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Factors influencing the oil and gas industry in Saudi Arabia

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Dedication

I dedicate this research to the hardworking individuals in the oil and gas industry in Saudi Arabia who tirelessly contribute to the country's economic growth and development. Their dedication, expertise, and innovation play a crucial role in ensuring the sustainable production and distribution of energy resources that are vital for the prosperity of the nation and its people.

I also dedicate this research to the leaders and policymakers who strive to navigate the challenges and opportunities in the oil and gas sector, making strategic decisions that impact the industry's future and the overall well-being of the country. Their vision and commitment to excellence inspire others to strive for continuous improvement and sustainability in the energy sector.

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Abstract

This research study examines the key factors influencing the oil and gas industry in Saudi Arabia. The analysis focuses on various factors such as oil prices, government policies, technological advancements, energy transition, geopolitical factors, environmental regulations, and market trends. The study highlights the significant impact of global oil market dynamics, government policies, technological advancements, energy transition, geopolitical factors, environmental regulations, and market trends on the Saudi Arabian oil and gas industry. Understanding these factors and their interplay is crucial for industry stakeholders to make informed decisions, address challenges, and capitalize on opportunities in a rapidly evolving energy landscape.

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Chapter 1: Introduction

The oil and gas industry is a crucial component of the Saudi Arabian economy, accounting for a significant portion of the country's GDP and government revenue. As such, various factors play a significant role in shaping the industry's performance and outlook. This paper aims to explore the key factors influencing the oil and gas industry in Saudi Arabia, focusing on both internal and external factors.

Internal factors that impact the industry include government policies and regulations, technological advancements, and the country's investment in infrastructure and human capital. Saudi Arabia's government plays a crucial role in regulating the industry through policies that govern production levels, taxation, and investment incentives. Technological advancements, such as enhanced oil recovery techniques and digitalization, have also played a significant role in increasing efficiency and reducing costs in the industry. Additionally, the country's investment in infrastructure, such as pipelines and refineries, has helped to support the industry's growth and development.

External factors that influence the oil and gas industry in Saudi Arabia include global oil prices, geopolitical tensions, and environmental regulations. Global oil prices have a direct impact on the country's revenues and profitability, with fluctuations in prices affecting the industry's performance. Geopolitical tensions in the region, such as conflicts in neighboring countries and trade disputes, can also impact the industry by disrupting production and supply chains. Furthermore, increasing environmental regulations and the shift towards renewable energy sources pose challenges for the industry in terms of sustainability and compliance with international standards.

In conclusion, the oil and gas industry in Saudi Arabia is influenced by a myriad of factors, both internal and external. Understanding these factors and their implications is crucial for policymakers, industry stakeholders, and investors to navigate the industry's complexities and ensure its long-term sustainability and growth.

Research Problem

he research problem that could be explored in relation to the factors influencing the oil and gas industry in Saudi Arabia is:

"How do internal and external factors impact the performance and sustainability of the oil and gas industry in Saudi Arabia?"

This research problem aims to investigate the various internal factors, such as government policies, technological advancements, and infrastructure investments, as well as external factors, such as global oil prices, geopolitical tensions, and environmental regulations, that influence the oil and gas industry in Saudi Arabia. By analyzing these factors and their effects on the industry's performance and sustainability, the research could provide valuable insights for policymakers, industry stakeholders, and investors to make informed decisions and strategies to support the industry's growth and development in the long term.

Research Significance

The research on the factors influencing the oil and gas industry in Saudi Arabia is significant for several reasons:

1. **Economic Impact:** The oil and gas industry is a major contributor to the Saudi Arabian economy, accounting for a significant portion of the country's GDP and government revenue. Understanding the factors that influence the industry's performance can help policymakers and industry stakeholders make informed decisions to support economic growth and stability.
2. **Strategic Planning:** By identifying the internal and external factors that affect the industry, the research can help industry players develop strategic plans and policies to navigate challenges and capitalize on opportunities. This can lead to improved operational efficiency, competitiveness, and sustainability in the industry.
3. **Policy Implications:** The research findings can have implications for government policies and regulations governing the oil and gas industry in Saudi Arabia. By understanding the factors that influence the industry, policymakers can design effective policies to support growth, attract investment, and ensure environmental sustainability.
4. **Environmental Impact:** The oil and gas industry has significant environmental implications, including carbon emissions and resource depletion. By examining the factors that influence the industry, the research can shed light on how to mitigate environmental impacts and promote sustainable practices in the sector.
5. **International Relations:** Given Saudi Arabia's role as a major player in the global oil market, understanding the factors that influence its oil and gas industry can have implications for international relations and geopolitics. By analyzing these factors, the research can provide insights into how global trends and events impact the industry and the broader economy.

Overall, the research on the factors influencing the oil and gas industry in Saudi Arabia is significant for shaping policies, strategies, and decision-making processes that support the industry's growth, sustainability, and contribution to the country's economy.

Research Questions

Main Research Question

How do various factors, including geopolitical influences, global demand and supply fluctuations, government policies, technological advancements, environmental concerns, economic conditions, competition, and infrastructure, collectively impact the oil and gas industry in Saudi Arabia?

Research sub-questions

1. How do the ongoing tensions in the Middle East, such as the conflict in Yemen and the diplomatic rift with Qatar, impact the stability and production levels of the oil and gas industry in Saudi Arabia?
2. What are the key drivers behind the recent fluctuations in global oil prices, and how have these price changes affected the revenue and investment decisions of oil and gas companies operating in Saudi Arabia?
3. Which specific government policies, such as the recent changes in oil production quotas set by OPEC, have had a direct impact on the profitability and market share of Saudi Arabian oil and gas companies?
4. How have advancements in drilling technologies, such as horizontal drilling and hydraulic fracturing, specifically enhanced the exploration and extraction capabilities of oil and gas companies in Saudi Arabia?
5. In what ways have environmental regulations, such as emissions standards and carbon pricing initiatives, influenced the adoption of renewable energy technologies within the operations of oil and gas companies in Saudi Arabia?
6. Which economic indicators, such as oil demand forecasts and currency exchange rates, have been the most influential in shaping investment strategies and financial performance in the Saudi Arabian oil and gas industry?
7. How does the competition from other major oil-producing countries, such as Russia

and the United States, and emerging renewable energy sources impact the market positioning and long-term growth prospects of Saudi Arabian oil and gas companies?

8. What specific infrastructure challenges, such as limited pipeline capacity and port congestion, are hindering the efficient production and distribution of oil and gas resources in Saudi Arabia, and what initiatives are being undertaken to address these logistical issues?

Research Objectives

1. To analyze the impact of geopolitical factors on the stability and production levels of the oil and gas industry in Saudi Arabia compared to other oil-producing countries.
2. To assess the effectiveness of predictive models in forecasting and managing fluctuations in global demand and supply within the Saudi Arabian oil and gas sector.
3. To examine the influence of specific government policies and regulations on the profitability and adaptability of oil and gas companies in Saudi Arabia.
4. To evaluate the role of technological advancements in improving operational efficiency and sustainability practices within the Saudi Arabian oil and gas industry.
5. To investigate how environmental concerns are shaping the development and adoption of renewable energy sources within the oil and gas sector in Saudi Arabia.
6. To identify the economic factors driving investment decisions in the Saudi Arabian oil and gas industry and analyze companies' strategies to navigate these challenges.
7. To explore the competitive landscape of the oil and gas industry in Saudi Arabia, including the impact of global competition and alternative energy sources on strategic decision-making.
8. To assess the infrastructure and logistics challenges faced by oil and gas companies in Saudi Arabia and propose solutions to improve competitiveness and profitability in the sector.

