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## Project Management and Attitude towards Risks: An Analysis of Pakistan Oil and Gas Sectors

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### Abstract

*The attitude toward risk analysis department in oil and gas sectors at some point is not be good its mean the attitude dealing with department and acceptance the important of this department is not acceptable and showing negative attitude. It's found that the most of the oil and gas sector companies working in Pakistan having its own risk analysis department and its percentage is almost 75% and out of 25 % companies (54.4 % hire external consultant while 45.6% having no serious attitude to hire external consultant or developed its own risk analysis department). Those companies who hire external or having its own risk analysis department having more project success rate as compare to those who having no department as well as did hire external consultants. The result show that risk analysis department play vital role in project success and helping to project by saving time, cost, delay issues etc. and due to project success the Pakistan economy also be supporting and helping to stand in global market at some position. In addition, it also shows that then attitude toward risk analysis in oil and gas sector in Pakistan is very positive as well as very satisfactory attitude, which means a positive attitude. The important of this department shown by this research are that "Risk analysis department help full for the*

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*success of project” with value 0.89.” and “Risk analysis department help on projects” 0.87 RII value.*

**Keywords:** Risk Analysis, Project Management, Energy, Attitude, Project Value, Oil & Gas

## INTRODUCTION

Petroleum and gas sector are the biggest business sector all over the world. These sectors doing different activities at a time and each activity taken as a project. In this sector project term is highly focus and applying most of the project management tools for the success of project. Project is some kind of activities, which are not normally doing in a routine work, basically is a unique work which can be start and end in a time frame which is giving to that work should be started or completed. In project different department are work together and different peoples are engaged with each other for the project, not only peoples are engaged but also in fact most of the times we see different organization are also be engaged or work together for the some specific or special project. Is not necessary these organization are based on same country may be they are from different country also. Project having different task or work breakdown so project can be easily managed by applying new tools and techniques, which can be done only by applying project management in any project.

Project management, then, is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management having few things which combine called a project management process i.e. Initiating, Planning, Executing, Monitoring and Controlling, Closing.



Fig 1: Steps of Project Management

Project management work on different area but the most important areas are;

- Scope
- Vision
- Time / schedule
- Cost / budget
- Risk management

Other the rest is mention in figure given below;



Fig 2: Knowledge Area of PM

### Oil & Gas Sector

As above mention this biggest commercial sector all over the world. Different activities are perform which are divided into 3 major sector:

- Up/ Upper stream
- Middle Stream
- Down Stream

#### Upper Stream

It is also known as (E & P) sector which mean exploration and production. This sector doing production or discovering crude oils or natural gas

#### Middle Stream

In this sector processing hydrocarbons into petrochemical products, and includes refineries, fertilizer, and petrochemical plants.

#### Down Stream

This sector doing marketing & distribution of oil & gas and provide this to the end users. Oil and gas industry are grow rapidly globally, new techniques and technology are come in the world new talent can come, which help the industry for future growth. Different project can be successful due to new technology. The most of Pakistan companies are involved in different oil and gas pipeline projects and contracts to increase their production capability and maintain their position in the oil and gas sector. As per 2018, Pakistan energy mix consist of 88% of fossil fuel in such manners 34% Natural gas, 31% Oil, 13% Coal, 9% imported LNG and 1% LPG), and 8% hydropower and 4% other.( Absar Saleh, 2015).

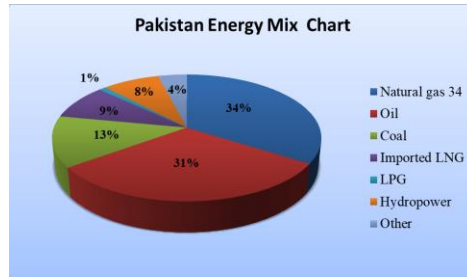


Fig 3: Pakistan Mix Energy Chart

Pakistan almost fulfils 2/3 of its energy requirement by natural gas or fuel oil. The natural gas consumption is full fill by itself Pakistan is 34.6% while the fuel oil is fulfill 31.2 % while rest of the requirement are fulfil by foreign import consumption (Haris Ahmed, 2020).

