



UNIVERSITY OF INDONESIA

**STRATEGIC DECISION EFFECTS ON COMPANY'S
PERFORMANCES IN AN UPSTREAM OIL AND GAS
INDUSTRY;
A STUDY CASE IN MEDCOENERGI GROUP**

THESIS

This thesis is proposed as one of the pre-requisite to graduate from Master Program
in Management Science

**EDWARD SIMANGUNSONG
0606010832**

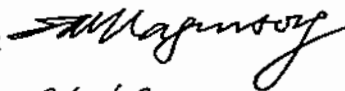
**FACULTY OF ECONOMICS
GRADUATE SCHOOL OF MANAGEMENT
MASTER PROGRAM IN STRATEGIC MANAGEMENT
DEPOK
DECEMBER 2008**

STATEMENT OF ORIGINALITY

This thesis has been originally conceived and prepared by the undersigned and has been enriched and substantiated by various related information and data sourced from other reference materials and literatures which are acknowledged and documented accordingly.

Name : Edward Simangunsong

NPM : 0606010832

Signature : 

Date : 9/12/08

STATEMENT OF THESIS APPROVAL

Name of Researcher /
Proponent : Edward Simangunsong

NPM : 0606010832


Program : Graduate Program In Management Science

Topic : Strategic Decision Effects on Company's Performances
in an Up Stream Oil and Gas Industry:
A Study Case in Medcoenergi Group

This thesis has been successfully defended before the Examining Council and is accepted as pre requisite to grant a Master Degree in Management Science from the Graduate School of Management by the Faculty of Economics of the University of Indonesia.

EXAMINING COUNCIL

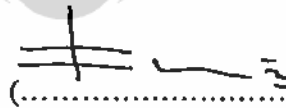
Promoting Lecture : Albert Wijaya PhD


(.....)

Examiner 1 : DR Setyo Hadi Wijanto


(.....)

Examiner 2 : Firmanzah PhD


(.....)

Approval established in : Jakarta

Date

: 9/12/08

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As a graduate member of the University of Indonesia herewith, I, the undersigned,

Name : Edward Simangunsong
NPM : 0606010832
Program : Graduate School of Management
Faculty : Economics
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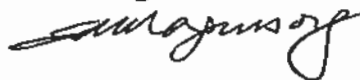
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Edward Simangunsong

FOREWORDS

Taking up a master degree at my age, now I am 54 years old, is already way behind the time. I was encouraged to attend the program because I think strategic management science is worth to know to understand more about environment, market, and firm relationships in the competition, so it will be useful to understand today's businesses in the pursue of my consulting profession and perhaps of teachings.

First of all, I would like to express my gratitude to my Lord because of HIS blessing I can manage to finish this master program. Secondly I would like to thank my family my wife who has given me support to study and my daughter who has been patient for being her father absence over the week ends. I present this master degree to my wife and my only one daughter as a prize of their understanding to me during the time I spent days to study at home and to go to campus which consumed a lot of time. Thank you for the support from my big family Simangunsong and my fellowship for their prayers and contributions especially my sister.

I had enjoyed the fellowship with my classmates and our professors during we studied at campus, and we the students enjoyed class discussions on the subjects being lectured. I appreciate and express my gratitude to all professors during the study for their integrity to lecture us. My special thanks and gratitude to my professor Albert Wijaya PhD who allocated time for me to supervise the process of this thesis until completely finished. I faced some difficulty to solve my methodology problems and to use Lisrel for data analysis had been helped by DR Setyo Hari Wijanto who was very patient to me. I also thank to him for his special attention. Lastly, I thank Ferry Slamet, my class mate in the program who had been very patient explaining multivariate analysis method which is required for data analysis.

The quality support from administration of the organizing program has made our study with the university of Indonesia was conducive, special thanks to administration staffs especially Pak Undang.

Having finished my study in premier class, I hope that Strategic Management Master Program will constantly continue and will produce strategic management experts in the job market to fulfill the needs in the industry and business.



ABSTRACT

Strategic Management has been widely discussed in the context of competitive advantage building a fundamental need by firms for competition. Competitive advantage of a firm may be reached by implementing distinguished strategies where its resources and capabilities are leveraged to overcome external environment forces. Strategic decision works at the operational level of strategy implementation. Strategic decision is getting more relevant for an industry risking massive capital and requiring high technology in environment uncertainties like oil and gas industry.

This research has surveyed upstream oil and gas business segment of PT MedcoEnergi International Tbk to study the roles of "strategic decision" thru "asset portfolio management", "operational success", and "financial risk management" tasks that have influences to its company's performances. MedcoEnergi is a holding company which has several entities in its portfolio. Underneath the parent's company consists of business units and assets portfolio. Strategic decision consequently should occupy either at corporate level or at business level. Organizational structure, executive paradigms, functional perspective integration dimensions should have shaped the strategic decisions.

This study addresses three main questions. First, do the strategic decision roles effects on company's performances thru asset portfolio management. Second, do the strategic decision roles effects on company's performances thru operational success. Third, do strategic decision roles effects on company's performances thru financial risk management. In making strategic decision "organizational structure", "executive paradigm", and "functional perspective" dimensions are measured.

A survey was conducted in MedcoEnergi group companies to measure the roles of strategic decision in achieving its performances through asset portfolio management, operational success, and financial risk management. Questionnaires were distributed along to samples under criteria reaching 55 respondents across the organizational structures, job positions, and job unit so the profiles has represented strategic decision makers and supporter around the group that focused on up stream oil and gas industry.

The results indicate that strategic decision has not been accordingly practiced to support asset portfolio management but slightly support operational success and financial risk management which remarked by insignificant relationship among the variables. As conclusion, the performance within the time frame surveyed of MedocEnergi generated from its up stream oil and gas exploration and development business segment not appeared to reach its optimality

This study should make important contributions which would promote the importance of further research of strategic decision roles in the up stream oil and gas industry as a whole. The findings here offer to practice strategic decision in tackling strategic issues such as to manage portfolio of assets (proved reserves), to manage operational success more sharply, to manage financial risk more expanded to

capability of the companies to reduce risks. By having those issues considered through strategic decision, the company's performances would be expected higher than current level.

Keywords: strategic decision, organizational structure, executive paradigms, functional perspective, assets portfolio, operational success, financial risks, company's performances.



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CHAPTER I

INTRODUCTION

1.1. Research Background

Making important decisions often requires incorporating major uncertainties, risks, long time horizons, multiple alternatives, and complex value issues into the decision model (Walls, 1995). Oil and gas industry faces uncertainties and risks because dealing with unseen natural resources requiring high technology and massive capital and also dealing with uncertainty in natural resources availability. Financial resources, which are limited, should be allocated for best mix selection of business unit entities or assets (ie. oil fields). Many issues faced by a company need to be dealt with strategic decision approaches because of the complexity, uncertainties, bounded rationality, and resources scarcity.

Strategic management suggests to seeking out competitive advantage for a company to compete in the market which may be reached by implementing its strategies. Strategic decision, which lies at the strategy implementation is also used toward competition, is required to overcome strategic issues oriented in the achievement of company's performances. Many issues faced by a company that contribute to performance making such as resources issues, operational issues, and risks issues need to be decided.

Strategic decision roles get more importance when there are choices to make among alternative for better results. Decision makers within the organization consider many aspects and consequences of every choice selected which is assumed to bring the best benefits/profits from one side and suppressing costs or risks to its lowest possible from another side. Assets portfolio is one technique that can be used to manage selecting choices which combine all possible scenarios to bring optimality on choices made in buying assets with different natures. Critical situation occurs normally in risky activities such as drilling in an oil field, mining activities, high rise construction when they are undertaking regular operational activities and decision made before at and after happenings contribute to whether or not operational

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activities are always in success or not. Another issue that effect to financial performances of a company is that how to manage the business while there are financial risks challenges as consequence of choices made on financial structure or money risked in the activities or money loaned for the business.

This research is made to study on three important issues assets portfolio, operational success, and financial risks that seem to be important in succeeding company's performances in an industry with risks and environment uncertainties like in upstream oil and gas industry, risk and uncertainties are major problems to be faced. Poor decision made by authorized persons within the organization will bring a company in the industry to go with serious problems. Lapindo case(1),(2) in Sidoarjo area (East Java) is an example of poor decision which resulted a blowout that still generates unstoppable hot mud outflows from subsurface in the exploration field until today. The story report on the case implied that decision made was not properly conducted, because it seemed that this company had overridden a procedural safety by not setting required a casing at the bore hole being drilled. A big loss has occurred to the people in the surrounding area and natural environment. From this point, the roles of strategic decision to support operational success appear to be very important on crucial and critical matters.

Energy supply is a crucial component for economic growth and bringing improvement to living standards. South east asia' primary energy resources - oil, gas, coal, and hydropower – are an-evenly distributed and relatively limited compared with the scale of demand (Symon, 2004).

(1) The paper by a Durham University-led team and published in the February issue of GSA Today (1), reveals that the eruption was almost certainly manmade and caused by the drilling of a nearby exploratory borehole (2) looking for gas, reinforcing the possible explanation in a UN report (3) from July last year. In the case of Lusi a pressured limestone rock containing water (a water aquifer) was drilled while the lower part of the borehole was exposed and not protected by casing. As a result rocks fractured and a mix of mud and water worked its way to the surface. Our research brings us to the conclusion that the incident was most probably the result of drilling." (2) Membaca berita terakhir di KCM tentang kasus banjir lumpur di Kecamatan Porong Kabupaten Sidoarjo, sepertinya kesalahan utama yang memicu kejadian itu adalah akibat kelalaian PT. Lapindo Brantas. KCM dalam beritanya yang berjudul "Lumpur Lapindo Mendekati Rel Kereta Api" menuliskan bahwa ada rekomendasi tertulis dari rekanan PT. Lapindo untuk memasang pipa selubung casing pada kedalaman 8500 feet yang tidak dilaksanakan oleh PT. Lapindo, padahal pengeboran terakhir (sebelum terjadi musibah) sudah mencapai 9297 feet.

As a growing country in the region, Indonesia has shown an increasing trend of demand from 75 million in tones of oil equivalent (1990) to 139 million tones of oil equivalent (estimated in 2010) or to become almost double in about 20 years (Asia Pacific Energy research center, Tokyo 2002). The increasing need is inevitable in every country in the world, not only in Asia pacific region, which has continuously made a consistent growth. An oil and gas company must maintain a portfolio of business and assets in order to sustain its business operation. Portfolio management theory used in an upstream oil and gas industry suggests maintaining a collection of entities (business units or assets) among which there may be interdependencies. An interdependency may exist between two entities in the portfolio and may effect specific performance measures of the portfolio (Skaf, 1999). Strategic decision in this industry should work out interdependencies among asset portfolio that support to positive effect to performances. One may be fail but the other two may be successful so overall the portfolio should provide positive impact.

Oil and gas reserves security is so important for a continuous production, major resources of the company are allocated to explore these reserves about 75% of capital budget run in a year (Walls, 1995). Over the years, PT MedcoEnergi International Tbk (MedcoEnergi) had maintained a portfolio of oil field assets to secure its continuous production. Still, the portfolio owned did not simply make profits because risks and uncertainties come along during the exploration and development stages before commercial production is reached. This research is studying the strategic decision roles in the oil and gas E&P business segment in MedcoEnergi as this industry faces high risks and an environment uncertainties, therefore strategic decision roles are highly important.

MedcoEnergi is a holding company which comprises of (4) four business segments; Oil and GAS E&P (upstream), Downstream, Power, and Drilling Services structured as in Figure 1.1.

This Oil and Gas E&P business segment or upstream oil and gas industry category is operated under PT Medco Exploration and Production Indonesia (MEPI) which owned 100% by MedcoEnergi. This segment started from 1992 after Tesoro's

oil field in Kalimantan was acquired and today it becomes the main contributor to MedcoEnergi group businesses as it contributes at approximately 66% of MedcoEnergi's total revenues today

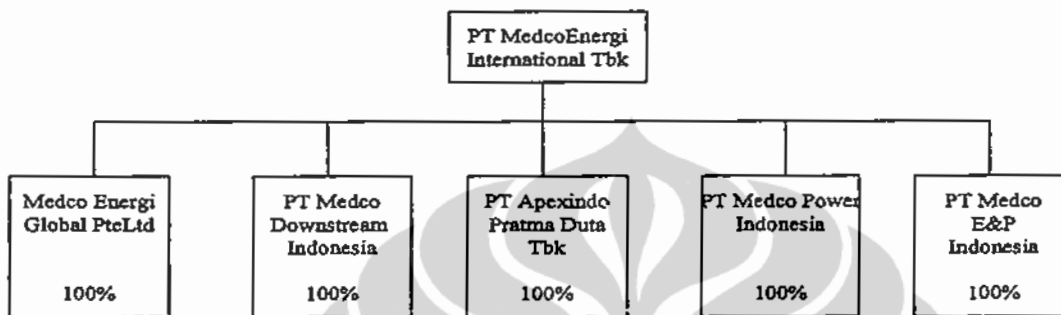


Figure 1.1. Planned Structure Holding and Sub-holding

Source: Annual Report of MedcoEnergi 2007

. This picture is presented to show the portion of oil and gas E&P business segment from overall business lines because this study only focus on this business segment.

Corporate strategies at sub-holding level which used to develop and sustain the company in business appear to deal with assets portfolio (A), operational success (B), and financial risks (C) concerns. The strategies set out at this level of Oil and Gas E&P business segment can be seen on Table 1.1.

As we can see from Table 1.1. MEPI's strategies importantly emphasize on maintaining the level of oil and gas reserves which expect to induce the level of production and consequently the revenue too. This study would like to stress out how

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important it is about the asset portfolio issues which should be handled through strategic decision process.

Table 1.1. Corporate Strategies of Oil and Gas E&P business segment
(PT MEPI group)

Category	Main strategies	Supporting strategies
A	Replace and add reserves through exploration and acquisition	1. Maximize contributions to the reserves replacements ratio. 2. Focus on assets value creation. 3. Optimize exploration opportunities.
B	Increase production volumes through the development of reserves and creating new markets for uncommitted natural gas	1. Optimize crude production 1. Gas Monetization 2. Improve operation integrity and efficiency
C	Build strategic alliances and maintain financial flexibility with prudent financial structures and cost control.	Optimize balance of commitment and risks levels.
	Foster prosperity with local communities and preserve the natural environment.	Ensure safety, health, and environment (SHE) excellent performance.
	Continue practicing the highest standard of corporate governance principles.	Improve organization capabilities and standard business process.

Source: MedcoEnergi's Annual Report 2007

Performance in the last six years in terms of assets portfolio as summarized in Table 1.2. indicates that MEPI concerns to accumulate proved reserves⁽³⁾ assets to secure its production and revenues, so proved reserves level is precedent set to support production level. Proved reserves in oil and gas had grown with different direction which is one of the options to sustain revenue generation. When oil proved reserve was in decrease, gas proved reserve stock filed up to fill in the downturn in oil

so MedcoEnergi maintained assets portfolio in each oil and gas which consisted of a number oil and gas fields and asset portfolio between oil and gas to balance business prospect between oil and gas.

Table 1.2 Proved Reserves of MEPI

	Unit	2002	2003	2004	2005	2006	2007
Oil	MMBO	151.6	113.9	94.3	117.0	104.7	99.1
Gas	BCF	124.0	271.0	382.3	327.6	253.2	285.7

Source : MedcoEnergi's Annual Report 2007

We can see from Table 1.2. and Table 1.3. that there is an increasing trend between oil and gas proved reserves trend with the financial performance achieved in terms of sales, oil and gas assets, capital expenditures, total assets. The increasing revenue stream from oil and gas E&P segment seems to have been supported by its increasing oil and gas reserves as the result of asset portfolio management tasks.

Table 1.3. Financial Highlight- MedcoEnergi's Oil and Gas Business Segment

Description	unit	2002	2003	2004	2005	2006	2007
Sales(revenue)	\$ mio	576.9	542.1	681.6	436.5	532.5	723.3
Op. Profit	dto	159.2	126.1	178.5	198.2	119.7	169.1
T/Capex	dto	165.9	149.3	246.7	226.6	388.9	384.8
Segment capex		84.2	77.5	235.1	140.6	156.5	312.6
		50.8%	51.9%	95.3	62.0%	40.2%	81.2%
Oil/gas properties	dto	286.0	312.3	449.1	534.5	577.7	686.0
Assets	dto	665.8	748.8	1,012.7	1,741.5	1,982.6	3,088.7

Source : MedcoEnergi's Annual Report 2002 up to 2007

There would not be any growth in terms of financial performance should there not be any growth occurring at oil and gas proved reserves. Both sides did not grow constantly and nor proportionately. Sales increase is not always proportionally

incurring operating profit margin which supported by proved reserves of oil and gas combined balance. More important view from this picture is that operating profit has been incurred by the company which means that the operation has been carried out relatively with success, otherwise a lot of costs would have absorbed the value received from oil and gas have been lifted.

Level of costs and cost structure is very important to be managed by operational management. To provide information, financial performances of oil and gas business segment in MedcoEnergi are presented in Table 1.3. The above data implies that the business segment has been growing positively although its assets grew faster than the revenue but it has managed to make profits over the years. All actions taken by a corporation or company are supposedly the results of decision made by authorized persons. Poor decisions consequently bring the company slowly or progressively to a difficult position.

As the business has become growing, MedcoEnergi has to face with financial needs over the years of its growth. Financial requirements can be sourced either from equity or from debts but if business growth comes faster than accumulated profit, financial requirements may not be fulfilled from equity source, as an alternative the company usually raises some debts to catch up its financial needs.

Source : MedcoEnergi's Annual Report 2007.

(3) Robert D. Edwards, Scott B. Sorensen, Harold E. Syms, "Estimated Oil and Gas Reserves", Pacific Outer Continental Shelf, OCS Report MMS 91-0087; Unproved reserves may be divided into sub-classifications, possible and probable, which are similarly based on the fields for which a schedule leading to a level of uncertainty. Unproved Possible Reserves are less certain than unproved probable reserves and can be estimated with a low degree of certainty which is insufficient to indicate whether they are more likely to be recovered than not. Unproved Probable Reserves - are less certain than proved reserves and can be estimated with a degree of certainty sufficient to indicate they are more likely to be recovered than not" (SPE, 1987). Proved Reserves can be estimated with reasonable certainty, to be recoverable under current economic conditions, such as prices and costs prevailing at the time of the estimate.

Proved Reserves can be subdivided into category undeveloped and developed. Proved Undeveloped Reserves are reserves expected to be recovered from (1) yet un-drilled wells, (2) deepening existing wells, or (3) existing wells for which a relatively large expenditure is required for re-completion. Proved Developed Reserves - reserves that are expected to be recovered from existing wells (including reserves behind pipe) are classified as proved reserves, are subcategorized as producing or non-producing" (SPE, 1987). Total Reserves are the sum of proved and unproved reserves.

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The larger the debt the higher is the risks to be faced by a company, risks such as in terms of larger creditor's claim, interest burden, and ability of a company to repay its debt (ratings). Several indicators of financial risks are presented in the Table 1.4.

Table 1.4. Financial Risks Highlight of MedcoEnergi

Description	Ref	2002	2003	2004	2005	2006	2007
DER	%	24.4	74.9	134.8	96.7	155.7	179.1
S&P	rating	B+	B+	B+	B+	B+	B+
Moody	rating	B3	B3	B2	B2	B2	unavailable
Pefindo	rating				AA-	AA-	unavailable

Debt equity ratio had risen up from year to year along with the growth achieved by the company thus financial requirement had been fulfilled by debts besides by partnership or joint ventures to expand its businesses. Here, the increasing trend of debt above the equity balance incurred financial risks to the company but as the performance results showed positive impacts these risks had been maintained proportionately as the rating provided by S&P or Moody keeps at B+ in average over the six years shown in Table 1.4.

Strategic decision occupies at high level of organization, and this can be evaluated from the organization structure and management structure at holding level. There are a few groups of management teams and committees in the organization. The Board of Commissionaire's duties are to oversee policies made by Board of Directors and to provide advice to the Board of directors. The duties are conducted thru Audit Committee, Risk Management Committee, and Good Corporate Governance (GCG) Committee. The Board of Director's duties are to fully manage the whole companies for the interest and the objectives of the company. Besides those there are other committees, which are Nomination Committee and Remuneration Committee, whose members are coming from either Commissionaires and or Directors. Many important decisions should come out from these management teams or committees which are strategic in its natures. As we can see from Table 1.1. main

concern of strategies of MedcoEnergi are to build asset portfolio, to increase production level and its market, and to build financing needs by flexible approaches. Strategic issues faced by the management of MedcoEnergi consequently are around the main topic of their strategies.

Asset portfolio is very much associated with capital allocation with the background that financing is limited (Walls,1995). This limitation is actually a relative condition as an upstream oil and gas company wants to grow bigger it requires a larger amount of money to realize it by exploring and developing for new proved reserves. This limited financing should be able to leverag to bring up overall performances of the company in industry. Capital owned by a company should be distributed to several projects to find potential oil and gas reserves because it needs to expand the number of such potentials in order to shape higher probabilities of finding commercially producing wells from proved reserves (Skaff,1999). The capital balance, after distributed to maintain collections of projects, used to find proves reserves often times become minimized, it is therefore that the second agenda is to seek for financing that needed for further development of oil and gas proved reserves.

When financing needs become obvious for a project which has concrete potential on oil and gas proved reserves, alternative solutions may be solved by raising fund from such as loans, bonds, and equity and by sharing partners approach such as strategic alliance or joint venture, etc. and option taken likely depending on financial risk calculation. Financial risk approach in MedcoEnergi is made by two main concerns; firstly reducing financial exposure on single projects and secondly sharing financing needs with other parties. First step required to calculate risk is by performing capital budgeting techniques such as Net Present Value (NPV), Internal Rate of Returns (IRR), and Pay back period for viability of a project. Further steps can be taken if capital budgeting technique allows its feasibility.

In an upstream oil and gas industry sharing partner approach is commonly used and can also expand to operate the business activities besides shared financing. To manage operation activities on projects already feasible are further the main agenda of an upstream oil and gas company, which also needs careful management. Large

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amount of money risked in projects enforces the operator to succeed their operation activities successfully by eliminating any potential risks or failures to its minimum level. The researcher assumes that exploration in Sidoarjo which created blow out had minimum sensibility to operational success.

Managing the strategies already discussed herewith at implementation level requires strategic decision which may emerge at various condition critically needs management's decisions. Relatively large capital, high risks, environment uncertainties are the main textures in strategic decision tasks of an upstream oil and gas company which relate to asset portfolio management, operational success, and financial risk management as suggested by this study.

What are the dimensions required in order to produce strategic decision that has positive impacts to performances? Oil and gas industry deals with uncertainties especially with finding reserves that are risky and costly. Strategic decision come out from decision makers within the organizational structure (Huber, Mc Daniel, 1986) either from vertical and horizontal differentiation (Jones, 2007) from the executive whose paradigms differently responds to opportunities or problems (Frederickson, 1985) and from functional perspectives of the managers who are holding different responsibilities (Jones, 2007).

1.2. Problems Statements

The larger the size of the company the more complicated are the problems to be faced and consequently more people to get involved in the activities and in the decision makings. Strategic decision made effects on long-term performance of the company (Fredrickson, 1985), therefore a company should continually practice proper strategic decisions on their management actions that bring the company to achieve its performances.

Upstream oil and gas, which deals with unseen natural resources, consequently has an industrial character of high risks and uncertainties. Few enterprises are as risky as searching for oil. Despite years of intensive research in the earth sciences, drilling success ratios are low (Foster, 1964). Due to the uncertainty, there are two principal

classifications of reserves, proved and unproved. The proved reserves are the petroleum which, by analysis of geological and engineering data can be estimated with reasonable certainty to be commercially recoverable and can be categorized as develop or underdeveloped. The unproved reserves are less certain and may be further sub-classified as Probable and Possible Reserves (Annual report of MedcoEnergi 2005).

Industrial characters should have forced an oil and gas company to make strategic decision on important and strategic issues. Within the risks and uncertainties, the company should always make strategic decisions in achieving its performances by seriously building asset portfolio for continuous production, managing its operation successfully every step of the way, and considering their financial risks to avoid bankruptcy.

In achieving its performances, an oil and gas company has to find oil and gas proved reserves as resources to make their own revenue. Finding proved reserves is a long process and spending a lot of money often times do not succeed with expected results. Oil and gas field location where proved reserves are to be found of course belong to the state so the company has to go through a lot of procedures and regulation to obtain concessions. Further after oil and gas fields are proved to have reserves another risks at exploration and development stage still exist until proved reserves realized to produce commercial reserves. Once an oil reservoir has been found a lot of uncertainty has been removed, however large scale problems such as finding the most profitable schedule of production for a collection of wells with known maximum production capacities are harder to handle (Foster, 1964).

The company must gather a number of oil and gas fields to find proved reserves and a number of proved reserves must be further developed into commercial status. From this point, to build portfolio of oil and gas fields in order to obtain proved reserves become one important step and to build portfolio of proved reserves (as assets portfolio) become second step before commercial reserves is reached. Strategic decision should play importantly roles to manage these assets portfolios become it is one of the major agenda in an upstream oil and gas company.

During the activities undertaken by an upstream oil and gas like MEPI either at exploration or development or production operational risks is always exposed. There are always possibilities of blow out, accidents, ineffective methods, etc when an operation is on motion. Any action taken on operational activities have its own consequences and costs. To operate in onshore and offshore is different, to go on relatively short deep and long deep of drilling is also different, to go on different soil nature and location is also different. Before an activity in exploration or development or production to commence, many aspects are seriously considered to its effective results and to its cost effectiveness while safety and security is also put at priority. Which partner or contractor to go on certain activities are also issues in operational success. Strategic decision should also play important roles to support the operational success.

By looking at the capital expenditure on exploration and development there implies that it takes so much money to produce much more money. Not every activity on exploration and development reveals commercial reserves while spending on these activities are quite substantial. An oil and gas company must allocate their funding to find oil and gas fields, proved reserves, commercial reserves before really to produce for commercial. The company distributes their funds to access for concessions and to explore for proved reserves in so doing to generate the most possible outcomes of their portfolio. In order to overcome funding needs, the company can also borrow money from lender or capital market still they need to share their operational risks with other parties to reduce financial risks if operation happens otherwise than plans. Projects in an upstream oil and gas company which hire substantial money are exposed to financial risks so financing is shared with several parties to reduce exposure on capital uses.

Strategic decision on assets portfolio, operational success, and financial risks are important tasks in an oil and gas company working out on optimal choices through deep thought, different angles, and proper process so potential loss can be avoided.

1.2.1. Strategic Decision on Assets Portfolio

Implementation of portfolio management theory is one of the techniques used in selection of mix investment or selection of assets that will reduce risks and maintain a performance. A portfolio is a collection of entities among which there may be several interdependencies. An entity can be a single physical asset (such as a producing field in the oil and gas industry or a manufacturing plant in another industry, a business unit which may include several assets, or a financial security (Skaf, 1999). Profit optimization can be achieved from holding combined different risk assets which realized by maximizing those with high returns and suppress loss with low returns to yield net results. The asset portfolio tasks is also to make sure that there have to be adequate assets in portfolio needed to continue and maintain levels of activities because sometime assets being explored may not proceed with positive results, so inventories of assets should be always ready.

Decisions about capital allocation may focus on selecting the appropriate mix of high risk versus low risk projects, domestic versus foreign activity, R&D versus production, acquisition versus expansion, as well as a host of other complicating dimensions (Walls, 1995). What behind strategic decision in managing assets portfolio is the paradigms of choosing alternatives; a choice between to explore or to acquire new oil field for oil and gas security, to buy a high risky or lower risky asset, to expand business or to increase existing production, etc. Decision makings are always influenced by a certain dominant logic that inspires their mind when solving problems or generating ideas and the results will prove tracks record of their performances. Before a decision to be made, relevant aspects need to be assured by several ways such as technical perspective, cost perspective, risks perspective and so on then by doing this unnecessary risks can be avoided or best option can be achieved.

