A Study on Impact of Procurement Practices on Organizational Performance in the Oil and Gas Sector in Malaysia

By

Hani Raihan Binti Anuwar

Project Paper Submitted in Partial Fulfilment of the Requirements

For the Degree of Master of Business Administration

Universiti Tun Abdul Razak

October 2023

DECLARATION

I hereby declare that this project paper is submitted to fulfil my MBA degree requirement which is my own work and that al contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part for any other degree at this or any other universities. In making these declarations, I understand and acknowledge any breach in this declaration constitutes academic misconduct which may result in my expulsion from the programme and/or exclusion from the award of the degree.

Signature :

Name : Hani Raihan Binti Anuwar

Date :

ACKNOWLEDGEMENT

I would like to acknowledge and give my warmest thanks to my supervisor Professor. Sapowan bin Sanusi who made this work possible. For giving me the opportunity to do research and providing invaluable guidance and advice carried me through all the stages of writing my project. His dynamism, vision, sincerity, and motivation have deeply inspired me. He has taught me the methodology to carry out the research and to present the research works as clearly as possible. It was a great privilege and honour to work and study under his guidance. I am extremely grateful for what he has offered me. I would like to thank him for his friendship, empathy, and great sense of humour. I am extending my heartfelt thanks to his wife, family for their acceptance and patience during the discussion I had with him on research work and thesis preparation. I would also liketo thank to all parties who helped me finish the thesis during the research process. All UNIRAZAK administrators, professors, and course participants, as well as my family for their continuous support and understanding when undertaking my research and writing my project. Their prayer for me was what sustained me this far.

Aside from that, I'd like to personally acknowledge the respondents for their time and effort in completing the questionnaires. This study would not have been possible without their participation through their responses.

Finally, I would like to thank to Almighty for letting me through all the difficulties. I have experienced your guidance day by day. You are the one who let me finish my degree. I will keep on trusting you for my future.

TABLE OF CONTENT

LIST OF TABLES AND CHARTS

Abstract of the project paper submitted to the Senate of Universiti Tun Abdul Razak in partial fulfilment of the requirements for the Master of Business Administration.

A Study on Impact of Procurement Practices in Organizational Performances in Oil and Gas Sector in Malaysia

By

Hani Raihan Binti Anuwar

October 2023

Procurement practices integrate various firms' operations and support functions, synchronising production with new orders, purchasing with demand and scheduling and shipping with client requirements. According to Malaysia's Economic Transformation Programme, the oil and gas (O&G) sector has been designated as a critical sector to support national growth and generates around 40% of the country's overall income. Procurement practices in Malaysia's Oil and Gas sector have a significant impact on organizational performance, making them a critical indicator of success in this industry. This abstract dives into the multifaceted impact of procurement practices on organizations within this sector. Procurement has emerged as a pivotal function that directly shapes operational efficiency, cost-effectiveness, and overall competitiveness in Malaysia's highly dynamic Oil and Gas landscape. Effective procurement practises in the oil and gas industry are distinguished by their capacity to optimise the supply chain, minimise operating costs and improve resource management. Organizations may ensure consistent access to high-quality products and services by methodically researching suppliers, negotiating favourable terms, and cultivating strategic partnership. This not only maintains a consistent flow of resources, but it also reduces the risks associated with supply chain interruptions which is critical in an industry where downtime may have disastrous repercussions.

Chapter 1

INTRODUCTION

1. Introduction

Procurement has seen a lot of growth leading to the formation of procurement related entities and become increasingly important in the success of companies operating in the oil and gas sector. There has been greater demand to align procurement practises and objectives with the aims of the organisation. The supply chain has been directly linked to the overall company performance and procurement practises are vital to company success. Procurement practises have positively impacted an organization's financial performance, the success of a new product is depending on procurement and supplier involvement during buying and negotiating occurs. However, in this study we will be focusing the oil and gas operations in procurement practices Carr and Pearson (2022). As one of the main drivers of economic growth, any adverse effect on this sector would have a significant impact on the country's development. The impact of procurement practices on organizational performance has been widely recognized in various industries. Hence, cost minimization has become critical for oil and gas firms in competing effectively, especially with other firms as Malaysia aims to become a hub for the oil and gas industry in Southeast Asia (PwC, 2015).

Due to a variety of circumstances, efficient procurement practices are critical for Malaysia's oil and gas industry. To begin with, the industry heavily relies on suppliers and vendors for essential resources, equipment, and services. The ability to choose reliable suppliers and establish favourable contractual terms has a direct impact on the organization's operations efficiency and cost effectiveness. Perhaps, effective procurement practices ensure timely availability of critical resources, enabling uninterrupted operations and minimizing production downtime. In fact, the oil and gas industry operate in highly competitive global market, optimizing procurement practices provides a competitive advantage by reducing costs, increasing productivity, and assuring high quality inputs.

Supplier selection is an important part of Malaysian procurement practises in the oil and gas industry. organizations must identify and partner with suppliers who can consistently offer high-quality in terms of goods and services. Perhaps, technical expertise, financial stability, compliance with safety and environmental standards, and timely delivery are critical considerations. Besides, an effective supplier evaluation method, including pre-qualification assessments and performance monitoring, are employed to mitigate risks and ensure the selection of reliable suppliers. Organizations may improve their operational performance, optimize cost, and improve their overall competitiveness by forming strategic relationships with competent suppliers.

Other than that, contract management is an integral part of any procurement cycle. Contracts provide a legal framework for procurement activities, defining the rights and obligations of both parties. Comprehensive contracts should encompass crucial elements such as quality standards, pricing mechanisms, delivery schedules, and dispute resolution mechanisms. Effective contracts management practices enable organizations to monitor supplier performance, enforce compliance, and address any contractual deviations promptly. By maintaining transparent and fair contractual arrangements, organizations can foster trust and collaboration with suppliers, leading to enhanced operational performance and optimize procurement related risks occurring.

Technology has been transformed procurement practices within the oil and gas industry in Malaysia. The adoption of digital solutions such as electronic procurement systems, e-sourcing platforms, and supply chain management software has streamlined and automated various procurement processes. Moreover, it is also enabling procurement practices facilitate accurate data analysis, efficient supplier collaboration, real time monitoring of procurement activities and improved decision making. By utilize technology, organizations can enhance their procurement efficiency, reduce administrative burden, optimize costs, and gain a competitive advantage.

In other words, procurement practices give insight on the impact of the organization performance of the oil and gas industry in Malaysia. However, through the effectiveness of supplier selection, technology input, contract management,

relationship between supplier helps to optimize costs, ensure operational efficiency, and maintain a competitive edge. This would help to achieve sustainable growth, contribute to the national economy, and adapt to the dynamic market conditions.

1.1 Background of Research

Procurement has greatly impacted on how an organization achieves its goals. According to (Leenders, Johnson, Flynn, & Fearson, 2008) mentioned that procurement practices add value to the organization. Procurement practises is an area that can be improved even more to organizational performance success. According to Weele, (2010) states that procurement is the practice of selecting vendors, strategic vetting, setting up payment terms, selection, negotiations of contracts and actual purchasing of goods. The oil and gas being an important growth driver of the national economy and it is a vital source of revenue for the government says (British & Francis, 2022). Organizations tend to choose procurement procedures that are familiar to them; alternatively, they should select those that are most suited to and beneficial to their organization's success. (Narasimban & Kim, 2002) states that there has been an upsurge in the need for purchasing integration. Perhaps, "Purchasing integration links purchasing practices to organizational performance" as cited by (Gattorna, 2006). There is a direct link of operational efficiency and supply chain to organizational performance therefore means that adopting procurement practises is critical to organizational success. The entire of procurement process must be consolidated and implement procurement practices such as green purchasing, Just in Time delivery, Total Quality Management (TQM) and e-procurement to improve overall organizational performance. Streamlined procurement methods boost efficiency and the trust of the organization's employees, customers, and stakeholders. Shifting away from traditional purchasing and moving into modern and more efficient procurement practices leads to continuous improving and benchmarking. This is where an organization compares itself against the leading organizations in its class or industry. Hence, procurement is no longer a process but a strategic function in the organization that reduces cost and achieves maximum savings for the organization. According to (Guth, April 2010), organisations should always compare themselves to the "best in class" and strive for ongoing improvement in their operations. Organisations can engage in a variety of procurement practises, including commitment to green purchasing, commitment to just in time delivery, commitment to total quality management and e-procurement. Considering a wide variety of performance measures is important when defining organizational performance. Perhaps, it should be measured under various perspectives which include quality, efficiency, productivity, profitability and sustainability and these practices should be looked at as part of organizational strategy. Moreover,

procurement practices should deeply concern in the budgeting process, buyer-supplier relationship, technological advancement, and the policy. However, the impact of procurement practices in organizational performance in Malaysia's oil and gas sector has been inadequately explored. Therefore, this research aims to have effective procurement practises are needed to ensure the smooth functioning and long-term growth of organisations in this industry. Understanding the relationship between procurement practises and organisational performance can provide helpful perspectivesfor improving procurement strategies and overall sector performance.