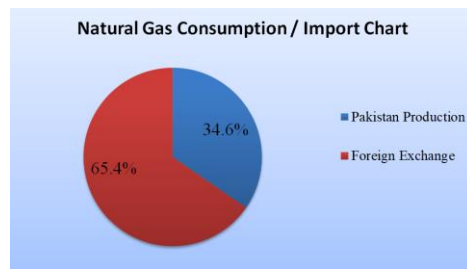


Fig 4: Consumption and Foreign Exchange Chart of Natural Gas

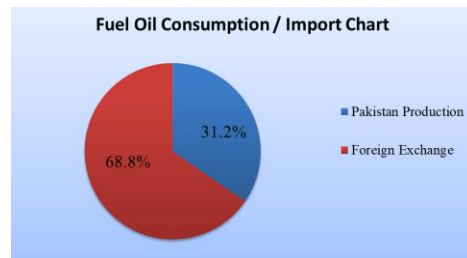


Fig 5: Consumption and Foreign Exchange Chart of Fuel Oil

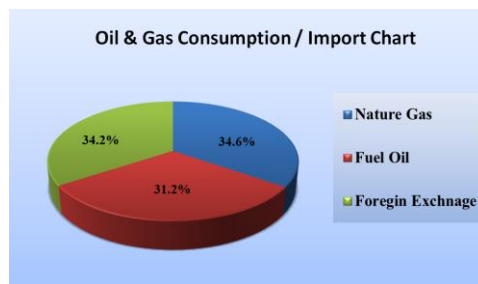


Fig 6: Consumption and Foreign Exchange Chart of Oil & Gas

Based on above mention chart, the consumption of energy show how much increases day by day or year by year. Due to the increases ratio of consumptions Pakistan need to full the demand by import the gas and oil.

Pakistan is ranking as 20th number of the largest consumer of gas while the 33rd number in the oil consumer in the world, which means we are the higher consumer rank line in the world due to this we cannot full fill the requirement of oil and gas so we have to import the energy. One of the reason is unsuccessful rate of project in theses sector and the project goes down toward unsuccessful mean the project key knowledge have been not taking seriously or work as the same as the requirement. Lots of factor involved in the failure of project but here we are discussing about attitude of dealing with risk analysis or attitude toward risk analysis. Sometime the department is not working as the requirement of this department, may be the department suggestion is not taken seriously as the need to take for project in oil and gas sector. Sometimes the finance issue to that department is not enough and due to this condition, business sustainability is affected. However, few risk like COVID-19 is unexpected to all the risk analyser. Due to this condition no one are ready to face and mitigate that situation and this is affect all the businesses and specially gas and oil sector. The price of fuel oil is decreasing day by day, which is causing to stop oil production. If this situation is not control, so the oil field is near to closing the plant.

The purpose of conducting this research is to full fill the gaps, which become the main reason of project failure in oil and gas sector. Many project simultaneously doing in these sectors. Oil and gas sector do work on different project which are highly costly. In this sector risk analysis is required to save the cost and damages which will be faced in future but the all thing depend upon how the sectors it seriously or they just make a department of risk or it work or not this all thing are to be study and find out the way through which these sector take it seriously if they are not taken previously.

## **REVIEWED LITERATURE**

In this globalization century, the demand of fuel oil and natural gas increase day by day and this is not only happened in Pakistan but all over the world. If we discuss about Pakistan culture so it become the biggest problem for next century [Muhammad arshad khan and usman ahmad]. Pakistan's economy is well-known for its boom and bust cycles established every five years, but last several year the export part of Pakistan going continuously in downfall and import increases in many ways. Economical crisis in Pakistan is may be due to energy crisis, because there is very low new discovering oil field in Pakistan as compare to global market and also nature gas short occurs. Due to theses expensive energy source are taking from foreign exchange. The import of energy is just because of new discovering is getting low and our reserve is how much we have in hand. Domestic demand increases and industrial requirement is also increases dramatically.

This mean the consumption of energy increases and production of energy going toward down mean the project started for production or to overcome the gap between demand and production is not too successful as they need to going up rate. The simple explanation of this is as compare to other countries our discoveries is very low and if we moving toward reserve so the reserve is also not too good. The reserve of fuel oil is compare to globally be at rank of 54th out of 186 countries. The reserve oil of Pakistan is 0.34 billion barrel in 2019 while the world average reserve on the base of 186 countries is 8.67 billion barrel.

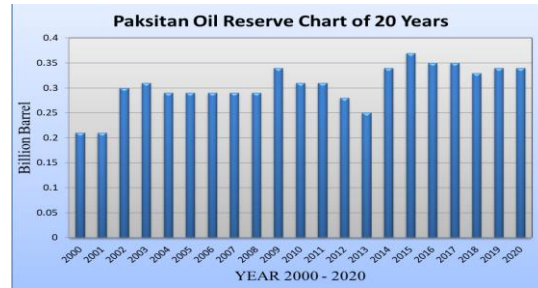


Fig 7: Pakistan Oil Reserve Chart of 20 Years

The all thing depend on project which are actively doing in gas and oil sector. If the project manager not only taken financial thing seriously but also show positive attitude toward risk management analysis so the project didn't goes downfall. Attitude toward risk analysis is one of the major factors which can affect the project of gas and oil sector. There are a lots of factors involve why the risk analysis is not taken seriously or is taken seriously these factor analysis is done in this research.