Two aspects involve in assets portfolio issues in relation to strategic decision; stock of oil and gas proved reserves, and cost of development of proved reserves which originate the level of production to the future. More stocks of proved reserves have to be built if production level is to increase thus if the company wants to grow

larger. Stock level of oil and gas proved reserves is endeavored by exploration of new oil and gas fields which may be several or many number of wells. Before the explorations for finding proved reserves begin, an oil and gas company must plan their exploration activities which expressed in capital expenditure budget. Further when proved reserves are already on hand the main issue to be decided is whether or not the proved reserves are developed. The decision to develop and undeveloped is much related to ability of an oil and gas company i.e. financing, human resources, technical knowledge, etc to carry on the development activities rather than geological and engineering analysis requirements.

1.2.2. Strategic Decision on Operational Success

Organizational structure dimension in the strategic decision is important in any aspect of the decision to be made. The ability of an organization to account successfully for its output and operations to its various internal and external constituents viewed as an effectiveness (Gaertner, Ramnarayan, 1983). In the absence of any significant mistake or incident, an organization that achieves its targeted output may be assumed successful in its operation. Operational success of course is supported by the ability of the organization.

Proper management of the project implementation process is essential for carrying out the project successfully. Successful implementation does not automatically result; it must be managed (Anderson, Narasimhan, 1979). To manage successful operational activities require decision made from the organizational structure dimension. The level of authorized person in the organizational hierarchy and involvement of different unit of organization is needed to make sound strategic decision for operation, so mistake can be avoided.

Operational success can be achieved by managing functional perspective when an upstream oil and gas company facing risks such as Lapindo case. Operational risks in an exploration activities located at near residential neighborhood shall be higher, therefore putting safety at an affordable cost is more relevant than cost safety in this case because of the rigidity of the environment. If a similar case occur in a jungle

where there is no people neighborhood to put at risk, the exposure to the damage may not be as big as in the case of Lapindo in Sidoarjo area.

Operational success may be measured from how much it does take to produce a certain quantity of products which already planned from a budget scenario or a relationship between the budgeted costs to operate the business with the output produced. Interruption, maintenance, safety, etc which may occur during the operation should have been taken into account but unexpected incidents, accidents, blow out which occurs beyond calculation or expectation is the cause of failures. It is therefore suggested that every decision made which has significant impacts should be made under strategic decision process.

Contingency plan should be always prepared for high risky operation such as exploration or development in an upstream oil and gas industry in case a trouble or serious problem likely to happen.

Two aspects involve in operational success issues which related with strategic decision which are operational management used to organize all activities within the operational functions and technical knowledge possessed by people in the operational function to carry on their duties toward the objectives. Operational management issues may be about choosing the right method, the right timing, the right equipment, the right people etc, while technical knowledge issues may be about technical competency of people, compatibility of equipments to be used, ability to uses of and combination of equipments, instruments, tools, etc. Knowledge of the risk of failure inherent in a particular situation, would enable the practitioners to develop strategies to reduce, overcome or finesse the influence of the risk factors and to increase the likelihood of successful implementation (Anderson, Narasimhan, 1979). Each project appears to have its own problem so its implementation has to be managed (Anderson, Narasimhan, 1979).

1.2.3. Strategic Decision on Financial Risks

To acquire an asset or to explore oil fields for production involve financial risks. When an exploration of an oil field fails to make commercial prospects, a large

financial loss will occur because the cost to operate explorations is significantly expensive, the exploration budget may be reserved 75% of total capital budget of an oil company (Walls, 1995). This pattern also occurs on capital expenditure spent by MedcoEnergi. Table 2 shows that capital expenditure spent on oil and gas reserves is in average 64.4% % from total capital expenditures spent for all business segments.

Either at exploration or development stage, companies in oil and gas business are also considering a partnership (s) with another company (s), to make joint venture, or to establish a strategic alliance to resolve their financial needs or to share their financial risks. Instead of additional borrowing, partnership or strategic alliance is an alternative to do their programs and this has been generally practiced in the business. A consideration to go with another partner or strategic alliance is related with the executive paradigm behind the strategic decision in managing the financial risks. Regardless funds from lenders can be obtained partnership or strategic alliance with another party (ies) on project to project basis is one way to reduce financial risks and to add value to organizational capabilities. By having more organizational capabilities sourced from partner (s) or strategic alliance (s) improvement in operation and reduce financial exposure can enabled.

To measure financial risks on a project may be approached from NPV, IRR, or payback period method. Capital budgeting technique theory requires a certain and accurate projection of cash flow for independent and mutual exclusive project and assumes that the organization concerned with a single objective "net present value" (Wall, 1995). NPV or Net Present Value is an indicator of feasibility or not on doing a project. An investment is worth undertaking if it creates value for its owners (Ross, Westerfield, Jordan, 1992) shown from the result which calculated from the sum of the revenue stream divided by discounted factor on revenue occurs in each year. If NPV gets positive from the calculation this means that a project to be undertaken is feasible or in another word money invested brings a certain profit. Internal Rate of Return is an indicator of level of discount factor that equates the total of discounted revenue streams is zero which means that it is the rate of return of investment that

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allows break even. While pay back period is an indicator of time horizon of investment costs returned from its total revenue streams.

Adequate amount of NPV that derived from a project is desirable by an investor because the value of the project business is attractive. The higher the figure of IRR the better it is to the eye of investor because positive (high) IRR indicates that return from investment exceed discount factor (ie. cost of money) used to sum up discounted revenues to net present value. The shorter the time required to pay off investment costs after all costs required already deducted the better it is to the eye of an investor based on the assumption that future is more risky than today because unknown situation.

Method of operation, technology, quality of skills selected to use in business contribute to the costs of the project business will effect the level of NPV, IRR and the term of pay back period. To share the business with other parties who can prepare the method, technology, and skills will bring down the financial risks of the company less than should they do it alone. When an NPV or IRR or pay back period is not attractive enough to go alone, a company may decide to share doing the project business with another participant(s).

When financial risk issues of a project within the strategic decision to be questioned there are two aspects to get involved which are first viability of the project and second the size of the project to be financed. Viability is measured in terms of NPV, IRR, payback period and also other non financial terms such as complexities, location condition and distance, etc. while the size of the project is questioned to the availability of financing source, cost of financing, dilution impact, etc.

In sum, the problem of the study is the decision choices to clarify assets portfolio, operational success, and financial risks.

1.3. Objectives of The Research

This research aims to study the roles of strategic decision on the three issues above in its effects to performance of a company which engages in an up stream oil

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and gas industry. Upstream oil and gas industry has high risk and uncertainty which involving large amount of money requires optimal decision on choices they make. Strategic decision becomes very important to be implemented in this industry in order to achieve and maintain its performance.

1.4. Research Contributions

Several numbers of contribution can be put to an upstream oil and gas company from strategic decision context.

- The research outputs may contribute for the development of strategic decision in industries with highly risks and perceived uncertainties not only for an upstream oil and gas company but also for a similar character of industries such as gold, tin, copper mining.
- For the oil and gas industry, emphasis on strategic process in securing its oil and gas reserves is important to company's performances.
- For the executives in oil and gas industry, this study may contribute to the importance of strategic decision makings on strategic issues in achieving outstanding performances. By referring to decision results being researched in this study, the executives can see the consequences it resulted to the performances achieved. Lapindo case has been inspiring the importance of strategic decision in this study.

1.5. Exploratory of Literature Study

An exploratory study is initial research conducted to clarify and define the nature of a problem (Zikmund, 1998). An exploratory study is a useful preliminary step that helps ensure a more rigorous, more conclusive future study (Zikmund, 1998).

In view of the literature study, understanding strategic decision is constructed in relation with its roles to performances. The literature explored herewith emphasize on what strategic decision can achieve if it is performed to the expected impacts, so discussion on what content and how is it processed in strategic decision topic is not necessarily relevant whereas content and process are actually the main stream in strategic

decision study. Further discussion in this study is about dimensions that contribute to output of strategic decision coming from organizational structure, functional perspective, and executive paradigm. From literature explored it theorizes that individual differences occur among decision makers but researches limit these differences discussion to firstly from organizational structure dimension (decision makers have different power and responsibilities to action taken), from functional perspective dimension (a function carry certain responsibilities), from executive paradigm (response differently to situation by dominant logic or thought pattern).

Literature study from management perspective that relevant to upstream oil and gas industry is also discussed as basis to build understanding on asset portfolio management and financial risk management. Operational activity is actually a common topic in any industry but this study emphasizes on how important it is to achieve success in an industry that characterized by high risk and environment uncertainties. Relevant literature from upstream oil and gas industry contributes to the study as to emphasize on how low the drilling success ratio is in exploration and development activities so an understanding on operational success importance is constructed.

After all, the research model is showing the strategic decision roles, from dimension of organizational structure, functional perspective, and executive paradigm, to asset portfolio management, operational success, and financial risk management and then each impact to company's performances. The research model is then tested by surveying Medcoenergi by having 55 respondents who are mainly people assumed to get involved in making and supporting strategic decision.

CHAPTER II

LITERATURE REVIEW

2.1. Strategic Decision

The strategic management has been widely discussed in the context of competition and long term viability from the perspective of inside outside approach (resources base view) or from the perspective of outside inside approach (market opportunities approach) by building competitive advantage to compete in the market.

Operating effectiveness, cost leadership, business focus, strategy process, and strategic decision are part of the main topics in strategic management studies. Strategic decision issues has given more attention to researcher which may mean that strategic management task to seek out sustainable competitive advantage not only concern on how to set strategy content but it already discuss more advance on quality decision made that influence the company's performance.

Researches also indicated that decision made has given significant effects too to the long term performances of the companies (Frederickson, 1985). On top of strategies taken by the company, strategic decision at implementation level contributes to the performances achieved. Strategic decision functions as preemptive actions before some thing is to realize by an organization. A strategy selected can be implemented in several different ways. Further, Eisandhart, Zbaracki (1992) theorized that strategic decision has impacts to the health and survival of the organization which imply that this role effects not only to the long term result but also to the short term condition of the company. Each business faces different risks and a company needs to be positioned to be able either to defend or to avoid or to override as possible as it can do. Threats to survival of the company may come from internal organization such as fraud, poor business process, etc and also come from external organization such as poor competitive advantage, inadequate sales, etc.

Decision theory has been characterized by Jeffry as an attempt to find criteria for selecting "optimal" decisions among a set of alternative actions – where optimality is

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based (C. West Churchman, 1956) thus, decision is made in the back ground of alternative selection which aims at getting an optimal solution. By referring to decision theory, strategic decision may be used to select decisions for optimality on strategic issues among a set of alternative actions. Optimality on decisions should effect at last to performance because unnecessary risks already taken into account and consequently avoided, then in the same time it enables to achieve it's out set objectives.

"Decisions" have been described as discrete and concrete phenomena driven by rational-albeit bounded -minds, stripped of affect, insight, and history (Langley, Minzberg, Pitcher, Posada, Macary, 1995). From this research it suggested that decision definition is expanded to an understanding that there are phenomena around decision making to consider, first as it is commitments to action, second as driven factors behind decision making such as emotion, imagination, and memories, and third as inextricably with other decisions. A decision then has undergone through a process in the mind of a decision maker before it comes out by him or her. This is important to know that there are dimensions behind the decision that support why certain thing is chosen among others. If decisions are irregular in nature, it becomes more obvious that this action should be related with important issues. Business activities run on a daily basis but not everything happens with the same situation, so problem occurs on which decision should emerge to tackle the situation.

A strategic decision is as one which is important, in terms of the actions taken, the resources committed, or the precedents set (Esendhardt,Zbaracki,1992). Strategic decision then deals with issues that are important such as commitment to resources needed. Resources are very important for business organizations which may absorbs major cost of the products or production activities. In certain industries, resources could be also sources of competitive advantage to produce its differentiated output. Strategic decision quality consequently cannot be unlinked with the consequences resulted in the areas effected. Strategic decision also deals with setting the precedent conditions which fundamental to move the organization forward. Decision makers concern to seek out for platforms that are required to enable the organization to

perform to its optimality. Sound organizational environment, selective good human resources, best quality of resources, best infrastructures are those that decision makers deal with in building its competitive advantage from its internal approaches.

Strategic decisions are nonprogrammable decisions that involve the commitment of substantial resources at the level of the total enterprise (Ghemawat, 1991; March & Simon, 1958; Porter, 1980). This theory emphasized more of its importance by referring to the magnitude and hierarchical level of the strategic decision roles whereby the process are non programmable. To commit on substantial resources is actually risking the company. If actual performance go beyond expectation in the future, because it will involve the ability of the company either to utilize them efficiently or to pay the consequences with rewards. Often time certain decisions have to be made under conditional terms such as time constraint, opportunity emergence, urgency sense, etc. which may not be programmed before. Having said that strategic decision deals with resources (substantial) commitment this role will impact survival substance of the organization and so will affect long term future of the company.

The management in a formalized organization makes choices on facing problems and or opportunities of course through a procedural means. Strategic decision can be of main alternative to process such choices. Strategic decisions are among the main means through which management choice is actually effected (Papadakis, Lioukas, Chambers, 1998). Each alternative taken to solve the problems or opportunities has its own consequences so several approaches and ideas are considered to decide on which one is best to reach optimality.

Individual differences among strategic decision makers affect strategic decision-making activities (Hambrick, Frankenstein, 1987, Hytt, Tyler, 1991). Differences may come from job position and hierarchy in the organization of, paradigm that influence, and discipline and functions of the decision makers. There may be a number of differences occur among decision makers when they are to make decisions but this study limits the scope to the dimensions just mentioned.

Factors behind decisions should be considered as much as possible. Decision makers are coming from organization in the structure with different background of

expertise and responsibilities, so decision results are expected to resolve problems with an optimal solution. Seeing from an organizational dimension in the decision making it relates with the hierarchy and functional involves set out in an organizational structure adapted by a firm. An organizational role is a set of task related behavior required of a person by his or her position in an organization (Jones, 2007). This theorized that a person plays his/.her role is related with his/her position in the organization. Degree of responsibilities of a person in an organization would influence how a decision should be made and decisions made would reflect the level of responsibilities he/she carries out. Inevitably that organizational structure dimension contributes to the strategic decision making.

How to manage paradigms in the making of strategic decisions is one issue to deal with strategic decision. There are paradigms or tendencies to certain choices in decision process because decision makers are logically dominant to what he/she choose from alternatives being faced (Prahalad, Bettis, 1986). Tendencies take place on decisions such as to explore or to expand, to stay business in the country or to seek out business in foreign country, to go alone by own resources or to go with another alliances or partner. Tolerance against risks is also different to individual who would be responsible from action taken.

There is a division of jobs within an organization a perspective from horizontal differentiation which are made according to their specialization or functional tasks (Jones, 2007), so they are holding responsibility from their function roles. The division of functions has at least operation, finance, and technical functions especially in a typical production or process activities. So executives should always come out from their responsibilities perspective in the decision process. Therefore, functional perspectives which are coming from financial, operational, and technical function need to be integrated in strategic decision making so these functions can work together supporting each other toward direction expected.

Assets portfolio perspectives come along when an oil and gas company wants to set up their level of production as how much proved reserves are ready to maintain its production for a certain period of time. Oil and gas reserves certainly deplete some

day after the whole reserves are lifted for production. The level of proved reserves allows an oil and gas company to set their level of production to meet expected performances but the activities to find oil and gas proved reserves also require the higher level of capital expenditures to move forward. This can be seen from Table 3.

2.2. Strategic Decision Roles

Strategic decisions are those that commit firms to actions that will have significant effects on their long-term performance (Fredrickson, 1985). This may mean that any decision that potentially effects to the company's performance should be made carefully. The management may face problems such as to choose among alternatives, to put priorities among importance, to integrate differences, etc. There is also quality required on decision made. Strategic decisions made effect on organizational health and survival (Eisenhardt, Zbaracki 1992) and have a relationship with environment, strategy, structure, and performances (Prescott, 1986). There may be a number of considerations to support an impacting decision, among other things the following issues are important to study;

- Who are supposed to be in the organization should be involved in strategic decision in their capacity to participate in strategic issues that relate with assets portfolio, operational success, and financial risks.
- How are functional perspective integrated in making strategic decision is one issue in strategic decision making because each executive come from different function and carry different responsibilities.
- What are the paradigms that influence decision makers to contribute to strategic decision is also an issue in strategic decision making because people when making important decision is influenced by his/her dominant logic or thought pattern a tendency to chose preferred options.

Strategic decision has dimensions because there are individual differences among decision makers due to their organizational role within the organizational structure, to their functional responsibilities, and to paradigms developed in their thought pattern or dominant logic.

2.3. Organizational Structure Behind The Strategic Decision

The concept of structure is usually understood to imply a configuration of activities that is characteristically enduring and persistent. The dominant feature of organizational structure is its patterned regularity (Ranson, Hinings, Greenwood, 1980). Individuals and groups within organization are powerful, therefore, because they control and can manipulate scarce resources. The distribution of these resources affords a capacity not only to determine "outcomes" but to recreate the rules, positions, and budgetary allocations which ensure the reproduction of these bases (cf. Greenwood, Hining, and Ranson, 1977). Thus, the people in the organizational structure have the chance to shape decision and to influence outcomes from the decision process because decision is made within and on behalf of the organization (Huber, Mc Daniel, 1986). A decision is made for the sake of the organization but it is inseparable from the person who plays decision making roles. Many reasons may be based including personal preference by decision makers to influence the decision but it allows him/her only to the extent of his/her level of responsibilities in a way that organizational tasks and scopes already set, therefore organizational structure has dimension to strategic decision.

An organizational role is a set of task related behavior required of a person by his or her position in an organization (Jones, 2007). Jones further theorized that an organizational structure is characterized by vertical and horizontal differentiation design where vertical differentiation refers to the way an organization designs its hierarchy of authority while horizontal differentiation refers to the way an organizational group organizational tasks into roles and roles into subunit which establishes the division of labor to enable people to become more specialized and productive.

The more complicated problem a company faces, the more organization needs to prepare carrying out tasks in a complex environment. Problems may emerge to the organization during or before or after an activity is in motion. Companies usually run management meeting such as to discuss budget, product development, asset acquisition, etc. a forum to exchange ideas and originate strategic decisions. In

management meetings strategic decision that require executives across the organization is discussed, formulated, and decided. Level of responsibilities of people in the organization brings different quality of contribution to strategic decision process because higher responsibility drives the managers to be more critical to view his/her areas of responsibilities.

MedcoEnergi has set out organizational structure at holding level, sub-holding level, and strategic business unit with variety of different functions according to existing task to carry out by the organization. Executive ranks from junior middle and senior level across the organizational structure with their respective roles and responsibilities.

2.4. Functional Perspective Behind The Strategic Decision

How to manage cost saving or efficiency may be related to making strategic decision with the background of operational perspective, how to strengthen company's position may be related to making strategic decision with the background of financial, operational, and technical requirement perspectives, how to reduce financial risks may be related to making strategic decision with the background of assets portfolio, financial, and operational perspectives, and so on.

Disciplines and risks taking challenges are part of the things that influence the executive minds when making a decision. To select an option should leave another option because decision is made through selection of alternatives, and an option taken is considered by risk calculation if it contains risk or preference to prioritize something than the others because of scarcity of or limited resources, technical requirements, operational capabilities, etc. A mix of different perspective come along during decision process and should come out of something after these perspectives are integrated (Hitt and Tyler, 1991). What perspectives that is relevant to an upstream oil and gas industry that relate to risks and uncertainties may be seen from financial, operational, technical requirements perspectives.

Financial executives in an organization concerns on how to maximize profit by securing costs and expenses so revenues generated are left for retained earnings.

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Keeping the level of cost and expenses from efficiency and effective use of resources are major concern from financial perspective. High care on financial disbursement is continuously monitored to keep the level of costs and expenses to match with the revenue generated. Financial loss may occur because of the negligence of controlling these costs and expenses. An opportunity may also loose if financing requirements are not in place or ready to finance a project. Any project or program to be undertaken by a company supposedly needs a review from financial perspective. Operational executives concerns on how to succeed organizational activities by implementing plans or scenario already decided.

Complex operational activity in high risk and environment uncertainties preserves the roles of management skill and knowledge together with relevant experience of the operational executives to tackle surprised happenings that occur beyond plans and scenarios. If projects want to be succeeded operational perspective would take into account any possible operational risks and distractions which might be different from one to another project so operational perspective is important behind the strategic decision made.

Technical perspective may concern on how to find solution on technology and methods required to undertake a project which supporting operational activities to carry out their jobs successfully. Sometimes a certain technology and or method may not be suitable for a condition being faced. Different complexities in high risk and environment uncertainties should make alert technical executives to design technical planning on project to be undertaken. It is suggested that technical perspective bring contribution behind the strategic decision.

2.5. Executive Paradigm Behind The Strategic Decision

In the evolution of many fields of human endeavor, paradigms appear, influence practices in the field, and eventually yield some or all of their influence to other paradigms - by Kuhn 1962 (Huber and McDaniel, 1986). Paradigms that works on strategic decision are between rationality or bounded rationality, between politics and power, and garbage can (Eisenhardt, Zbaracki,1992). The word paradigm used here

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by the researchers referred to show thought pattern in responding to problems such as by rationality or by garbage can. Similarly, paradigm used in this study is also to show how thought pattern made by decision makers when facing issues on resources allocation. (Prahalad, Bettis ,1986) used a dominant logic to refer to as the way in which managers conceptualize the business and make critical resource allocation decisions. Like wise, this kind of paradigm should occur in the mind of functional manager when they should contribute to strategic decision making, if it occurs to resources allocation or asset portfolio decision then it should also occur to other issues such as operational success and financial risks.

Executives in an organization would like to pursue their career by making best performances as they could. The paradigm works on their mind when making a decision; do they averse risks or challenge risks that impacting their career? It is a choice to make when making strategic decision. There are people who would like to achieve something with high care so performance results appear to be slow or with aggressiveness to grab opportunities so performance results expected to be outstanding.

Regardless the impact of decision to an executive's career, strategic decision to overcome problems is also approached with different paradigms. There are people who are less tolerant to risks so the choice is to make conservative approach in taking options for solution or who are highly tolerant to risks so they would like to make a shortcut in solving problems or to override procedural means.

In an upstream oil and gas company, this paradigm issue should also take place whenever strategic decision is to be made. Forces from different direction also influence strategic decision to make, apart from company's missions to carry on. In each context to solve problems, these paradigms may work differently and may relate to who supposed to share with decision process and to hold responsibilities. Lapindo case for example, to save cost over safety in a critical exploration activities might have been influenced by power paradigms because it seems that it did not allow technical expert to forward their functional agenda on safety. Overriding procedural means by ignoring risk calculation and measurement from technical and operational

perspective seemed to have caused the accident. Cost saving priority under the mindset of financial perspective had been suspiciously dominant in making strategic decision on the case. Mixing and integrating paradigms from other existing functional perspectives was missed in the case.

2.6. Company's Performances in Perception of The Management

In view of the impact of strategic decision, result to performance can be seen in a short term or in a longer term because there are cases where immediate result to performance can be vision such as yearly profit margin, assets increase, while longer term performance resulted from strategic decision can be seen on organizational capabilities, modernized technology uses, size of the company in term of assets, people, market capitalization, etc. In short, the impact is to the health and survival of the organization (Eisendhart, Zbaracki, 1992) and performances (Prescott 1986), and to the long term performance of the company (Frederickson, 1985).

Company's performance can be approached from different measurements but people always refer to how much money does a firm to make from its business endeavour for the shareholders who owned the company. This can be measured by the value of earning per share (EPS) which is reflected on the magnitude of the net profit made from business operation and other activities, from its profit margin that is useful to compare to industry average, from return of investment that is useful to measure effectiveness of fund invested. Actually, financial performances are the narrowest indicators of a firm's effectiveness, these include accounting based measures such as profitability ratios (Hamsal, 2006).

Apart from financial performance which commonly used as a measure of operational results of a business, non financial performances, are also significant factors to indicate company's performance. Firm performance is conceptualized in terms of financial performance or in terms of overall organizational effectiveness (Venkatraman, Ramanujan, 1986). Organizational effectiveness may be indicated by achievements in terms of successful tasks, reached target, reached objectives, etc either quantifiable or quality measurement. As an upstream oil and gas company, the

level and value of proved reserves assets and the growth rate of total assets from oil and gas business segment are likely sound indicators to show how big the size of the company in terms of oil and gas reserves it has, and also how good the company accumulates its assets base in performing its business from year to year.

In this study, non financial performances are discussed to indicate the results of strategic decision made thru asset portfolio management, operational success, and financial risks management in terms of perception of the strategic decision makers and supporting group to strategic decision makers. Non financial performances that discussed in this study are stock level of proved research, level of revenue resulted from lifting, level of capacity to operate exploration, development, production activities, and efficiency.

The definition of performance (Porter, Lawler, 1968) refers to perception which to the effect that performance is the end result of the application of effort. Porter and Lawler stated that one way of measuring actual performance is through self appraisal, which necessarily involves the perception of the individual regarding his role accomplishments. Performance achieved by an organization as the result of the effort of a group of people who participated in the activities should be sensed and seen by them. Their perceptions are used here to measure performances achieved by surveyed company.

CHAPTER III

CONCEPTUAL FRAMEWORK

3.1. Conceptual Models

The study of strategic decision should bring more contribution to strategic management especially when its view is coming from non competition aspect. In an industry deal with natural resources, where competition do not occupy at the product offering or value proposition, serious attention should be given to strengthen the resources that at last maximize value to the company. Hence, natural resources business always face with scarcity issues while market for its products usually has no problems such as oil, gas, coal, gold, tin, etc.

The main objective of this study is to examine the roles of strategic decision in its effects to performances of a company in relationship to assets portfolio, operational success, and financial risks issues in an upstream oil and gas company. Backgrounds in strategic decision making are associated with organizational structure dimension in shaping strategic decision, with executive paradigm dimension which prefer him to favor one or two choice(s), and with functional perspective from different roles of decision makers and responsibilities to be integrated.

The model shows that strategic decision is to deal with strategic issues such as assets portfolio, operational success, and financial risks that have impacts to company's performances. Strategic decision becomes more important when a company lives in condition of high risks and environment uncertainties because any poor decision will cause to relatively a lot of money lost.

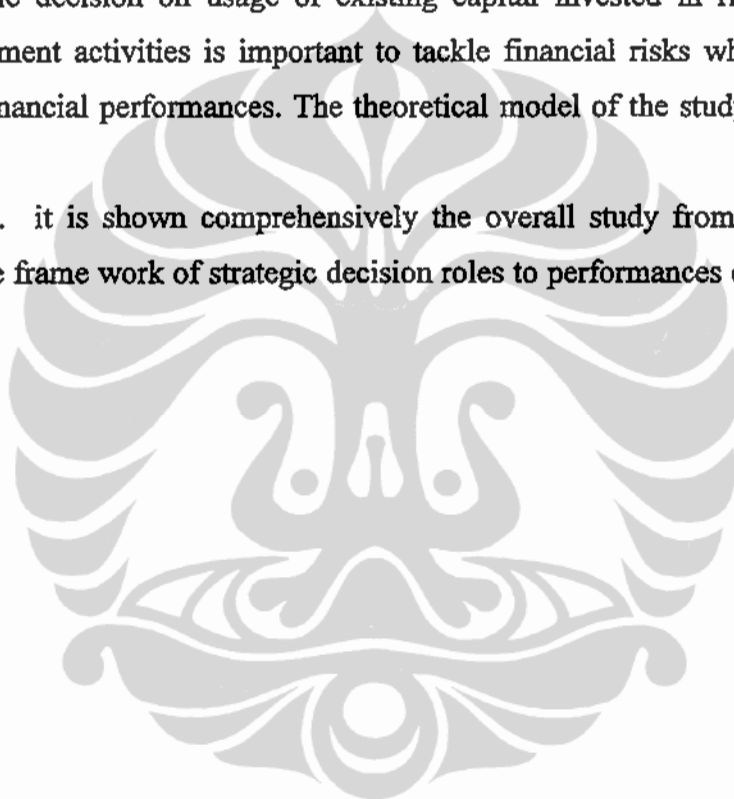
Assets portfolio issues is to deal with minimizing risks and maximizing returns from assets acquired and possessed on which strategic decision has to make the right choices on alternative actions. Good selection of assets with combination required to produce expected return form these assets portfolio, thus to contribute to the financial performances.

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Operational aspects of business such as exploration, development, production, and shipping have to be managed in high care because of the risks involved there. Success in operation by avoiding negligence, accidents, blowout, lost assets in hole, etc would contribute to the performances of a company within the industry.