In recent years, the O&G sector has been facing challenges such as volatile prices of crude oil and intense competition (Ekeh Modesty, 2013). These challenges have forced oil and gas companies to re-evaluate their procurement strategies. Procurement strategy has become an increasingly important aspect of the overall business strategy for organizations in the O&G sector. As a result, much research has been conducted to explore the impact of procurement strategy on organizational performance in Malaysia's O&G sector. This research aims to provide insights into how procurement strategies can be optimized in the O&G sector in Malaysia, ensuring competitiveness and sustainability for organizations operating within the sector. (Hoque et al., 2020). The research is significant as it contributes to the body of knowledge on procurement strategy and organizational performance in Malaysia's O&G sector, identifying best practices and potential areas for improvement. Furthermore, the research aims to provide practical recommendations that Oil and Gas organizations can adopt to optimize their procurement strategies and improve their overall business performance. This research is timely and significant as it addresses the need for Oil and Gas organizations in Malaysia to remain competitive in an increasingly challenging market while ensuring their long run.

1.2 Problem Statement

An organization's procurement department still under pressure to achieve financial savings through efficient and coordinated service provided. Nowadays, organizations are selecting more professionalism and efficient in the procurement process. According to Hassanzadeh and Jafarian (2010) mentioned that procurement practices are strategic in nature with the goal of increasing productivity, identifying better sources of supply, and lowering raw material prices and expenses. Procurement practises enhance information and material flows and are considered as strategic functions that aim to increase the organization's profitability, find better sources of supply, and lower raw material prices and expenses. Organisations must plan their procurement processes and ensure the timely availability of products and services through effective procurement planning. In the Malaysian oil and gas business, however, poor procurement planning frequently leads to delays, cost overruns, and operational interruptions. The lack of an organised approach to procurement planning impedes resource utilisation, affects project timeframes, and, ultimately, lowers organisational performance. Environmental pollution has prompted procurement to further restructure its activities to protect the minimal resources available. (Aref, Marilyn, & Joseph, 2005) says that the idea of implementing green procurement is beneficial because it could eliminate unsafe discharges and excesses across the supply chain. Therefore, every organizational should embrace the use of procurement practices such as electronic procurement and the employment of professionals as they more focus on achieving competitive advantage. Factor may hinder this implementation may include employee resists to change, a failure by top management to allocate the required resources and lack of finances. Due to technology improvements, the corporate environment is evolving at a rapid speed, and procurement managers must keep up to guarantee that all forms of procurement are environmentally friendly. Most challenges that occur are market conditions, supplier relationships, compliance, regulatory requirements, technology adoption.

In general, the oil and gas industry are one of the most susceptible industries to market fluctuations especially with the pressure to green energy initiatives. Hence, this will make it challenging for procurement teams to secure such favourable pricing and contracts with suppliers. According to (Zach , n.d.) mention that it can make challenging part for procurement teams to secure favourable pricing and contracts with suppliers. Staying updated on industry trends and conditions is most crucial part for procurement management to make the flourishing decision for their organisation. Perhaps, inventing a technology advancement would help by providing real-time data and analytics to help procurement management make informed decisions. Advanced technological solutions such as e-procurement systems, data analytics, and supply chain management software are examples of advanced technical solutions that can help to expedite procurement procedures, increase transparency, and improve decision-making. Automation speeds up processes, reduces mistakes, and provides real-time visibility throughout the procurement cycle. Furthermore, technology-enabled procurement practises allow organisations to optimise inventory management, minimise risks, and uncover cost-cutting possibilities. Companies may improve productivity, save costs, and improve overall organisational performance by successfully using technology. In this matter, data analytics playing a major role which provide insight into market trends and supplier performance, enabling procurement management to negotiate better prices and terms with suppliers. Organizational performance is improved when Information of technology is implemented in procurement.

However, there are instances in Malaysia where organisations fail to form mutually beneficial agreements with suppliers. Poor supplier connections can lead to poor quality, inconsistent delivery dates, and higher expenses. These challenges have a direct impact on the overall functioning of organisations. Besides, in oil and gas industry relies heavily on suppliers or vendors which can provide essential goods and services. According to (Zach , n.d.) says that maintaining a good positive relationship with vendors is crucial to ensuring the timely delivery of quality products and services they provided. Furthermore, managing multiple vendors and reach their high expectations can be a challenging task for procurement members. Building strong and collaborative relationships with suppliers is critical for the success of Malaysian oil and gas firms. Maintaining excellent communication, building trust, and cultivating mutually beneficial connections with suppliers may all result in considerable benefits. Close engagement with suppliers may result in higher quality goods and services, faster delivery, and more

market response. Furthermore, excellent supplier connections may boost innovation and information exchange, allowing organisations to achieve an industry competitive advantage. Companies may increase operational efficiency, cut costs, and improve overall performance by using the experience and skills of their suppliers.

The importance of procurement practises on organisational success in Malaysia's oil and gas sector cannot be overstated. Effective procurement planning, solid supplier connections, the use of technology, and a sound procurement strategy are all critical components that lead to increased operational efficiency, cost management, and overall performance. Companies that prioritise these practises may improve their competitiveness, generate sustainable development, and effectively traverse the challenges of the volatile oil and gas sector. Investing in optimising procurementpractises is thus critical for Malaysian organisations operating in the oil and gas sector.

1.3 Objectives of the Study

1.3.1 General objectives

The main objective of the research was to establish the impact of procurement practices on organizational performance in the Oil and Gas sector in Malaysia.

1.4 Research Objectives:

The main research objectives have been outlined below:

1. To assess the impact of procurement planning on organizational performance of oil and gas sector in Malaysia.
2. To determine the impact of supplier relationships on organizational performance of oil and gas sector in Malaysia.
3. To establish the impact of technology utilization in procurement on organizational performance of oil and gas sector in Malaysia.
4. To find out the impact of procurement policy on organizational performance of oil and gas sector in Malaysia.

1.5 Research Questions:

- What is the impact of procurement planning on organizational performance of oil and gas sector in Malaysia?
- What is the impact of supplier relationships on organizational performance of oil and gas sector in Malaysia?
- What is the impact of technology utilization in procurement on organizational performance of oil and gas sector in Malaysia?
- What is the impact of procurement in policy on organizational performance of oil and gas sector in Malaysia?

1.6 Significant of the Study

Understanding the impact of procurement practises on organisational performance in Malaysia's oil and gas sector is critical. This article intends to emphasise the importance of researching this issue for procurement practises in management, the Malaysian government, the industrial sector, and researchers/academicians.

1.6.1 Procurement Practices in Management

For procurement professionals, understanding the influence of procurement practises on organisational performance is critical for attaining efficiency and success. This research gives significant insights into effective procurement methods, tools, and processes. Managers may find opportunities for improvement, streamline procedures, and make educated decisions about supplier selection, negotiation, and contract management by analysing the link between procurement practises and organisational performance. The study's findings help procurement managers to optimise their practises, align them with industry best practises, and contribute to their organisations' overall success and growth.

1.6.2 The Government of Malaysia

Malaysia's government is crucial in regulating and managing the oil and gas industry. Understanding the influence of procurement practises on organisational performance enables the government to develop rules, regulations, and recommendations that encourage efficiency, transparency, and long-term growth. The government may learn about the issues that businesses confront in their procurement procedures, supplier relationships, and technology utilisation by researching this topic. The findings of this study may be used to build procurement frameworks that improve competitiveness, promote ethical practises, and assure effective resource utilisation in the oil and gas industry.