### Research Framework

This is can be simple define or describe as “a ‘visual’ presentation of key variables, factors or concepts and their relationship among each other which have been or have to be studied in research either graphically or in some other native form” (Miles & Huberman, 1994). This research basically focus on the relationship between different fact and figures which can affect the attitude toward the risk analysis in oil and gas sector which can indirectly or directly affect the project success rate and growth curve of oil and natural gas in Pakistan which are normally going in decline mode or direction. This study also shows the project cost which can be increases if the risk analysis does not take it seriously or does not show positive attitude toward risk analysis of project. It's not only affected the cost of project but also can be one of the reasons of project stop. Or become to delay the reason of any new project.

### METHODOLOGY

This is a sample text. The nature of this research is descriptive type and in this study try to find out the factor which can lead the positive or negative attitude toward risk analysis in oil and gas sector. In this study, the sectors (oil and gas) are observed to know the issues and identify the factors for the source of the occurrence of attitude which can be lead risk analysis seriously or may be not which can indirectly affect the oil and gas sector projects success rate in Pakistan.

This study started with the problem recognizing and this problem highlight by the discussion with professional and experience person who are related with our topic and by base paper and literature review. Information and data collection sources are design by formulated research design and on the base of this research tools were selected and studied the secondary data. After studied the literature review and discussion with professionals, design the questionnaires and distribute to the respondents to collect the data based on their experience education and designation. After collection of require data run the statically tools to analyse data and then give conclusion. Based on conclusion give the possible solution to change the negative attitude toward of risk analysis in gas and oil sector and improve the positive attitude toward of risk analysis department in gas and oil sector. This changing attitude will help future project success rate in oil and gas sector.

## **Research Design**

Research process start with the identification of problem and also the problem area which can be get through the literature review and the plan was formed by the senior or experience professional and by studying the secondary data. After the data collection, the data was giving the information through the process and then after this decide which tools and techniques are used to analysis the data. Deep study of literature and secondary data, the design of questionnaires formed and then distribute to the respondents to know the view of experience professionals. When the desire data collected, then moving toward the analysis of data and then interpreted the result and this result help to decide and write the conclusion. Hope this conclusion give help for future project in oil and gas sector and this sector will go to increases the growth rate.

Questionnaires were design the simple way which can give the easily path for respondents through this they cannot be confuse to answer. The design of questionnaires are multiple or likert scale (1 to 5). Primary and secondary data source are use to collect the data. While the primary data were collected through the survey and questionnaires filling form and secondary get through the journal, text, case study and etc. Sample size, a group of a subject that are selected from the general population and are considered as representative of the real population for that specific study. For the random sampling and to avoid the error, an adequate sample size required to remove the error. The larger the sample size means less chance of error which can help the study to collect and study the true base analysis (Gill, 2010).

## **FINDINGS & RESULTS**

### **Respondents Profile**

In this research, the data collect from highly experience to new comers and collect from different designation persons. In this data collection, also contain the age and experience on work and qualification of respondents note down. Based on these, the data was analyses and then move on toward discussion. Section one is depend on introduction questions in which asked the personal details of respondents like education, age, experience, designation etc. Question distribute as per designation of the respondents, which are shown in below table:

S.No	Respondents Designation	Distributed	No. of Response	Percent (%)	Cumulative (%)	Response rate (%)
1	Directors/ Managing Directors/ General Manager	10	07	10.34 %	10.34 %	70.00%
2	Senior Project Manager	15	12	17.65 %	27.99%	80.00%
3	Project Manager	15	14	20.69%	48.58%	93.33%
4	Assistant Project Manager	20	18	26.50%	75.00%	90.00%
5	Senior Risk Analyst	20	17	25.00%	100. %	85.00%
6	Total	80	68	100 %	-----	84.00%

The percentage based on age groups of respondents. It's clearly show the age group less than 25 age is 5.9% mean the respondents of age less than 25 was not too much of data population. The age group of 26-35 was cover the more than half of data and its percentage is 51.5% and the age of between 36-45 was 23.52 % we can say that is almost cover one fourth of the data. The most senior age group carries the least percentage of data that is 2.94%. Based on qualification the percentage of respondents are as follows like bachelor degree respondents are 26.47% which convert ¼ of the data respondents. The highest percentage carry degree is masters, which cover more than half of the data that is 52.94%, and the 21% respondents carry specialized



degree in project management. The overall work experience of respondents shows. The main portion cover the data was 1- 10 year experience that is cover more than half of the data that is 57.35%. The experiences between 11 – 20 years are cover 26.47% that mean more than half of the data is covered. The 21 – 30 years’ experience carry 14.70% of the data and least percentage-covered data is 1.47% that is belong to 31 – 40 years’ experience.