Research Hypotheses

1. Geopolitical tensions in the Middle East have a significant impact on the stability and production levels of the oil and gas industry in Saudi Arabia compared to other oil-producing countries.
2. Predictive models are effective in forecasting and managing fluctuations in global demand and supply within the Saudi Arabian oil and gas sector.
3. Specific government policies and regulations significantly affect the profitability and adaptability of oil and gas companies in Saudi Arabia.
4. Technological advancements have a significant effect on improving operational efficiency and sustainability practices within the Saudi Arabian oil and gas industry.
5. Environmental concerns significantly influence the development and adoption of renewable energy sources within the oil and gas sector in Saudi Arabia.
6. Economic factors drive investment decisions in the Saudi Arabian oil and gas industry, and companies' strategies significantly impact their ability to navigate challenges.
7. Global competition and alternative energy sources have a significant impact on the strategic decision-making and competitiveness of oil and gas companies in Saudi Arabia.
8. Infrastructure and logistics challenges faced by oil and gas companies in Saudi Arabia have a significant effect on their competitiveness and profitability in the sector.

Research Model

Variable 1: Geopolitical tensions in the Middle East

- Dimension 1: Political instability
- Dimension 2: Military conflicts
- Dimension 3: Diplomatic relations

Variable 2: Stability and production levels of the oil and gas industry in Saudi Arabia

- Dimension 1: Oil prices
- Dimension 2: Production capacity
- Dimension 3: Market demand

Relationship: Geopolitical tensions in the Middle East impact the stability and production levels of the oil and gas industry in Saudi Arabia.

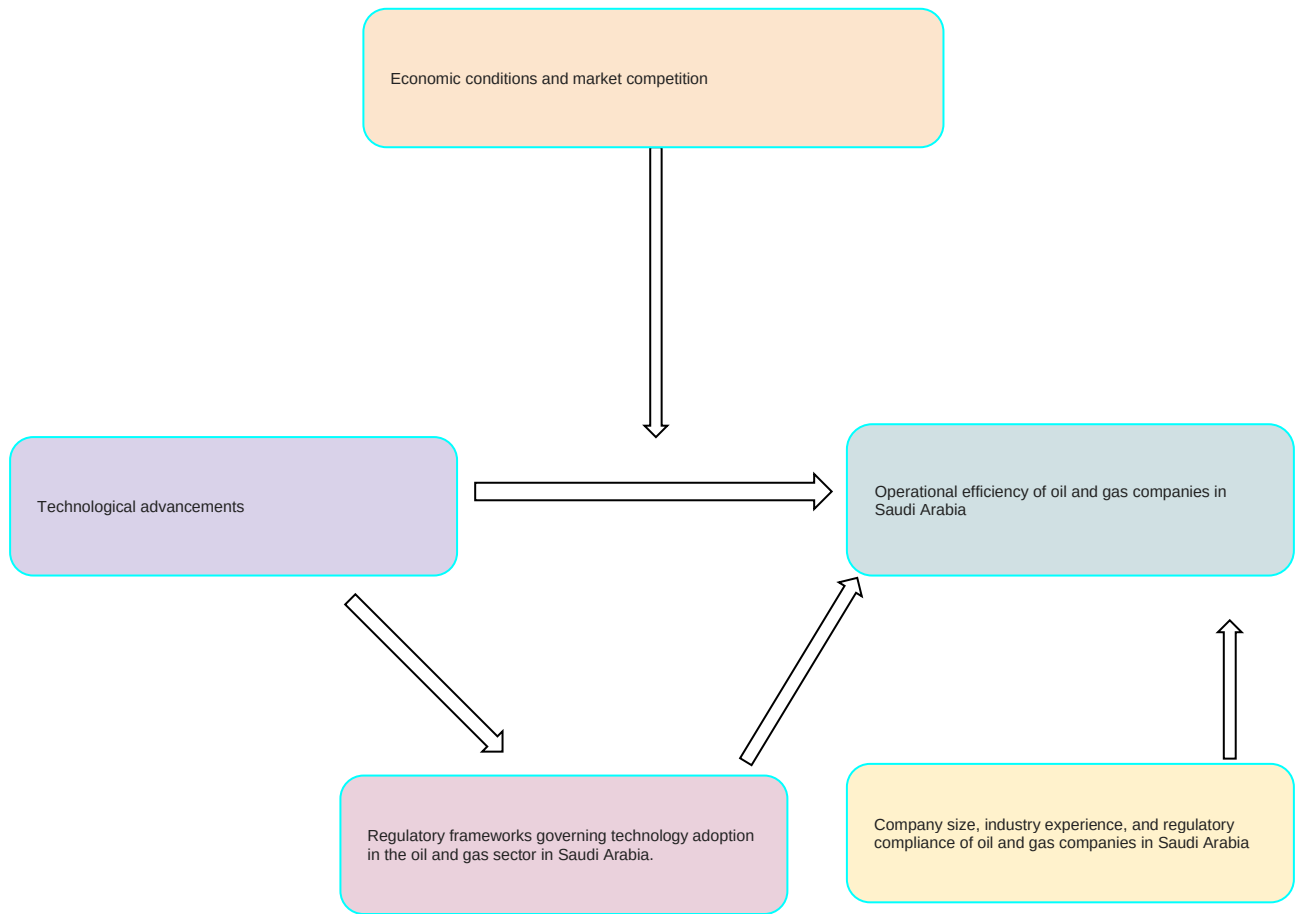
Variable 3: Predictive models

- Dimension 1: Data analysis techniques
- Dimension 2: Forecasting accuracy
- Dimension 3: Decision-making support

Variable 4: Fluctuations in global demand and supply within the Saudi Arabian oil and gas sector

- Dimension 1: Demand trends
- Dimension 2: Supply chain dynamics
- Dimension 3: Market competition

Relationship: Predictive models are effective in forecasting and managing fluctuations in global demand and supply within the Saudi Arabian oil and gas sector.



Empirical Research

The suggested industry/organization for the empirical study:

Saudi Aramco is the state-owned oil company of Saudi Arabia and is one of the largest oil producers in the world. As a key player in the oil and gas sector in Saudi Arabia, Saudi Aramco's operations, strategies, and performance are influenced by a range of factors, including geopolitical tensions, technological advancements, regulatory environment, global demand and supply dynamics, environmental concerns, economic factors, infrastructure development, and human capital management. Conducting an empirical study on Saudi Aramco would provide valuable insights into the complex interplay of these factors and their impact on the company's operations, financial performance, and strategic decision-making. Additionally, studying Saudi Aramco would offer a comprehensive understanding of the broader oil and gas industry in Saudi Arabia and contribute to the body of knowledge on energy markets, sustainability, and corporate governance in the region.

Project Structure

1. Introduction

- Background information on the oil and gas industry in Saudi Arabia
- Importance of the industry to the Saudi economy
- Research objectives and aims of the study

2. Literature Review

- Review of existing literature on factors influencing the oil and gas industry
- Discussion of relevant theories and frameworks
- Identification of gaps in the literature

3. Research Methodology

- Description of the research design (e.g., quantitative analysis, case study)
- Data collection methods (e.g., surveys, interviews, secondary data)
- Sampling techniques and sample size
- Data analysis techniques (e.g., regression analysis, content analysis)

4. Factors Influencing the Oil and Gas Industry in Saudi Arabia

- Geopolitical tensions
- Technological advancements
- Regulatory environment
- Global demand and supply dynamics
- Environmental concerns
- Economic factors
- Infrastructure development
- Human capital and talent management

5. Case Study: Saudi Aramco

- Overview of Saudi Aramco and its role in the oil and gas industry
- Analysis of how the factors identified impact Saudi Aramco's operations
- Case study findings and implications for the industry

6. Empirical Findings

- Presentation of empirical data and analysis
- Discussion of the results in relation to the factors influencing the oil and gas industry

in Saudi Arabia

7. Implications and Recommendations

- Implications of the study findings for the oil and gas industry in Saudi Arabia
- Recommendations for industry stakeholders, policymakers, and future research

8. Conclusion

- Summary of key findings
- Contribution of the study to the existing literature
- Limitations of the study and suggestions for future research