1.6.3 The Manufacturing Sector

Malaysia's industrial sector is primarily reliant on the oil and gas industry for inputs and raw materials. As a result, producers must investigate the influence of procurement practises on organisational performance. Understanding how procurement practises impact performance allows manufacturers to optimise supply chains, cut costs, and improve overall operational efficiency. Organisations in the manufacturing sector may identify opportunities for development and align their practises with industry best practises by analysing procurement strategy, supplier relationships, technology utilisation, and procurement regulations. The study's findings can help firms increase collaboration with suppliers, implement technology-driven procurement processes, and develop efficient procurement rules, resulting in improved performance and competitiveness.

1.6.4 The Research/Academicians

The outcomes of these studies give significant overview into the industry's particular procurement difficulties, opportunities, and best practises. Furthermore, research in this field promotes academic conversation, creativity, and the creation of new ideas and frameworks. The data may also be utilised to create specialised training programmes and courses that will provide future procurement professionals with the skills and knowledge they need to succeed.

The importance of researching the influence of procurement practises on organisational performance in Malaysia's oil and gas sector is obvious to all stakeholders. Procurement experts and the Malaysian government, as well as the industrial industry and researchers/academicians, all stand to benefit from the findings of such investigations. Understanding the link between procurement practises and organisational performance allows stakeholders to drive changes, boost competitiveness, and contribute to the long-term success of Malaysia's oil and gas sector. Organisations may achieve improved procurement results, cost reductions, and overall operational excellence by constant study, analysis, and application of best practises.

1.7 The Organization of the Study

The study is divided into three (3) chapter. Chapter one of the study consists of the general introduction which includes the introduction, background of the study, the statement of the problem, the objective of study, the research questions, significance of the study and the organization of the study.

Chapter two is the literature review which evaluates the works of other research on the subject, their approaches, and the researcher's criticisms of their stance where necessary.

Chapter three focuses on the methodology of the study, analysis of the data collected through google forms and the questionnaire have been provided and it is the main topic in the chapter.

Chapter 2:

LITERATURE REVIEW

2.1 Introduction

Procurement practices refer to the strategies of procuring or acquiring product and service (McFalls, 2016). Procurement practices may also be defined as the managerial measures performed to improve the performance of the integrated supply chain. Research methodology was defined and described by is (Kothari, 1990) as “a scientific and systematic search for pertinent information on a specific topic”.

A consistent supply of raw materials and services, lower prices, and risk mitigation for supply chain disruptions are all emphasised as benefits of effective procurement practises in studies (Nawi & Othman, 2019). Also, due to the unique characteristics of the business, which includes high-value contracts, lengthy supply chains, and strict safety and quality criteria, procurement practises in the oil and gas sector are characterised by complexity (Chua et al., 2018).

A major factor in the efficiency and cost reductions in the industry has been recognised as the implementation of technology in the procurement process, such as e-procurement platforms and digital marketplaces (Kamal et al., 2020). The potential of blockchain technology to improve transparency and traceability in the purchase of raw materials and the monitoring of supply chains is drawing attention (Rahman et al., 2019).

The chapter presents the research study’s design and procedure, including the rationale for the methodologies and techniques used. It examines and provides the proposed study design and stages, as well as the research objectives and methods. The scope and methodological approach of the research were driven by several crucial challenges that were quite specific to the oil and gas industry. The issues are the procurement planning, supplier relationships, technology utilization in procurement & procurement policy on organizational performance. These issues will be raised and presented at the end of this chapter.

2.2 Theoretical Foundation

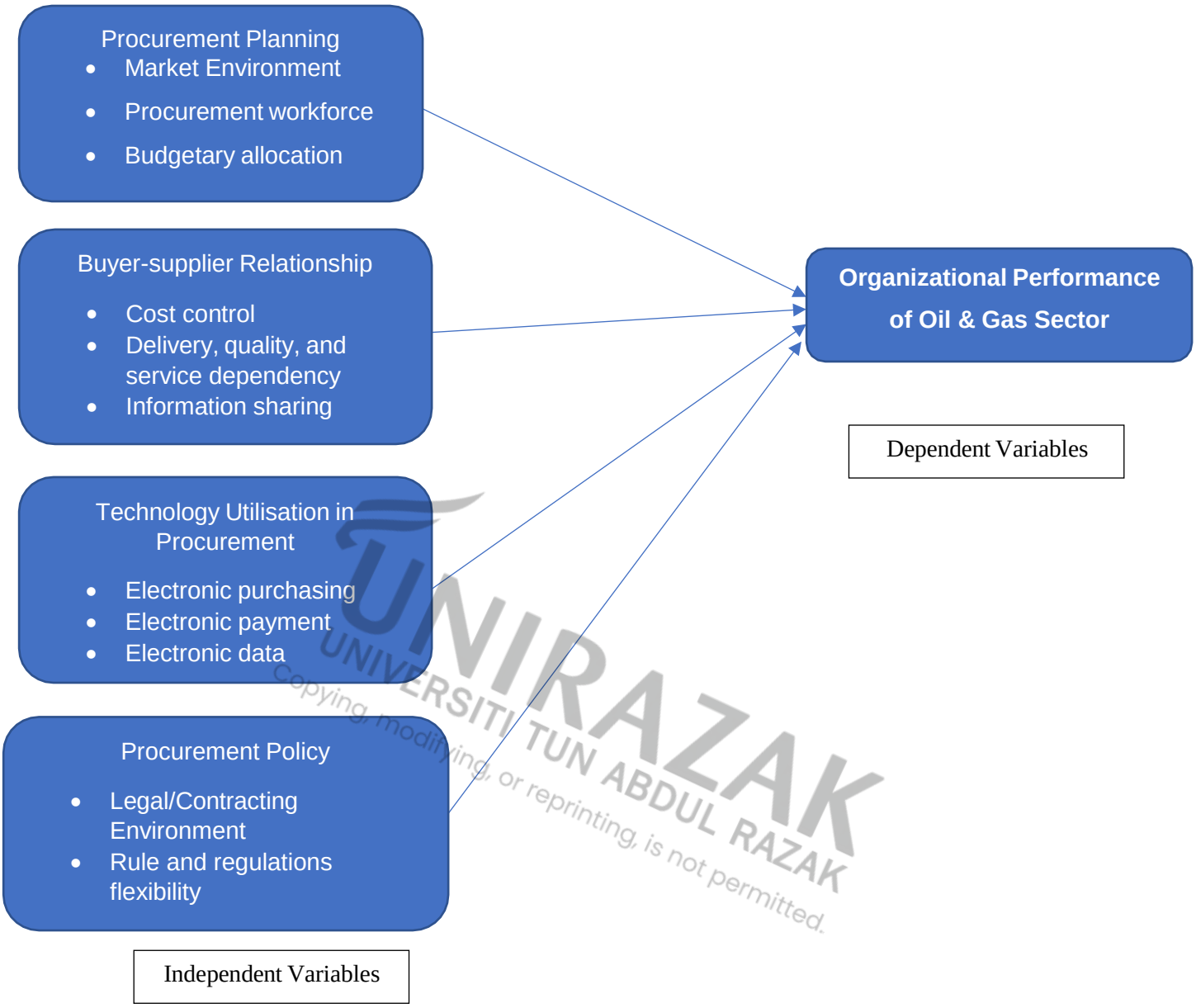

Figure 2.2: Theoretical Framework
Source: Researcher 2018

2.3 Theoretical Foundation

The basic framework for this study is Resource-Based View (RBV) theory which was popularised in the 1990 by Barney. According to the RBV hypothesis, a company's special assets and skills, including its procurement procedures, may provide it a competitive edge and boost performance. Oil and gas companies may use procurement tactics to get access to essential resources and a competitive advantage (Barney, 1991). Also, The TCE hypothesis places a strong emphasis on how transaction costs influence purchasing choices. To lessen the danger of opportunistic behaviour, oil and gas companies may choose for procurement strategies that minimise transaction costs, such as working with dependable suppliers (Williamson, 1985). Besides, Institutional theory investigates how organisations follow accepted conventions and methods. Due to pressure from stakeholders, rules, or industry standards, organisations may adoptcertain procurement practises that have the potential to affect their performance (DiMaggio & Powell, 1983).