Massive capital is required to do the business in this industry, so working on certain exploration activities need to share with other parties to reduce financial risks. Sharing activities on exploration project which is risky is one way to maintain financial health. Strategic decision on usage of existing capital invested in risky exploration and development activities is important to tackle financial risks which contribute to maintain financial performances. The theoretical model of the study is presented in figure 3.2.

From the Figure 3.1. it is shown comprehensively the overall study from all variables discussed in the frame work of strategic decision roles to performances of a company in the industry.



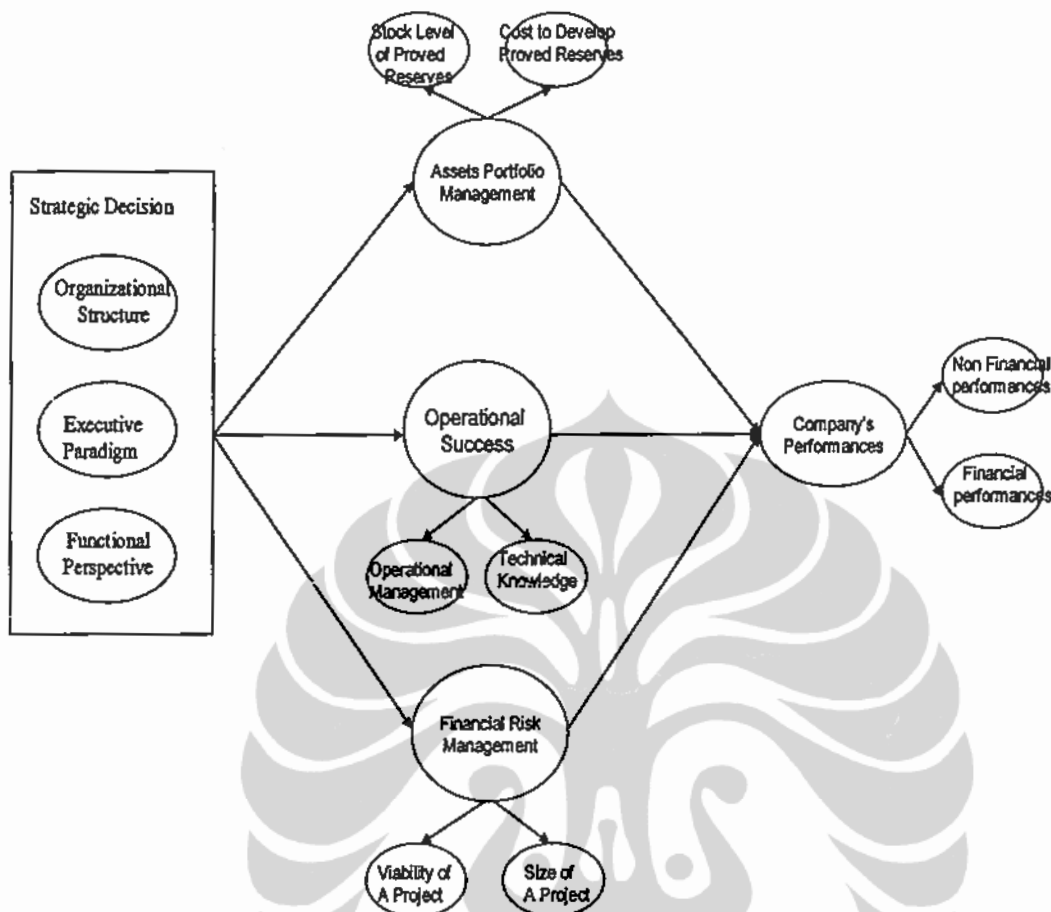


Figure 3.1. Theoretical model

What behind the strategic decision making are those that relate with organizational structure either from hierarchy and or from functional responsibilities, paradigms that influence executive minds, and functional perspective from financial, operational, and technical responsibilities that to be integrated among decision makers. This study constructs 5 latent variables which consist of “Organizational structures”, “Executive Paradigm”, “Functional Perspective” each is set as measured variable of Strategic Decision, “Asset Portfolio Management” is measured by stock level of proved reserves, “Operational success” is measured by operational

management and technical knowledge, “Financial Risk Management” is measured by viability of a project and size of a project, and “Company’s Performances” is measured by non financial performances and financial performances. Measurement variables used here are discussed in the following sections.

3.2. Hypothesis Development

Strategic decisions made effects on organizational health and survival (Eisenhardt, Zbaracki, 1992) which means that the decision made contribute to the performance reached. Strategic decision can be understood as decision on major issues made on the basis of selection of alternative actions to reach optimality.

How to reach optimality in decision is the challenge of decision makers that they should consider adequately alternatives to be enough for making important decisions which have impacts to the performance or future of the company. A number of things such as perspectives, ideas, methods, risks, costs that required to resolving problems need to bring to the table for discussions so decisions made already critically analyzed. In short, strategic decision making are influenced from dimensions of organizational structures, executive paradigm, and functional perspectives. The development of the hypotheses is organized by the relationship of pairs of constructs among the five constructs examined in this study.

3.3. Strategic Decision Has Dimension of Organizational Structure, Executive Paradigm, and Functional Perspective

Strategic decision is made within the context of organizational structure where the people in the organization identify outcomes including budgetary allocation (Greenwood, Hining, Ranson 1977). These people in the organization dealing with strategic decision are the executives or committee members who have to respond to the situation either on solving problems or on taking up opportunities may approach with rationality, bonded rationality, or garbage can paradigm (Eisanhardt, Zbaracki, 1992). The paradigm refers to thought pattern or dominant logic (Prahalad, Bettis, 1986) that influences the minds of decision makers in their decision makings. Assets

portfolio, operational success, financial risks issues within the responsibilities of decision makers in an oil and gas company are responded and decided with the paradigm they have. Another dimension that influences strategic decision is functional perspective of the decision makers in the organization. They tend to choose alternatives that they assume influences their performances. Different perspectives which occur in the strategic decision process must be integrated (Hitt, Tyler, 1991) which perspectives are different because of the functional responsibilities of each strategic decision makers.

3.3.1. Strategic Decision on Asset Portfolio Management

Assets portfolio management has been much used in managing different investments with related risks to attain the most possible scenario of risk combination on the investment portfolio. Like wise, assets portfolio in an oil and gas group companies, like MedcoEnergi, comprises of business units and oil and gas reserves and fields which are selected thru a decision process. Finding oil and gas reserves and developing them into commercial production contain highly risks which require careful decisions that should be generated from proper process.

An oil and gas company needs to maintain a portfolio of business and assets in order to sustain its business operation (Skaf,1999). Therefore a company in the industry should continue to reserve budget for capital expenditures needed to find new oil and gas field and to conduct exploration and development as an effort to secure oil and gas reserves for production. Exploration and development on oil and gas wells will keep going from one to another well until the last deposit in a well is lifted then it become dry holes. A dry hole well will be left behind and activities move to another fields within the portfolio. Therefore, to find and select oil and gas field for assets portfolio continuously is an important task in the strategic decision making. Many consideration is made in the strategic decision making process so the results are expected to achieve optimality.

Asset portfolio needs to be built over time in line with the production level expected. The level of the assets portfolio then will contribute to the level of

production and revenue which effects company's financial performances. In an effort to find and select oil and gas fields consideration must be given to the stock level of oil and gas proved reserves and to the cost of development of proved reserves into commercial production.

Oil and gas fields are searched before oil and gas reserves to be proved and stocked. To choose among alternatives of potential and quality oil and gas fields for finding proved reserves is a critical decision, so at this stage strategic decision must emerge to set planning with all the consequences for finding oil and gas proved reserves. Second consideration is given to overcome costs to develop oil and gas proved reserves which require a lot of money. Again strategic decision must emerge at this stage in order to secure capital employed spending for the results of development expected.

H1a: Strategic decision in which organizational structure dimension occurs in the process contributes positively to assets portfolio management.

H1b: Strategic decision in which executive paradigm dimension occurs in the process contributes positively to assets portfolio management.

H1c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to assets portfolio management.

3.3.2. Strategic Decision on Operational Success

Environment uncertainties have a great deal of influence to operate the activities on oil and gas fields. MedcoEnergi is exposed to operational risks at exploration, reserve estimate, and concentration of assets risks (MedcoEnergi's annual report of 2007). Failure to make sound decision on critical issues will result with a big loss because upstream oil and gas industry are highly exposed to operational risks such as safety, accidents, blowout, etc. Oil and gas fields which already have proved reserves still need to be explored and develop for Developed Producing Reserves that create

revenues but before that it absorbs a lot of money, effort, people, management and technical skills to realize it. The capital disbursed on exploration and development is always at risks if the outcomes do not reach target or commercial level.

In an upstream oil and gas industry, strategic decision not only occupy at a planning stage but also at implementation level because there are crucial factors to be faced in the operational issues. Successful implementation does not automatically achieve positive result: it must be managed (Anderson, Narasimhan, 1979). New problems may occur when the operation is on motion and because the problems are characterized with risks and uncertainties, then solutions have to be made through strategic decision process. Operational success has to be achieved along with the activities of the company's business that operated at any stage from one level to another level of company's growth and from start to finish of any project undertaken. An implementation effort is termed successful if the efforts lead to (i) transformation of decision response (i.e. different decisions, different procedures for making decisions), (ii) a greater understanding of the decision situation and concepts used, (iii) operational benefits such as higher pay offs, (iv) increased confidence and less time to make a particular decision. Thus, operational success is reached thru an implementation of efforts (Anderson, Narasimhan, 1979).

Because the character of the tasks, operational success issues occupy at the business unit or operational functions, however strategic decision may be set at corporate level that influence the work of operational function at whichever department within the organization it occurs.

To counter the operational risks, operational success is the key. To secure operational success from activity to another activity including sub-activities that supporting the overall activity must be monitored thru operational management. Every project or activity is designed and works are allocated through out the division, department, group unit within the internal organization and allocated to outsiders for outsourcing elements. Logistic requirement in the supply chain management is also contributing to the operational success. Where to buy, what quality, how much costs, how long is the time delivery and by what methods are issues in the logistics area.

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Strategic management should emerge when project and even regular activity before they commence operating. Planning on job distribution, logistic requirement, man power, requirement, etc dedicated to secure operational success should go under the strategic decision roles.

Operational issues in an upstream oil and gas industry deals with technical knowledge that necessary to use technologies, methods, equipments, instruments to carry on the operational tasks. Deep wells, offshore, remote area, odd locations are those characters that are faced by operational activities. Strategic decision must emerge to decide on critical issues or potential error that might jeopardize the operational success.

H2a: Strategic decision in which organizational structure dimension occurs in the process contributes positively to operational success.

H2b: Strategic decision in which executive paradigm dimension occurs in the process contributes positively to operational success.

H2c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to operational success.

3.3.3. Strategic Decision on Financial Risk Management

Risks of failure and large amount of money invested on exploration and development makes this upstream oil and gas business exposed to financial risks. Volatility of oil prices and capital requirements which have to be sourced from third parties contribute to financial risks exposure (Annual Report 2006 of Medcoenergi). Over the last five years since the 9/11 tragedy, oil prices tend to increase significantly and this makes revenue gets better however several cost components gone hike too which effecting the company's budget.

To avoid misleading in selecting projects to undertake, capital budgeting technique which uses NPV, IRR, and payback period method (Ross, Westerfield, Jordan, 1992) is employed in order to see the feasibility of a certain project before it

is process further to decide on which partner to go with (project structure), financial sources to get from, or technology requirements and costs to choose. Further after the viability of a project is reached other issues have to be settled such as financing, risks, and other resources that the company does not have in order to explore and develop the projects to bring growth to the business.

Sharing risks with another party is one way the procedure that is available in the industry which can be approached by a joint partner, a joint venture, a joint operation, strategic alliance, etc. Strategic decision will facilitate in choosing alternatives either on debt financing or equity financing or a partnership which aims at minimizing financial risks while operational success has also to be reached. The aims of financial risks management among those are reducing financing exposed on projects that absorbing capital owned and choosing the least risks from combined assets used in portfolio.

To start with an acquisition of asset portfolio, capital budgeting technique under the assumptions set can be used to measure the viability of a project either by purchasing of proved reserved or by self exploring a potential oil and gas field. Viability of a project may be also considered from several approached such as from location wise, from complexities of operational aspects and economics, from technology requirements, etc which can be decided through strategic decision which aims at how to secure financial risks.

A viable project may have different magnitude in size and in investment requirements. Larger size of a project enables economies of scale somehow it brings financial exposure on capital hired in the project. Larger project is potentially to make a better margin but on the other hand capital employed is so large to put at risks. Decision on such situation should also come out under strategic decision process which aims at sharing risks with another party (ies) such as joint venture, joint operation, sharing profit, strategic alliance, etc.

H3a: Strategic decision in which organizational structure dimension occurs in the process contributes positively to financial risks management.

H3b: Strategic decision in which executive paradigm dimension occurs in the process contributes positively to financial risks management.

H3c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to financial risks management.

3.4. Asset Portfolio Management on Company's Performances

Assets portfolio possessed which in terms of oil and gas proved reserves are assets needed to produce revenues. Revenue stream are generated from production lifted on oil and gas wells that are commercially developed. An oil and gas company needs to build stock levels of proved reserves over time and it goes higher to support higher level of revenue expected. As we have discussed earlier, the level of oil and gas proved reserves of MedcoEnergi assumes to have a positive relation to its level of revenues and of total assets – see Table 1.2. and Table 1.3. Strategic decision must get involved in the building of assets portfolio that is useful to make company's performances.

Combining proved reserves with different risks and different outcomes in stock is the main task of asset portfolio management in an oil and gas company (Skaf,1999) because it is necessary to keep face of the growth of an oil and gas company not only to achieve growth but to stay away from vulnerability. While growth performance of a company is achieved through implementation of its strategies, asset portfolio management makes sure that the growth achieved should be stable and sustainable but eventually the purpose of the tasks is to make contribution to performances.

H4: Asset portfolio management has positive effects to company's performances

3.5. Operational Success on Company's Performances

Securing and saving every step of the way in the oil and gas activities especially on exploration, development, and production activities are succeeding operational

success of the company. As operational risks are always exposed in the oil and gas activities it is therefore strategic decision should emerge not only in the planning stage but also in any critical situation that is considered to make serious impacts to company's performance like Lapindo case. Inadequate consideration to responds to problems that occur at operational level in an oil and gas activities may result with serious problems and big loss. Every step in the operational activities seems to have potential risks of accidents, incidents, blow out which can jeopardize human life, natural environment, and assets used in the operation. This discussion suggests that an oil and gas company must be careful and responsive to situation faced in every step of the operational activities. Operational success is the key to overcome operational risks. Operational success will make the contribution to the performance making. An implementation effort is termed successful if the efforts lead i.e. to operational benefits such as higher pay offs (Anderson, Narasimhan, 1979).

H5: Operational success has positive effects to company's performances.

3.6. Financial Risk Management on Company's Performances

Suppressing financial risks by way of project viability consideration and sharing financial exposure with third parties are techniques used in an oil and gas company to avoid from financial problems (Wall, 1995). Capital balance is not entirely used to explore and develop probable and proved reserves on a single project to avoid total failure. Spreading financial resources to build assets portfolio and to develop proved reserves is a technique used to reduce financial exposure to a single or a few project (s). In case one project fails another one may be succeed with good results.

Traditional capital budgeting theory is inadequate model for incorporating the strategic issues managers are concerned with into the capital allocation process (Walls, 1995). Sharing projects with third parties is used to cover lacks of financial and non financial abilities, so strategic decision should emerge in partner selection issues such as what partner's criteria is suitable to go with, what kind of capabilities that are expected from a partner (s), etc. Markowitz model (1952) emphasized that investment is characterized by higher risks high return and lower risk lower return

relationship. Higher risks may come in the forms of financial exposure, complexities, skill or expertise requirements, etc. when an oil and gas company lacks of ability to handle financial exposure, complexities, and skill or expertise requirements to work on a high return project, it is wise to share the project with third party (ies). By having third party (ies) who can contribute to handle issues that an oil and gas company can not afford to will help secure the success the exploration and development of a viable project. Financial risk management in this case has functioned to suppress risk by selecting viable projects and reducing financial exposure on single projects. Thus, assets portfolio management may have kept face of the proved reserves asset building on one hand while financial risk management may have suppressed risks associated in the projects to be undertaken by careful project selection on the other hand. Overall the financial risk management tasks should support to company's performances with controllable risks.

Reducing financial exposure on single projects and spreading business risks with number of projects is an important task of financial risk management in MedcoEnergi in order to achieve healthy growth and steady performances of the company, so financial risk management will contribute to stabilize and sustain the company's performances. Within the high risks and uncertainties, financial risk management should contribute to company's performances especially in a longer term.

H6: Financial risks management has positive effects to company's performances.

3.7. Hypotheses summary

In order to see overall hypotheses in this study, twelve hypotheses are developed and summarized as presented in Table 3.1. and also can be seen in the construct as pictured in Figure 4.2. of the research model in Chapter IV.

The proposed hypotheses to be tested are summarized as follows.

Table 3.1 Hypotheses summary

H1a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to assets portfolio management.
H1b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to assets portfolio management.
H1c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to assets portfolio management.
H2a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to operational success.
H2b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to operational success.
H2c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to operational success.
H3a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to financial risks management.
H3b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to financial risks management.
H3c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to financial risks management.
H4	Assets portfolio management has positive effects to company's performances.
H5	Operational success has positive effects to company's performances.
H6	Financial risks management has positive effects to company's performances.

Sources: researcher

CHAPTER IV

RESEARCH METHODOLOGY

4.1. Research Design and Model

This study is a cross functional research among strategic decision makers in an upstream oil and gas company "MedcoEnergi". The industry on which the company involves is characterized by high risks in exploring and developing activities because massive capital employed in the business and by environment uncertainties in finding proved reserves that required producing oil and gas products.

MedcoEnergi is a holding company which has four (4) business segments consist of upstream oil and gas exploration and development, downstream oil and gas, power generation, and drilling services. This study focuses on strategic decision roles on assets portfolio, operational success, and financial risks issues which occupy at MedcoEnergi in the holding level and at MEPI as the sub-holding level that manages the oil and gas exploration and development business segment.

In the survey of this study, subjective measures of strategic decision, assets portfolio, operational success, and financial risks are collected from the executives and committee members who deal with strategic issues from the holding and sub-holding level relevant with the issues. Questionnaires survey is submitted through corporate secretary of the company who channels them to respondent members and in addition to it interviews are also conducted to certain member for issues needing clarifications.

This is a quantitative research conducted by using survey method. This research is categorized as associative research and is not experimental with the objectives to explain the roles of strategic decision, from dimensions of organizational structure, functional perspective , and executive paradigm, in relation to asset portfolio, operational success, and financial risk issues which have impacts to company's performances. The study is performed with several stages as can be seen in Figure 4.1.

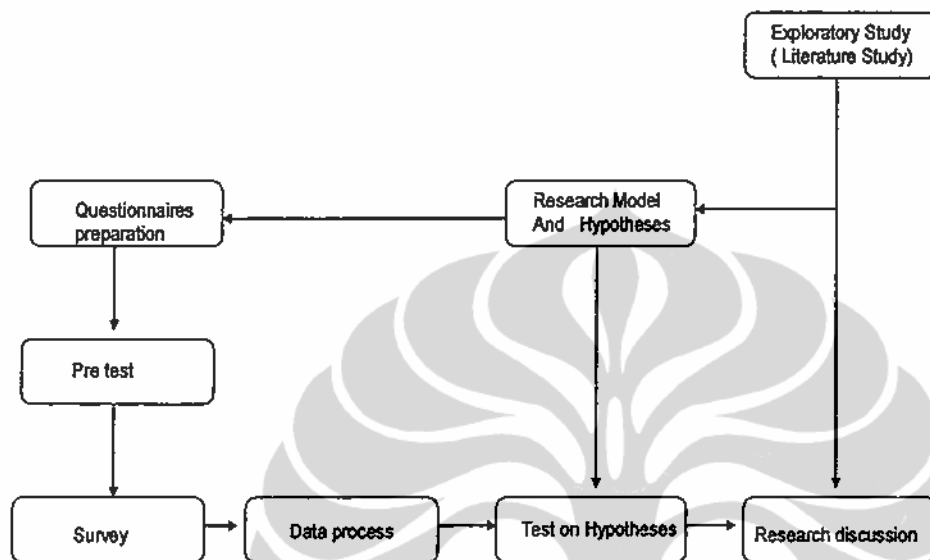


Figure 4.1 Research Methodology
Sources: researcher

The research model which already discussed in previous chapter is presented in Figure 4.1. with more detail showing the relationship within and between latent variables and measured variables. This research model is going to be used as a basis for Analytical Method.

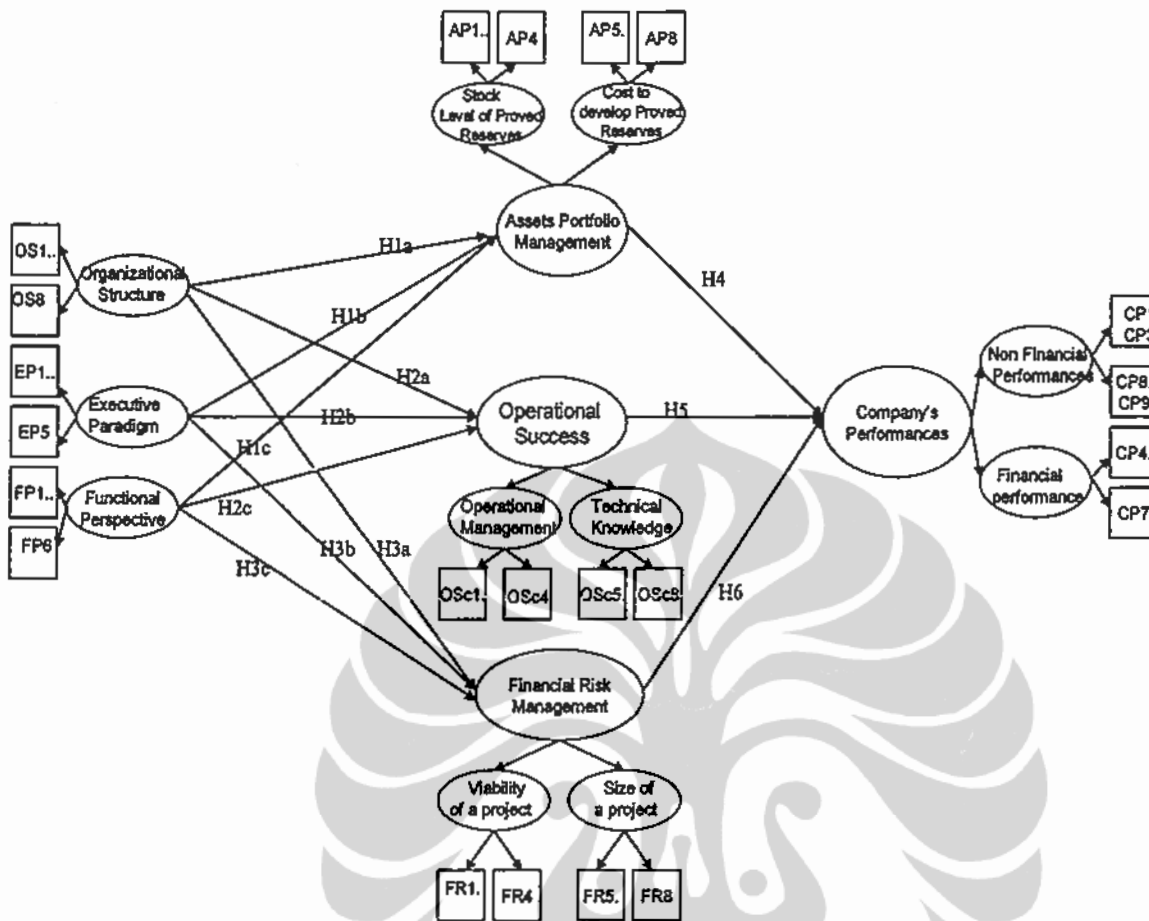


Figure 4.2. Research Model

4.2. Operational Definition of Variables

In this study, multi items scales are used to collect data on most of the key construct. Simple scoring is sought by using a balanced six point Lykert type scale to make it easier to operate and understand. Each respondent is asked in the questionnaires to indicate the extent to which he/she disagreed or agreed with the given statements. For example, answers that select # 1 means strongly disagree and #6 means strongly agree.

All latent variables that contained in the independent variables; "organizational structure", "functional perspective", and "executive paradigm" as dimensions of strategic decision in the dependent variables "assets portfolio management",

Table 4.1. Operational Definition of Variables

Variable	Definition	Operationalization	Support in the Literature
Strategic decision	Decision that has dimensions of organizational structure, executive paradigm, and functional perspective.	19 items asking executives in holding and sub-holding level and committee members to agree or disagree to strategic decision process which made from dimension of their organizational structure, their paradigm, and their functional perspectives; - 8 items for organizational structure - 5 items for executive paradigm - 6 items for functional perspective	Greenwood, Hining, Ranson (1977), (Huber, McDaniel, 1986) Hitt, Tyler (1991), Eisendhart, Zbaracky (1992), Jones (2007)
Assets portfolio	Collection of oil and gas proved reserves	A eight items asking executives at holding and sub-holding level and committee members to agree or disagree to stock level of proved reserves and to cost of development of proved reserves; - 4 items for stock level of proved reserves - 4 items for cost to develop proved reserves.	Skaf (1999), Walls (1995)
Operational success	Successful rates of exploration, development, production operations	A eight items asking executives at sub-holding level to agree or disagree to the ability of operational management and to technical knowledge possessed to operate; - 4 items for operational management - 4 items for technical knowledge	Anderson, Narasihman (1979),
Financial risks	Risks on capital employed in the oil and gas exploration and development	A eight items asking executives at holding and sub-holding level and committee members to agree or disagree to the viability of a project and to the size of project value in handling financial risks issues; - 4 items for viability of a project - 4 items for size of a project	Ross, Westerfield, Jordan (1992), Markowitz (1952). Walls, 1995,
Company's performances	Current and longer time strategic and financial performances	A nine items asking executives at holding and sub-holding level to agree or disagree to the contribution of assets portfolio, operational success, financial risks to ROA, profit margin, assets, etc and non financial measures of the company. - 6 items for non financial performances - 3 items for financial performances.	Walls (1995), Anderson, Narasihman (1979), Eisendhart, Zbaracki (1992), Prescott (1986).

Sources: researcher

“operational success”, “financial risk management”, and company’s performances” are all measured by using the above multi items scales. The conceptual model presented in Figure 3.1 suggests that by performing strategic decision from dimensions of organizational structure, functional perspective, and executive paradigm on assets portfolio, operational success, financial risks should contribute to company’s performances. Table 4.1. presents operational variables that are used to define strategic decision dimensions from (“organizational structure”, “functional perspective”, “executive paradigm”) , “assets portfolio”, operational issues”, “financial risks”, and “company’s performances” in the constructs model.

4.3. Research Instrument and Data Collection Method

Data used to test the hypothesis is generated from survey data conducted to an upstream oil and gas company “MedcoEnergi Group”. The survey was implemented by using closed ended questionnaires to measure the construct designed.

4.3.1. Questionnaires Design

The questionnaire was developed on the basis of previously established scales to measure the study constructs. The initial draft of the survey was reviewed by a faculty before questionnaires was submitted to respondents.

The survey research instrument was developed based on operationalization of the constructs. The questionnaires designed is forwarded to respondents in order to measure “Strategic Decision” from dimension of “Organizational Structure” , “Executive Paradigm”, “Functional Perspective”, to measure “Asset Portfolio Management” from dimension of “Stock Level of Proved Reserves” and “Cost to develop Proved Reserves”, to measure “Operational Success” from dimension of “Operational Management”, “Technical Knowledge”, to measure “Financial Risks Management” from dimension of “Viability of a Project” and “Size of a Project”, and to measure “Company’s Performances” in perception of management from dimension of “Non Financial Performances and “Financial Performances”. Respondents are asked to answer questions by picking a choice between 1 to 6 ratings on a Lykert

scale. The questionnaires design is divided into two parts as can be seen in the followings.