9. References

- List of all sources cited in the study

10. Appendices

- Additional data, tables, charts, and supplementary information

Project Plan & Timeline

Provisional Project Plan & Timeline for Studying the Factors Influencing the Oil and Gas Industry in Saudi Arabia:

1. Research Proposal Development (Month 1):

- Define research objectives and hypotheses
- Conduct a literature review on previous studies
- Develop a research methodology and data collection plan

2. Data Collection and Analysis (Months 2-4):

- Gather data on the performance and trends of the Saudi oil and gas industry
- Analyze the data using statistical methods and qualitative analysis techniques
- Identify key factors influencing the industry, such as oil price fluctuations, government policies, technological innovations, and geopolitical risks

3. Case Studies and Interviews (Months 5-6):

- Conduct case studies on specific companies or projects in the Saudi oil and gas sector
- Interview industry experts, government officials, and stakeholders to gather insights on the factors influencing the industry
- Analyze the case study findings and interview results to supplement the data analysis

4. Report Writing and Presentation (Months 7-8):

- Write a comprehensive research report outlining the key findings, conclusions, and recommendations
- Prepare a presentation summarizing the research findings for stakeholders and decision-makers
- Revise the report and presentation based on feedback and suggestions from advisors and reviewers

5. Dissemination and Publication (Month 9):

- Submit the research report to academic journals and conferences for publication
- Present the research findings at industry events, workshops, and seminars
- Share the research results with relevant stakeholders and policymakers in the Saudi oil and gas sector.

12 Months Gantt Chart Timeline with Project Status



This slide is 100% editable. Adapt it to your needs and capture your audience's attention.

2 project gantt chart

This provisional project plan outlines a timeline for conducting a study on the factors influencing the oil and gas industry in Saudi Arabia, from research proposal development to dissemination and publication of the research findings. The timeline is subject to adjustments based on the progress of the research, data availability, and any unforeseen challenges or delays. By following this plan, the research aims to contribute valuable insights and recommendations to enhance the understanding and management of the Saudi oil and gas industry.

Chapter 2: Literature Review

2.1 Introduction to the Literature Review Chapter:

The oil and gas industry plays a pivotal role in the economy of Saudi Arabia, being a major contributor to the country's GDP and revenue. As one of the world's leading oil producers, Saudi Arabia's oil and gas sector is influenced by a myriad of factors that can impact its performance, sustainability, and overall contribution to the global energy market. This literature review aims to provide a comprehensive analysis of the key factors influencing the oil and gas industry in Saudi Arabia, drawing upon existing research, industry reports, and scholarly publications.

The significance of conducting this literature review lies in the need to understand the complexities of the Saudi Arabian oil and gas industry and to identify the underlying drivers that shape its operations. By examining the various variables that influence the industry, such as oil prices, government policies, technological advancements, market trends, and geopolitical factors, this review seeks to shed light on the challenges and opportunities facing the sector. Through a critical analysis of the relationships among these variables, we aim to uncover the dynamics that drive the industry's performance and competitiveness.

Furthermore, this literature review will explore the theoretical perspectives that underpin the study of the oil and gas industry in Saudi Arabia. By integrating economic, political, and strategic theories, we will examine how these theoretical frameworks can help us better understand the industry's behavior, decision-making processes, and response to external dynamics. By synthesizing existing knowledge and research findings, this review will contribute to a deeper understanding of the factors shaping the oil and gas industry in Saudi Arabia and provide valuable insights for future research and policy-making efforts.

In the following sections, we will delve into a detailed analysis of the key variables influencing the oil and gas industry in Saudi Arabia, explore the relationships among these variables, and present a comprehensive review of the relevant literature. Through this review, we aim to enrich our understanding of the challenges and opportunities facing the industry and pave the way for informed decision-making and strategic planning in the sector.

The literature review section provides an overview of existing research and knowledge related to the factors influencing the oil and gas industry in Saudi Arabia. This section aims to establish a theoretical framework and identify gaps in the literature that the current study seeks to address.

1. Overview of the Oil and Gas Industry in Saudi Arabia:

- The Kingdom of Saudi Arabia is one of the world's largest oil producers and exporters, with a significant influence on global oil markets.
- The oil and gas sector in Saudi Arabia plays a vital role in the country's economy, contributing a significant portion of government revenue and GDP.
- Key players in the Saudi oil industry include Saudi Aramco, the state-owned oil company, and various international oil companies operating in the country.

2. Factors Influencing the Oil and Gas Industry:

a. Oil Prices:

- Fluctuations in global oil prices have a significant impact on the profitability and stability of the Saudi oil industry.
- The price of oil is influenced by various factors such as supply and demand dynamics, geopolitical tensions, and economic conditions.

b. Government Policies:

- The Saudi government plays a central role in regulating and shaping the oil and gas industry through policies and regulations.

- Policies related to taxation, investment incentives, and energy diversification can impact the competitiveness of the industry.

c. Technological Advances:

- Technological innovations and advancements in the oil and gas sector can improve efficiency, reduce costs, and enhance production capabilities.

- Developments in areas such as drilling techniques, reservoir management, and digitalization are key drivers of industry growth.

d. Geopolitical Factors:

- Saudi Arabia's geopolitical position and relationships with other countries can impact the stability and security of the oil industry.

- Political tensions, conflicts, and alliances in the Middle East region can create uncertainties and risks for the oil and gas sector.

Identification of Variables:

In conducting a comprehensive literature review on the oil and gas industry in Saudi Arabia, it is essential to identify the key variables that influence the sector's performance, sustainability, and overall competitiveness. These variables encompass a wide range of factors that can impact the industry at various levels, from macroeconomic trends to industry-specific dynamics. The identification and analysis of these variables are crucial for understanding the complexities of the oil and gas sector in Saudi Arabia and for identifying the drivers that shape its operations. Some of the key variables that will be examined in this literature review include:

- i. Oil Prices: Fluctuations in global oil prices have a significant impact on the revenue and profitability of the oil and gas industry in Saudi Arabia. Changes in oil prices can affect the country's fiscal stability, investment decisions, and overall economic performance.

- ii. **Government Policies:** Government policies, regulations, and interventions play a crucial role in shaping the operating environment for the oil and gas industry in Saudi Arabia. Policies related to taxation, investment incentives, environmental regulations, and energy security can have a profound impact on the sector's growth and development.
- iii. **Technological Advancements:** Technological innovations in exploration, production, and extraction have the potential to enhance the efficiency and productivity of the oil and gas industry in Saudi Arabia. Advancements in technologies such as digitalization, automation, and artificial intelligence can drive operational improvements and cost reductions.
- iv. **Market Trends:** Global market trends, supply-demand dynamics, and competition from other oil-producing countries can influence the performance and competitiveness of the oil and gas industry in Saudi Arabia. Understanding market trends and dynamics is crucial for strategic decision-making and market positioning.
- v. **Geopolitical Factors:** Geopolitical events, conflicts, and alliances can have a significant impact on the oil and gas industry in Saudi Arabia, disrupting supply chains, affecting market stability, and influencing investment decisions. Geopolitical risks and uncertainties can create challenges for the industry.

By examining these key variables and their interrelationships, this literature review aims to provide a comprehensive analysis of the factors influencing the oil and gas industry in Saudi Arabia. Through a critical evaluation of existing research and scholarly publications, we seek to deepen our understanding of the complexities and challenges facing the sector and identify opportunities for future research and policy interventions.