2.4 Empirical Research

The oil and gas sector in Malaysia is a key to contributor to the country's economic growth, accounting for a significant proportion of its GDP and employment (Ryandono, Wildan, & Imron, 2020). To ensure efficient and effective procurement practices in this sector, empirical research studies have been conducted to investigate the impact of such practices on organizational performance. The oil and gas industry are defined by complicated operations, technical developments, and global market dynamics. Procurement practices which include sourcing, supplier selection, contract management and strategic alliances, are critical for assuring resource availability, lowering costs, managing risks, and encouraging innovation. Understanding the influence of procurement practises on organizational performance in Malaysia's oil and gas sector is so critical.

Procurement planning is an essential component of good supply chain management. It includes strategic supplier identification, evaluation, and selection as well as the formulation of procurement plans and policies. Procurement planning assists organizations in this sector in optimising their supply chain operations, managing risks, and ensuring the availability of vital resources. Hence, procurement planning leads to cost savings, quality improvement, on-time delivery, and innovation all of which have an influence on organizational performance (Kipkemoi, 2017).

Discusses the importance of effective supplier selection, contract management, collaboration and trust building strategies to facilitate positive **buyer supplier relationship**. The unique challenges faced by organizations in the oil and gas sector, such as volatile market conditions and geopolitical risks are highlighted. These factors include communication, trust, commitment, mutual goals, transparency, and supplier development initiatives. Effective relationships need effective communication, trust, commitment, transparency, and supplier development programmes (Tyler & Handfield, 2007). Improved performance measures, such as cost reduction, quality enhancement, on-time delivery, and innovation, result from such connections. Oil and gas companies should prioritise creating and cultivating good buyer-supplier relationships as a strategic necessity to improve their overall performance. However, given the dynamic nature of Malaysia's oil and gas business, further study is needed to investigate contextual elements that may influence the impact of buyer-supplier interactions in this sector.

At the public sector level, **technology utilization** improves unrestricted access to government information while also increasing market openness and economic inclusion through complementarities (Popescu & Carayanni, 2005). Among the main benefits that a system like this can provide to public administration are cost and process reduction, possible supplier broadening, easy access to preferred goods (predefined quality standards), information intelligibility and ease of comparison among goods and purchases logging and ensuing expenditure monitoring. The virtual market is being taken over by acquisition technologies. Rather of imposing tight selection criteria, it is available to capable vendors. An integrated ERP system with an effective Procurement/e-procurement suite is a critical facilitator of successful strategic procurement strategy. Suffice it to say, the use of technology to assist procurement is abundant; results clearly demonstrate that the adoption of new technologies, such as Electronic Data Interchange (EDI), increases procurement efficiency and improves overall company performance.

Procurement policies in the oil and gas sector in Malaysia provide a structured approach to procurement activities. A key sort of intellectual property is confidential knowledge. It is very useful in commercial contracts, particularly in oil and gas contracts. Since oil and gas contracts involve proprietary technical information and business expertise, multinational oil firms frequently include confidentiality clauses in their contracts to ensure their secrecy. For instant, investors that want to participate in exploration and production must apply for and get a licence from PETRONAS (PETRONAS, 2023). Procurement policies in the oil and gas sector give an organised

approach to procurement operations, assuring compliance with legal and regulatory requirements, supporting ethical practises, and fostering a competitive business climate. Hence, well-designed procurement rules assist organisations to increase efficiency, eliminate corruption risks, and achieve better performance outcomes. Understanding the influence of procurement policy on organisational performance is therefore critical for Malaysia's oil and gas sector. The British Patent Act of 1977, for example, states that "publication made in breach of confidence will not invalidate the patent application." Furthermore, according to the British Copyright, Designs and Patents Act 1988, "nothing in this part [of the Act dealing with copyright law] affects... the operation of any rule of equity relating to breach of trust or confidence." says (Ridhwan & Mohsin , 2017)

In this sense, integration refers to the extent to which distinct supply chain activities and processes interact as seamlessly as feasible says (Edward , 2012). Besides, Supply chain integration (SCI) is primarily focused with the development of more integrated systems that offer the promise of removing many of the inefficiencies caused by supply chain fragmentation. According to (Fagan, 1991), global sourcing of raw materials and other inputs has now become a reality for many businesses as the structure of the worldwide economic and commercial environment has developed. Supply chain integration has the potential to considerably improve operational efficiency in Malaysia's oil and gas sector. Organisations may simplify operations, reduce redundancies, and optimise resource allocation by integrating multiple supply chain roles and entities. Integration, for example, enables real-time information sharing, accurate demand forecasting, and inventory optimisation by facilitating seamless communication and collaboration among suppliers, manufacturers, distributors, and customers. These elements contribute to shorter lead times, better order fulfilment, and greater operational performance. Supply chain integration can result in cost savings and enhanced financial performance for Malaysian oil and gas companies. Integration improves visibility and control across the whole supply chain, enabling for more efficient cost management and the identification of cost-saving options. Organisations, for example, can optimise transportation and logistics operations, negotiate favourable contracts with suppliers, and reduce inventory holding costs by improving coordination and information sharing. These cost-cutting strategies have a favourable influence on organisations' financial performance, allowing them to reallocate resources to other key areas. Supply chain integration improves customer satisfaction and gives organisations in Malaysia's oil and gas sector a competitive advantage. Organisations may better understand client requirements, adapt to changing expectations, and deliver greater service levels through integrating. Organisations may improve order accuracy, minimise delivery lead times, and assure on-time delivery by integrating operations. Meeting consumer expectations builds loyalty, improves brand reputation, and assists organisations in gaining a competitive advantage in the market. Supply chain integration is critical for risk mitigation and organisational resilience in Malaysia's oil and gas business. Organisations may detect possible risks, analyse their effect, and implement suitable risk management strategies by integrating supply chain operations. Integration, for example, facilitates the creation of comprehensive contingency plans, supplier diversity, and effective monitoring

of supply chain interruptions. Supply chain integration improves the capacity to respond quickly, minimise interruptions, and preserve company continuity in a sector prone to geopolitical tensions, natural disasters, and market changes. Finally, supply chain integration has a substantial influence on organisational performance in Malaysia's oil and gas business. Several significant benefits have been emphasised in the article, including increased operational efficiency, cost savings, risk mitigation, higher customer satisfaction, and a competitive edge. This industry's organisations must recognise the value of supply chain integration and invest in technology, procedures, and partnerships that encourage seamless coordination and cooperation. By doing so, companies may enhance their performance, boost their market position, and promote long-term growth in Malaysia's dynamic oil and gas business.

2.5 Proposed Conceptual Framework

Conceptual frameworks are fundamental structures that describe the systemic properties of a system under consideration (Biklen & Bogdan, 2006). According to the framework below, it is defining the important variables, linkages, and procedures that impact organizational performance of oil and gas sector. The proposed conceptual model includes four impact of procurement practices on organizational performance in the oil and gas sector in Malaysia: **1) Procurement planning, 2) Buyer-supplier relationship 3) Technology Utilization in Procurement 4) Procurement policy.**

To gain a thorough knowledge of procurement practises in the oil and gas business, it is vital to keep in mind that these theories are not mutually incompatible. Instead, different ideas may be combined. To improve performance and preserve competitive advantage in the difficult and complex environment of the oil and gas sector, organisations can use these theoretical frameworks to guide their strategies, policies, and practises.

According to (Jason, 2023) stated that **Resource-Based View** best describe as a theory that able to establish competitive advantage through internal resources of the firm that are valuable, rare, not imitable and organized for value capture. According to this hypothesis, efficient procurement planning, which involves locating and procuring essential resources, can enhance organisational performance. The idea also emphasises the need of building a solid buyer-supplier connection as a crucial tool that may result in alliances and information exchange, eventually increasing organisational performance.

The costs and risks of transactions between organisations are a key emphasis of **TCE theory (Transactions Cost Economics)**. According to this theory, strong buyer-supplier relationships can lower transaction costs and hazards in the oil and gas business. Organisations may lessen opportunistic behaviour, negotiate advantageous contracts, and enhance overall procurement efficiency by creating long-term partnerships and encouraging trust. This idea emphasises how crucial it is to match transactional needs with procurement strategies to reduce risks and guarantee top performance.