1. Part I is demographic questionnaires. This part accumulates information regarding subjective profiles of the respondents such as gender, age, education background, job level, job unit, years in company, and experiences.
2. Part II is overall questionnaires. This part accumulates information regarding subjective opinion of respondents regarding strategic decision behind the organizational structures, executive paradigm, functional perspective, asset portfolio management, operational success, financial risk management, and company's performances.

Questionnaires are constructed from related theories developed here and also adapted from samples used in the existing researches that used for measuring variables in the construct. As explained in previous section each measure variable consist of at least 4 statements (items) to be answered by respondents on a Lykert scale.

4.3.1.1. Questionnaires on Strategic Decision.

Table 4.2. Questionnaires on Strategic Decision

Organizational Structure dimension

OS1	In our organization every one is responsible for the consequences of decisions made at the degree of their position
OS2	A decision made has to be responsible for from the perspective of their functions
OS3	The people in our organization are being checked at any time for rules or procedures violation.
OS4	Any thing unusual arisen from an activity must be put in a report
OS5	Each department in our organization are given adequate authority to carry on their duties
OS6	I have to question and analyze activities beyond plan and budget
OS7	When I anticipate there will be a serious problem that risk my department's or company's objective, I must have analysis and report provided for further actions
OS8	Each project is headed and supported from all functions required through a coordination mechanism

Executive Paradigm

EP1	I do not want to carry out a program without being adequately planned
EP2	When the company makes big efforts to seek out new opportunities I am available to support
EP3	I support if our company considers investing a large amount of money in a project with high potential return.
EP4	Our company solves problems by having a partnership (either joint venture, joint operation, strategic alliance) on projects requiring larger money and higher risks
EP5	Our company put priority on safety and security over the profit.

Functional Perspective

FP1	Any project should be technically planned before it is started
FP2	Equipment, personnel, method used should be fit to carry on operational activities
FP3	Specific training for specific tasks are required to implement a project
FP4	All components and equipments to be used on any project have to be provided and ready before it comments
FP5	Any project to be undertaken should be analyzed for its cost benefit viability
FP6	Any project to be undertaken should be approved from budget and technical viability

Sources: researcher

Questionnaires on strategic decision are divided into 3 (three) measurement variables each with several items; organizational structure with 8 items OS1 to OS8, executive paradigm with 5 items EP1 to EP5, functional perspective with six items FP1 to FP6. Questionnaires on organizational structure is tailored to measure organizational that are constructed from aspects of mechanism, disciplines, authority, procedures, consequences, budget, coordination and participation of functions, which all these are taking place in a formalized business organization. A formalized business organization is normally set up with a number of formalities; systems and procedures, delegation of authority, disciplines, distribution of work and coordination, budget, etc (Minzberg, Lampel, Quinn, Ghosal, 1996). Formalization refers to the extent to which firm policies, job descriptions, organization charts, plans,

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and objective-setting are articulated explicitly, usually thru written communications (Wally, Baum, 1994). Questionnaires on executive paradigm is tailored to measure dominant logic or preferences in response to situation being faced by a company in topics of technical , financial, and operational aspects. As it mentioned (Frederickson,1985), executives respond differently between on problems and opportunities. Questionnaires on functional perspective is tailored to measure how executives response to see company's agenda from their responsibilities and position in the organization. Executive who has different responsibilities may see things with different perspective on same objects that is why integration of perspective is required (Hitt, Tyler,1991). In a formalized business organization, at least three main responsibilities exist in an organization which are technical, operational, and financial function.

4.3.1.2. Questionnaires on Asset Portfolio Management

Table 4.3. Questionnaires on Asset Portfolio Management

AP1	Oil and gas proved reserves are better acquired from third party rather than self explored to accumulate stocks for securing oil and gas productions
AP2	Various degree of deposits in proved reserves exist , so combined proved reserves assets are needed to support production level
AP3	The level of production are associated with the level of oil and gas proved reserves
AP4	The company keeps searching oil and gas fields in order to support level of proved reserves.
AP5	Budget has to be set prior to exploration, development, production
AP6	Planning and budget have to be set before spending to develop or undevelop proved reserves
AP7	Uncertainties always occur in exploring and developing proved reserves, so I agree that capital disbursed should be sharing with another party (ies)
AP8	Adequate capital should be always ready to pursue new opportunities, so additional capital for exploring and developing proved reserves can be shared with another party (ies)

Sources: researcher

Questionnaires on asset portfolio management is tailored to measure efforts needed to build stocks of proved reserves by items AP1 to AP4 and to measure

approach and availability of the company to finance exploration, development, and production for keeping up the production level by items AP5 to AP6. Proved reserves in portfolio have interrelationship to support production level because of their different deposits and character, so stock level of the proved reserves is major agenda to support production level (Skaf,1999). Since costs of exploration, development, and production are that high, so decisions on these activities are related with the benefit expected from cash disbursed and or capital expenditures and with the utilization of existing fund used among projects in an efficient way to achieve performance targeted (Walls, 1995).

4.3.1.3. Questionnaires on Operational Success

Table 4.4. Questionnaires on Operational success

Osc1	It requires to succeed all operational activities because of the operational risks exposure
Osc2	Project management technique is significantly important to manage operational activities for coordinating, time scheduling, monitoring
Osc3	It requires managerial skill to coordinate all functions and equipments used to succeed operational activities in exploration , development, and production at all time
Osc4	Operational activities need to be alert on risks of accidents, incidents, blow out, odd experiences, etc. at all time and management meetings takes place when one of them occurs.
Osc5	Knowledge is important to master technology equipments, methods used to run operational activities in exploration, development, production
Osc6	It requires specific skills to each type of operational activities in exploration, development, production that contribute to operational success
Osc7	Specific training for personnel is required to master operational activities in exploration, development, production to counter operational failures
Osc8	A project design is technically analyzed before operational activities to commence.

Sources: researcher

Questionnaires on operational success is tailored to measure approach and technical capability (items Osc1 to Osc4) which required to run the operation

successfully, and to measure knowledge and skills possessed (items OSc5 to OSc8) which required to guide, overcome, and to solve problems on projects undertaken. Operational activities should be managed by team of people with technical skill whom already equipped with knowledge and trained with specific knowledge on specific tasks. Projects have been managed as technical systems instead of behavioral systems. The focus was concentrated on the results with a mechanistic approach (Belout,1998).

In summary, questionnaires on organizational structure, functional perspective, and executive paradigm are constructed as such to build elements that can shape strategic decision from responsibilities, procedures, authority, analysis requirements, mechanism in an organization that influence to make strategic decisions, and from pattern, preferences, tendency in response to situation by paradigm that lead to make strategic decisions, and from financial, operational, technical aspects which are to be accounted for by functional responsibilities in making strategic decisions.

4.3.1.4. Questionnaires on Financial Risk Management

Questionnaires on financial risk management is tailored to measure viability of a project from project identification, cost benefit analysis, capital budgeting techniques, and consideration to develop or undevelop approaches by items FR1 to FR4 and to measure size of a project undertaken from size of financing needs, financing methods on large size projects, allocation of capital, and participation of third parties approaches by items FR5 to FR8.

Viability of a project has been normally measured by capital budgeting methods such as net present value (NPV), internal rate of return (IRR), and pay back period that are used to measure risk before a project further evaluated (Van Horne, Wachowich Jr, 1995). It is common practice among large firms to employ a discounted cash flow technique such as IRR or NPV along with payback period or average accounting return. It is suggested that this is one way to resolve the considerable uncertainty over future events that surrounds estimating the NPV.

Table 4.5. Questionnaires on Financial Risk Management

FR1	Exploration and development activities to realize proved reserves are exposed to uncertainties
FR2	Each exploration, development , production activities are analyzed to its cost benefit rationale before they are decided to go or no go
FR3	Viability of a project in exploration and development is measured either from NPV, IRR, and payback period methods
FR4	Costs to develop or undevelop proved reserves are considered from level and source of financing after viability is reached
FR5	Substantial financing required for exploration and development is actually put at risk
FR6	In order to solve financing requirements for exploration, development, production activities the company should be open for third party (ies) participant (s).
FR7	The company allocates its financial resources to build pool of proven reserves in order to secure stocks of asset portfolio and searches additional financing for exploration and development activities
FR8	By sharing investment with third party (ies) will reduce financial exposure to projects undertaken.

Sources: researcher

A risk is getting exposed when the financial disbursed on a single project is large or relatively large, so sharing a large project with a party (ies) is necessary to reduce financial exposure on a single project.

4.3.1.5. Questionnaires on Company's Performances

Questionnaires on company's performances is tailored to measure non financial performances achieved by the company contributed from asset portfolio management, operational success, financial risk management by items CP1 to CP6 and to measure financial performances contributed from asset portfolio management, operational success, financial risk management by items CP7 to CP9. Performances of a company have been normally measured from perspective of non financial and financial measurements.

Table 4.6. Questionnaires on Company's Performances

CP1	Assets portfolio management has contributed to build quality and quantity of proved reserves for production level
CP2	Projects at implementation that are exposed to operational risks have been secured by operational success
CP3	Financial risk management has contributed to reduce financial exposure on single project
CP4	Assets portfolio management has contributed to generate revenue levels on combined different risk of proved reserves.
CP5	Financial risk management has contributed to strategize the level of exploration, development, and production activities
CP6	Operational success has contributed to implement projects undertaken and to build capacity level.
CP7	Operational success has contributed to suppress unnecessary costs for exploration, development, production
CP8	Financial risk management has contributed to support profit margin and return on assets making
CP9	Assets portfolio management has contributed to support profit margin and asset growth

Sources: researcher

. Non financial performances may consist of several items such as in terms of operational results, organizational capabilities, etc. while financial performances are obviously referred to around financial ratios, EPS, etc.

4.3.2. Sampling and Profiles

The sampling frame for this study comprised of strategic decision makers and strategic decision support group from management level on existing functional units in MedcoEnergi group where they occupy at holding and sub-holding level either as executive or committee members, dealing with assets portfolio, operational success, or financial risks. In order to test the proposed conceptual model and hypotheses, this research design identifies the respondents as "supervisors", "managers", "vice president/division head", "directors", "commissioners/committee members" those from existing functional positions. These respondents occupy at corporate and business level, at different position in organizational structures, at different functional

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positions, at different responsibilities aspect. The expected examples are 55 respondents altogether.

4.4. Methods of Data Analysis

Data collected are converted into a format that can be used to inform the research problems, hence data are prepared and analyzed. Data preparation is the process of extracting data from questionnaires so they can be read and manipulated by computer software. During preparation the data are validated, edited, coded, entered and cleaned (Hair et al., 2006).

In this study, data collected is processed with Lisrel Student version 8.8 software to observe the measurement model by confirmatory factor analysis and secondly to observe the structural model by multiple regression analysis. Exploratory factor analysis is necessary to reduce measurement error (Hair et al., 2006) before going to multiple regression analysis.

4.4.1. Confirmatory Factor Analysis

One of the weaknesses of multiple regression is that it can only represent single relationship between dependent and independent variable instead of multiple relationship (Hair et al 2006) within the construct, therefore it is suggested (Hair et al 2006) to use Structural Equation Model or SEM to predict the multiple relationship of the variables.

Based on this research model, SEM procedures apply two step approaches (Anderson, Gerbing, 1988). The first step is taken to re-specify a hybrid model to become a Confirmatory Factory Analysis (CFA) model whereby the measurement component of the hybrid model is specified. Further, the CFA model is analyzed to test its goodness of fit with data. In this first step, before going to second steps the analysis must make sure that CFA model has goodness of fit, good validity, and good reliability with the data. Flow chart of SEM procedures can be seen as per Table 4.2.

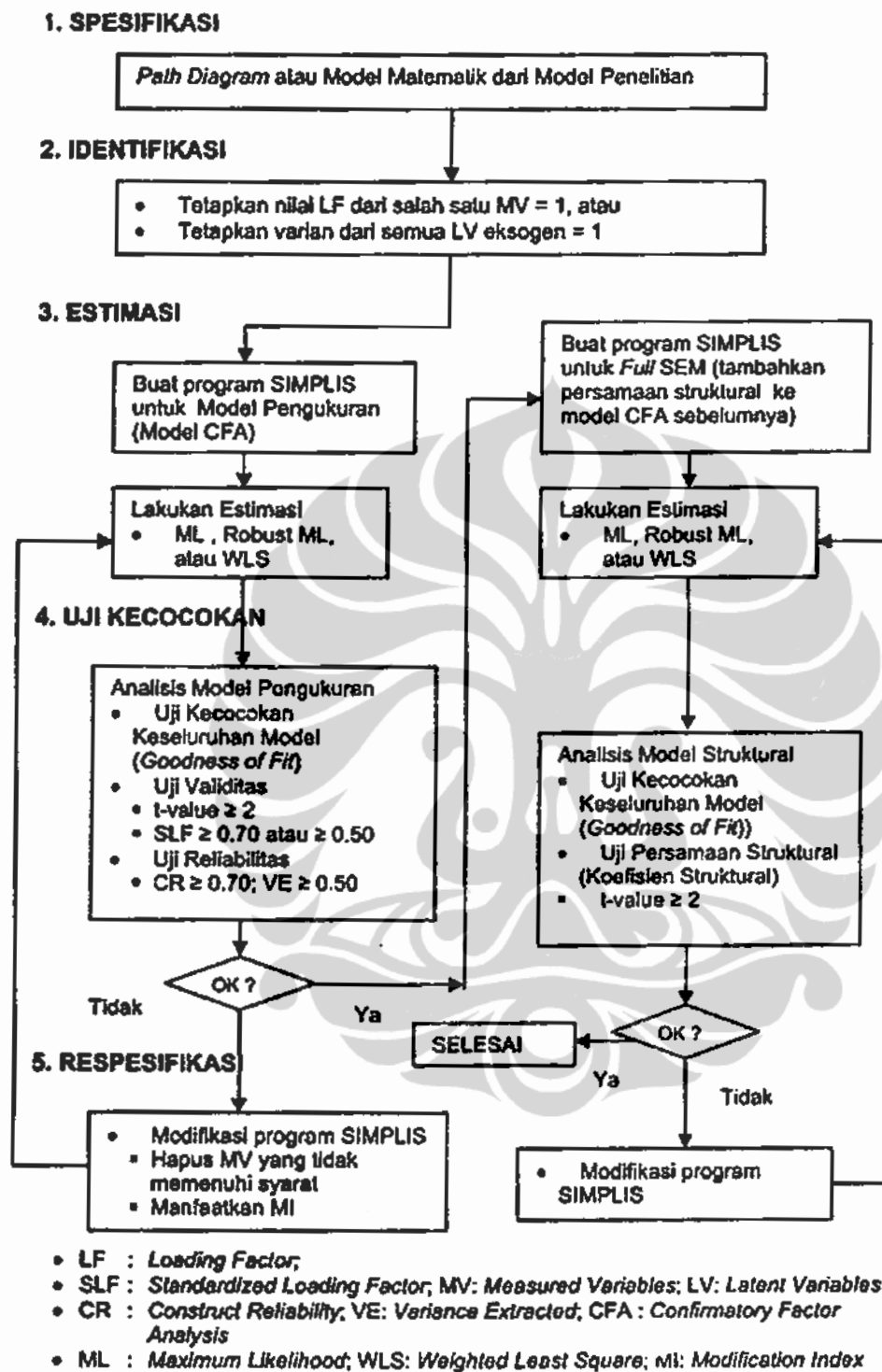


Figure 4.2. Flow chart of SEM procedures

Source: Wijanto 2008

Structural Equation Modeling (SEM), which is sometimes called LISREL or confirmatory factor analysis (CFA), is an appropriate statistical technique for this study because the construct developed in this study contains multiple regressions. An SEM is a multivariate technique combining aspects of multiple regression and factor analysis to estimate a series of separate, but interdependent equations simultaneously with statistical efficiency (Hair et al., 2006). Many problems associated with confirmatory factor analysis and SEM in general, including identification and convergence problems, results from two resources: insufficient sample size and insufficient number of indicator variables per construct, Hair et al (2006) recommended that an adequate sample based on the model conditions is used and that every construct is measured by at least three or four items. At least four items were used to measure every construct in this study.

Strategic Decision, Asset Portfolio Management, Operational Success, Financial Risk Management, and Company's Performances with a variety of dimensions have been considered as closely linked but different from one another in the previous chapters. The measurement of constructs and the hypothesized relationships among constructs were examined by using SEM.

The major focus of the technique in SEM is "the fit of the model," which estimates the degree of correspondence between the specified relationships and those indicated by the data. The pattern of relationships stated in the specified model is compared to the pattern of relationships expressed by the data (Hair et al., 2006). Model fit in structural equation modeling helps to assess the adequacy of measured constructs and their relationships precisely and to yield a thorough understanding of the data (Hughes, Price, & Marrs, 1986). Goodness-of-fit indices can be used to indicate the fit of the measurement and construct.

Structural model through a chi-square, a normed chi-square (chi-square/df), a Root Mean Square Error of Approximation (RMSEA), a Normed Fit Index (NFI), a Non-normed Fit Index (NNFI), a Comparative Fit Index (CFI), and a Goodness-of-fit Index (GFI) (Hair et al., 2006) is applied.

An SEM has a two-stage procedure (Wijanto, 2008).

- a. Analysis and examination of measured model. This analysis and examination is made to see the relationship among the latent variables.
- b. Analysis and examination of structural model. This analysis and examination is made to see the relationship between and among the latent variables and its measured variables which made under the factor analysis model.

4.4.2. SEM Procedures

SEM procedures in general will cover five (5) stages (Bollen and Long, 1993) which can be explained in the followings (Wijanto, 2008).

4.4.2.1. Model specification

This model specification set up consists of measurement model specification and structural model specification as required for SEM procedure. Measurement model specification is set up by defining latent variables, measured variables, and relationship between latent variables with measured variables. Structural model specification is set up by defining causal relationship among latent variables.

4.4.2.2. Identification

Identification of mathematical model equation in SEM procedure is necessary in order to secure specified model. The equation may fall under three categories which are under-identified, just-identified, over-identified. The purpose to reach specified model is to avoid under specified or unidentified model, because under or unidentified model is the model which has estimated parameter number is greater than known data.

4.4.2.3. Estimation

Estimation is needed on each parameter used which specified in the model shaping the matrix $\epsilon(0)$ as such that the value of the parameter is closed enough with the value in the matrix S (matrix covariant and measured variables). In this research,

estimation is made by using Maximum Likelihood (ML) method. If quantity of data obtained is greater then Weighted Least Square method can be used.

4.4.2.4. Goodness of fit Test

Test on goodness of fit is necessary to run in SEM procedure in order to evaluate degree of fitness or goodness of fit between data collected with the model, validity and reliability of measurement model, and coefficients significance of structural model. Hair et al (1998) mentioned that evaluation to test of goodness of fit is approached by several stages which are (Wijanto, 2008);

1. Overall model fit
2. Measurement model fit
3. Structural model fit

It needs to go through a sequence in performing the goodness of fit test of these models.

4.4.2.5. Re-specification

As goodness of fit test already performed, re-specification of model is further required to reach the most suitable model for data obtained. Re-specification of model depends on modeling strategies which can go by three alternatives;

1. Confirmatory modeling strategy (Hair et al 1998) or strictly confirmatory/SC which go by preparing one single model and then empirical data is tested to the model to know its significance.
2. Competing modeling strategy or alternative/competing models/AM which go by preparing several modeling and then empirical data is tested to the most suitable model.
3. Model development strategy or model generating strategy which goes by development stages whereby a model is changed until a most suitable one is reached by doing the test of empirical data to the model developed.

The approach that performed in this study is rather closer to confirmatory modeling strategy whereby only one model is prepared but it is confirmed after the

model is run. The empirical data was tested to the model set up and the facts are reported in chapter V.

4.4.3. Goodness of Fit Indices

The minimum sample size for a particular SEM model depends on several factors, including the model complexity and communalities (average variance extracted among items) in each factor. SEM model containing five or fewer construct, each with more than three items, and high item communalities (0.6 or higher) can be adequately estimated with samples as small as 100 to 150. when the number of factors is larger than six, some of which have fewer than three measured items as indicators, and multiple low communalities (variance extracted) are present, sample size requirements may exceed 500 (Hair et al:2006). However, Wijanto (2008) suggests that one variable in a construct may be adequately estimated by 5 respondents. This study adopts this approach where 11 variables in the construct of research model as seen in Table 4.2. being "Organizational Structures", "Executive Paradigm", Functional Perspective" (Strategic decision dimensions), "Level of Stock of Proved Reserves", Cost to Develop of Proved Reserves" (Asset Portfolio Management), "Operational Management" (Operational Success), "Viability of Risk of a Project", "Size of a Project"(Financial Risk Management), "Non Financial Performances", "Financial Performances" (Company's Performances) were estimated by 55 respondents, that is why the researcher collected respondents under the sample criteria until 55 people from the organization being surveyed.

A SEM model is estimated to provide an empirical measure of the relationship among variables and constructs represented by the measurement theory. Model fits well when the predicted covariance matrix becomes similar to the actual covariance matrix computed from the raw data. Multiple fits statistics should be reported to help understand how well a model truly fits. These include χ^2 goodness-of-fit statistic and degrees of freedom. Joreskog Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), and the Non Normed Fit Index (NNI) are among others. One of those indices should also be a badness-of-fit indices like the RMSEA.

(Root Mean Square Error of Approximation). Table 4.7. shows measurement of good fit indices that can be generated from SEM process, somehow those indices are not wholly used in this study.

Table 4.7. Measurement of *Goodness of Fit* (GOF) Indices

UKURUAN GOF	TINGKAT KECOCOKAN YANG BISA DITERIMA
ABSOLUTE-FIT MEASURES	
Statistic Chi-square (χ^2)	Mengikuti uji statistik yang berkaitan dengan persyaratan signifikan. <i>Semakin kecil semakin baik.</i>
Non-Centrality Parameter (NCP)	Dinyatakan dalam bentuk spesifikasi ulang dari Chi-square. <i>Penilaian didasarkan atas perbandingan dengan model lain. Semakin kecil semakin baik.</i>
Scaled NCP (SNCP)	NCP yang dinyatakan dalam bentuk rata-rata perbedaan setiap observasi dalam rangka <i>perbandingan antar model. Semakin kecil semakin baik.</i>
Goodness-of-Fit Index (GFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. GFI > 0.90 adalah good-fit, sedang 0.80 < GFI < 0.90 adalah marginal fit.
Root Mean Square Residual (RMSR)	Residual rata-rata antara matrix (korelasi atau kovarian) teramati dan hasil estimasi. RMSR < 0.05 adalah good fit.
Root Mean Square Error of Approximation (RMSEA)	Rata-rata perbedaan per degree of freedom yang diharapkan terjadi dalam populasi dan bukan dalam sampel. RMSEA < 0.08 adalah goodfit, sedang RMSEA < 0.05 adalah close fit.
Expected Cross-Validation Index (ECVI)	GOF yang diharapkan pada sampel yang lain dengan ukuran sama. Penilaian didasarkan atas perbandingan antar model. <i>Semakin kecil semakin baik.</i>
INCREMENTAL FIT MEASURES	
Tucker-Lewis Index atau Non-Normed Fit Index (TLI atau NNFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. TLI > 0.90 adalah good-fit, sedang 0.80 < TLI < 0.90 adalah marginal fit.
Normed Fit Index (NFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. NFI > 0.90 adalah good-fit, sedang 0.80 < NFI < 0.90 adalah marginal fit.
Adjusted Goodness of Fit Index (AGFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. AGFI > 0.90 adalah good-fit, sedang 0.80 < AGFI < 0.90 adalah marginal fit.
Relative Fit Index (RFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. RFI > 0.90 adalah good-fit, sedang 0.80 < RFI < 0.90 adalah marginal fit.
Incremental Fit Index (IFI)	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. IFI > 0.90 adalah good-fit, sedang 0.80 < IFI < 0.90 adalah marginal fit.
Comparative Fit Index	Nilai berkisar antara 0-1, dengan nilai lebih tinggi adalah lebih baik. CFI > 0.90 adalah good-fit, sedang 0.80 < CFI < 0.90 adalah marginal fit.
PARSIMONIOUS FIT MEASURES	
Parsimonious Goodness of Fit (PGFI)	Spesifikasi ulang dari GFI, dimana nilai lebih tinggi menunjukkan parsimoni yang lebih besar. Ukuran ini digunakan untuk perbandingan diantara model-model.

Sources : Wijanto 2008

CHAPTER V

DATA ANALYSIS AND RESULTS

5.1. Sample Description

In order to fulfill SEM procedures in this study where it is one measured variable requires 5 respondents (Wijanto, 2008), MedcoEnergi group have been given questionnaires to people under sample category. Survey had reached 55 people who have participated by returning completed questionnaires. Subjective measures of Strategic Decision, Asset Portfolio Management, Operational Success, and Financial Risk Management were collected from supervisory levels up to director including commissioners who were selected by criteria that suitable either to contribute strategic decision or to support the makings of strategic decision.

5.2. Sample Profiles

Qualifying the respondent is based on the assumption that they occupy at strategic position in the organization who can contribute and support to the makings of strategic decision. Respondents in this study were profiled from perspective of gender, age, education, years in company, and their working experiences.

5.2.1. Gender

The sample was primarily male (74.5%) as provided in the table 5.1. below. Including in the female respondents were people with high rank position in the organization being surveyed such as director and commissioner.

Table 5.1. Profile of Respondent's Gender

	Description	Frequency	Percentage
<u>1</u>	Male	41	74.5%
<u>2</u>	Female	14	25.5%
	Total	55	100%

Source: questionnaires

5.2.2. Age

Majority of respondents were in the age of over 50 years old (43%) and between 40 to 49 years old (36%) representing seniority of people who occupy job positions. The category of age profile was set up prorata firstly those with age below 30 years old, secondly those with age between 30 to 39 years old, thirdly those with age between 40 to 49 years old, and lastly those with age over 50 years old as presented in Table 5.2.

Table 5.2. Profile of Respondent's Age

	Description	Frequency	Percentage
<u>1</u>	< 30 years	3	5.5%
<u>2</u>	30 - 39	8	14.5%
<u>3</u>	40 - 49	20	36.4%
<u>4</u>	> 50	24	43.6%
	Total	55	100%

Source: questionnaires

5.2.3 Education

Education backgrounds of the respondents were primarily bachelor and master degree, which are highly level of education, representing 92.8% from total survey. The category of education profile was set up according to education levels firstly those with diploma 3, secondly those with bachelor degree, thirdly those with master degree, and lastly those with doctoral degree as presented in Table 5.3.

Table 5.3. Profile of Respondent's Education

	Description	Frequency	Percentage
<u>1</u>	Diploma 3	3	5.5%
<u>2</u>	Bachelor degree	36	65.5%
<u>3</u>	Master degree	15	27.3%
<u>4</u>	Doctoral degree	1	1.8%
	Total	55	100%

Source: questionnaires

5.2.4. Years in company

Respondents with less than 5 years in company, which are relatively new comers, had significant participation in the senior position representing 40% from total survey and respondents with over 20 years experience occupy at the second rank of the numbers representing 25.5% of total survey. The category of profile of experience within the company was firstly those with below 5 years, secondly those between 5 to 10 years, thirdly those between 10 to 19 years, and lastly those with above 20 years as presented in Table 5.4.

Table 5.4. Profile of Respondent's Years Experience in Company

	Description	Frequency	Percentage
<u>1</u>	< 5 years	22	40.0%
<u>2</u>	5 – 10 years	9	16.4%
<u>3</u>	10 - 19	10	18.2%
<u>4</u>	> 20 years	14	25.5%

Source: questionnaires

5.2.5. Working Experiences

Respondents with working experience more than 20 years, basically matured people, were primarily samples representing 76.3% from total survey. The category of experiences profile was set up prorata firstly those with below 10 years, secondly those between 10 to 19 years, thirdly those between 20 to 29m years, and lastly those with above 30 years as presented in Table 5.5.

Table 5.5. Profile of Respondent's Experiences

	Description	Frequency	Percentage
<u>1</u>	< 10 years	4	7.3%
<u>2</u>	10 – 19 years	9	16.4%
<u>3</u>	20 – 29 years	31	56.3%
<u>4</u>	> 30 years	11	20.0%

Source: questionnaires

5.2.5. Job level

Majority of the job positions of the respondents were managers and above, which are key positions in the organization being surveyed, representing 87.3% from total survey. The category of job level profile was set up firstly those with officer rank, secondly those with manager/ dept head rank, thirdly those with Vice President/General Manager/Division Head rank, and fourthly those with Director ranks, and lastly those with Commissioner function as presented in Table 5.6.