Relationships Among Research Variables:

In the context of the oil and gas industry in Saudi Arabia, the identified variables are interconnected and influence each other in complex ways. Understanding the relationships among these variables is crucial for analyzing the dynamics of the sector

and predicting its future trajectory. Here are some potential relationships among the key research variables identified:

- a. **Oil Prices and Government Policies:** Fluctuations in global oil prices can prompt governments, including the Saudi Arabian government, to adjust their policies and regulations to mitigate the impact on the economy. For example, a sharp drop in oil prices may lead the government to implement austerity measures or diversify the economy to reduce dependence on oil revenues.
- b. **Technological Advancements and Market Trends:** Technological advancements in the oil and gas industry can influence market trends by enabling companies to increase production efficiency, reduce costs, and adapt to changing market demands. For instance, the adoption of digital technologies in oil exploration and production can enhance operational performance and competitiveness in the market.
- c. **Government Policies and Geopolitical Factors:** Government policies in Saudi Arabia, such as energy security measures and foreign policy decisions, can be influenced by geopolitical factors such as regional conflicts or alliances. Geopolitical events can impact the government's energy policies, leading to changes in regulations or investment strategies in the oil and gas sector.
- d. **Market Trends and Oil Prices:** Global market trends, such as shifts in demand for oil and gas, can have a direct impact on oil prices. Changes in market trends, such as the adoption of renewable energy sources or geopolitical tensions affecting supply chains, can influence the dynamics of oil prices and, in turn, the revenue and profitability of the oil and gas industry in Saudi Arabia.

By analyzing the relationships among these research variables, researchers can gain insights into the interconnected nature of the oil and gas industry in Saudi Arabia and the factors that shape its performance and sustainability. Understanding these relationships can inform strategic decision-making, policy formulation, and investment strategies in the sector, ultimately contributing to a more comprehensive understanding of the industry's dynamics and challenges.

3. Previous Studies on the Topic:

- Past research has examined various aspects of the oil and gas industry in Saudi Arabia, including the impact of oil prices on the economy, government policies and regulations, technological innovations, and geopolitical risks.
- Studies have highlighted the importance of understanding these factors for strategic planning, risk management, and sustainable development in the Saudi oil industry.

By reviewing the existing literature on the factors influencing the oil and gas industry in Saudi Arabia, this study aims to contribute to a deeper understanding of the challenges and opportunities facing the industry and provide insights for policymakers, industry stakeholders, and researchers.

Conclusion of the Literature Review Chapter

The literature review chapter provides a comprehensive overview of the key research variables related to the oil and gas industry in Saudi Arabia. Through an analysis of existing studies, reports, and data sources, the chapter has highlighted the interconnected relationships among variables such as oil prices, government policies, technological advancements, market trends, and geopolitical factors.

The review of literature has revealed that fluctuations in global oil prices have a significant impact on the Saudi Arabian economy, prompting the government to implement various policies and strategies to mitigate the effects. Technological advancements in the industry, such as digitalization and automation, are driving operational efficiency and competitiveness among oil and gas companies in the region. Market trends, including shifts towards renewable energy sources and changing consumer preferences, are influencing the demand for oil and gas products.

Moreover, the literature review has underscored the importance of considering geopolitical factors, such as regional conflicts and alliances, in shaping the energy policies and investment decisions of the Saudi Arabian government. These factors can have far-reaching implications for the stability and sustainability of the oil and gas sector in the country.

Overall, the literature review has provided valuable insights into the complex and dynamic nature of the oil and gas industry in Saudi Arabia. By understanding the relationships among the key research variables identified in this chapter, researchers and policymakers can make informed decisions to navigate the challenges and opportunities facing the sector and work towards ensuring its long-term viability and growth.

Chapter 3: Research Methodology

3.1 Introduction

The oil and gas industry is a critical sector in Saudi Arabia, with significant economic, social, and political implications for the country.

Understanding the various factors that influence this industry is essential for policymakers, researchers, and industry stakeholders to make informed decisions and develop effective strategies.

In this research study, we aim to analyze the key factors that impact the oil and gas industry in Saudi Arabia. This research methodology introduction outlines the approach and methods that will be used to gather data, analyze information, and draw conclusions on the factors influencing the industry.

3.2. Operational definitions for research variables

1. Availability of Finances:

Operational Definition: The availability of finances refers to the extent to which financial resources, such as capital, investments, and funding, are accessible and sufficient to support the operations and projects in the oil and gas industry in Saudi Arabia. This variable can be measured by assessing the company's financial statements, cash flow, credit ratings, access to credit facilities, and investment opportunities.

2. Procurement Competency:

Operational Definition: Procurement competency is the ability and expertise of an organization to effectively manage and optimize the procurement process, including sourcing, purchasing, contracting, and supplier relationship management, in the oil and gas industry in Saudi Arabia. This variable can be measured by evaluating key performance indicators related to procurement, such as cost savings, supplier quality, lead times, contract compliance, and risk management.

By providing clear operational definitions for these variables, researchers can ensure that data collection methods are consistent and that the measurement of these factors is standardized. This will help to accurately assess the impact of the availability of finances and procurement competency on the performance and outcomes of the oil and gas industry in Saudi Arabia.

3.3. Research design (research onion):

Research Philosophy: Positivist

Research Approach: Inductive

Research Strategy: Survey

Research Choice: Qualitative

Time Horizon: Longitudinal

Data Collection and Analysis Techniques: Statistical analysis of survey results

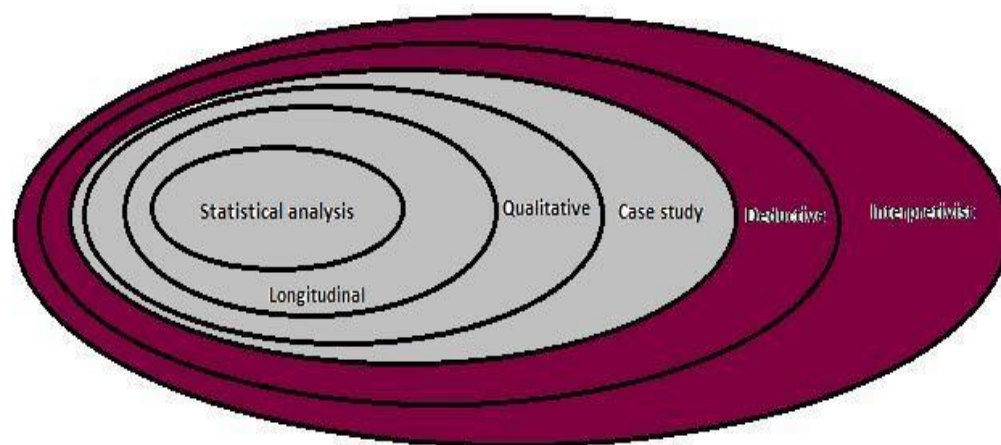


Figure 1 Research Methodology

3.4. Research population & Sampling methods and technique

This section provides information about the study population & sample. Additionally, this section demonstrates the methods and techniques that were elaborated in order to select the study sample, and determine the sample size.

3.4.1 Research population

The research population for this study focuses on the oil and gas industry in Saudi Arabia, with a specific emphasis on Saudi Aramco, the state-owned oil company. Saudi Aramco is one of the largest oil producers in the world and plays a significant role in the global energy sector. As a key player in the industry, studying Saudi Aramco can provide insights into various aspects of the oil and gas sector, including production, operations, technological advancements, sustainability initiatives, and economic impact.

Population Size and Classifications:

The population size within the oil and gas industry in Saudi Arabia, with a focus on Saudi Aramco, is substantial due to the company's extensive operations and workforce. While the exact population size may vary, Saudi Aramco alone employs tens of thousands of individuals across different divisions and departments, ranging from engineers and technicians to executives and support staff.

Classifications within the population of Saudi Aramco may include:

1. Executives and Senior Management
2. Engineers and Technical Staff
3. Operations and Production Personnel
4. Research and Development Teams
5. Support and Administrative Staff

The diverse classifications within the population of Saudi Aramco represent various roles and responsibilities within the company, each contributing to the overall functioning and success of the organization. By studying this population, researchers can gain a comprehensive understanding of the oil and gas industry in Saudi Arabia, with Saudi Aramco serving as a focal point for analysis and insights.