An approach to comprehending organisations and management techniques as the results of social rather than economic constraints is known as **institutional theory.** Because it may be used to explain organisational behaviours that defy economic reason,

it has gained popularity in management theory (Suddaby, 2012). Organisations in the oil and gas industry frequent must follow strict rules and guidelines for sustainable procurement practises, ethical sourcing, and other factors. According to these theories, businesses may increase their legitimacy and reputation while also performing better as a whole if they match their procurement strategies with these institutional demands. Following industry-specific norms and standards can increase stakeholder trust and promote long-term success.

(Davit & Papagiannidis, 2023) stated that TAM (Technology Acceptance Model) postulates that the acceptance of technology is predicted by the users' behavioural intention, which is, in turn, determined by the perception of technology usefulness in performing the task and perceived ease of its use. According to the TAM theory, organisations should take organisational readiness, perceived utility, and ease of use into account while integrating technological solutions. Organisations may increase efficiency, accuracy, and decision-making through the appropriate use of technology in procurement practises, which eventually results in enhanced performance.

2.6 Hypothesis Development

Procurement Planning

The study's aim was to determine how procurement planning methods impact the effectiveness of procurement practices in companies' oil and gas sector. According to the (Industry Manual, 2008) a procurement plan is an instrument used for budget implementation that should be produced by user departments to minimise or restrict surplus votes in the entities' budgets and to ensure that procurements do not proceed unless appropriate funds are available to pay for them. Thus, all procurement strategies should be integrated into the budget process as necessary and in accordance with procurement legislation.

Section 53(2) of the Public Procurement Asset and disposal Act (2015) provides that the annual budget preparation process, an accounting officer must produce a realistic annual procurement plan in the manner specified in the Regulations within the authorised budget prior to the start of each fiscal year. Caldwell, Roehrich, and Davies (2009) concept of procurement idea states that an advanced plan, scheduled and group buying result in cost savings, an effective corporate operation, and consequently enhanced profitability. The steps that comprise procurement planning include group procurement, just-in-time delivery, negotiated bulk pricing and reduced administrative cost.

Buyer-supplier Relationship

The buyer-supplier relationship entails determining how the relationship comprises buyers interact with suppliers. Companies use strategic supplier selection, evaluation, and development criteria to build and retain partnerships with the best suppliers (Rebelo, Ana Filipa, Nobre, & Szczygiel, 2019). Just as a firm must cultivate connections with its consumers, it must cultivate ties with its suppliers to provide quality goods and services, timely and assured delivery, and information flow to assist both organisations in planning. Relationships can be supplier or buyer captive. Supplier applies when the supplier has little chance of changing the buyer, either because the supplier has committed a lot of resources to make a specific product for a given business and therefore transferring would be a loss, or when the supplier has only one or a few clients to supply to. Hence, buyer captive occurs when a buyer has only one source to buy from, such as when a product has only one supplier or producer.

Technology Utilization in Procurement

Aberdeen Group (2006) as cited that in comparison to faxed purchase orders and the use of Excel spreadsheets, an efficient technology platform that includes a comprehensive database management component is critical for supplying trustworthy and accurate data for spending analysis and management. Using integrated ERP system with an effective Procurement/e-procurement is a successful flow in strategic procurement planning. It is sufficient to mention that technology is widely used to assist procurement; results unmistakably demonstrate that new technologies, such as Electronic Data Interchange (EDI), boost the efficiency of procurement and enhance overall business performance. It suffices to note that technology is frequently utilised to support procurement; findings unequivocally show that new technologies, such Electronic Data Interchange (EDI), increase procurement efficiency and improve overall corporate performance (Barney, 2008)

Procurement Policy

The procurement policy's purpose is to provide processes for the business to follow when buying any goods or services, as well as to guarantee that all purchases are made at rates that are cost-effective, meet the standards for quality and specifications, and are made in a timely manner (Procurement Policy and Procedures, 2018). It is the function that initiates the complete acquisition or procurement process for purchasing services in governments (Lambsdorff, 2007). (Schooner & Whiteman, 2000) cited that "policies" when referring to values like transparency, integrity, competitiveness, and value for money. These principles would be classified from a systems viewpoint as desirable outcomes (outputs or impacts) to be accomplished through procurement standards.

Organizational Performance

Performance can refer to accomplishments, carrying out whatever commanded or undertaken, to something performed or done, to a deed, achievement, or exploit, or to the execution or accomplishments of labour. Performance is a measurable outcome or a collection of collected findings. When used in the context of the workplace, performance may refer to both a successful outcome and the method that business is handled. Performance is what the company delivers to stakeholders in terms of finances and operations. According to Mutai (2015) mentioned that organisations can gain operational transparency, efficiency, and accountability using procurement policies (Nyaboke, Arasa, & Ombui, 2013).

H1	Procurement planning has significant impact on organizational performance in the oil and gas sector in Malaysia.
H2	Buyer - supplier relationship has significant impact on organizational performance in the oil and gas sector in Malaysia.
H3	Technology utilisation has significant impact on organizational performance in the oil and gas sector in Malaysia.
H4	Procurement policy has significant impact on organizational performance in the oil and gas sector in Malaysia.

2.7 Summary of Chapter 2

In this chapter, it will focus on theoretical foundation, empirical research, conceptual framework, and hypotheses development. Organisational performance is greatly impacted by procurement practises in Malaysia's oil and gas industry. Improved performance results are a result of effective procurement practises, such as procurement planning, buyer-supplier relationship, technological utilization, and procurement policy. These procedures give businesses a competitive edge by encouraging cost-cutting, higher product quality, on-time delivery, and innovation.

The GDP and employment of Malaysia's economy are significantly influenced by the oil and gas industry. In this industry, empirical research studies have been carried out to look at how procurement practises affect organisational performance. To manage risks, optimise supply chain operations, and ensure resource availability, procurement planning is essential. Positive buyer-supplier relationships need effective supplier selection, contract management, cooperation, and trust-building tactics. Initiatives for supplier growth as well as communication, trust, dedication, and openness all have an impact on these partnerships. Technology, like Electronic Data Interchange (EDI), improves the effectiveness of procurement processes and overall business performance. To ensure compliance with legal requirements, promote ethical behaviour, and develop a competitive corporate environment, procurement policies offer an organised approach to procurement operations. To improve performance results in Malaysia's oil and gas sector, it is essential to comprehend the influence of procurement practises and rules.

Finally, effective buyer-supplier relationships, the use of technology, and well-designed procurement procedures all help to improve performance results in this industry. To adapt to the dynamic character of the business environment and achieve sustained development and success, it is crucial for organisations in the oil and gas sector to give priority to these factors and carry out additional research.

CHAPTER 3:

RESEARCH METHODOLOGY

3.1 Introduction

This section described the study's research strategy and methods. A research method is basically a data collection strategy that involves either listening to the subject, witnessing what people do and say, or collecting and analysing documents that humans create. As a result, the chapter covers research design, target population sample and sampling methodologies, data collecting tools, data collection processes, pilot study, data analysis and presentation.

3.2 Research Design

The study design is an important component of any research report's analysis and should be stated in every report. The research design is a complete strategy for addressing the study topic in the most effective manner feasible. Furthermore, the study design contains goals derived from the research question, explains the data collection sources, addresses ethical considerations, and considers constraints such as data access, time, location, and financial resources among others.

The research in this sort of study intends to investigate the link between two or more variables, notably procurement practices and organizational performance in Malaysia's Oil and Gas industry.

The study used **quantitative approach**. According to (Gay LR, 2018) the quantitative approach was chosen due to its capacity to collect and evaluate data for numerical settings to explain phenomena that are studied. The design of a correlation study aided in demonstrating how procurement best practises give an impact of procurement practices on organizational performance in the oil and gas sector in Malaysia.

3.3 Study Population and Sampling Procedures

The target population of the study typically consists of organizations operating in the oil and gas industry in Malaysia. These includes companies involved in exploration, production, refinery, and manufacturer of oil and gas product.

3.3.1 Sampling procedures

Regarding of the sampling procedures, the researcher would need to determine an appropriate sampling method from the representative sample from population itself. Depending on the sampling techniques can be imply such as stratified random sampling, cluster sampling or convenience sampling, depending on the specific research objectives, available resources and constraints can be used. According to (Jane Nduta Mwinga & Dr.Anaya W. Senelwa, 2019) the stratified proportional random sampling approach has been implied in their research and they mentioned that more precise estimates of general population characteristics and guarantees a more representative sample is produced from a reasonably homogeneous population.