Table 5.6. Profile of Respondent's Job Level

	Description	Frequency	Percentage
<u>1</u>	Officer	7	12.7%
<u>2</u>	Manager/Dept Head	12	21.8%
<u>3</u>	VP/GM/ Div Head	21	38.2%
<u>4</u>	Director	10	18.2%
<u>5</u>	Commissioners	5	9.1%
	Total	55	100%

Source: questionnaires

5.2.6. Job Unit

Job units by functional responsibility in the sample were adequately covered as their participation in the survey was relatively proportionate. The category of job unit profile was set up according to existing functions in the organization or job unit; accounting/finance, audit, administration support/strategist, communication/ relation, project, human resources, operational, technology, non dept/div. as presented in Table 5.7.

Table 5.7. Profile of Respondent's Job Unit

	Description	Frequency	Percentage
1	Accounting/Finance	10	18.2%
2	Audit	1	1.8%
3	Administration support/Strategy	8	14.5%
4	Communication/Relation	8	14.5%
5	Project	9	16.4%
6	Human Resources	3	5.5%
7	Operational	10	18.2%
8	Technology	2	3.6%
9	Non Dept/Div	9	16.4
	Total	55	100%

Source: questionnaires

5.3. Validity, Reliability, and Constructing Latent Variables

The validity and reliability of the proposed construct here is analyzed from the result of data collected from the respondents. Validity test is analyzed by referring to standardized loading factor of items measured variables to the latent variable. Validity applies when the value of standardized loading factor is ≥ 0.50 of each item of measured variables to the latent variable (Wijanto, 2008). A reliable measure can be established when a measure is free from error and provides consistent results (Zikmund, 1997, 2000). To test the construct reliability, researcher must calculate the value of Construct Reliability, Variance Extract, of each measured variable as follows.

$$\text{Construct reliability} = \frac{(\sum \text{std. loading})^2}{(\sum \text{std. loading})^2 + \sum \epsilon_j}$$

$$\text{Variance extracted} = \frac{\sum \text{std. loading}^2}{\sum \text{std. loading}^2 + \sum \epsilon_j}$$

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$$\text{Variance extracted} = \frac{\sum \text{std. loading}^2}{N}$$

Reliability applies when a measure shows the same results over time and across situations (score is ≥ 0.70). However it is still acceptable in an exploratory research although the score of cronbach's alpha is ≥ 0.60 (Hair et al., 2006).

5.3.1. Structural Construct

In this study, confirmatory factor analysis or CFA which provides latent variable scores was performed to reduce measured variables of Organizational Structures, Executive Paradigm, Functional Perspective, Asset Portfolio Management, Operational Success, Financial Risk Management and to determine their measurement errors. Each measured variable are measured at least by 4 items as suggested in the approach adopted. Confirmatory Factor Analysis (CFA) was utilized to estimate the adequacy of the measurement model for each construct. The adequacy of the model indicated the goodness-of-fit between the hypothesized model and the sample data. Several goodness-of-fit statistics in CFA were Chi-square, Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Non-normed Fit Index (NNFI), Comparative Fit Index (CFI), and Goodness-of-fit Index (GFI) were measured as explained in previous chapter.

Latent variable score of latent variables with measurement variables constructed in one component can be obtained. This score can be used as a measurement of this latent variable which means there is only one measurement variable for the latent variable. Therefore in structural model analysis, error variance of the measurement variable which becomes the only one measuring latent variable is set up zero.

5.3.1.1. CFA of Strategic Decision Dimensions

Strategic decision has dimensions of namely "Structural Organization", "Executive Paradigm", and "Functional Perspective". There are 18 items to measure strategic decision dimensions in questionnaires where 8 questionnaires to measure organizational structure latent variable, 5 questionnaires to measure executive paradigm latent variable, and 5 questionnaires to measure functional perspective latent variable.

Among the 8 items of measured variables to organizational structure latent variable there was one item (OS3) dropped, among 5 items of measured variable to executive paradigm there were two items (EP1,EP5) dropped, among 5 items of measured variable to functional perspective latent variable there were two items (FP1, FP5) dropped those with its standardized loading factors were below 0.50.

Table 5.8. Goodness of Fit Statistic - Strategic Decision

GOF Index	Value	FIT index	Remark
Chi Square (p-value)		> 0.05	
Organizational Structure	3.44 (P=0.75)		Good fit
Executive Paradigm	0.00(P=1.00)		Perfect fit
Functional Perspective	0.00(P=1.00)		Perfect fit
Degree of freedom			
Organizational Structure	6		Good fit
Executive Paradigm	0		Perfect fit
Functional Perspective	0		Perfect fit
RMSEA		< 0.08	
Organizational structure	0.0		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit
NFI		> 0.9	
Organizational structure	0.99		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit
CFI		> 0.9	
Organizational structure	1.00		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit
IFI		> 0.9	
Organizational structure	1.01		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit
Standardized RMR		< 0.05	
Organizational structure	0.031		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit
GFI		> 0.9	
Organizational structure	0.98		Good fit
Executive Paradigm	-		Perfect fit
Functional Perspective			Perfect fit

Strategic decision which is constructed by three latent variables is having construct reliability of 0.80 and variance extracted above or at 0.50 at organizational structure measured variable, construct reliability of 0.76 and variance extract of 0.52 at executive paradigm measured variable, and construct reliability of 0.80 and variance extract of 0.57 at functional paradigm measured variable. The results of SEM procedure are presented in Table 5.8. and Table 5.9.

Table 5.9. Validity and Reliability of Strategic Decision Dimensions

Measured variable and Indicators	Standardized loading factor ≥ 0.50	error	Reliability		Remark
			CR ≥ 0.70	VE ≥ 0.50	
Organizational Structure			0.80	0.50	Good reliability
OS1	0.67	0.56			Valid
OS2	0.53	0.72			Valid
OS4	0.70	0.51			Valid
OS5	0.78	0.40			Valid
OS6	0.77	0.41			Valid
OS7	0.63	0.60			Valid
OS8	0.83	0.31			Valid
Executive Paradigm			0.76	0.52	Good reliability
EP2	0.71	0.49			Valid
EP3	0.66	0.57			Valid
EP4	0.88	0.54			Valid
Functional Perspective			0.80	0.57	Good reliability
FP2	0.82	0.33			Valid
FP3	0.77	0.40			Valid
FP4	0.66	0.56			Valid

Sources : data processed from questionnaires

5.3.1.2. CFA of Asset Portfolio Management

The latent variable of "Asset Portfolio Management" is constructed using two measured variables namely "Stock level of Oil and Gas Proved Reserves" and "Cost to develop Proved Reserves". Factor Analysis is applied to construct the two measured variables based on defined sets of measured variables.

Table 5.10. Goodness of Fit Statistic – Asset Portfolio Management

GOF Index	Value	FIT index	Remark
Chi Square (p-value)	2.75(P=0.043)	> 0.05	Less Good fit
Degree of freedom	3		
RMSEA	0.0	< 0.08	Good fit
NFI	0.99	> 0.9	Good fit
CFI	1.00	> 0.9	Good fit
IFI	1.00	> 0.9	Good fit
Standardized RMR	0.022	< 0.05	Good fit
GFI	0.90	> 0.9	Good fit
Adjusted GFI	0.90	> 0.9	Good fit

Source: data processed by researcher

Table 5.11. Validity and Reliability of Asset Portfolio Management

Measured variable and Indicators	Standardize d loading factor ≥ 0.50	error	Reliability		Remark
			CR ≥ 0.70	VE ≥ 0.50	
Stock level of Proved Reserves			0.82	0.81	Good reliability
AP2	0.79	0.37			Valid
AP3	0.91	0.17			Valid
AP4	0.98	0.04			Valid
Cost to develop Proved Reserves			0.92	0.85	Good Reliability
AP5	0.92	0.16			Valid
AP6	0.92	0.15			Valid

Sources : data processed from questionnaires

There are 8 items in questionnaires to measure asset portfolio management latent variable which comprised of 4 items to measure stock level of proved reserves measured variable and 4 items to measure cost to develop proved reserves measured variable. Among 4 items of measured variable to stock level of proved reserves there was one item (AP1) dropped, among 4 items of cost to develop proved reserves measured variable there were two (AP7,AP8) dropped, those with its standardized loading factor below 0.50. Asset portfolio management latent variable which is constructed by stock level of proved reserves and cost to develop proved reserves is

having construct reliability of 0.82 and variance extract of 0.81 at stock level of proved reserves and construct reliability of 0.92 and variance extract of 0.85 at cost to develop proved reserves. The results of SEM process are shown in Table 5.10 and Table 11..

5.3.1.3. CFA of Operational Success

Table 5.12. Goodness of Fit Statistic – Operational Success

GOF Index	Value	FIT index	Remark
Chi Square (p-value)	14.13(P=0.23)	> 0.05	Good fit
Degree of freedom	11		
RMSEA	0.060	< 0.08	Good fit
NFI	0.96	> 0.9	Good fit
CFI	0.99	> 0.9	Good fit
IFI	0.99	> 0.9	Good fit
Standardized RMR	0.066	< 0.05	Less Good fit
GFI	0.94	> 0.9	Good fit
Adjusted GFI	0.81	> 0.9	Less Good fit

Source: data processed by researcher

Table 5.13. Validity and Reliability of Operational Success

Measured variable and Indicators	Standardized loading factor ≥ 0.05	error	Reliability		Remark
			CR ≥ 0.70	VE ≥ 0.50	
Operational Management			0.88	0.66	Good reliability
OSC1	0.64	0.60			Valid
OSC2	0.96	0.08			Valid
OSC3	0.74	0.45			Valid
OSC4	0.88	0.23			Valid
Technical Knowledge			0.91	0.71	Good reliability
OSC5	0.93	0.14			Valid
OSC6	0.78	0.39			Valid
OSC7	0.91	0.18			Valid
OSC8	0.75	0.44			Valid

Sources : data processed from questionnaires

The latent variable of "Operational Success" is second order CFA constructed using two latent variables namely "Operational Management" and "Technical Knowledge". Confirmatory Factor Analysis is applied to construct the two latent variables based on defined sets of its measured variables.

There are 8 items in questionnaires employed to measure operational success latent variable which comprised of 4 items to measure operational management measured variable and 4 items to measure technical knowledge measured variable. Among 8 items of measured variables in the construct there were no items to be dropped. The construct of operational success is having construct reliability of 0.88 and variance extract of 0.66 at operational management measured variable and construct reliability of 0.91 and variance extract of 0.71 at technical knowledge measured variable. The results of SEM process are shown in Table 5.12 below while goodness of fit indices are shown in Table 5.13.

5.3.1.4. CFA of Financial Risk Management

The latent variable of "Financial Risk Management" is second order CFA constructed using two latent variables namely "Viability of a Project" and "Size of a Project". Confirmatory Factor Analysis is applied to construct the two latent variables based on defined sets of its measured variables.

There are 8 items in questionnaires employed to measure financial risk management latent variable which comprise of 4 items to measure viability of a project measured variable and 4 items to measure size of a project measured variable. Among the 4 items of viability of a project measured variable there was one (FR3) dropped which had standardized loading factor below 0.50. The construct of financial risk management is having construct reliability of 0.68 and variance extract of 0.42 at viability of a project measured variable and construct reliability of 0.80 and variance extract of 0.45 at size of a project measured variable. The variance extract scores of the asset portfolio management construct were not good enough as they were below

0.50. The results of SEM process are shown in Table 5.11. together with its goodness of fit indices are shown in Table 5.14 and Table 5.15.

Table 5.14. Goodness of Fit Statistic – Financial Risk Management

GOF Index	Value	FIT index	Remark
Chi Square (p-value)	9.73(P=0.37)	> 0.05	Less Good fit
Degree of freedom	9		
RMSEA	0.022	< 0.08	Good fit
NFI	0.96	> 0.9	Good fit
CFI	1.00	> 0.9	Good fit
IFI	1.00	> 0.9	Good fit
Standardized RMR	0.048	< 0.05	Good fit
GFI	0.95	> 0.9	Good fit
Adjusted GFI	0.86	> 0.9	Less Good fit

Source: data processed by researcher

Table 5.15 Validity and Reliability of Financial Risk Management

Measured variable and Indicators	Standardized loading factor ≥ 0.50	error	Reliability		Remark
			CR ≥ 0.70	VE ≥ 0.50	
Viability of a Project			0.68	0.40	Good reliability
FR1	0.63	0.61			Valid
FR2	0.78	0.40			Valid
FR4	0.52	0.73			Valid
Size of a Project			0.76	0.46	Good reliability
FR5	0.63	0.61			Valid
FR6	0.68	0.54			Valid
FR7	0.75	0.44			Valid
FR8	0.64	0.59			Valid

Sources : data processed from questionnaires

5.3.1.5. CFA of Company's Performances

The latent variable of Company's Performances" is second order CFA constructed using two latent variables namely "Non Financial Performances" and

“Financial Performances”. Confirmatory Factor Analysis is applied to construct the two latent variables based on defined sets of its measured variables.

. Table 5.16. Goodness of Fit Statistic – Company’s Performances

GOF Index	Value	FIT index	Remark
Chi Square (p-value)	37.69(P=0.037)	> 0.05	Less Good fit
Degree of freedom	24		
RMSEA	0.080	< 0.08	Less Good fit
NFI	0.94	> 0.9	Good fit
CFI	0.98	> 0.9	Good fit
IFI	0.98	> 0.9	Good fit
Standardized RMR	0.054	< 0.05	Good fit
GFI	0.88	> 0.9	Less Good fit
Adjusted GFI	0.78	> 0.9	Less Good fit

Source: data processed by researcher

Table 5.17. Validity and Reliability of Company’s Performances

Measured variable and Indicators	Standardized loading factor ≥ 0.05	error	Reliability		Remark
			CR ≥ 0.70	VE ≥ 0.50	
Non Financial Performances			0.81	0.39	Good reliability
CP1	0.65	0.58			Valid
CP2	0.50	0.75			Valid
CP3	0.64	0.60			Valid
CP4	0.80	0.35			Valid
CP5	0.81	0.35			Valid
Financial Performances			0.91	0.72	Good reliability
CP6	0.72	0.48			Valid
CP7	0.81	0.35			Valid
CP8	0.88	0.23			Valid
CP9	0.96	0.08			Valid

Sources: data processed from questionnaires

There are 8 items in questionnaires employed to measure company’s performances latent variable which comprise of 4 items to measure non financial

performances measured variable and 4 items to measure financial performances measured variable. Among 8 items of measured variables there were no item to be dropped and the construct of company's performance is having construct reliability of 0.81 and variance extract of 0.39 at the non financial performances measured variable and construct reliability of 0.91 and variance extract of 0.72 at the financial performances measured variable. Although variance extract score arrived at 0.39, the construct of company's performances remain valid with good reliability. The results of SEM process are shown in Table 5.16. together with its goodness of fit indices are shown in Table 5. 17.

5.4. Preparing data for Hypothesis Tests

In order to prepare for hypotheses tests, data which have been analyzed and adjusted must be prepared with its Latent Variable Scores (LVS). LVS are obtained from validity and reliability test and from adjustment of statements. LVS obtained now become scores of the new variable that measure its latent variables. From this stage, we can assume that these variable scores are used to represent 100% of its latent variables (Wijanto, 2008). Latent variable scores are presented in the attachment.

5.5. Structural Model and Hypothesis Tests

The construct proposed herewith is used to develop structural model that is useful for data analysis and hypothesis tests. For further analysis, latent variables scores from validity test, reliability test, and construct latent variables are used. Value of measured variable used in the structural model is generated from latent variables scores exercised in confirmatory factor analysis.

5.5.1. Model Simplification

According to SEM procedures, the model simplification is set up to make structural model. As latent variable score already obtained, simplified model now can be constructed by only using one and two measurement variables for each latent

variable. The simplification is made by referring to the results of validity and reliability tests of each latent variable which useful to determine which measured variables can be used in the structural model. Latent variable scores are then used in the structural model. For each latent variable which has only one measured variable, its measured variable score is specified to have its error zero.

5.5.2. Structural Model

The maximum likelihood method was employed in the estimation of this structural equation model. Maximum likelihood estimation (MLE) is a commonly used and conservative method that iteratively improves parameter estimates to minimize a specific fit function (Hair et al., 2006). The structural model is the regression part of the latent variables. It specifies the links among the unobserved latent variables. It specifies which latent variables directly or indirectly influence changes in the values of other latent variables in the model (Byrne, 1998).

There are 11 latent variables in this research model as they are pictured in Figure 4.2 to be constructed based on the group of measured variables. All measured variables and latent variables in the construct were measured using such legend to simplify the variable names as indicated in Table 5.18.

Table 5. 18. Variables of the Construct

Variables	Legend	Measurements	Legend
Strategic Decision	SD	Organizational Structure	ORGS
		Executive Paradigm	EXEPR
		Functional Perspective	FUNC
Asset Portfolio Management	APM	Level of Stock of Proved Assets	STOCK
		Cost to develop Proved Reserves	COST
Operational Success	OSS	Operational Management	OMGT
		Technical Knowledge	TKNOW
Financial Risk Management	FRM	Viability of a Project	VIAB
		Size of a Project	SIZE
Company's Performances	CP	Non Financial Performances	NFP
		Financial Performances	FP

Sources: researcher

The theoretical structural model is presented in Figure 5.1. below.

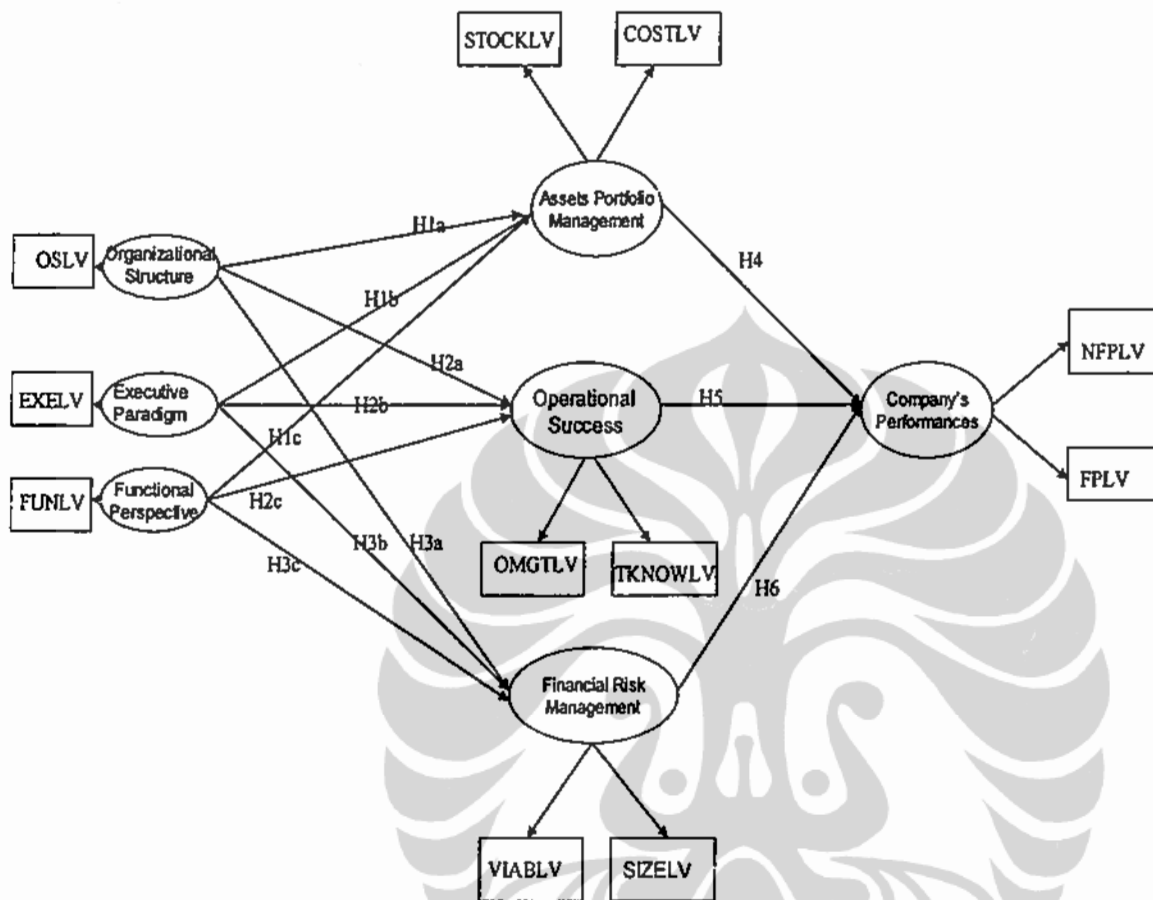


Figure 5.1. Structural Model

To simplify multivariate analysis, data which have been conformed to its validity and reliability tests at first order confirmatory factor analysis is further processed by second order confirmatory factor analysis to the latent variables which have two or more components left of their measured variables. Measured variables which combined in one component gets its latent variable score calculated, then latent variable scores of the components is set up as measurement variable scores of its latent variable. This process reduced measurement errors and latent variable's measurements accordingly.

By using software Lisrel student version 8.8. data processing against 55 respondents can show standardized solution which indicate coefficient between variables and t value as can be seen in Figure 5.2. and Figure 5.3. below.

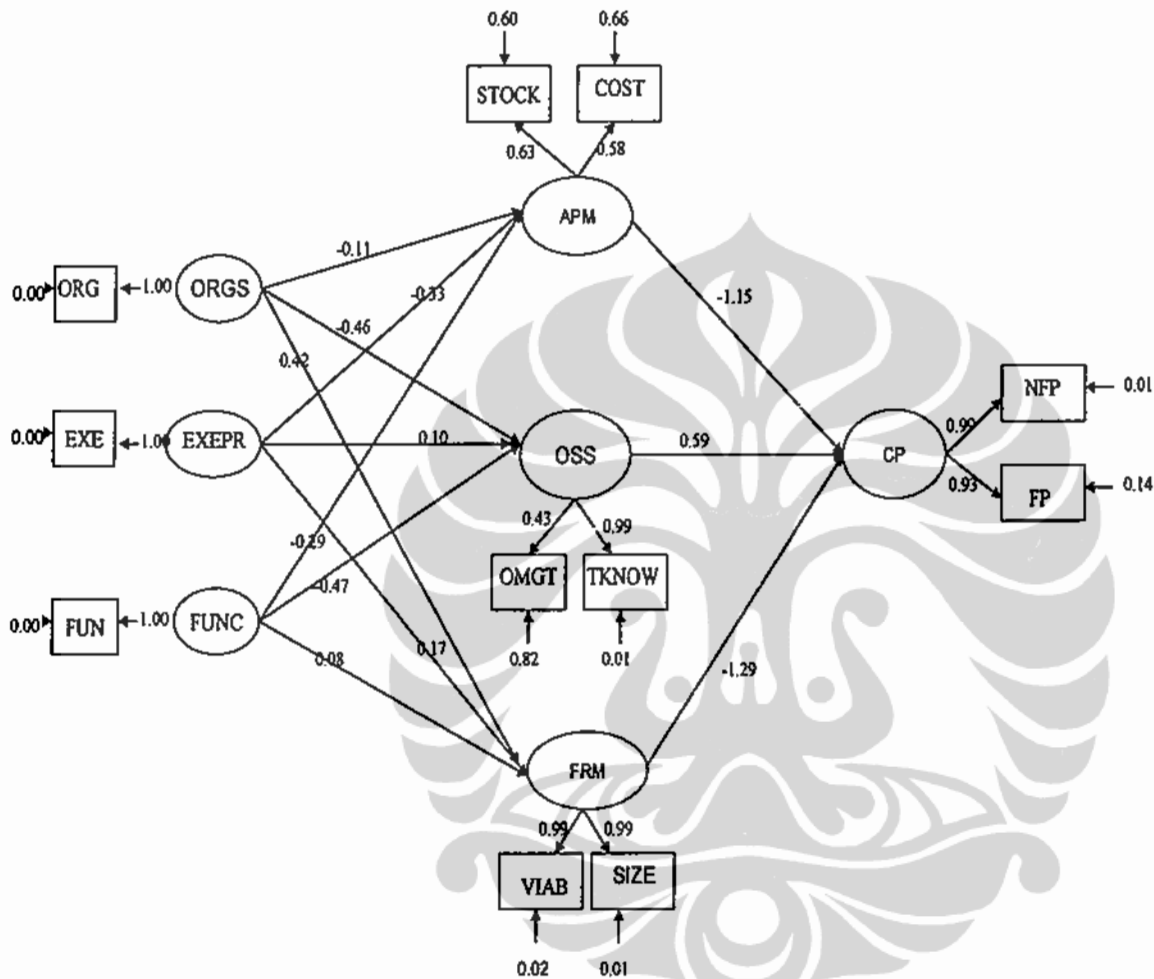


Figure 5.2. Structural Model of 55 respondents for standardized solutions

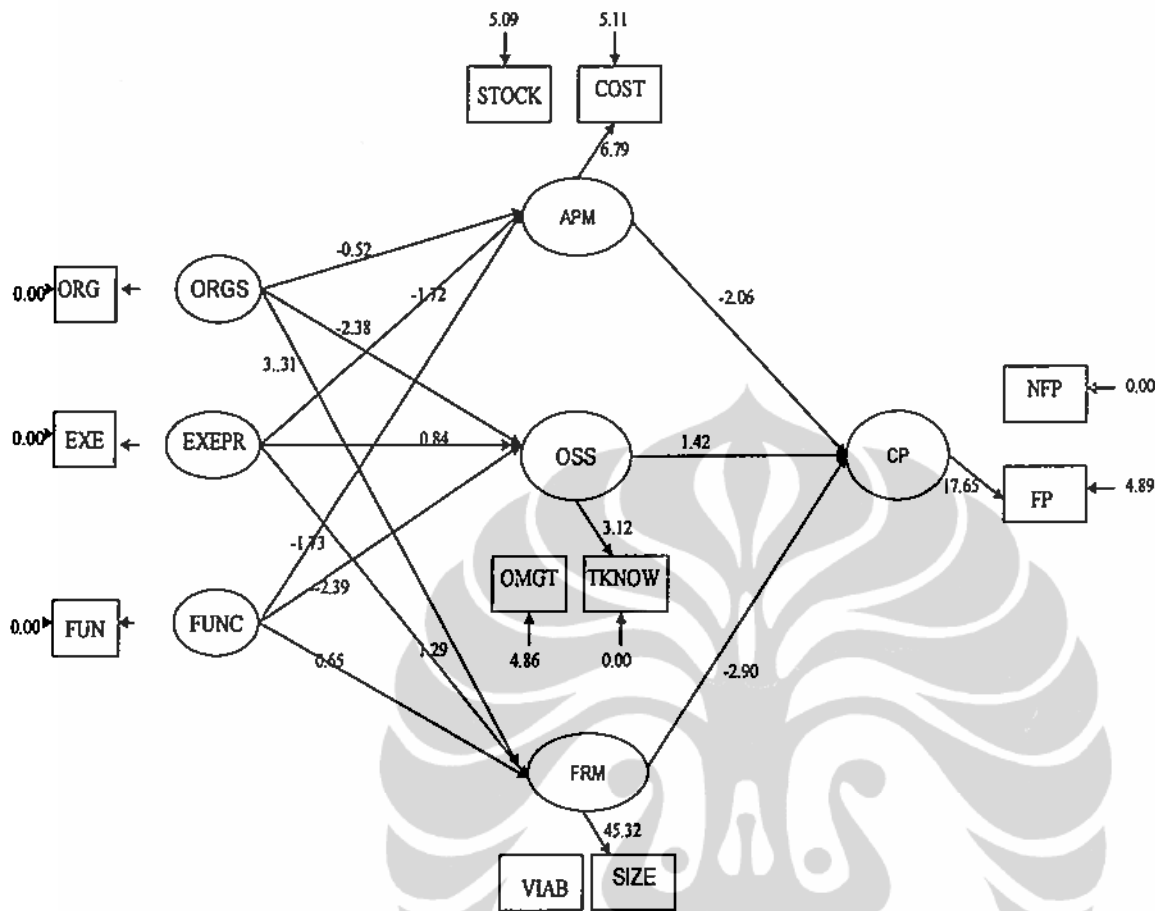


Figure 5.3. Structural Model of 55 respondents for t values

By using software Lisrel student version 8.8, second order confirmatory factor analysis produced latent variable scores as shown in Table 5.14. and also good of fit indices as shown in Table 5.15. Standardized loading factor of each measured variables have scores by over 0.50 which means valid except for OMGT only 0.43. All construct validity appeared to be good where its scores go by over 0.70 except APM only by 0.54 and all variance extract were also good as its score go by over 0.50 except APM only by 0.38. the results of SEM process are shown in Table 5.20.