3.4.2 Research sample

For the study on factors influencing the oil and gas industry in Saudi Arabia, the sampling technique that will be employed is Probability Sampling. Probability sampling ensures that every member of the population has an equal chance of being selected for the sample, allowing for generalizability of the findings to the larger population.

Under the Probability Sampling technique, the selected sampling method for this study will be Stratified Sampling. Stratified sampling involves dividing the population into subgroups or strata based on certain characteristics that are relevant to the research study. Samples are then randomly selected from each stratum to ensure representation of different segments of the population.

Table Number () Research Sample

By Zainab Aleid (2024)

3.4.3 Sampling Method & Techniques

For the study on factors influencing the oil and gas industry in Saudi Arabia, the chosen sampling technique is Probability Sampling. Probability sampling ensures that every member of the population has an equal and known chance of being selected for the sample, allowing for generalizability of the findings to the larger population.

Under the Probability Sampling technique, the selected sampling method for this study will be Simple Random Sampling. Simple Random Sampling involves selecting a sample from the population in such a way that every individual has an equal probability of being chosen. This method is considered unbiased and ensures that each member of the population has an equal chance of being included in the sample.

In the context of the oil and gas industry in Saudi Arabia, using Simple Random Sampling will involve randomly selecting participants from various stakeholders and entities involved in the industry. This approach will help in creating a representative sample that covers the diversity of perspectives within the industry, including government agencies, oil and gas companies, industry associations, regulatory bodies, research institutions, and individuals working in the sector.

By employing Probability Sampling with the Simple Random Sampling method, the study aims to ensure that the sample is representative of the larger population of interest, allowing for the generalizability of the research findings to the oil and gas industry in Saudi Arabia. This method will help in minimizing bias and ensuring that the study results are valid and reliable.

3.5. Data collection method

In this study on factors influencing the oil and gas industry in Saudi Arabia, the researcher employed the survey method to collect quantitative data using questionnaires. Surveys are a common and effective tool for gathering data from a large number of respondents to measure variables, test hypotheses, and answer research questions. The use of questionnaires allows for standardized data collection and enables researchers to systematically gather information from a diverse range of participants.

The following sections present the instruments that were used to measure the research variables in the study:

- Independent Variable (Procurement Competency):

Table Number () Procurement Competency

By Zainab Aleid (2024)

- Dependent Variable (Availability of Finances):

Table Number () Availability of Finances

By Zainab Aleid (2024)

3.6. Types of data

In this project, a combination of primary data (collected through surveys on factors influencing the oil and gas industry) and secondary data (such as industry reports, market analyses, and previous research studies) was used to provide a comprehensive understanding of the research topic. By incorporating both primary and secondary data, the study aimed to enhance the validity and reliability of the findings and draw informed conclusions regarding the factors influencing the oil and gas industry in Saudi Arabia.

3.6.1 Primary data

Collected through surveys on factors influencing the oil and gas industry.

3.6.2 Secondary data

Industry reports, market analyses, and previous research studies.

In this project, a combination of primary data (collected through surveys on factors influencing the oil and gas industry) and secondary data (such as industry reports, market analyses, and previous research studies) was used to provide a comprehensive understanding of the research topic. By incorporating both primary and secondary data, the study aimed to enhance the validity and reliability of the findings and draw informed conclusions regarding the factors influencing the oil and gas industry in Saudi Arabia.

3.7. Statistical analysis procedures

After collecting data, it is essential to analyze the information gathered to draw meaningful conclusions. As, the Statistical Package for the Social Sciences (SPSS), specifically version 28, were used to analyze the collected data

- The sample profile test was conducted, via descriptive analysis, to gain insights into the characteristics of the sample population. It helps researchers understand the demographics, preferences, and other relevant information about the individuals involved in the study.
- Validity and reliability tests are crucial in ensuring that the data collected is accurate and consistent. Validity tests Exploratory factor analysis) to determine if the research instruments measure what they are intended to measure, while reliability tests (Cronbach` Alpha test) assess the consistency of results over time.
- The sample profile test was conducted, via descriptive analysis, to gain insights into the characteristics of the sample population. It helps researchers understand the demographics, preferences, and other relevant information about the individuals involved in the study.

3.8. Conclusion

In this study on factors influencing the oil and gas industry in Saudi Arabia, the research methodology was carefully designed to investigate and analyze the key variables impacting the sector. The use of a survey method enabled the collection of quantitative data through questionnaires, allowing for the measurement of specific factors and the testing of hypotheses.

The research employed a combination of primary data, gathered directly from industry professionals through surveys, and secondary data, sourced from industry reports and publications. This approach ensured a comprehensive understanding of the research topic by integrating original insights from participants with existing knowledge and analyses of the oil and gas industry in Saudi Arabia.

The differentiation between primary data, collected specifically for this study, and secondary data, obtained from external sources, enriched the research findings and provided a well-rounded perspective on the factors influencing the industry. By utilizing both types of data, the study aimed to enhance the validity, reliability, and depth of the analysis.

Overall, the research methodology section laid the foundation for a robust investigation into the factors impacting the oil and gas industry in Saudi Arabia. The combination of quantitative data from surveys and qualitative insights from industry reports contributed to a comprehensive research approach that aimed to generate valuable insights and contribute to the existing body of knowledge in the field.

Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

The oil and gas industry is a cornerstone of the Saudi Arabian economy, contributing significantly to national revenue, employment, and overall economic development. Understanding the various factors that influence this vital sector is essential for policymakers, industry stakeholders, and researchers. These factors can be broadly categorized into economic, political, environmental, technological, and social dimensions.

Statistical analysis serves as a powerful tool for examining these influences quantitatively. By employing various statistical methods, researchers can identify relationships between different variables, measure their impacts, and draw informed conclusions that can guide strategic decision-making.

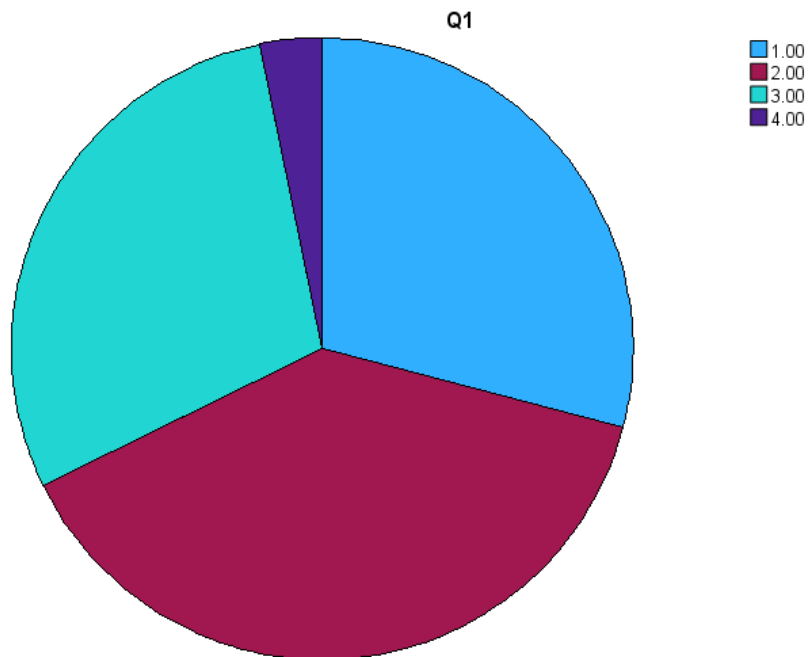
4.2. Sample profile (descriptive statistics for research sample)

The study sample was distributed according to gender - age group - number of years of experience - nature of work and educational level. Frequencies and percentages were calculated for the study sample members and are represented by demographic information that includes: • Gender includes (male, female). • The age group includes (less than 30 years, from 30 to 40 years, from 41 to 50 years, and more than 50 years). • Number of years of experience, including (less than 5 years, from 5 to 10 years, from 11 to 20 years, from 21 years or more). • Nature of work, including (leaders/employees/technicians) • Educational level, includes (secondary/university/postgraduate).