3.4 Data collection Methods

The researchers will distribute **100 oil and gas sector employees** to the company of oil and gas in Malaysia, via an online form rather than paper. Moreover, surveys conducted through online platforms and distributed through telephone, media social, text messages phone and WhatsApp message group members will also be used to contact the responders. All questions are closed ended questions of check marking and Likert scale and there will be no open-ended questions in the survey. Perhaps, this strategy is more effective to develop and deploy.

The nature of the data gained in this survey is ordinal because all data was collected using Likert-scale type questions by Google Form. There is no way to quantify the difference between “agree” and strongly agree” because participant’s judgements of the psychological and emotional effect of these responses would undoubtedly differ. This is due to prevalence of survey data, several descriptive tests (non-parametric, chi-square, t-test, and analysis of variance (ANOVA) are frequently used and utilised (Fink 1995, p. 50).

Next, for between subject design, choose one of the non-parametric tests (the Mann-Whitney U test, median test, or Kruskal-Wallis test which possibilities include

the Mann-Whitney U test, median test, and Kruskal-Wallis test said (Boslaugh and Watter 2008, p.209).

The researcher chooses top management, middle management, and lower management the reasons are most of the organizations should have expertise and experience directly related to procurement practices in the oil and gas industry. Their perspectives will be valuables in understanding the performance. This is to ensure by targeting the appropriate audience will get diverse and relevant data that aligns and enable a deeper understanding of the topics.

3.5 Research Instruments

3.5.1 Questionnaire design

This study adopts a quantitative research approach to cope with variable measurement and analysis to accomplish findings. Questionnaires were utilised since they are more objective in obtaining information from several groups in a very short amount of time. Furthermore, the data collection is analysed by the researcher using Statistical Packages for Social Sciences (SPSS). Since a result, developing a questionnaire design is crucial, since it requires trustworthy data from respondents to answer the research questions and satisfy the objectives needs. This is because the design of the questionnaire will influence the responses, as well as the reliability and validity of the data. Except for the information test on gender and age, all procurement practices and organizational performance aspects were evaluated by using a 5-point Likert type scale.

3.5.2 Scales of Measurement

This research used the most popular measuring scales in Google Forms such as interval, Likert-style Rating, and nominal scale, as did most prior studies.

3.5.3 Scale of Nominal Values

According to (Dalati, 2018), a nominal scale is the lowest measurement level, and it is most used with qualitative variables rather than quantitative variables ones. A nominal scale lacks the mathematical characteristics of magnitude, equal spacing and absolute zero points. Only grouping of things into mutually exclusive categories is consistent with nominal scarcity.

3.5.4 Scale of Intervals

To assess the respondents' age, gender, education qualification, total work experience, employment years, employment type and position level, an interval scale might be utilised. According to Dalati (2018), the ordinal scale represents a higher measurement level and mentioned that interval scale includes both scales and equal intervals between surrounding units. In contrast, the interval scale lacks an absolute zero point. The interval scale is like an ordinal scale in that it includes equal intervals between surrounding units.

3.5.5 Scale of Likert-Style Ratings

It defines as a rating scale that is often used in surveys and questionnaires to assess people's attitudes, views, or perceptions regarding a certain issue. This method only considers one attribute during the analysis. While completing out the questionnaire, respondents will be given an original scale on which to score their level of agreement. A five-point scale with "Strongly Disagree" on one end and "Strongly Agree" on the other, with "Neither Agree" nor Disagree" in the middle is the most common arrangement. In this study, a Likert-style rating is used in section C of the questionnaire in Google Forms.

3.6 Data Processing

At the end of this chapter, data processing is applied and analyse the survey data. Following data collection, the researcher will employ a range of data analysis techniques to convert quantitative data into interpretable information. The results of data analysis may be used to validate the hypothesis and get a better knowledge of the data. The researcher analyses the data using SPSS Version software because it helps the researcher to study quantitative data more effectively and efficiently. As analytical approaches, descriptive analysis, reliability analysis, correlation analysis, and multiple linear regression were implied in this study.

3.6.1 Editing Data

(Editing During Data Collection (Theme), 2023) define that the technique of "improving" acquired survey data is known as data editing. This includes looking for errors committed by either the interviewer or the respondent. The data will be adjusted when the questionnaire has been assessed. The act of going over the questionnaire again to enhance accuracy and precision is known as data editing. We checked the consistency of these poor responses such as half-answered questions. As a result, missing or incomplete survey are no longer a worry because Google Form "required" button which respondents must have to answer all without missed any.

3.6.2 Coding of Data

Each conceivable response to each question is assigned a code using data coding. The questionnaire has been coded differently to identify distinct questions. This code applied once the questionnaire has been finished.

Section B: Variables - Bahagian B: Pemboleh Ubah

In this section I am using Likert Scale methodology, it's a scale used to represent respondent's attitudes or opinion to a topic. Kindly indicate your overview to each statement that been displayed and the indicator are as follows:

- 1. Strongly Disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly Agree

Dalam bahagian ini saya menggunakan metodologi Skala Likert, dimana ia adalah skala yang digunakan untuk mewakili sikap atau pendapat responden terhadap sesuatu topik. Sila nyatakan gambaran keseluruhan anda kepada setiap pernyataan yang telah dipaparkan dan penunjuk jawapan adalah seperti berikutnya:

- 1. Sangat Tidak Setuju
- 2. Tidak bersetuju
- 3. Berkecuali
- 4. Setuju
- 5. Sangat Setuju

Table 3.6.2.1: Example of questionnaires

Procurement planning enhances cost reduction / Perancangan perolehan meningkatkan pengurangan kos

	1	2	3	4	5	
Strongly Disagree / Sangat Tidak Setuju	○	○	○	○	○	Strongly Agree / Sangat Setuju

Table 3.6.2.2: Example of questionnaire structure

As the picture above shows “Strongly disagree”, for example is marked as “1”, whereas “Strongly Agree” is coded as “5”. The construct measurement section of the questionnaire includes independent elements such as procurement planning, buyer-supplier relationship, technology utilization for procurement and

procurement policy. The replies will be classed from “1” to “5” based on the amount of agreement of the respondents. For instance, “Strongly Disagree” is recorded as “1” whereas “Strongly Agree” is marked as “5”.

3.6.3 Data Import

Data entry for research or a thesis from questionnaire using Google Forms refers to the act of putting the survey results into a digital format to analyse and understand the data more easily (Febriansah & Abdullah, 2020). We entered the data from the questionnaire into the Statistical Package for the Social Sciences (SPSS) to achieve accurate findings for analysis.

3.7 Data Analysis Techniques

Data analysis is the process of looking at, purifying, transformation, and modelling data with the goal of finding relevant information, offering hypotheses, and assisting in decision-making (Oso & Onen, 2009). To analyse quantitative data, the study will use both descriptive statistics and inferential statistics. Based on the questionnaires, data will be examined using the statistical package for social sciences (SPSS) version 20.0. The frequency distribution table, percentage, mean, and standard deviation will be used in the descriptive statistics, while Pearson correlation analysis will be used in the inferential statistics. The link between the independent factors and the dependent variables will be examined using Pearson's correlation. The following statistical methods are used by the researcher to produce a quantitative description of the data:

3.7.1 Descriptive Analysis Techniques

Descriptive Techniques strategies are designed to offer a clear and succinct explanation of data properties, pattern, and trends without reaching judgements or implications about the underlying population. In this case study, the demographic group of skills procurement in the oil and gas sector was imply as an example to analyse the aspects that impact in organizational performance. In other words, the researcher focuses on the quantitative research strategy, which comprises collecting data based on quantifiable facts and then combining it with a statistical analysis of the population sample.

This strategy will be appropriate for the study that will be undertaken to identify what components influence the population of procurement practises in the oil and gas industry

to be satisfied with their organizational performance. The researcher implies the descriptive analysis to help define respondent characteristic. The respondent shows their driving style, attributes, and behaviours, as well as their attitudes towards the inquiry, by asking a closed-ended question.

Mean and Standard Deviation. This was employed as an example of the respondents' typical reaction on the procurement practices and organizational performance. One-Way Analysis of Variance (ANOVA). This was used to assess the importance of the difference in the procurement practices and organizational performance as well as demographic profiles of the respondents.