Confirmatory Factor Analysis (CFA) was utilized to estimate the adequacy of the measurement model for each construct. The adequacy of the model indicated the

goodness-of-fit between the hypothesized model and the sample data. Several goodness-of-fit statistics in CFA were Chi-square, Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Standardized RMR, Comparative Fit Index (CFI), Goodness-of-fit Index (GFI), and adjusted GFI (Wijanto,2008) as shown in Table 5.19. From all those indices, Standardized RMR and Adjusted GFI go beyond its fitness measurements.

Table 5.19. Goodness of Fit Statistic – Structural Model

GOF Index	Value	FIT index	Remark
Chi Square (p-value)	37.53 (P =0.086)	> 0.05	Good fit
Degree of freedom	27		
RMSEA	0.070	< 0.08	Good fit
NFI	0.94	> 0.9	Good fit
CFI	0.98	> 0.9	Good fit
IFI	0.98	> 0.9	Good fit
Standardized RMR	0.057	< 0.05	Less Good fit
GFI	0.90	> 0.9	Good fit
Adjusted GFI	0.75	> 0.9	Less Good fit

Source: data processed by researcher

Table 5.20. Validity and Reliability of Latent Variable in Structural Model

Latent Variable	Measured variable	Standardized loading factor ≥ 0.50	error	Reliability	
				CR ≥ 0.70	VE ≥ 0.50
ORGS	ORG	1.0	0	1*	1*
EXEPR	EXE	1.0	0	1*	1*
FUNC	FUN	1.0	0	1*	1*
APM	STOCK	0.63	0.60	0.54	0.38
	COST	0.58	0.66		
OSS	OMGT	0.43	0.82	0.71	0.58
	TKNOW	0.99	0.01		
FRM	VIAB	0.99	0.02	0.99	0.98
	SIZE	0.99	0.01		
CP	NFP	0.99	0.01	0.85	0.92
	FP	0.93	0.14		

Source : data processed by researcher

* single indicator

5.5.3. Hypothesis Tests

From Lisrel student version 8.8 process, a path diagram is also produced which shows estimation and t – values scores that measure the latent variables relationships constructed on hypothesis developed. The results of the hypothesis test can be seen in Table 5.21.

Table 5.21. Hypothesis Test 1- 12

Hypothesis	Path diagram	Est	t- value *	Significant $\alpha = 0,05$	Conclusion
H1a	Org structural -----> Assets portfolio management.	-0.11	-0.52	Not significant	rejected
H1b	Exe paradigm -----> Assets portfolio management.	-0.33	-1.72	Not significant	rejected
H1c	Func perspective -----> Assets portfolio management.	-0.29	1.29	Not significant	rejected
H2a	Org structure -----> Oper success.	-0.46	3.31	significant	accepted
H2b	Exe paradigm -----> oper success.	0.10	0.84	Not significant	rejected
H2c	Func perspective -----> operational success.	-0.47	-2.39	significant	accepted
H3a	Org structure -----> financial risks management.	0.42	3.31	significant	accepted
H3b	Exe paradigm -----> financial risks management.	0.17	1.29	Not significant	rejected
H3c	Func perspective -----> financial risks management.	0.08	0.65	Not significant	rejected
H4	Assets portfolio management -----> company's performances.	-1.15	-2.06	significant	accepted**
H5	Operational success -----> company's performances.	0.59	1.42	Not significant	rejected
H6	Financial risks management -----> company's performances.	-1.29	-2.90	significant	accepted**

* - 1.96 < t value > 1.96 is significant

** Negative value in H4 and H6 means opposite meaning

Source: data processed by researcher

So the final structural model can be seen as in Figure 5.4.

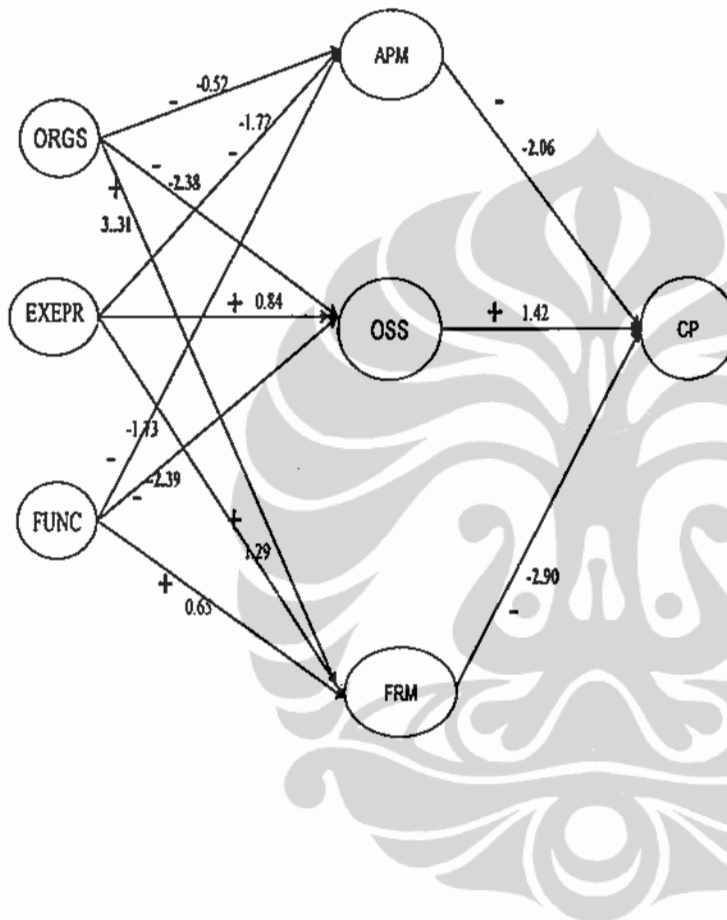


Figure 5.4. Final Structural Model

The hypotheses were tested on the basis of the structural model. The results of the hypotheses testing are presented in Table 5.15. The structural model specified the direct and indirect effects among the exogenous and endogenous variables. The strategic decision is the exogenous variable; and the asset portfolio management, operational

success, and financial risk management, and company's performances are the endogenous variables in this study.

As explained in the following discussion 12 hypothesis developed there were 7 (seven) hypotheses accepted and 5 (five) hypotheses rejected. Those that accepted 3 (three) hypotheses did not have significant relationships.

H1a : Strategic decision in which organizational structure dimension occurs in the process contributes positively to assets portfolio management (hypothesis is rejected).

Hypothesis 1a was developed to test the relationship of strategic decision from the dimension of the organizational structure with asset portfolio management. The result revealed that the standardized path coefficient of -0.14 and the t-value of -0.52 in the structural model were not significant. Therefore, the results did not support the hypothesis 1a. Asset portfolio management was not effected from the perspective of organizational structure nor the relationship between organizational structure and asset portfolio management were significant in MedcoEnergi. In this case asset portfolio management in MedcoEnergi is set in a regular motion conducted by a certain assignment without sufficiently going to a strategic decision process.

H1b. Strategic decision in which executive paradigm dimension occurs in the process contributes positively to assets portfolio management (hypothesis is rejected)

Hypothesis 1b was developed to test the relationship between strategic decisions from the dimension of the executive paradigm with asset portfolio management. The result revealed that the standardized path coefficient of -0.33 and the t-value of -1.72 in the structural model were not significant. Therefore, the results did not support the hypothesis 1b. In this case, asset portfolio management was not effected by executive paradigm too, nor the relationship between executive paradigm and asset portfolio management was significant. It appears that the task of portfolio management in

MedcoEnergi does not come from strategic decision processes that mix several paradigms but it might have been conducted from regular job of a unit assigned to it.

H1c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to assets portfolio management (hypothesis is rejected).

Hypothesis 1c was developed to test the relationship between strategic decision from the dimension of the functional perspective with asset portfolio management. The result revealed that the standardized path coefficient of -0.29 and the t-value of 1.29 in the structural model were not significant. Therefore, the results did not support the hypothesis 1c. Asset portfolio management was not effected by functional perspective nor the relationship between the functional and asset portfolio management was significant in MedcoEnergi. As explained previously, the job of an asset portfolio management seems to be conducted on a regular basis where strategic decision is not required, so functional perspective is also not necessarily needed in their asset portfolio management tasks.

H2a: Strategic decision in which organizational structure dimension occurs in the process contributes positively to operational success (hypothesis is accepted).

Hypothesis 2a was developed to test the relationship between strategic decision from the dimension of the organizational structure with operational success. The result revealed that the standardized path coefficient of -0.46 and the t-value of 3.31 in the structural model were significant so the hypothesis was accepted. Therefore, the results supported the hypothesis 2a. Organizational structure appeared to have effects on operational success which its roles seemed to make corrective actions because the relationship was negative. Absence of accidents, blow out, incidents, etc cases in MecoEnergi's annual report for the last six years demonstrated that the companies have carefully undertaken their project with success.

H2b: Strategic decision in which executive paradigm dimension occurs in the process contributes positively to operational success (hypothesis is rejected).

Hypothesis 2b was developed to test the relationship between strategic decision from the dimension of the executive paradigm with operational success. The result revealed that the standardized path coefficient of 0.10 and the t-value of 0.84 in the structural model were rejected because the relationship was not significant. Therefore, the results did not support the hypothesis 2b. Operational success was not affected by executive paradigm since the relationship between executive paradigm with operational success was not significant in MedcoEnergi.

H2c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to operational success (hypothesis is accepted)

Hypothesis 2c was developed to test the relationship between strategic decision from the dimension of the functional perspective with operational success. The result revealed that the standardized path coefficient of -0.47 and the t-value of -2.39 in the structural model were significant so the hypothesis was accepted. Therefore, the results supported the hypothesis 2c. Operational success was effected by functional perspective because the relationship between functional perspectives with operational success was strongly significant but functional perspective had reverse function to operational success in MedcoEnergi.

Different from hypothesis 1a,1b,1c which are all rejected meaning that duties of asset portfolio management seems to be assigned to a special task without sufficiently going to strategic process anymore. Although operational activities are concern with routine and operational tasks somehow there may be cases that strategic decision emerges to save the company from some critical situations.

H3a: Strategic decision in which organizational structure dimension occurs in the process contributes positively to financial risks management (hypothesis is accepted).

Hypothesis 3a was developed to test the relationship between strategic decision from the dimension of the organizational structure with financial risk management. The result revealed that the standardized path coefficient of 0.42 and the t-value of 3.31 in the structural model were significant. Therefore, the results supported the hypothesis H3a. Financial risk management was effected by organizational structure with a strong relationship between organizational structure with financial risk management in MedcoEnergi.

H3b: Strategic decision in which executive paradigm dimension occurs in the process contributes positively to financial risks management (hypothesis is rejected).

Hypothesis 3b was developed to test the relationship between strategic decision from the dimension of the executive paradigm with financial risk management. The result revealed that the standardized path coefficient of 0.17 and the t-value of 1.29 in the structural model were not significant so the hypothesis was rejected. Financial risk management tasks have been allocated to a special team where their duties are to reduce risks by having reduced financial exposure on single projects and having shared participations from third parties on large projects. This means that risk management had not been adequately approached from other executive paradigms, which can be developed thru strategic decision process, that might be relevant to help solve financial risks.

H3c: Strategic decision in which functional perspective dimension occurs in the process contributes positively to financial risks management (hypothesis is rejected).

Hypothesis 3c was developed to test the relationship between strategic decision from the dimension of the functional perspective with financial risk management. The result revealed that the standardized path coefficient of 0.08 and the t-value of 0.65 in the structural model were not significant so the hypothesis was rejected. Similarly like on the

hypothesis 3b, functional perspective had not been adequately used to help solve financial risks which might be contributed by other executives.

In MedcoEnergi, both executive paradigm and functional perspective did not apply to help solve financial risk while organizational structure has strongly affected financial risk management. This might be assumed that financial risk management tasks were strongly approached from organizational delegation but it did not need to mix and integrate other paradigms and different perspectives.

H4: Assets portfolio management has positive effects to company's performances (hypothesis is accepted)

Hypothesis 4 was developed to test the relationship between asset portfolio management with company's performances. The result revealed that the standardized path coefficient of -1.15 and the t-value of -2.06 in the structural model were significant so there was a strong relationship between asset portfolio management with company's performances in MedcoEnergi. Therefore, the results supported the hypothesis H4 but in the opposite meaning. Company's performances were not positively effected by asset portfolio management so it can be understood that asset portfolio management tasks has functioned in terms of selecting lower risks with lower return projects/assets and stabilizing highly risk projects/assets in portfolio.

H5: Operational success has positive effects to company's performances (hypothesis is rejected).

Hypothesis 5 was developed to test the relationship between operational success with company's performances. The result revealed that the standardized path coefficient of 0.59 and the t-value of 1.42 in the structural model were not significant, so the hypothesis was rejected. Therefore, the results did not support the hypothesis H5 but somehow the company's performances were slightly effected by operational success in MedcoEnergi but not strongly supported by the significant relationship between operational success with company's performances.

H6: Financial risks management has positive effects to company's performances (hypothesis is accepted).

Hypothesis 6 was developed to test the relationship between financial risk management with company's performances. The result revealed that the standardized path coefficient of -1.29 and the t-value of -2.90 in the structural model were significant so there was a strong relationship between financial risk management with company's performances in MedcoEnergi. Therefore, the results supported the hypothesis H6 but in the opposite meaning. The company's performances were not positively affected by financial risk management instead it was having a reversal impact. This can be understood as financial risk management tasks had functioned in terms of controlling and stabilizing highly risky projects undertaken by that companies.

In summary the results of the hypothesis test are presented in Table 5.22.

Table 5.22. Summary of Hypotheses Test Results

No	Hypothesis	Results
H1a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to assets portfolio management.	rejected
H1b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to assets portfolio management.	rejected
H1c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to assets portfolio management.	rejected
H2a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to operational success.	accepted
H2b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to operational success.	rejected
H2c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to operational success.	accepted
H3a	Strategic decision in which organizational structure dimension occurs in the process contributes positively to financial risks management.	accepted
H3b	Strategic decision in which executive paradigm dimension occurs in the process contributes positively to financial risks management.	rejected
H3c	Strategic decision in which functional perspective dimension occurs in the process contributes positively to financial risks management.	rejected
H4	Assets portfolio management has positive effects to company's performances.	accepted
H5	Operational success has positive effects to company's performances.	rejected
H6	Financial risks management has positive effects to company's performances.	accepted

Sources: data processed by researcher

5.6. Results Discussions

This is a study about strategic decision being a topic in strategic management which is emerged on the level of strategy implementation. Strategic issues of a firm or corporate are approached accordingly either from the perspective of organizational structure, executive paradigm, and functional perspective. This study revealed that the practices of strategic decision in MedcoEnergi somehow have not undergone accordingly as compared to data analyzed and the theories explored, consequently the results of not practicing strategic decision accordingly did not contribute to the performances makings of the companies to its optimality.

This chapter provides the profile of the sample, the results of the reliable and valid measurement model, and the structural model with variance extracted, in the study constructs. Confirmatory factor analysis was conducted to test the fit of the measurement model. Structural equation modeling was conducted to examine the hypotheses provided in the study and to find a final structural model that fit the data of this study.

The analysis supported 5 (five) out of 12 (twelve) hypotheses; identified 5 (five) paths with positive standardized path of coefficient (EXEPR to OSS, ORGS to FRM, EXEPR to FRM, and FUN to FRM) and 2 (two) paths with negative standardized path of coefficient (APM to CP) and (FRM to CP). The negative path of the hypotheses are accepted here because its relationship (APM TO CP and FRM to CP) is in the opposite meaning whereby asset portfolio management has stabilizing effect to company's performance in the sense that it controls the performances by having reduced risky assets which in turn reducing production from higher risk of assets. Likewise, financial risk management has stabilizing effect to company's performances by having reduced financial exposure into single projects which in turn reducing results of the investment. Either asset portfolio management and or financial risk management have been working as control function because they were not supported by strategic decision, so the impact to company's performances was not achieving its best. Different with operational success, this issue was supported by strategic decision in corrective ways and in turn to slightly support company's

performances because the relationship between operational success with company's performances was not strongly significant. Let us discuss the reasons behind these conditions.

As explained earlier in literature discussion chapter III, strategic decision has dimensions of organizational structure, executive paradigm, and functional perspective and this strategic decision should support the asset portfolio management, operational success, and financial risk management.

The building of a portfolio of proved assets in an oil and gas company requires selection process from quality, cost, location, country, and deposit perspectives. This information may be collected prior to decision on which one of the prospect to be followed up. Having the conclusion that the hypotheses of organizational structure, executive paradigm, functional perspective either has positive relationship with asset portfolio management is each not acceptable, this confirmed that asset portfolio management had not been approached appropriately. There appear that the role of asset portfolio management tend to do a control function instead of increasing better performances and if it is to increase performances still the control function do not need to be ignored. The conclusion in these issues is that Medcoenergi seemed to be too conservative in leveraging their resources for optimal performances.

Supporting of operational success from strategic decision is slightly positive in MedcoEnergi practices as it was shown by the positive path between strategic decision with operational success only the relationship between organizational structure, functional perspective with operational was each negative path. Operational success did not strongly support company's performances because strategic decision from the dimensions of organizational structure and functional perspective had reverse function to operational success. The conclusion in these issues is that MedcoEnergi seemed to be too slow in response to operational issues for optimal performances.

The role of strategic decision in the dimension of organizational structure to financial risk management was slightly better compared to asset portfolio

management and operational success. Financial risk management appeared to have been supported by strategic decision strongly from the dimension of organizational structure but only slightly from executive paradigm, and functional perspective as it was shown by the positive path by each relationship in the financial risk management construct. The relationships were positive but not entirely significant because both executive paradigm and functional perspective were not having significant relationships. The conclusion in these issues is that MedcoEnergi had not effectively used participations from non financial views to tackle financial risks.

To conclude the discussion of the results of the study, MedoEnergi appeared to have not practiced the strategic decision accordingly either in the areas of asset portfolio management or operational success or financial risk management, as suggested by theories, which are important functions in an up stream oil and gas company. As a consequence either asset portfolio management or operational success or financial risk management did not function optimally to support company's performances.

CHAPTER VI

IMPLICATIONS AND SUGGESTIONS

6.1. Theoretical Implications

The following discussion assess findings of this research for theoretical and management implication as well as suggestion for the future. This study revealed that strategic decision had an impact to the health of the organization such as reasonable financial ratios, level of proved reserves for production, and survival of the organization such as continuous search of new reserves, consistent capital allocation for exploration to be increased from year to year in the survey of MedcoEnergi in the last 6 years.

Contribution from asset portfolio management and financial risk management appeared from the increasing numbers of proved reserves from year to year and contribution from operational success remarked by the absence of significant operational failures which might have bankrupted the companies like Lapindo Brantas in Sidoardjo area, East Jawa should MedcoEnergi not implemented operational success in succeeding their either exploration and or development conducted. Operational activities in an up stream oil and gas company do not exactly go like routine jobs instead it has unique operational activities from one to another project. Therefore operational success tasks can be seen as part of the strategic issues jobs because operational activities on each project is characterized by specific teams, equipments, natures, risks, etc.

The research of strategic decision in this study brings larger perspective of the corporate strategy at implementation level on the importance of an upstream oil and gas company is an important role. The implication to theory is as follows.

1. Strategic decision on asset portfolio management tasks seemed to have not been practiced accordingly in MedcoEnergi, so asset portfolio management roles is more likely to control higher risky investments. Asset portfolio management is an important approach to build production level in an up stream oil and gas company (Skaf,1999) and would be contributing to company's performances, should the strategic decision is in role to support the asset portfolio management instead of being conducted only by special unit assigned to it. Therefore strategic decision to support asset portfolio management becomes important to be practiced in an up stream oil and gas company. Asset portfolio management should be considered as a strategic issue which also falls under strategic decision tasks, however it did not work as expected in this study.
2. Strategic decision on operational success seemed to have not been practiced significantly in MedcoEnergi , so operational success have not effectively worked to produce higher exploration and development safely (Anderson, Narassimhan, 1979). Operational success which is important to counter operational risk, would be contributing to produce higher level of stock of proved reserves by self exploration and to lift higher production level should the strategic decision support operational success significantly. Therefore strategic decision to support operational success becomes important to be practiced in an up stream oil and gas company.

3. Strategic decision from the dimension of organizational structure on financial risk management seemed to have been practiced in MedcoEnergi but not adequately supported from the dimension of executive paradigm and functional perspective, so financial risk management is more likely just to control financial exposure on projects. Financial risk management is an important function to reduce risks of money invested in exploration, development, and production by having reduced exposure in single projects and having risk shared with others on larger projects (Walls,1995). The implication of this practice was that to suppress an over growth of performances for steady and safety reasons which do not allow to achieve company's performances to its optimality. Therefore strategic decision to support financial risk management becomes important to be practiced in an up stream oil and gas company.

Findings on this study supports that strategic decision have affected the company's performances (Frederickson,1985) and (Prescott, 1986), to the health and survival of the organization (Eisandhart, Zbaracky, 1992), and while it was not practiced accordingly in MedcoEnergi, otherwise the impact to optimal performances of the company would had been possibly reached. Overall these findings ascertain that strategic decision have effects to company's performances as they are seen by the absence of the optimal impact for not applying strategic decision accordingly. The following facts indicate that optimality was not reached.

Proved reserves average level of oil between 2002 and 2007 were 113.4 MMBO while level at 2002 already reached 151.6 MMBO or decrease 25%, and proved reserves average level of gas between 2002 and 2007 were 273.9 BCF

resulting an increase of 221% or 36% average growth in the last 6 years. Although gas production had been in increased overall sales average level of upstream oil and gas business segment between 2002 to 2007 reached USD 582.1 million or only increased 1% from 2002. This is not an optimality and MedcoEnergi was actually trying to survive because its risk indicator not improving; Debt Equity Ratio become higher from 24.4 (in 2002) to 179.1 (in 2007) and its rating stayed at B+ (S&P assessment) overtime from 2002 until 2007.

Asset portfolio management, operational success, and financial risk management should be considered as strategic issues which supposedly fall under strategic decision tasks, however it did not work as expected from this study. Somehow, strategic decision on operational success worked slightly but not sufficiently strong to affect the company's performances. The fact could be right if operational success is seen as daily routine and not as strategic issues. In the event of significant errors or accidents, blows out, etc strategic decision may emerge to overcome the situation. Operational success especially in exploration and development activities in an up stream oil and gas industry may be succeeded to its optimality if it is approached from strategic issues because most of the activities go under project to project basis which has unique problems from one to another project. That is why the researcher suggests that operational success require also strategic decision tasks on its approach to undertake projects.

6.2. Managerial Implications

The researcher expects that this study would bring contributions to the strategic management from strategic decision point either in MedcoEnergi in particular or in up stream oil and gas companies in general. As the study revealed that when strategic decision did not work accordingly in the corporate agenda of surveyed company, the results to the company's performances become less than expected. Strategic decision tasks may had been allocated to special respective assignments as MedcoEnergi have risk management task, audit committee, nomination committee, remuneration committee, and also commissioners meeting, directors meeting. It might be reasonable to be suspicious that those functions may not be linked and aligned each other function in producing their strategic decisions. As this study suggests strategic decision requires of mixing ideas and opinions from dimension of organizational structure, executive paradigm, and functional perspectives to settle strategic issues. This study should implicate to the strategic decision practices by the management of an up stream oil and gas company.

Firstly, this study suggests the management trying to understand the important roles of the strategic decision in tackling strategic issues especially when an organization is relatively large. In forming strategic decision, it is necessary to look at this issue from the dimension of organizational structure, executive paradigm, and functional perspective.

Secondly, organizational structure dimension may need to be considered in producing strategic decision in order to view problems from hierarchical positions, procedures, and disciplines (Greenwood, Hining, Ranson, 1977).

Thirdly, executive paradigm dimension may have reversing or supporting ideas differently in tackling problems or opportunities in producing strategic decision (Eisandhart, Zbaracki, 1992, Prahalad, Bettis, 1986). The outcome of decisions after mixing different paradigms need to be managed in order to have members in the organization are supporting the ideas which already examined thru a process.

Fourthly, functional perspective, which each executive has it differently, need to be mixed and integrated in producing strategic decision (Hitt, Tyler, 1991) in order to measure consequences of decision from each management's responsibility.

Fifthly, asset portfolio management can be extended to strategic decision task not only from a routine delegation because involvement of the management participation at large scale would provide better quality of portfolio not only from perspective of risk and return relationship (Markowitz, 1952).

Sixthly, operational success tasks in an upstream oil and gas industry might be viewed as strategic issues because the management faces different projects particularly in exploration and development. This study suggests that operational success tasks may be considered from strategic decision roles not only from technical and operational perspective because people and technology costs would provide better operation results (Anderson, Narasimhan, 1979).

Seventhly, financial risk management which tasks are to tackle risks on invested money can be also approached from strategic decision roles because it would also consider the organizational ability, skill, and methods that can reduce risks that can contribute to improve company's performances. The financial risk management

tasks in MedcoEnergi so far is approached to averse risks by having reduced financial exposure on single projects and by sharing project with other party (ies).

6.3. Research Limitations

This study has limitations such as from the amount of samples, scope of discussion on strategic decision agenda, and from the performance measurement of the company surveyed in terms of perception,

Firstly, the object of the study was limited to MedcoEnergi group only and number of respondents were constrained to relevant executive members and staffs around strategic decision makers. One measurement variable was measured by 5 respondents (Wijanto 2008) so total respondents were only 55 people which only meeting minimum requirement. The construct would be more valid and reliable should the respondent reached 100 people.

Secondly, this study emphasizes the linkage of strategic decision roles to asset portfolio management, operational success, and financial risk management tasks only because these issues are important subject in an up stream oil and gas company. This study did not measure the relationship between strategic decision directly with company's performances which might be important to reveal.

Thirdly, since the respondent came from the same group of companies so company's performances measured in this study was limited to their perception only, other wise real data used by the respondents to answer the questionnaires were sourced from different companies.

6.4. Suggestion For The Future

There are few suggestions from this study that can be addressed for future researches.

Firstly, the study of strategic decision roles can be expanded to the up stream oil and gas industry in Indonesia following the results from surveying MedcoEnergi are known, so strategic decision studies can be added to literature accordingly.

Secondly, strategic management subject which is more focus on building competitive advantage for competition and sustainability in order to compete in customer market can also see importance of building assets in the context of strategic management in a natural resources related industry to compete in the supply market as the industry is characterized by competition in natural resources supply.

Thirdly, the study of strategic decision, which by researchers mainly focus on content and process discussion, is added to literature from strategic decision roles view.

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QUESTIONNAIRES

Part I Demographics

1. Please indicate your gender
 - a. Male
 - b. Female
2. Please specify your year of birth:
3. Please indicate your level of education:
 - a. Diploma (D3)
 - b. Bachelor (S-1)
 - c. Master (S-2)
 - d. Doctoral (S-3)
4. Please indicate your position:
 - a. Supervisor/Staff
 - b. Manager and/or Department Head
 - c. Vice President and/or General Manager and/or Division Head
 - d. Director
 - e. Advisor
 - f. Commissioner
 - g. Others, please specify:
5. Please specify your department and/or your division:
6. How long have you been in this position?
7. How long have you been with this company?
8. How long have you been working in your life?