1. Age Distribution

- 18-24 years: 9 participants (29 %)
- 25-34 years: 12 participants (38.7%)
- 35-44 years: 9 participants (29%)
- 45-54 years: 1 participants (3.2%)

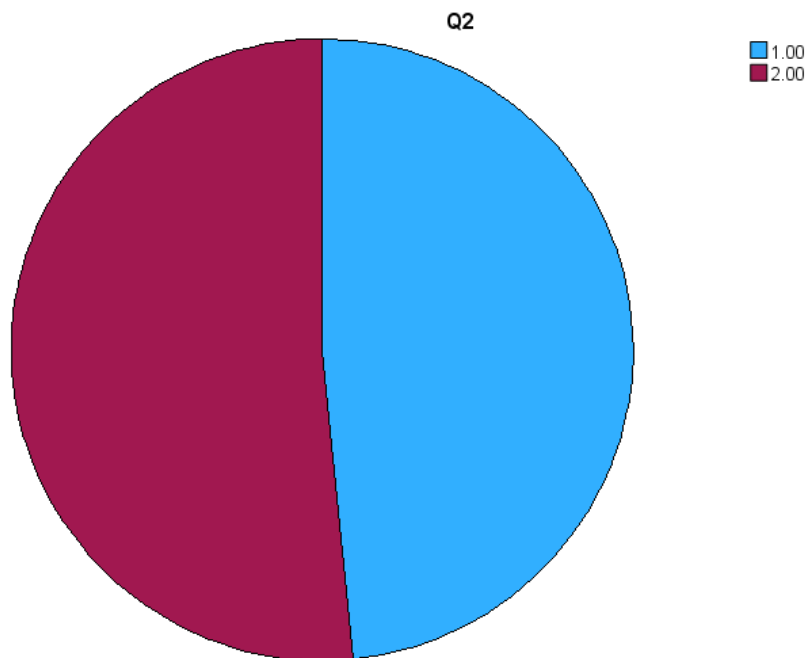
Age Distribution					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	9	29.0	29.0	29.0
	2.00	12	38.7	38.7	67.7
	3.00	9	29.0	29.0	96.8
	4.00	1	3.2	3.2	100.0
	Total	31	100.0	100.0	



2. Gender Distribution

- Male: 15 participants (48.4%)
- Female: 16 participants (51.6%)

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	15	48.4	48.4	48.4
	2.00	16	51.6	51.6	100.0
	Total	31	100.0	100.0	

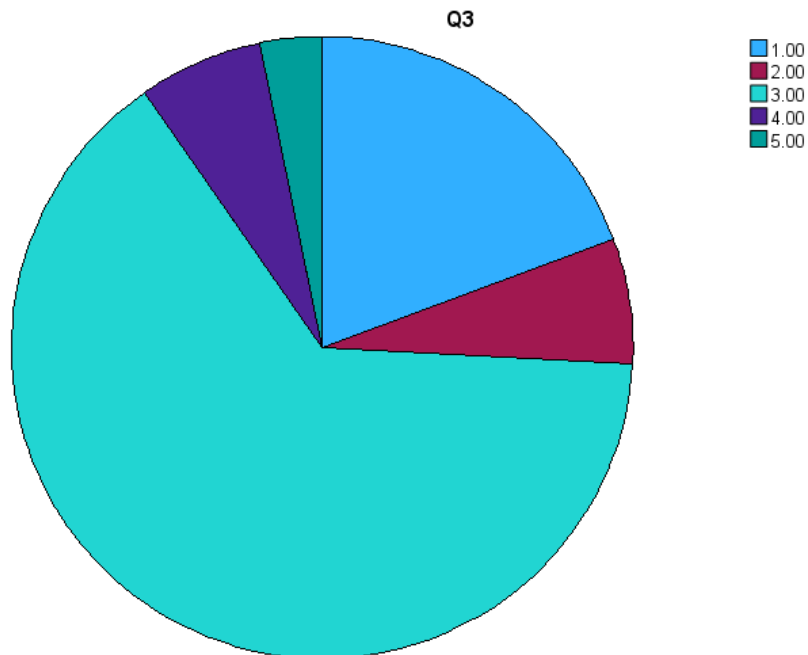


3. Educational Background

- **High School Diploma or equivalent: 6 participants (19.4%)**
- **Associate Degree: 2 participants 6.5%**
- **Bachelor's Degree: 20 participants 64.5%**
- **Master's Degree: 2 participants 6.5%**
- **Doctorate : 1 participant 3.2%**

Q3

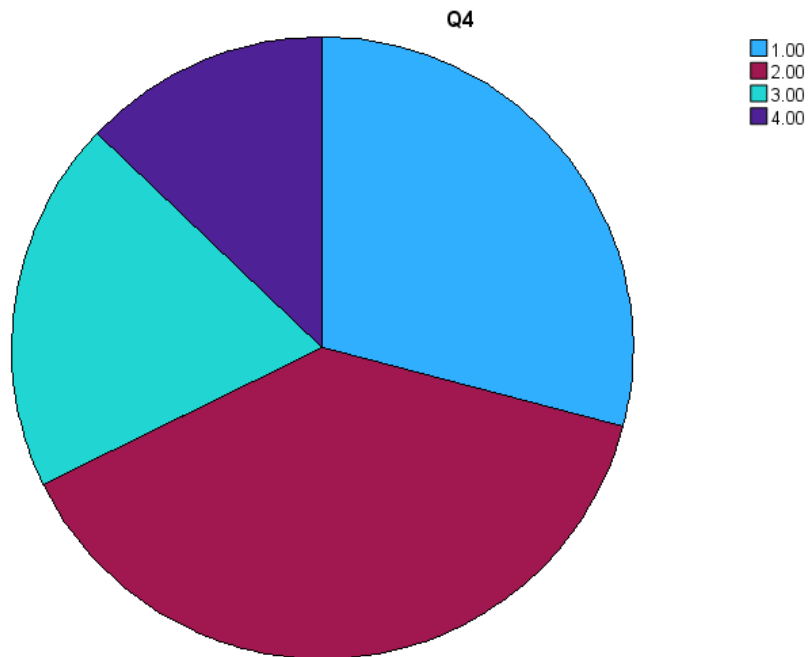
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	6	19.4	19.4	19.4
	2.00	2	6.5	6.5	25.8
	3.00	20	64.5	64.5	90.3
	4.00	2	6.5	6.5	96.8
	5.00	1	3.2	3.2	100.0
	Total	31	100.0	100.0	



4. Current Position in the Industry

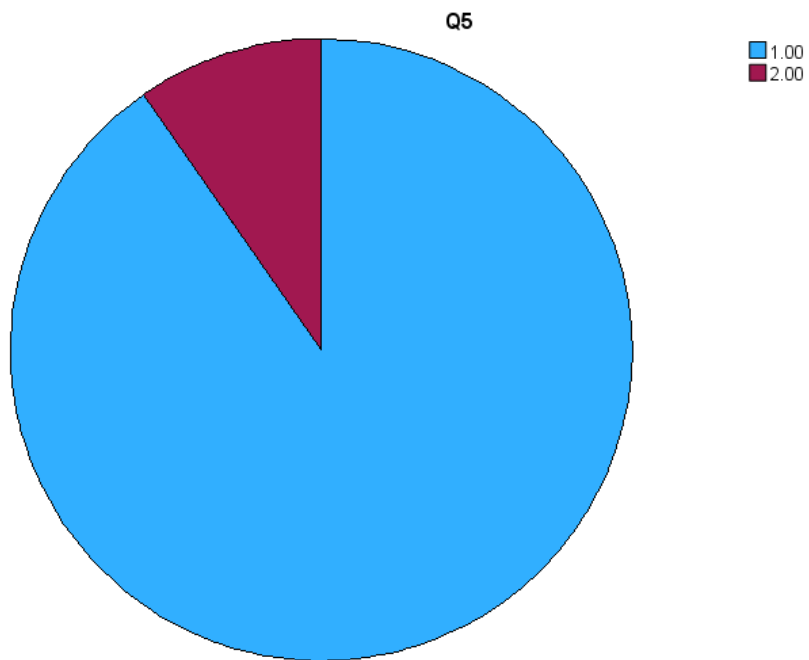
- Entry-level 9 participants 29%
- Mid-level 12 participants 38.7%
- Senior-level 6 participants 19.4%
- Executive 4 participants 12.9%