3.7.2 Inferential Analysis Techniques

According to Norman Blaikie, n.d, inferential analysis is a set of method for predicting what the population characteristics (parameters) could be based on what is known about the sample's characteristics (statistics) or determining if patterns or correlations, including association and influence or differences exist. This helps demonstrate the strength of the relationship between procurement practices and organizational performance in oil and gas sector in Malaysia. To complete this study, the researcher employed descriptive and qualitative methodologies to examine data from questionnaire as well as material acquired from primary and secondary sources. The researcher will use a table, bar graphs, pie charts, line chart, pie graphs and other methods of analysis to present the survey's results and findings. We will focus on two methodologies based on our research: Pearson Correlation Coefficient and multiple regressions analysis.

3.7.2.1 Pearson Correlation Coefficient Analysis

The Pearson Correlation coefficient is a statistic that measures the strength and direction of the linear relationship between two variables. It ranges from -1 to 1, where -1 indicates a perfect negative relationship, 0 indicates no relationship and 1 indicates a perfect positive relationship, according to (Correlation Coefficient | Types, Formulas & Examples – Scribbr, n.d). This coefficient is commonly used in various fields of research to determine the strength and direction of a linear relationship between two variables. According to Slouf, 2020, in this field of statistics, the Pearson Correlation Coefficient is a valuable tool for quantifying the degree and direction of linear association between two variables.

If the correlation value is greater than 0.8, the relationship is strong. However, if the correlation coefficient is less than 0.5, the relationship is weak. R2 is the coefficient of determination which indicates how much variation exists in the dependent variable in relation to the variance in the independent variable. In this research, Pearson Correlation Analysis is used to identify a relationship between independent variable and dependent variable.

Coefficient range	Strength
+0.91 to +1.0	Very Strong
+0.71 to +0.90	High
+0.41 to +0.70	Moderate
+0.21 to +0.40	Small but definite relationship
0 to +0.20	Slight, almost negligible

Table 3.7.2.1: Pearson Correlation Coefficient Strength

Sources: *Hair et.al (2003); Essential of Business Research Method*

3.7.2.2 Multiple Regressions Analysis

Multiple regressions analysis is a statistical technique that allows researchers to assess the relationship between a dependent variable and multiple independent variables. By incorporating multiple independent variables into the analysis, researchers can better understand how these variables collectively affect the dependent variable. Multiple regressions are associated with R2 which suggests that all of the independent variables may explain the proportion of variation in the dependent variable.

3.7.3 Coefficient Correlation Analysis

To study the relationship two quantitative approaches, continuous variables, the Pearson Correlation Analysis approach is performed. This method is being utilized in this research report to examine the link between each variable. The coefficient might have a value between -1 and 1, a positive 1 implies a positive correlation, while a negative 1indicates a negative correlation.

Size of Correlation	Interpretation
0.9 to 1.00	Very position or negative
0.70 to 0.90	High positive or negative
0.50 to 0.70	Moderate positive or negative
0.30 to 0.50	Low positive or negative

Table 3.7.3.1: Rule of Thumb for Correlation

3.7.4 Reliability Test

In this research, dependability refers to the reliability and consistency of the research findings and conclusions. It is important to demonstrate that the data analysis has been conducted in a precise, consistent, and exhaustive manner. The method of the study is considered trustworthy if the findings can be repeated using a comparable technique. Cronbach's Alpha is a measurement of the internal consistency or reliability of test items that are provided by SPSS. The larger the alpha, the higher the correlation between variables. According to L.M. Collins, Cronbach's Alpha is a method of measuring reliability that compares the amount of shared variation, or covariance among the items that comprise an instrument to the amount of total variance. A Cronbach's Coefficient of 0.6 or higher indicates great dependability as well as excellent internal consistency and reliability.

Alpha Coefficient Range	Strength of Association
<0.6	Poor
0.6 to < 0.7	Moderate
0.7 to <0.8	Good
0.8 to < 0.9	Very Good
0.9	Excellent

Table 3.7.4.1: Rule of Thumb on Cronbach's Alpha Coefficient Strength

Sources: *Hair et.al (2003); Essential of Business Research Method*

3.7.5 Operationalisation and Measurement

This study's conceptual model is explicit about which factors to investigate and how each variable influences the study's outcomes. The research will be focused on developing a clear conceptual model and hypothesis, minimising time waste and straying beyond the scope of the research investigation.

3.8 Independent Variables

Independent variables are those that the researcher manipulates or controls and which are thought to influence the dependent variable. In the context of studying independent variables may be taken into consideration when analysing how procurement practises affect organisational performance in Malaysia's oil and gas industry. Let's look more closely at these four important independent variables:

The systematic process of determining an organization's procurement needs and creating a strategic plan to address those needs is referred to as procurement planning. It entails deciding on the procurement's amount, quality, timeliness, and suppliers. Planning for purchases wisely may have a big influence on how well an organisation performs. It guarantees that the appropriate products, services, or equipment are acquired quickly, minimising operational interruptions and maximising resource allocation. Forecasting demand, budgeting, and strategic sourcing choices are important components of procurement strategy that may be addressed.

The interactions, partnerships, and collaborations between the purchasing organisation and its suppliers are all included in the buyer-supplier relationship. Relationships with suppliers that are strong, and cooperative can improve organisational success. This may be accomplished through good communication, common objectives, mutual trust, and collaboration. A good supplier-buyer relationship may result in more responsive suppliers, prompt deliveries, better-quality goods and services, and innovation. Examining elements like supplier selection criteria, contract management procedures, supplier assessment procedures, and the degree of cooperation and trust between the parties may help in understanding and rating the quality of the buyer-supplier relationship.

The use of technology in procurement procedures may have a big influence on how well an organisation performs. Technology may increase productivity, minimise

mistakes, and give access to real-time data and analytics during the procurement process. It can improve decision-making, automate repetitive operations, and improve communication. E-procurement systems, electronic data exchange (EDI), supplier portals, contract management software, and supply chain management systems are important examples of technology use in procurement. Examining elements like technology adoption rates, system integration, data security precautions, and the efficiency and efficacy of technology in enhancing procurement may help determine the level of technology usage and how it affects procurement performance.

An organization's procurement procedures are governed by a set of principles and standards called procurement policies. These rules lay forth the norms, processes, and moral guidelines that must be adhered to when conducting procurement operations. The success of an organisation may be significantly impacted by clear and efficient procurement rules. They encourage justice, accountability, and openness in the procurement process, ensuring that rules are followed and lowering the possibility of fraud or corruption. The degree of conformity with industry best practises, the amount of stakeholder input in policy formation, and the enforcement and monitoring mechanisms in place are some of the key components of procurement policies that may be evaluated.

It is crucial to apply the right measuring techniques and statistical analysis, as well as to identify and operationalize the independent variables precisely when analysing their effects on organisational performance. Researchers may learn more about how these elements affect the performance results of organisations in Malaysia's oil and gas sector by examining procurement strategy, buyer-supplier interactions, technology utilisation, and procurement rules.

3.9 Mediating Variable

In this case, the mediating variable is identified to be organizational performance. organizational performance in this research will correlate with the independent variables that are procurement planning, buyer supplier relationship, technology utilization of procurement and procurement policy.

3.10 Dependent Variable

In the oil and gas industry, organisational performance is a multidimensional concept that includes a company's operations, financial situation, competitive position, and sustainability. Organisational performance may be evaluated through various important aspects as a dependent variable when examining the influence of procurement practises on organisational performance in Malaysia's oil and gas sector.

To start with, financial performance indicators including revenue growth, profitability, return on investment, and cash flow offer information about an organization's financial health and sustainability. Effective allocation of resources, cost control, and revenue production are indicated by strong financial performance. Perhaps, production efficiency, process cycle time, and project delivery time are examples of operational performance measures that show how successfully and efficiently an organisation can carry out its activities. High operational performance denotes efficient workflow, effective resource management, and on-time project completion.

Furthermore, in the oil and gas industry, client satisfaction and loyalty are key measures of organisational performance. Through surveys, feedback surveys, or customer retention rates, an organization's capacity to satisfy customer requirements, provide high-quality goods or services, and maintain long-term relationships may be assessed. Increased customer satisfaction promotes brand loyalty, a favourable reputation, and market competitiveness.