Over all work experience is important but if we moving toward project manager so is necessary to know the respondents work experience as a project manager. The data most cover respondents having none experience as a project manager and its percentage is 39.70 %. Another most cover data respondents having 1-5 years’ experience and is percentage is 30.88%. the least 3 kind of respondents having such percentages is that 6-10 years having 14.70%, 11-20 years cover 11.76% and 21-30 years cover the most least percentage that is 2.94%. In the first section, the question is related to personal details. On the basis of personal details the highest response of respondents on the base on education, work experience, age designation etc. The below figure show the response of respondent. After the above mention personal details questions the second section depend on 3 questions which are close ended and multiple choice question. Through this section we can find out the figures how much companies are having risk analysis department or how much hire from external source and if the companies having or hiring external so which base they decide their risk analysis team design. On the basis of above mention figure and table shows that the most often company of oil and gas sector in Pakistan having their own risk analysis department and percentage is 75% while the rest 25% companies having no internal risk analysis department (Sharif, Ahmad, & Sarwar, 2019).

The risk analysis team is design or hire on the basis on different factors, the above mention table and figure shows that the risk analysis team design mostly based on experience that percentage is 61.80%, which cover more than half of the data. The remaining option is qualification is ranked as second important thing which can be seen when the team is design and is percentage is 25% and last thing is seniority check also me measure and is percentage is 13.20 while the option is age is never be consider as per respondents when the risk analysis team is design.

**Cause of Attitude toward Risk Analysis**

After discussion on respondents personal detail and companies profile then third section in which specific statement discuss; in which the research concept of project management and risk analysis discussed. The respondents were rate those questions by using the scale of strongly disagree, disagree, neutral, agree and strongly agree.

The cause of attitude toward risk analysis in oil and gas sector project in Pakistan can be identified by using RII technique here. First find out the RII value of each single questions and then rank the values according to RII values; ranking the values higher to lower side.

Factors Causing Cost Escalation	Relative Importance Index (RII)	Rank According To (RII)
Do you think risk analysis department is important	0.82	5
Is this department is mandatory for new projects	0.85	3
This department work on our company	0.78	7
Did this department help on projects	0.87	2
Is this department help full for the success of project	0.89	1
Can the project team take it seriously if the risk department give them any suggestion	0.85	3
is always required higher management approval	0.83	4

Based on RII values the questionnaires which having highest value of RII are those; first one is “department help full for the success of project” 0.89 value which shows that the risk analysis department play a key role in the success of project. The second highest value containing question is “Risk analysis department help on projects” is value is 0.87 which mean the risk analysis help the project fir success and for save it from failed.

The least RII value containing questions are the following;

- This department work on our company with the value 0.78
- This department use new tools for risk analysis with value 0.81

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on data collected from respondents and then apply the RII techniques to analyze the data and then decide the attitude toward risk analysis in oil and gas sector in Pakistan. The core aims are divided into following breakdown. The current condition of Pakistan oil and gas sector is how to increases the growth rates to these sectors and to increases the success rate of projects. How to change the negative attitude and improve the positive attitude of these sector toward risk analysis department and how to clear the thing is that this department is play important role in project and project management.

This research questionnaires are divided into 3 section in which section 1 is depend on personal details of respondents and section 2 is depend on company profile and the last section having research related question is mean project management and risk analysis department importance.Total 8 statements are study; 80 questionnaires distributed out of which 68 were received completely this figure show that 85% response were received. As per result the selected statements are the following on the basis of RII values;

- The highest RII value containing statement is “Risk analysis department help full for the success of project” with value 0.89.Its show the project success rate in oil and gas sectors at some point depend on risk analysis department .if this department become the part of project so most of the project go to success path.
- The second highest value containing statement is “Risk analysis department help on projects” 0.87 RII value. Its show the risk analysis department helps the project to save it time, cost and delay of project.

On the basis of result is decided that the company having risk analysis department or hire external consultant so that most of the company project are successful and the growth rate of that company also increases which indirectly or directly support Pakistan Economy. It helps the oil and gas sector to stand in global market and due to this, the consumption requirement try to fill itself and less to import the energy (fuel oil and natural gas).

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