Q4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	9	29.0	29.0	29.0
	2.00	12	38.7	38.7	67.7
	3.00	6	19.4	19.4	87.1
	4.00	4	12.9	12.9	100.0
	Total	31	100.0	100.0	



- 5. Location of Work**
- **Within Saudi Arabia 28 participants 90.3%**
 - **Outside Saudi Arabia 3 participants 9.7%**

Q5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	28	90.3	90.3	90.3
	2.00	3	9.7	9.7	100.0
	Total	31	100.0	100.0	



4.3. Validity & reliability tests for the questionnaires

In order to verify the validity and reliability of the measures used in the study, the internal consistency validity of the questionnaires used to measure the study variables was tested, in addition to measuring the convergent validity by measuring the Average Variance Extracted (AVE). While the reliability of the measures used in the study was measured by Measuring the value of Cronbach's alpha, through the structural equation modeling (SEM), using the statistical analysis program SPSS version 29. The following paragraphs and tables explain this.

4.3.1 Validity of the measures used in the study

The internal consistency validity of the scales used to measure the study variables was tested, in addition to measuring the convergent validity by measuring the average variance extracted. Internal consistency validity: It means the extent to which each statement of the questionnaire is consistent with the variable to which it belongs. Therefore, the researcher measured the internal consistency of the questionnaires by calculating the correlation coefficients between the score of each statement and the total score of the variable to which it belongs. According to Kaiser (1974) study, a correlation coefficient of less than 0.5 is removed from the questionnaire. Convergent Validity: The average variance between statements that measure the same scale is measured by calculating the average variance extracted (AVE), whose value must be greater than 0.5 according to Hair et al (2006). The following tables show the statistical results for (correlation coefficients, standard deviation, calculated T value, and P value between the score of each statement and the total score of the variable to measure the validity of the internal consistency of the questionnaires. Also, calculating the value of the average variance extracted (AVE) to measure the convergent validity of the questionnaires through the equation model. Structural SPSS version 29, as follows:

Variable	Statements	KMO	Factor Loadings	Standard deviation	P Values	Average variance extracted
Availability of Finances	A1	0.701	0.929	1.382	0.00	0.998
	A2		0.853	1.185	0.00	
	A3		0.827	1.079	0.00	
	A4		0.659	1.248	0.00	
Procurement Competency	B1	0.710	0.891	0.890	0.00	0.99
	B2		0.850	1.166	0.00	
	B3		0.843	1.284	0.00	
	B4		0.801	1.185	0.00	
	B5		0.716	1.219	0.00	
	B6		0.632	1.364	0.00	
	B7		0.552	1.166	0.00	

1. Availability of Finances analysis:

Descriptive Statistics

	Mean	Std. Deviation	Analysis N	Missing N
A1	2.6129	1.38269	31	0
A2	2.8387	1.18594	31	0
A3	3.0323	1.07963	31	0
A4	3.3226	1.24866	31	0

Correlation Matrix^a

		A1	A2	A3	A4
Correlation	A1	1.000	.692	.679	.287
	A2	.692	1.000	.707	.622
	A3	.679	.707	1.000	.363
	A4	.287	.622	.363	1.000
Sig. (1-tailed)	A1		<.001	<.001	.059
	A2	.000		.000	.000

A3	.000	.000		.022
A4	.059	.000	.022	

a. Determinant = .129

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.701
Bartlett's Test of Sphericity	Approx. Chi-Square	57.081
	df	6
	Sig.	<.001

Communalities

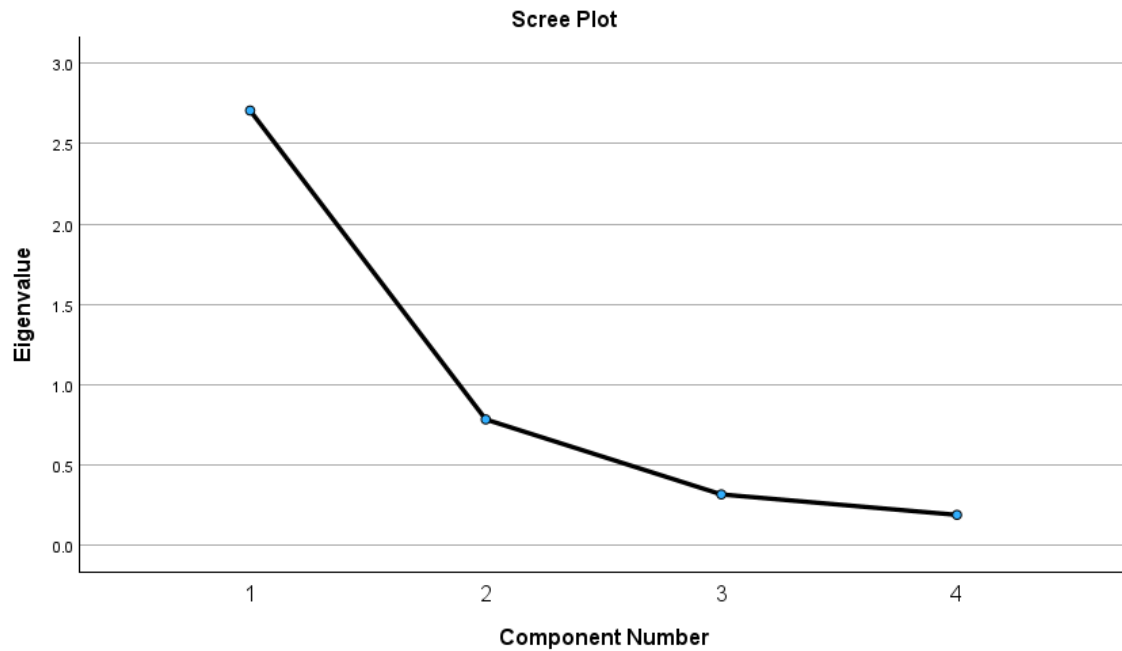
	Initial	Extraction
A1	1.000	.683
A2	1.000	.862
A3	1.000	.728
A4	1.000	.434

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.707	67.675	67.675	2.707	67.675	67.675
2	.785	19.615	87.290			
3	.318	7.946	95.236			
4	.191	4.764	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component 1
A2	.929
A3	.853
A1	.827
A4	.659

Extraction Method:
Principal Component
Analysis.

a. 1 components
extracted.