Part II Questionnaires on Strategic Decision

A. Organizational Structure dimension

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

1	In our organization every one is responsible for the consequences of decisions made at the degree of their position	1	2	3	4	5	6
2	A decision made has to be responsible for from the perspective of their functions	1	2	3	4	5	6
3	The people in our organization are being checked at any time for rules or procedures violation.	1	2	3	4	5	6
4	Any thing unusual arisen from an activity must be put in a report	1	2	3	4	5	6
5	Each department in our organization are given adequate authority to carry on their duties	1	2	3	4	5	6
6	I have to question and analyze activities beyond plan and budget	1	2	3	4	5	6
7	When I anticipate there will be a serious problem that risk my department's or company's objective, I must have analysis and report provided for further actions	1	2	3	4	5	6
8	Each project is headed and supported from all functions required through a coordination mechanism	1	2	3	4	5	6

B. Executive Paradigm

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

1	I do not want to carry out a program without being adequately planned	1	2	3	4	5	6
2	When the company makes big efforts to seek out new opportunities I am available to support	1	2	3	4	5	6
3	I support if our company considers investing a large amount of money in a project with high potential return.	1	2	3	4	5	6
4	Our company solves problems by having a partnership (either joint venture, joint operation, strategic alliance) on projects requiring larger money and higher risks	1	2	3	4	5	6
5	Our company put priority on safety and security over the profit.	1	2	3	4	5	6

C. Functional Perspective

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

1	Any project should be technically planned before it is started						
2	Equipment, personnel, method used should be fit to carry on operational activities	1	2	3	4	5	6
3	Specific training for specific tasks are required to implement a project	1	2	3	4	5	6
4	All components and equipments to be used on any project have to be provided and ready before it comments	1	2	3	4	5	6
5	Any project to be undertaken should be analyzed for its cost benefit viability	1	2	3	4	5	6
6	Any project to be undertaken should be approved from budget and technical viability	1	2	3	4	5	6

D. Assets Portfolio Management

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

Stock level of proved reserves							
1	Oil and gas proved reserves are better acquired from third party rather than self explored to accumulate stocks for securing oil and gas productions	1	2	3	4	5	6
2	Various degree of deposits in proved reserves exist , so combined proved reserves assets are needed to support production level	1	2	3	4	5	6
3	The level of production are associated with the level of oil and gas proved reserves	1	2	3	4	5	6
4	The company keeps searching oil and gas fields in order to support level of proved reserves.	1	2	3	4	5	6

Cost to develop proved reserves							
5	Budget has to be set prior to exploration, development, production	1	2	3	4	5	6
6	Planning and budget have to be set before spending to develop or undevelop proved reserves	1	2	3	4	5	6
7	Uncertainties always occur in exploring and developing proved reserves, so I agree that capital disbursed should be sharing with another party (ies)	1	2	3	4	5	6
8	Adequate capital should be always ready to pursue new opportunities, so additional capital for exploring and developing proved reserves can be shared with another party (ies)	1	2	3	4	5	6

E. Operational success

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

Operational management							
1	It requires to succeed all operational activities because of the operational risks exposure	1	2	3	4	5	6
2	Project management technique is significantly important to manage operational activities for coordinating, time scheduling, monitoring	1	2	3	4	5	6
3	It requires managerial skill to coordinate all functions and equipments used to succeed operational activities in exploration , development, and production at all time	1	2	3	4	5	6
4	Operational activities need to be alert on risks of accidents, incidents, blow out, odd experiences, etc. at all time and management meetings takes place when one of them occurs.	1	2	3	4	5	6

Technical knowledge							
5	Knowledge is important to master technology equipments, methods used to run operational activities in exploration, development, production	1	2	3	4	5	6
6	It requires specific skills to each type of operational activities in exploration, development, production that contribute to operational success	1	2	3	4	5	6
7	Specific training for personnel is required to master operational activities in exploration, development, production to counter operational failures	1	2	3	4	5	6
8	A project design is technically analyzed before operational activities to commence.	1	2	3	4	5	6

F. Financial Risk Management

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

Viability of a project							
1	Exploration and development activities to realize proved reserves are exposed to uncertainties	1	2	3	4	5	6
2	Each exploration, development, production activities are analyzed to its cost benefit rationale before they are decided to go or no go	1	2	3	4	5	6
3	Viability of a project in exploration and development is measured either from NPV, IRR, and payback period methods	1	2	3	4	5	6
4	Costs to develop or undevelop proved reserves are considered from level and source of financing after viability is reached	1	2	3	4	5	6
5	Substantial financing required for exploration and development is actually put at risk	1	2	3	4	5	6

Size of a project							
6	In order to solve financing requirements for exploration, development, production activities the company should be open for third party (ies) participant (s).	1	2	3	4	5	6
7	The company allocates its financial resources to build pool of proven reserves in order to secure stocks of asset portfolio and searches additional financing for exploration and development activities	1	2	3	4	5	6
8	By sharing investment with third party (ies) will reduce financial exposure to projects undertaken.	1	2	3	4	5	6

G. Company's Performances

Please make your choice on statements below to the most agreeable condition to you.

1	2	3	4	5	6
Very disagree	Disagree	Almost agree	Somewhat agree	Agree	Very agree

Non financial performances							
1	Assets portfolio management has contributed to build quality and quantity of proved reserves for production level	1	2	3	4	5	6
2	Projects at implementation that are exposed to operational risks have been secured by operational success	1	2	3	4	5	6
3	Financial risk management has contributed to reduce financial exposure on single project	1	2	3	4	5	6
4	Assets portfolio management has contributed to generate revenue levels on combined different risk of proved reserves.	1	2	3	4	5	6
5	Financial risk management has contributed to strategize the level of exploration, development, and production activities	1	2	3	4	5	6
6	Operational success has contributed to implement projects undertaken and to build capacity level.	1	2	3	4	5	6

Financial performances							
7	Operational success has contributed to suppress unnecessary costs for exploration, development, production	1	2	3	4	5	6
8	Financial risk management has contributed to support profit margin and return on assets making	1	2	3	4	5	6
9	Assets portfolio management has contributed to support profit margin and asset growth	1	2	3	4	5	6



DATE: 12/ 5/2008

TIME: 10:31

LISREL 8.80 (STUDENT EDITION)

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file C:\Documents and Settings\Edward\My Documents\NormMod\2CFANORMMod.Spl:

raw data from file LVS NORMMod.psf

latent variables ORGS EXEPR FUNC APM OSS FRM CP

relationships:

ORG = 1* ORGS

EXE = 1* EXEPR

FUN = 1* FUNC

STOCK COST = APM

OMGT TKNOW = OSS

VIAB SIZE = FRM

NFP FP = CP

APM = ORGS EXEPR FUNC

OSS = ORGS EXEPR FUNC

FRM = ORGS EXEPR FUNC

CP = APM OSS FRM

set error variance of ORG to 0

set error variance of EXE to 0

set error variance of FUN to 0

set error variance of TKNOW to 0.01

set error variance of NFP to 0.01

set error variance of SIZE to 0.01

let error covarian of COST and STOCK free

let error covarian of OMGT and STOCK free

let error covarian of TKNOW and OMGT free

let error covarian of SIZE and COST free

let error covarian of SIZE and TKNOW free

let error covarian of OSS and APM free

let error covarian of FRM and APM free
 let error covarian of FRM and OSS free

Options AD = off
 options MI
 path diagram
 end of problem

Sample Size = 55

Covariance Matrix

	STOCK	COST	OMGT	TKNOW	VIAB	SIZE
STOCK	1.00					
COST	0.79	1.00				
OMGT	0.08	0.19	1.00			
TKNOW	0.51	0.47	0.57	1.00		
VIAB	-0.59	-0.50	-0.25	-0.67	1.00	
SIZE	-0.57	-0.46	-0.25	-0.68	0.99	1.00
NFP	0.34	0.29	0.00	0.47	-0.64	-0.66
FP	0.22	0.13	-0.06	0.42	-0.54	-0.58
ORG	-0.31	-0.18	-0.17	-0.50	0.48	0.50
EXE	-0.47	-0.33	-0.10	-0.28	0.35	0.38
FUN	-0.31	-0.26	-0.26	-0.52	0.20	0.24

Covariance Matrix

	NFP	FP	ORG	EXE	FUN
NFP	1.00				
FP	0.92	1.00			
ORG	-0.64	-0.58	1.00		
EXE	-0.13	-0.04	0.39	1.00	
FUN	-0.10	-0.09	0.18	0.41	1.00

Number of Iterations = 49

LISREL Estimates (Maximum Likelihood)

Measurement Equations

STOCK = 0.63*APM, Errorvar.= 0.60 , R² = 0.40
 (0.12)
 5.09

COST = 0.57*APM, Errorvar.= 0.64 , R² = 0.34
 (0.084) (0.13)
 6.79 5.11

OMGT = 0.42*OSS, Errorvar.= 0.81 , R² = 0.18
 (0.17)
 4.86

TKNOW = 0.99*OSS, Errorvar.= 0.0100, R² = 0.99
(0.32)
3.12

VIAB = 0.99*FRM, Errorvar.= 0.016 , R² = 0.98
(0.0049)
3.22

SIZE = 0.99*FRM, Errorvar.= 0.0100, R² = 0.99
(0.022)
45.32

NFP = 1.00*CP, Errorvar.= 0.0100, R² = 0.99

FP = 0.93*CP, Errorvar.= 0.14 , R² = 0.86
(0.053) (0.028)
17.65 4.89

ORG = 1.00*ORGS,, R² = 1.00

EXE = 1.00*EXEPR,, R² = 1.00

FUN = 1.00*FUNC,, R² = 1.00

Error Covariance for COST and STOCK = 0.41
(0.10)
3.93

Error Covariance for OMGT and STOCK = -0.12
(0.066)
-1.78

Error Covariance for TKNOW and OMGT = 0.14
(0.078)
1.78

Error Covariance for SIZE and COST = 0.023
(0.013)
1.76

Error Covariance for SIZE and TKNOW = 0.00
(0.010)
-0.27

Structural Equations

APM = - 0.11*ORGS - 0.33*EXEPR - 0.29*FUNC, Errorvar.= 0.67 , R² = 0.33
(0.21) (0.19) (0.17) (0.28)
-0.52 -1.72 -1.73 2.38

OSS = - 0.46*ORGS + 0.10*EXEPR - 0.47*FUNC, Errorvar.= 0.55 , R² = 0.45
(0.19) (0.12) (0.20) (0.38)
-2.38 0.84 -2.39 1.45

FRM = 0.42*ORGS + 0.17*EXEPR + 0.082*FUNC, Errorvar.= 0.71 , R² = 0.29
(0.13) (0.13) (0.13) (0.14)
3.31 1.29 0.65 5.10

$$CP = -1.15*APM + 0.59*OSS - 1.29*FRM, \text{Errorvar.} = 0.41, R^2 = 0.59$$

(0.56)	(0.42)	(0.44)	(0.14)
-2.06	1.42	-2.90	2.93

Error Covariance for OSS and APM = 0.54

(0.23)
2.37

Error Covariance for FRM and APM = -0.65

(0.18)
-3.61

Error Covariance for FRM and OSS = -0.39

(0.17)
-2.32

Reduced Form Equations

$$APM = -0.11*ORGS - 0.33*EXEPR - 0.29*FUNC, \text{Errorvar.} = 0.67, R^2 = 0.33$$

(0.21)	(0.19)	(0.17)
-0.52	-1.72	-1.73

$$OSS = -0.46*ORGS + 0.10*EXEPR - 0.47*FUNC, \text{Errorvar.} = 0.55, R^2 = 0.45$$

(0.19)	(0.12)	(0.20)
-2.38	0.84	-2.39

$$FRM = 0.42*ORGS + 0.17*EXEPR + 0.082*FUNC, \text{Errorvar.} = 0.71, R^2 = 0.29$$

(0.13)	(0.13)	(0.13)
3.31	1.29	0.65

$$CP = -0.68*ORGS + 0.22*EXEPR - 0.051*FUNC, \text{Errorvar.} = 0.60, R^2 = 0.40$$

(0.11)	(0.12)	(0.11)
-5.96	1.85	-0.46

Correlation Matrix of Independent Variables

	ORGS	EXEPR	FUNC
ORGS	1.00		
	(0.19)		
	5.20		
EXEPR	0.39	1.00	
	(0.15)	(0.19)	
	2.69	5.20	
FUNC	0.18	0.41	1.00
	(0.14)	(0.15)	(0.19)
	1.31	2.78	5.20

Covariance Matrix of Latent Variables

	APM	OSS	FRM	CP	ORGS	EXEPR
APM	1.00					
OSS	0.83	1.00				
FRM	-0.90	-0.69	1.00			
CP	0.49	0.52	-0.66	1.00		
ORGS	-0.29	-0.51	0.50	-0.61	1.00	
EXEPR	-0.49	-0.27	0.37	-0.07	0.39	1.00

FUNC : -0.45 -0.51 0.23 -0.08 0.18 0.41

Covariance Matrix of Latent Variables

FUNC

FUNC 1.00

Goodness of Fit Statistics

Degrees of Freedom = 27

Minimum Fit Function Chi-Square = 37.53 (P = 0.086)

Normal Theory Weighted Least Squares Chi-Square = 34.06 (P = 0.16)

Estimated Non-centrality Parameter (NCP) = 7.06

90 Percent Confidence Interval for NCP = (0.0 ; 26.16)

Minimum Fit Function Value = 0.70

Population Discrepancy Function Value (F0) = 0.13

90 Percent Confidence Interval for F0 = (0.0 ; 0.48)

Root Mean Square Error of Approximation (RMSEA) = 0.070

90 Percent Confidence Interval for RMSEA = (0.0 ; 0.13)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.31

Expected Cross-Validation Index (ECVI) = 2.08

90 Percent Confidence Interval for ECVI = (1.94 ; 2.43)

ECVI for Saturated Model = 2.44

ECVI for Independence Model = 11.35

Chi-Square for Independence Model with 55 Degrees of Freedom = 590.87

Independence AIC = 612.87

Model AIC = 112.06

Saturated AIC = 132.00

Independence CAIC = 645.95

Model CAIC = 229.35

Saturated CAIC = 330.48

Normed Fit Index (NFI) = 0.94

Non-Normed Fit Index (NNFI) = 0.96

Parsimony Normed Fit Index (PNFI) = 0.46

Comparative Fit Index (CFI) = 0.98

Incremental Fit Index (IFI) = 0.98

Relative Fit Index (RFI) = 0.87

Critical N (CN) = 68.57

Root Mean Square Residual (RMR) = 0.057

Standardized RMR = 0.057

Goodness of Fit Index (GFI) = 0.90

Adjusted Goodness of Fit Index (AGFI) = 0.75

Parsimony Goodness of Fit Index (PGFI) = 0.37

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

APM OSS FRM CP

STOCK	--	0.08	0.55	0.10
COST	--	0.08	0.55	0.10
OMGT	0.09	--	0.24	5.38
TKNOW	0.09	--	0.24	2.95
VIAB	0.63	1.23	--	1.79
SIZE	0.63	1.23	--	1.67
NFP	1.15	0.10	1.57	--
FP	1.15	0.10	1.57	--

Expected Change for LAMBDA-Y

	APM	OSS	FRM	CP
STOCK	--	-0.04	-0.15	-0.03
COST	--	0.04	0.13	0.03
OMGT	-0.06	--	0.10	-0.33
TKNOW	0.15	--	-0.23	0.49
VIAB	0.05	0.05	--	0.04
SIZE	-0.05	-0.05	--	-0.04
NFP	0.07	0.02	-0.09	--
FP	-0.06	-0.02	0.09	--

No Non-Zero Modification Indices for LAMBDA-X

Modification Indices for BETA

	APM	OSS	FRM	CP
APM	--	--	--	--
OSS	--	--	--	0.19
FRM	--	--	--	1.65
CP	--	--	--	--

Expected Change for BETA

	APM	OSS	FRM	CP
APM	--	--	--	--
OSS	--	--	--	-0.22
FRM	--	--	--	1.02
CP	--	--	--	--

Modification Indices for GAMMA

	ORGS	EXEPR	FUNC
APM	--	--	--
OSS	--	--	--
FRM	--	--	--
CP	3.31	3.32	0.33

Expected Change for GAMMA

	ORGS	EXEPR	FUNC
APM	--	--	--
OSS	--	--	--
FRM	--	--	--
CP	-0.65	-0.45	-0.15

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	APM	OSS	FRM	CP
APM	--			
OSS	--	--		
FRM	--	--	--	
CP	--	0.19	1.65	--

Expected Change for PSI

	APM	OSS	FRM	CP
APM	--			
OSS	--	--		
FRM	--	--	--	
CP	--	-0.09	0.42	--

Modification Indices for THETA-EPS

	STOCK	COST	OMGT	TKNOW	VIAB	SIZE
STOCK	--					
COST	--	--				
OMGT	--	0.00	--			
TKNOW	0.61	0.31	--	0.19		
VIAB	3.24	0.67	0.15	0.03	--	
SIZE	2.92	--	0.01	--	0.64	0.52
NFP	0.00	2.89	0.04	0.37	0.03	0.04
FP	0.33	1.90	1.76	0.95	1.45	1.44

Modification Indices for THETA-EPS

	NFP	FP
NFP	0.26	
FP	0.26	--

Expected Change for THETA-EPS

	STOCK	COST	OMGT	TKNOW	VIAB	SIZE
STOCK	--					
COST	--	--				
OMGT	--	0.00	--			
TKNOW	-0.04	0.03	--	0.15		
VIAB	-0.03	0.04	-0.01	0.02	--	
SIZE	0.03	--	0.00	--	0.01	-0.01
NFP	0.00	0.05	-0.01	-0.02	0.00	0.00
FP	-0.02	-0.04	-0.05	0.02	0.01	-0.01

Expected Change for THETA-EPS

	NFP	FP
NFP	-0.02	
FP	0.02	--

Modification Indices for THETA-DELTA-EPS

	STOCK	COST	OMGT	TKNOW	VIAB	SIZE
ORG	2.52	1.02	1.73	3.16	0.16	0.25
EXE	0.64	0.00	0.49	0.02	0.71	0.48
FUN	0.00	0.00	0.17	0.10	3.90	3.94

Modification Indices for THETA-DELTA-EPS

	NFP	FP
ORG	0.32	0.14
EXE	0.90	0.45
FUN	0.13	0.15

Expected Change for THETA-DELTA-EPS

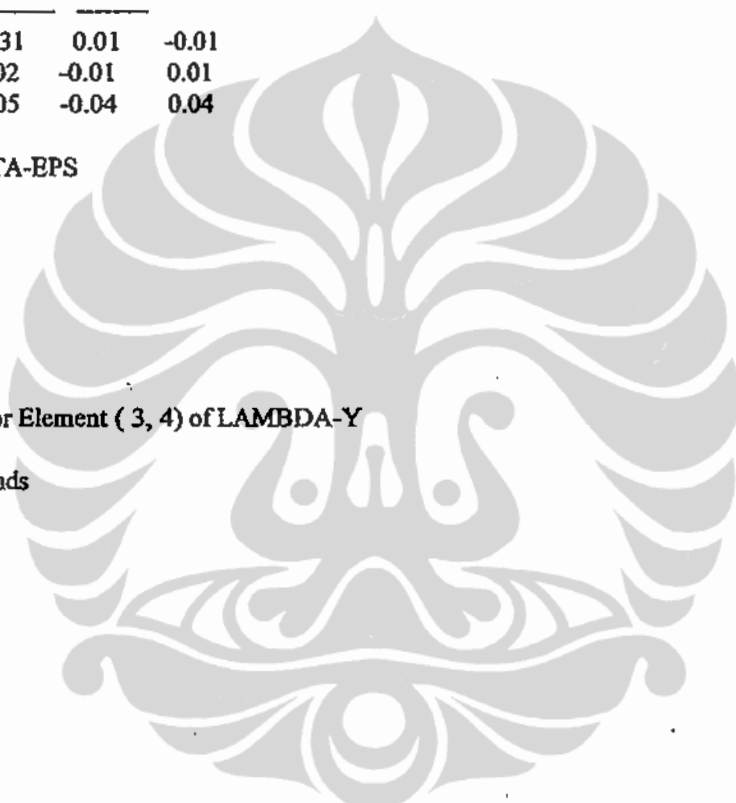
	STOCK	COST	OMGT	TKNOW	VIAB	SIZE
ORG	-0.10	0.06	-0.11	0.31	0.01	-0.01
EXE	-0.05	0.00	0.06	0.02	-0.01	0.01
FUN	0.00	0.00	-0.05	0.05	-0.04	0.04

Expected Change for THETA-DELTA-EPS

	NFP	FP
ORG	-0.02	0.01
EXE	-0.04	0.03
FUN	0.01	-0.01

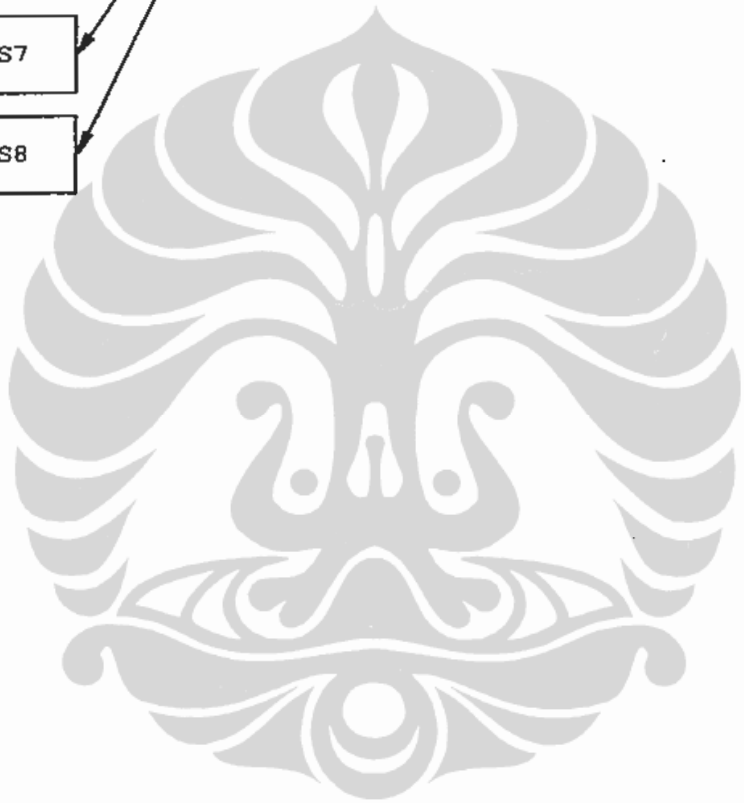
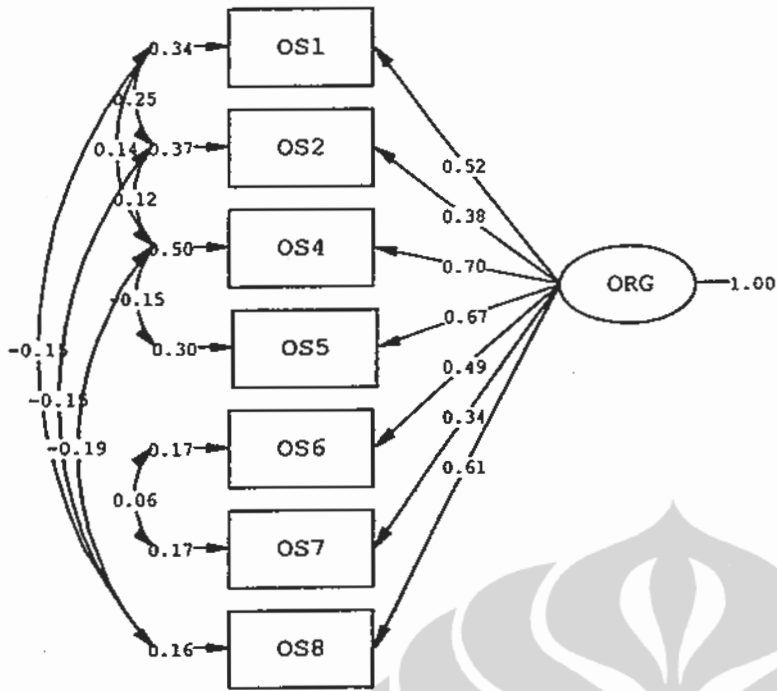
Maximum Modification Index is 5.38 for Element (3, 4) of LAMBDA-Y

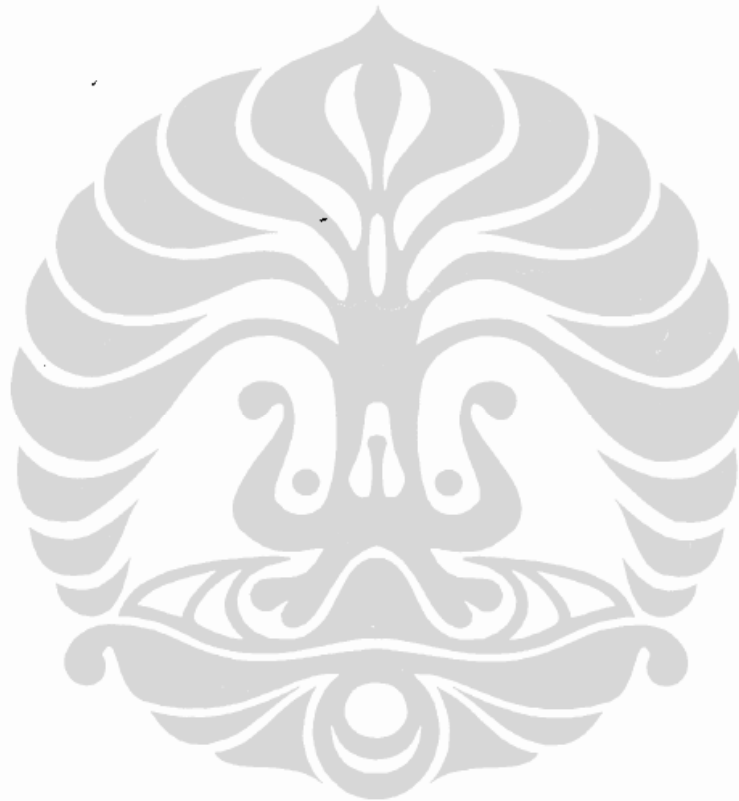
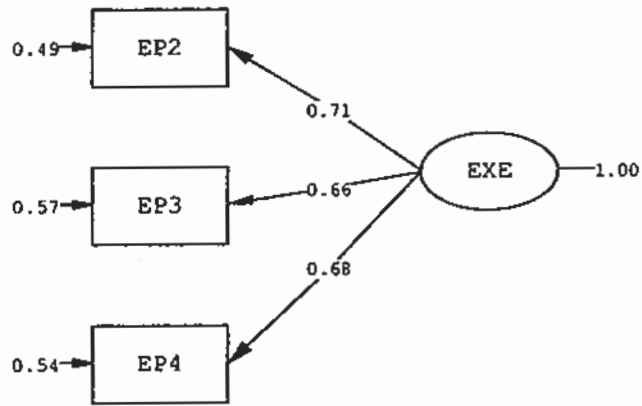
Time used: 0.090 Seconds



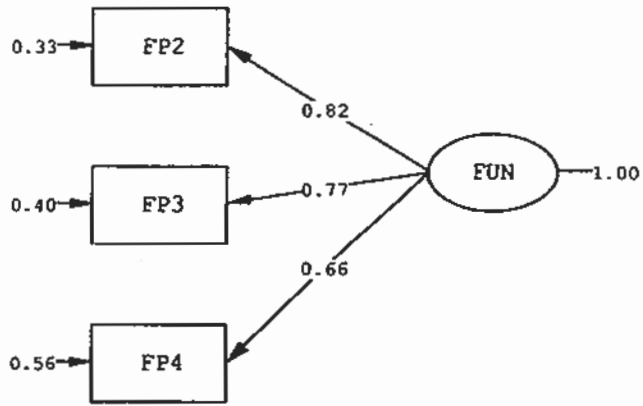
Latent Variable Scores

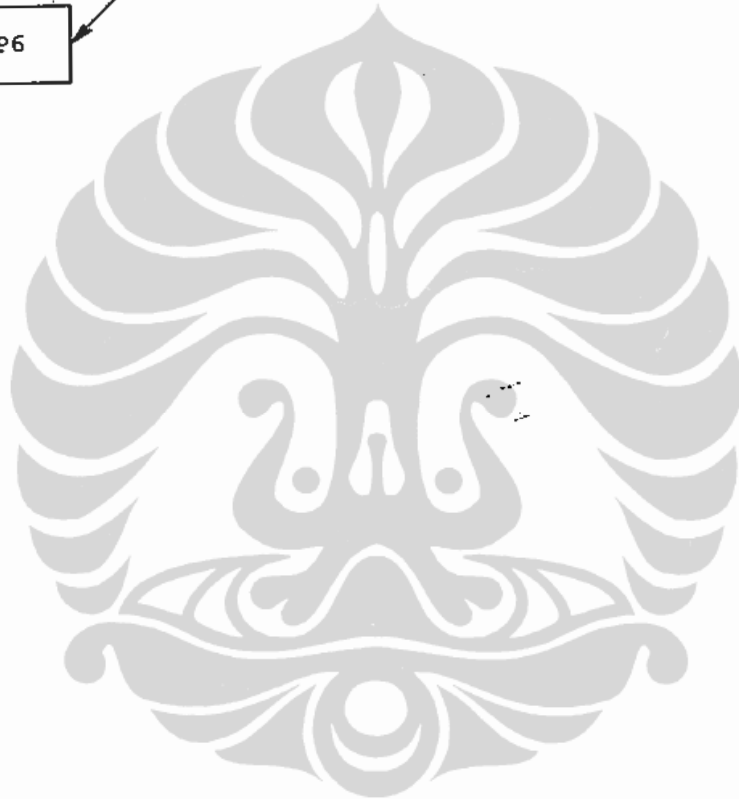
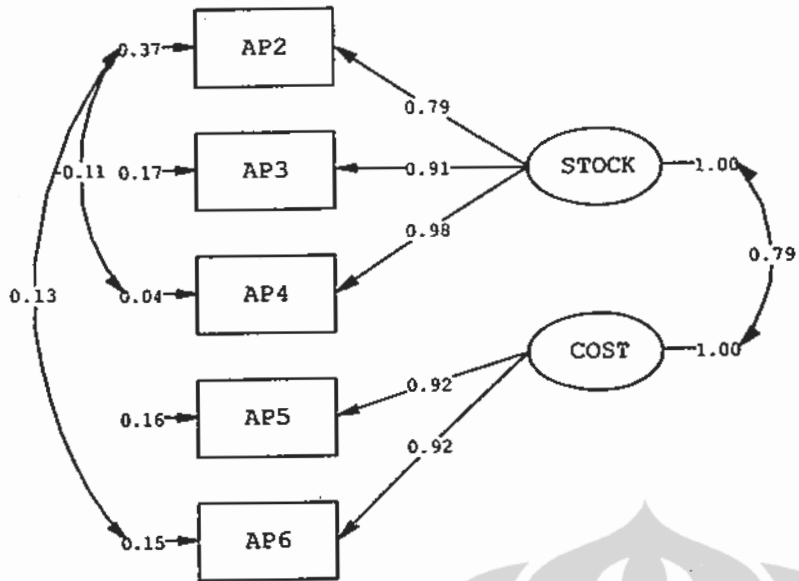
ORG	EXE	FUN	STOCK	COST	OMGT	TKNOW	VIAB	SIZE	NFP	FP
-0,77	0,15	1,53	1,47	0,85	-1,54	0,26	-1,07	-0,97	0,49	0,35
-0,70	-0,42	-1,76	1,39	-0,62	-1,63	0,44	0,00	-0,23	1,13	0,82
-0,77	-0,42	-0,27	1,09	0,98	0,35	0,60	-1,35	-1,07	0,78	0,77
0,30	0,15	1,53	0,04	2,49	-0,09	-1,00	1,08	1,31	-0,02	-1,47
-0,98	-3,08	-0,99	2,08	1,31	0,35	0,60	0,32	0,22	0,49	0,35
-3,46	1,02	0,54	0,88	-0,79	1,36	2,07	-0,35	-0,37	1,15	1,22
0,44	-0,42	-0,27	1,57	1,14	0,48	0,67	-1,47	-1,24	0,49	0,35
-1,18	0,91	2,00	-0,76	-0,82	-0,36	-1,15	-0,74	-0,67	2,88	2,81
1,01	-0,84	-0,27	1,60	1,15	-0,23	-1,08	0,27	0,12	-0,08	-0,55
-0,44	-0,99	2,00	-0,76	-0,82	-0,09	-1,00	0,05	-0,08	-1,71	-1,74
-0,42	0,33	-0,27	-0,52	0,96	-0,29	0,63	0,96	1,05	0,49	0,35
0,71	0,44	-1,21	-0,73	-0,81	0,70	0,57	0,37	0,11	0,20	0,31
-0,03	1,20	-0,70	-1,11	-0,68	-0,37	0,56	0,67	0,72	0,44	0,11
1,77	1,77	2,00	-0,76	-0,82	-0,09	-1,00	1,08	1,31	-0,78	-0,29
-0,42	-0,42	-0,27	1,09	0,98	0,48	0,67	-0,58	-0,62	0,49	0,35
1,77	1,02	-1,33	-0,76	-0,82	-0,09	-1,00	1,35	1,41	-1,71	-1,74
-0,33	-0,42	-0,70	-0,73	-0,81	0,82	0,76	0,15	-0,14	0,49	0,35
0,18	1,77	-0,70	-0,52	0,96	1,58	0,84	-0,35	-0,37	-0,20	-0,45
-0,45	-0,42	-0,27	1,09	0,98	0,48	0,67	-1,07	-0,97	0,49	0,35
1,77	-0,56	-0,70	-0,76	-0,82	-0,09	-1,00	0,11	0,01	-1,71	-1,76
1,77	1,02	0,72	-0,76	-0,82	-0,09	-1,00	1,35	1,41	-1,57	-1,34
-1,00	-0,42	-0,27	1,12	0,99	0,21	2,25	-3,07	-3,13	2,37	2,44
1,77	0,44	0,54	-0,76	-0,82	-0,23	-0,83	0,67	0,72	-1,41	-1,31
-0,71	-1,14	0,11	-0,73	-0,81	0,93	-0,72	0,23	0,27	-1,24	-1,28
-0,42	0,44	-0,27	-1,08	-0,67	2,64	1,12	-0,75	-0,76	0,47	0,30
-0,45	-0,42	-0,27	1,09	0,98	0,48	0,67	-1,07	-0,97	0,49	0,35
0,03	0,15	-1,33	0,29	0,71	0,66	0,74	0,71	0,57	-1,42	-0,88
-0,45	-0,42	-0,27	-0,73	-0,81	0,93	-0,72	0,54	0,22	0,29	-0,35
-0,39	-0,42	0,72	1,09	0,98	-1,28	-1,19	0,27	0,12	0,49	0,35
1,77	1,77	2,00	-0,76	-0,82	-0,09	-1,00	1,35	1,41	-1,71	-1,74
-1,25	-1,41	-2,69	2,53	2,57	0,76	2,33	-2,30	-2,53	1,21	0,83
1,62	1,77	1,00	-0,76	-0,82	-0,09	-1,00	1,35	1,41	-0,99	-0,54
0,73	-0,42	-0,27	1,09	0,98	0,48	0,67	-1,07	-0,97	0,50	0,74
-0,85	1,02	-0,27	-0,52	0,96	0,60	0,55	-0,86	-0,97	1,51	2,32
-0,14	-0,42	-0,27	-0,73	-0,81	1,72	0,85	0,15	-0,14	0,75	1,14
-0,45	-1,14	-0,27	-0,76	-0,82	-1,28	-1,19	0,27	0,12	-0,50	-0,24
-0,69	-0,42	-0,27	-0,76	-0,82	0,66	0,74	0,27	0,12	-0,51	0,19
-0,42	-0,99	-0,27	-0,76	-0,82	-0,17	-0,83	1,39	1,26	-0,51	0,19
-0,45	-0,42	-0,27	-0,76	-0,82	0,48	0,67	-0,58	-0,62	0,49	0,35
-0,45	-0,99	-0,27	1,09	0,98	0,48	0,67	-0,95	-0,71	0,49	0,35
-0,69	0,15	-0,27	-0,76	-0,82	-1,04	-1,10	1,08	1,31	-0,10	-0,16
-0,22	-0,99	-0,27	-0,76	-0,82	-1,42	0,45	0,27	0,12	0,49	0,35
0,64	-0,42	-0,27	-0,76	-0,82	-1,28	-1,19	1,35	1,41	-1,28	-0,35
-0,14	-0,42	-0,27	-0,76	-0,82	0,48	0,67	-1,07	-0,97	0,34	-0,10
-0,96	-0,99	1,53	-0,76	-0,82	-1,04	-1,10	-1,07	-0,97	0,49	0,35
-0,45	-0,42	-0,27	1,09	0,98	-1,42	0,45	-1,07	-0,97	0,49	0,35
-0,69	0,15	-0,27	-0,76	-0,82	-1,04	-1,10	1,08	1,31	-0,10	-0,16
0,30	-0,42	-0,27	-0,16	0,82	0,48	0,67	0,71	0,57	-0,50	-0,24
0,60	-0,42	-0,27	1,09	0,98	-1,42	0,45	-1,07	-0,97	0,49	0,35
1,47	1,02	-0,27	-0,76	-0,82	-1,28	-1,19	1,35	1,41	-0,94	-0,29
-0,14	1,77	-0,27	-0,76	-0,82	-1,33	-1,18	0,56	0,45	0,04	0,28
0,30	-0,42	-0,27	1,09	0,98	1,72	0,85	-0,28	-0,01	-1,26	-1,67
1,03	1,77	2,00	-0,76	-0,82	-1,33	-1,18	0,56	0,45	0,04	0,28
0,30	-0,42	-0,27	1,09	0,98	1,72	0,85	-0,28	-0,01	-1,26	-1,67
1,03	1,77	2,00	-0,76	-0,82	-1,33	-1,18	0,56	0,45	0,04	0,28

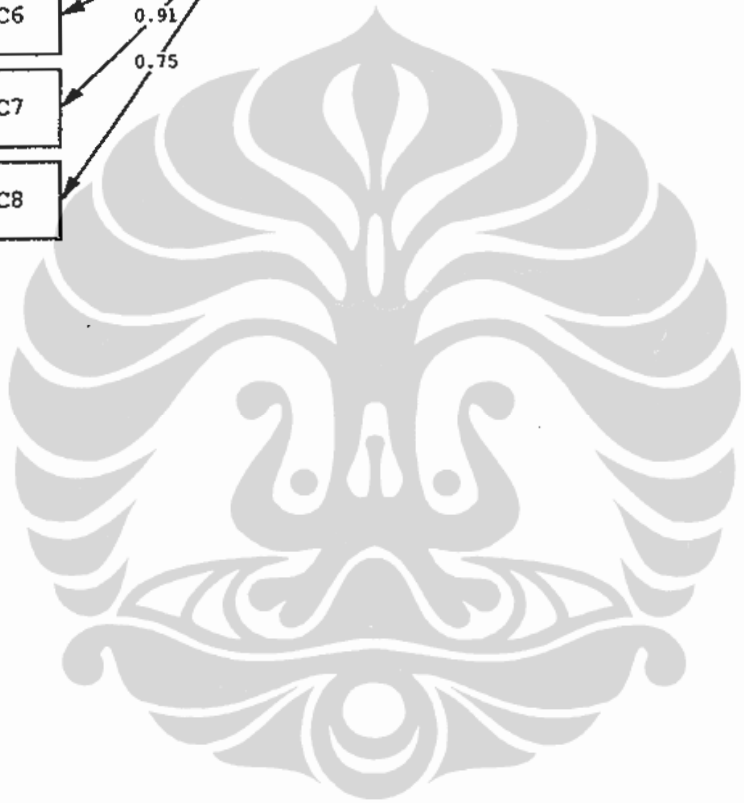
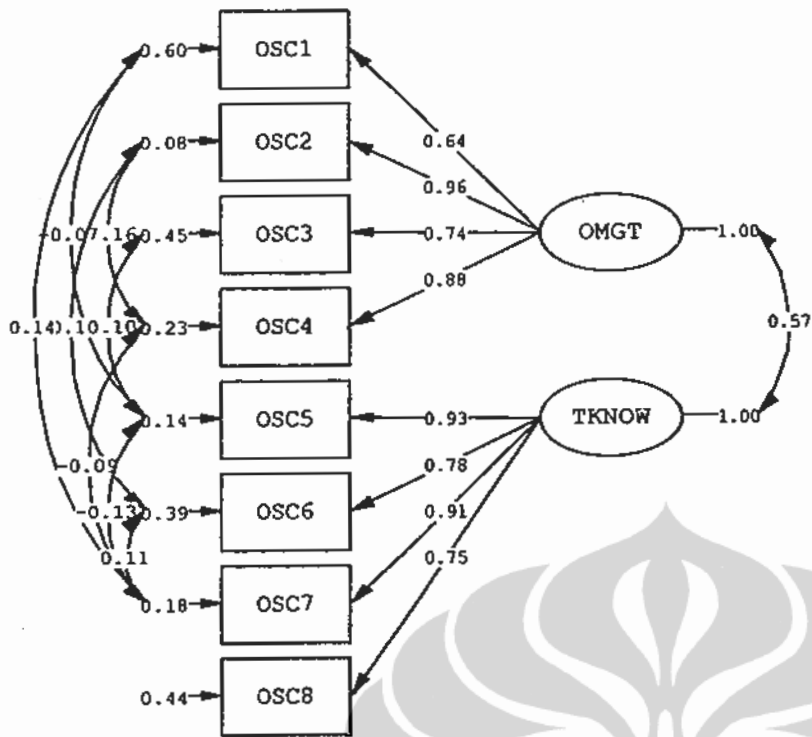


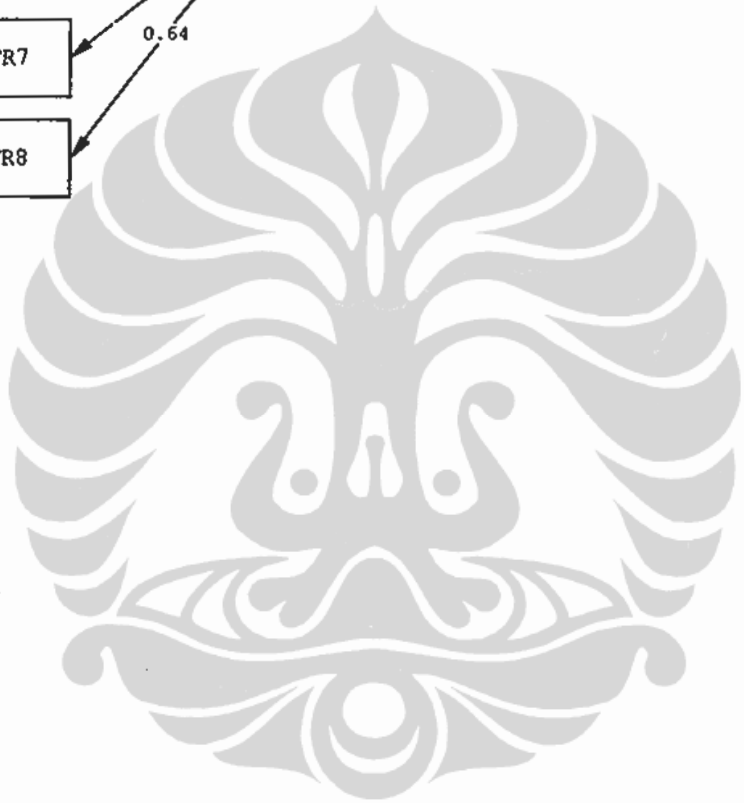
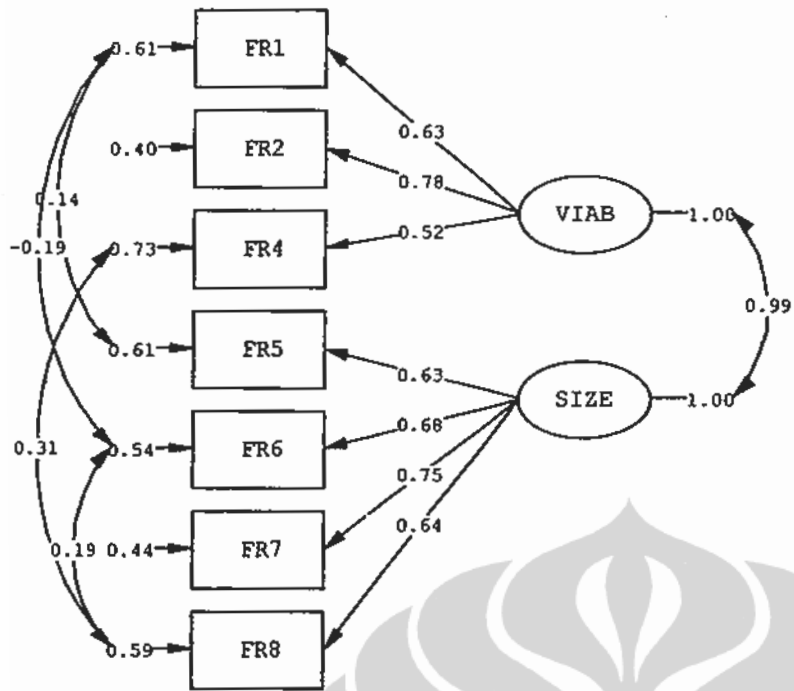


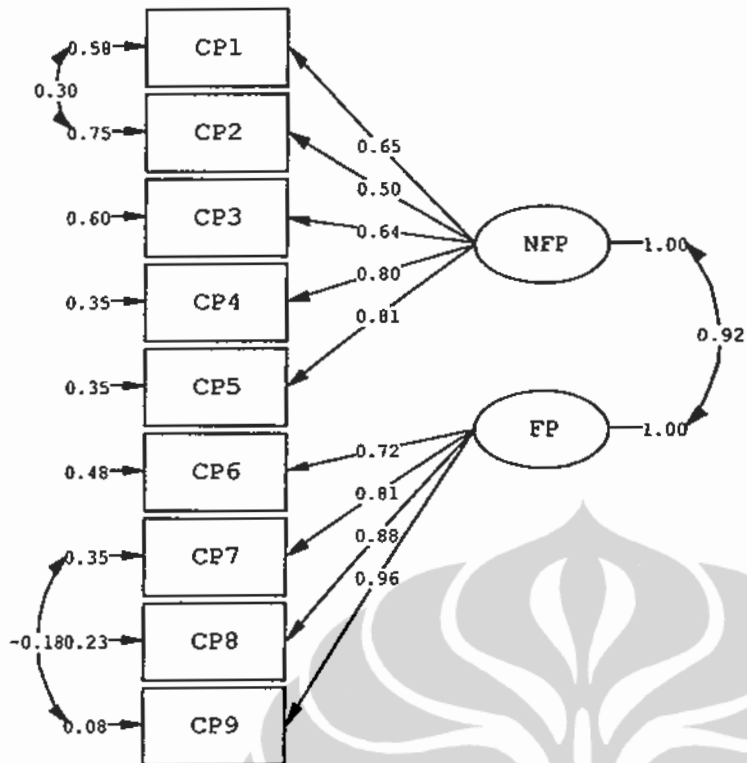
CFA of Functional Perspective

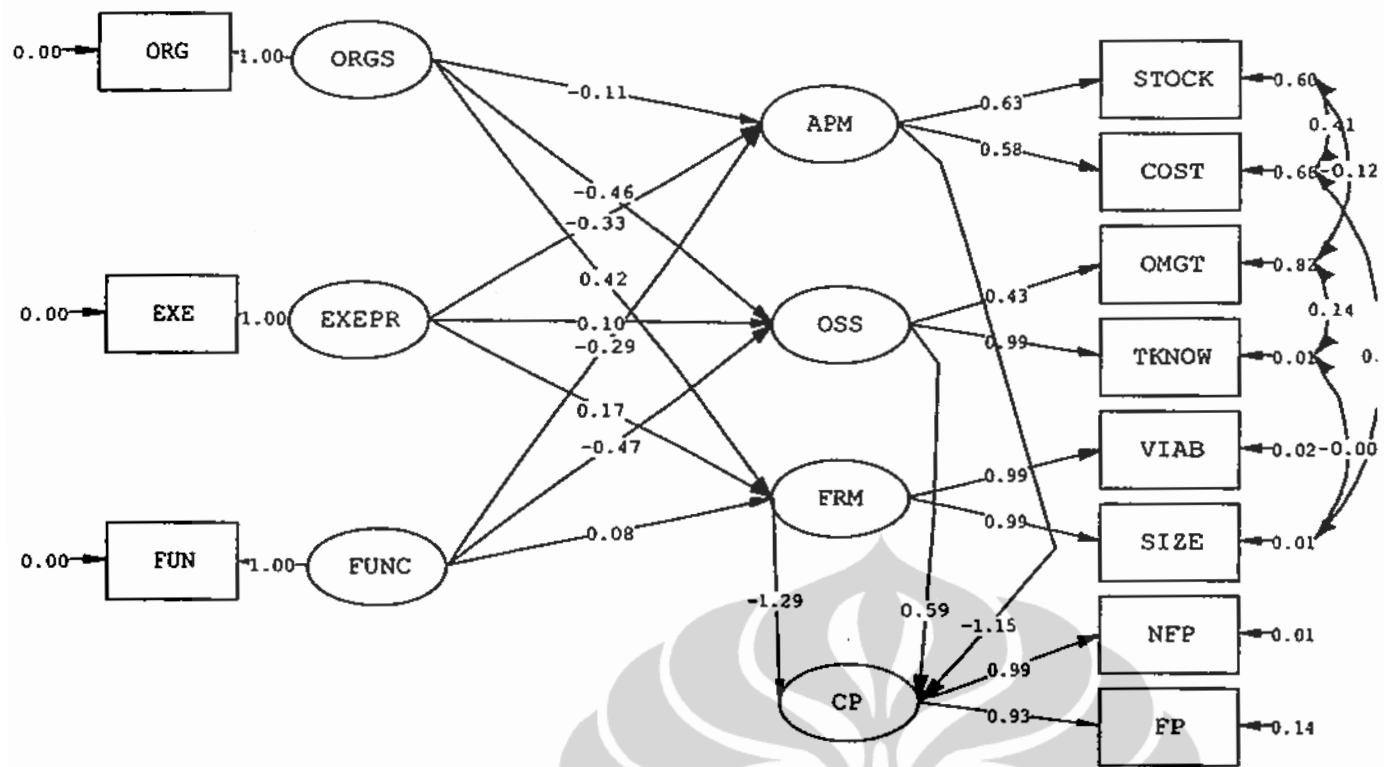


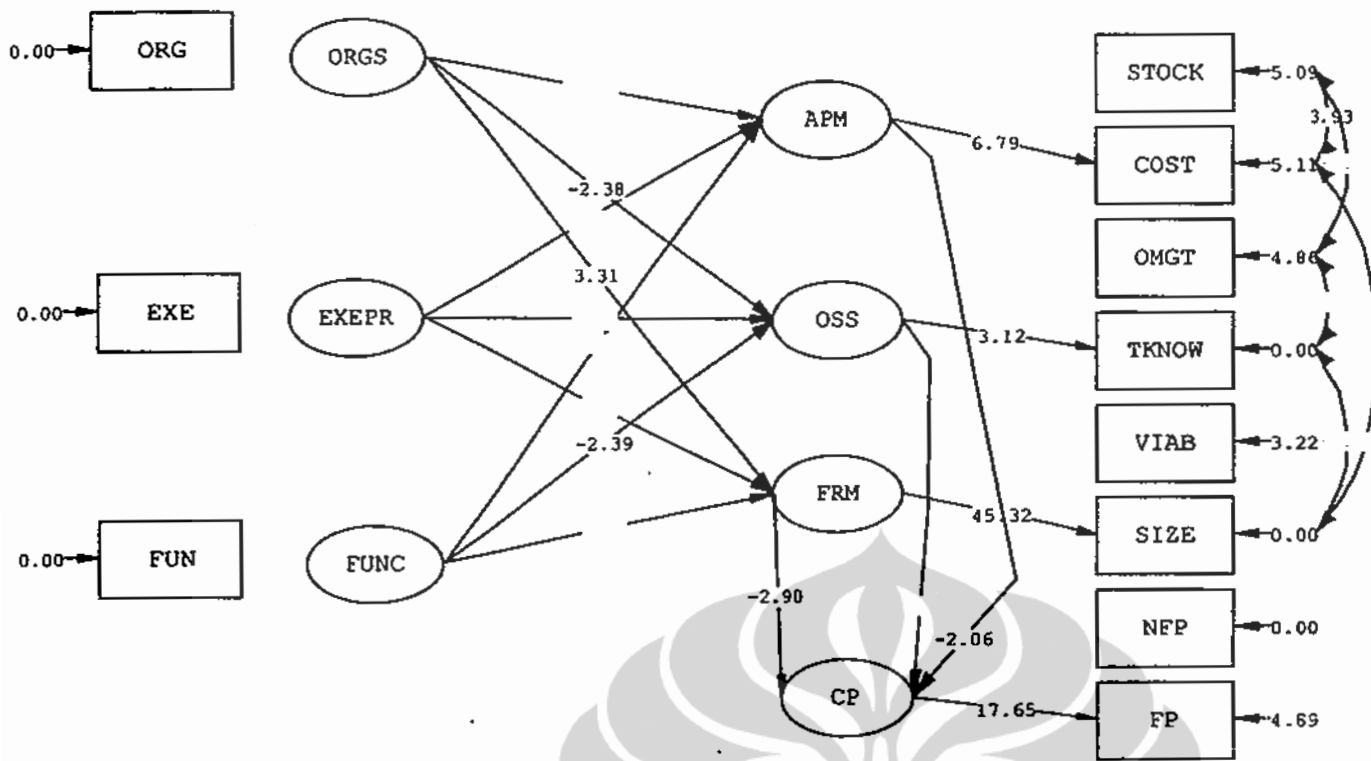












CURRICULUM VITAE

Personal Information

Name : Edward Simangunsong
Place & date of Birth : Pematang Siantar, 27th February 1954
Religion : Christian
Address : Jl Ismaya I/27, Blok K - Cinere, Sawangan , Depok 16514
Tel 021-7543208
email address:edwardsimangunsong@yahoo.com

Family

Spouse : Dewi Kartini Simangunsong
Date of birth 21st April 1957

Daughter : Stefania Denardian Kristie Simangunsong
Date of birth 27th December 1996

Education background

1974-1981 University of Indonesia , Jakarta
Bachelor (S1) in economics majoring in accountancy from Faculty of Economics
Title of thesis : Internal audit as its effect external audit

1996-1997 University of Sahid , Jakarta
Master (unfinished, thesis outstanding) from Master Program in Finance specialized in Capital Market

Professional Course

Jan-Jun1996 CFA review course, Jakarta

Professional Experiences

Accounting Firm (PMM & Co or KPMG as Senior Auditor) 1978 – 1983
I gained an extensive experience to understand how the accounting were practiced and functioned in different companies.
I led auditing assignments to various companies.

PT Rekayasa Industri as GM Accounting, C&E 1981 – 1983
Job Position: General Accounting Manager
Responsibilities: to lead an accounting department and develop overall accounting functions, Systems and Standard Operating Procedures (SOP).

Dowell Schlumberger , Oil field Services Company 1983 – 1988
Position: Internal Auditor (based In London)
Responsibilities: to conduct corporate internal audit in units through out many operation offices.
Last Position: Controller (based in Singapore and Jakarta)
Responsibilities: to head controller department managing accounting administration, finance, and cost control.

PT Oriflame Indonesia, Cosmetic Trading 1989 – 1991
Job Position: Finance, Administration, Personnel Manager
Responsibilities: to head finance/administration and personnel department managing accounting administration, financial matters, and personnel matters.

PT. CMC Bina Amsali, Consulting and trading 1992 – 1995
Job position: director
Responsibilities: to lead the business and provide the services to the clients.

KPMG, Public Accountant and Consulting Firm 1996 – 1998
Job Position: Director of corporate finance services division
Responsibilities: to lead the division and provide the services to clients.

PT Perusahaan Pelayaran Tempuran Emas (Tbk)
2003 – now
Position: Audit committee member

IPE Associates, Consulting and Advisory 1998 – now
Job Position: Director
Responsibilities: to lead the business of the firm and provide the services to clients.

Expertise

Financial advisory services: IPO review, restructuring, information memorandum, FS, etc

Management consulting services: organization development, business plan, SOP and business process design, etc.

Professional membership

Ikatan Sarjana Ekonomi Indonesia (ISEI)

Ikatan Akuntan Indonesia (IAI)

What I stated here is the truth.

Jakarta, December, 2008

Edward Simangunsong