2. Procurement Competency analysis:

Descriptive Statistics

	Mean	Std. Deviation	Analysis N	Missing N
B1	2.9677	1.30343	31	0
B2	3.1290	1.31001	31	0
B3	3.5484	1.05952	31	0
B4	3.4516	1.02758	31	0
B5	3.1935	1.13782	31	0
B6	3.4194	.95827	31	0
B7	3.5161	1.12163	31	0

Correlation Matrix^a

		B1	B2	B3	B4	B5	B6	
Correlation	B1	1.000	.452	.255	.434	.566	.278	
	B2	.452	1.000	.596	.599	.542	.433	
	B3	.255	.596	1.000	.439	.434	.423	
	B4	.434	.599	.439	1.000	.521	.140	
	B5	.566	.542	.434	.521	1.000	.535	
	B6	.278	.433	.423	.140	.535	1.000	
	B7	.377	.135	.343	-.035	.363	.629	
Sig. (1-tailed)	B1		.005	.083	.007	<.001	.065	
	B2	.005		.000	.000	.001	.007	
	B3	.083	.000		.007	.007	.009	
	B4	.007	.000	.007		.001	.227	
	B5	.000	.001	.007	.001		.001	
	B6	.065	.007	.009	.227	.001		
	B7	.018	.235	.029	.425	.022	.000	

a. Determinant = .041

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.693
Bartlett's Test of Sphericity	Approx. Chi-Square	85.642
	df	21

Sig.	<.001
------	-------

Communalities

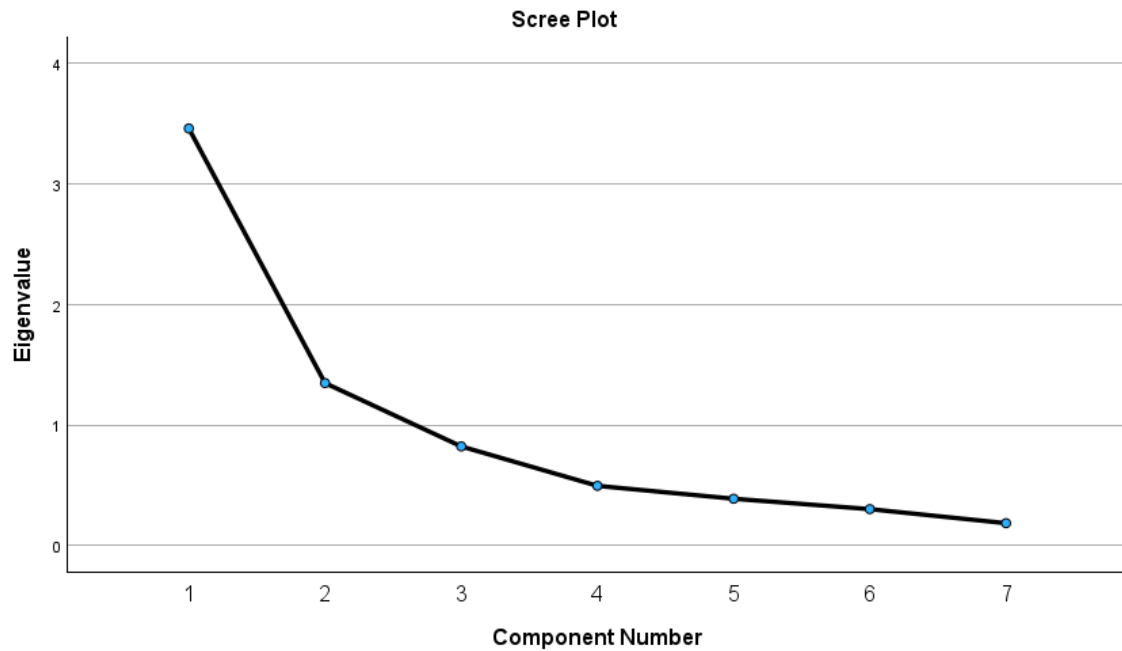
	Initial	Extraction
B1	1.000	.469
B2	1.000	.733
B3	1.000	.515
B4	1.000	.805
B5	1.000	.679
B6	1.000	.760
B7	1.000	.847

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	3.460	49.434	49.434	3.460	49.434	49.434	2.8
2	1.348	19.254	68.688	1.348	19.254	68.688	1.9
3	.822	11.746	80.434				
4	.495	7.070	87.504				
5	.388	5.543	93.046				
6	.302	4.311	97.357				
7	.185	2.643	100.000				

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component	
	1	2
B5	.823	
B2	.788	-.335
B3	.716	
B6	.692	.531
B1	.682	
B4	.646	-.623
B7	.536	.748

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
B4	.883	

B2	.842	
B5	.701	.433
B3	.626	.350
B1	.602	.326
B7		.919
B6		.824

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with
Kaiser Normalization.^a

a. Rotation converged in 3
iterations.

Component Transformation Matrix

Component	1	2
1	.833	.553
2	-.553	.833

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with
Kaiser Normalization.

- Cronbach's alpha measurements:

Variable	Number of Statements	Cronbach's alpha	
Availability of Finances	4	0.918	0.927
		0.918	
		0.917	
		0.917	
Procurement Competency	7	0.885	0.879
		0.868	
		0.839	
		0.849	

		0.857	
		0.848	
		0.879	
		0.7	
		0.76	
		0.74	
		0.768	
		0.728	
		0.725	
		0.781	

References:

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Appendix

Introduction

The oil and gas industry is a cornerstone of Saudi Arabia's economy, contributing significantly to national income, employment, and energy supply. Understanding the factors that influence this sector is crucial for policy-makers, industry stakeholders, and researchers aiming to ensure sustainable development and economic stability.

This questionnaire aims to gather insights from industry professionals, economists, and other stakeholders about the various factors that impact the oil and gas industry in Saudi Arabia. These factors include economic, political, technological, environmental, and social influences. Your participation is invaluable and will contribute to a comprehensive analysis that can help shape future strategies and policies in the sector.

Your responses will be kept confidential and will be used solely for research purposes. We appreciate your time and effort in providing honest and thoughtful answers.

Objective:

The primary objective of this survey is to identify and analyze the key factors influencing the oil and gas industry in Saudi Arabia, to better understand their impacts and to propose recommendations for improvement and sustainability.

Instructions:

1. Please answer all questions to the best of your knowledge.
2. Some questions may require selecting multiple answers or providing detailed explanations.
3. If you are unsure about a question, feel free to indicate so.
4. Your responses should reflect your professional experience and personal views.

Thank you for your participation!

Zainab Aleid
Midocean University - Faculty of Management

Demographic Information Section

To ensure we understand the context of your responses, please provide the following demographic information:

1. *Age:*

 - 18-24
 - 25-34
 - 35-44
 - 45-54
 - 55-64
 - 65 and above

2. *Gender:*

 - Male
 - Female
 - Prefer not to say

3. *Educational Background:*

 - High School Diploma or equivalent
 - Associate Degree
 - Bachelor's Degree
 - Master's Degree
 - Doctorate
 - Other (please specify)

4. *Current Position in the Industry:*

 - Entry-level
 - Mid-level
 - Senior-level
 - Executive
 - Consultant
 - Other (please specify)

5. *Years of Experience in the Oil and Gas Industry:*

 - Less than 1 year
 - 1-3 years
 - 4-6 years
 - 7-10 years
 - 11-15 years
 - More than 15 years

6. *Type of Organization:*

 - National Oil Company
 - International Oil Company
 - Service Provider
 - Government Agency
 - Research Institution
 - Consultancy
 - Other (please specify)

7. *Primary Area of Expertise:*

- Exploration
- Drilling
- Production
- Refining
- Distribution
- Environmental Management
- Health and Safety
- Economics and Finance
- Policy and Regulation
- Other (please specify)

8. *Location of Work:*

- Within Saudi Arabia
- Outside Saudi Arabia (please specify the country)

This information will help us analyze the data more effectively and ensure the results are representative of the diverse perspectives within the industry. Thank you for providing this valuable information.

Questionnaires Survey

Table 1: Availability of Finances

Availability of Finances	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The organizations procurement funds are adequate to initiate procurement process is commendable					
There is procurement budget reviewing to cater for changes in the economic environment					
Tender float is based on the financial resources availability and confirmation					
Tender award is based on the financial resources availability and confirmation					

Table 2: Procurement Competency

Procurement Competency	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The organization ensure that there is continuous on job training to enhance implementation of rules and regulations					
There are periodic refresher courses offered to the procurement staff to enhance					
implementation of rules and regulations.					
The organization ensures that professional competence is uphold in order to foster public procurement policies implementation					
The formal courses offered are fair and equitable to the staff thus enhanced quality improvement					
The training programs are periodically done to enhance procurement policies implementation in the organization					
There exists professional courses offered by the professional bodies to the staff to enhance implementation of rules and regulations					