In addition, market share and growth are important factors in how well an organisation performs. The ability to capture a sizeable piece of the market is indicated by a higher market share, whereas market expansion shows the company's capacity to respond to market shifts, launch novel products, and expand into new areas. Other than that, environmental sustainability metrics, such as carbon footprint reduction, energy efficiency, and waste management, have grown in significance when assessing organisational performance in the oil and gas industry. Organisations must follow responsible and sustainable practises to reduce environmental impacts as environmental concerns increase. Enhancing brand reputation, regulatory compliance, and stakeholder confidence through evaluation and improvement of environmental sustainability performance.

3.11 Summary of Chapter 3

Research methodology is the collective term for the methods used to gather, process, and evaluate data for a research project. It includes a few components, including the study design, data collecting strategies, sampling tactics, data processing methodologies, and ethical issues. The main goal of research technique is to make sure that the study is carried out with validity, dependability, and rigour, allowing researchers to come to relevant conclusions.

The research design is one of the most important elements of research technique. The study's main structure and plan are outlined in the research design, which also specifies how data will be gathered and analysed. Experimental, correlational, descriptive, and qualitative designs are frequently used in research. The research aims, research questions, and characteristics of the phenomena being studied all influence the choice of study design. A clearly specified research design guarantees that the study is carried out in an organised and methodical way, enabling the proper interpretation of data.

The choice of data gathering techniques is a key component of research methodology. Surveys, interviews, observations, experiments, and document analysis are just a few examples of data collecting techniques. The choice of data collection techniques is influenced by the goals of the research, the type of data needed, and the resources available. It is critical to use data gathering techniques that answer the research objectives and deliver accurate and dependable information. To guarantee data accuracy and reduce bias, the data gathering procedure needs to be properly designed and carried out.

Sampling technique data are an essential component of research methodology. Sampling is the process of choosing a selection of people or things from a broader population to be studied. The population's makeup, the research's aims, and practical factors like time and financial restrictions all play a role in the sampling procedure selection. Random, stratified, and convenience sampling are a few common sampling methods. By using the right sampling procedures, it is possible to confidently generalise the results and know that the sample is typical of the population.

An important part of research components is data analysis. It entails putting the data into order, analysing it, and coming to conclusions. The type of data gathered and the

study plan both influence the choice of data analysis methods. Regression analysis, inferential statistics, and other statistical methods are often used in quantitative data analysis. Thematic analysis, content analysis, and grounded theory are examples of methodologies used in qualitative data analysis. Researchers may understand the data and get valuable insights to answer the study objectives and research questions by using data analysis.

It provides a structured framework for conducting and evaluating research, guaranteeing the study's rigour, dependability, and validity. Researchers may provide relevant and reliable results by establishing the study design, choosing acceptable data gathering methods, using sound sampling strategies, doing data analysis, and taking ethical factors into account. A strong research technique improves the research's generalizability and credibility, which advances knowledge in the relevant field of study.

Findings and analysis chapters have been regarded as a significant aspect that can aid in achieving dissertation conclusions. This chapter mostly focuses on giving outcomes analysis. The outcomes of this study would be analysed using statistical tests and the study's quantitative data. As previously stated in the methodology chapter of the research, this chapter will give analysis of the outcomes of defined statistical tests that will be done in the statistical programme known as SPSS. A descriptive study of the respondents' profiles in terms of "age, gender, ethnicity, household income, level of education, and occupation" would be presented in this chapter.

CHAPTER 4

ANALYSIS AND FINDINGS

4.1 Introduction

This chapter explains the study's data analysis and conclusions. The questionnaire used in this retrospective study was thoroughly examined to ensure that the information gained was presented clearly, using tables, percentages, and graphs where possible. To acquire the data required to achieve the study objectives, a retrospective chart analysis was performed.

4.2 Findings Analysis

4.2.1 Missing Data Findings

Statistics								
		Age	Gender	Education Qualification	Total Work Experience	Employment Years in Procurement Sector	Employment Type	Position Level
N	Valid	101	101	101	101	101	101	101
	Missing	0	0	0	0	0	0	0

Table 4.2.1: Missing Data Findings

The statistics related to the missing data analysis are shown in the figure above. There was a total of 101 respondents collected for the study with no missing data found.

4.2.2 Reliability Test

In conducting the reliability test data analysis, it should be mentioned that for the alpha to represent dependability, it must be precisely or more than 0.6. if it is less than this value, it indicates that the questionnaire's scale is unreliable.

4.2.2.1 Reliability Test Alpha for Procurement Planning Likert Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.913	4

Table 4.2.2.1: Reliability Test Alpha for Procurement Planning Likert Scale

The alpha for procurement planning benefits because it is .913 (>0.6 or), the Likert Scale demonstrates dependability. A result like this is interpreted to mean that the dependability is satisfactory.

4.2.2.2 Reliability Test Alpha for Buyer-Supplier Relationship Likert Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.870	4

Table 4.2.2.2: Reliability Test Alpha for Non-Monetary Benefits Likert Scale

The alpha for Buyer-Supplier relationship benefits because it is .870 (>0.6), the Likert Scale demonstrates dependability and Cronbach's Alpha of this value indicates satisfactory reliability.

4.2.2.3 Reliability Test Technology Utilization in Procurement Likert Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.923	4

Table 4.2.2.3: Reliability Test Alpha for Technology Utilization in Procurement Benefits Likert Scale

The alpha for Technology Utilization benefits because it is .923 (>0.6), the Likert Scale demonstrates dependability and Cronbach's Alpha of this value indicates satisfactory reliability.

4.2.2.4 Reliability Procurement Policy Likert Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.941	4

Table 4.2.2.4: Reliability Test Alpha for Procurement Policy Procurement Benefits Likert Scale

The alpha for Procurement Policy benefits because it is .941 (>0.6), the Likert Scale demonstrates dependability and Cronbach's Alpha of this value indicates satisfactory reliability.

4.2.2.5 Reliability Organizational Performance Likert Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.911	4

Table 4.2.2.5: Reliability Test Alpha for Organizational Performance Benefits Likert Scale

The alpha for organizational performance benefits because it is .911 (>0.6), the Likert Scale demonstrates dependability and Cronbach's Alpha of this value indicates satisfactory reliability.

4.2.3 Frequencies Test

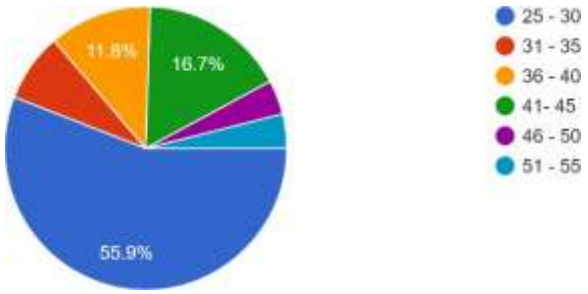

Chart 4.2.3 (a): Demographics – Respondents Age Chart

| Section A: Background Information
Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 - 30	57	56.4	56.4	56.4
	31-35	7	6.9	6.9	63.4
	36-40	12	11.9	11.9	75.2
	41-45	17	16.8	16.8	92.1
	46-50	4	4.0	4.0	96.0
	51-55	4	4.0	4.0	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (b): Frequency Test – Respondents Age

The frequency of test statistics for age of the participants in the project provide that 56.4% are between 25 to 30 years old, 6.9% are between 31 to 35 years old, 11.9% are between 36 to 40 years old, 16.8% are between 41 to 45 years old, 4.0% between 46 to 50 years old and 4.0% between 51 to 55 years old. the obvious finding is that participants who participated here were mostly between 25 to 30 years old. The lowest number are between 46 to 50 years old and 51 to 55 years old.

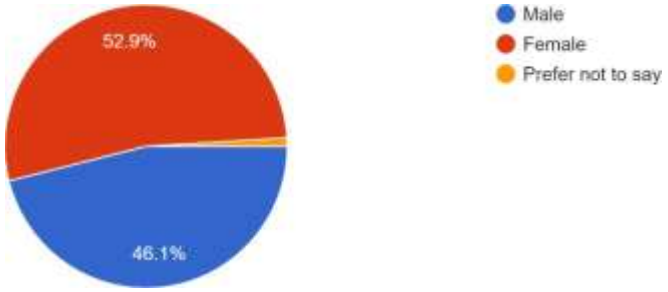

Chart 4.2.3 (c): Respondents Gender Chart

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	47	46.5	46.5	46.5
	Female	53	52.5	52.5	99.0
	Prefer not to say	1	1.0	1.0	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (d): Frequency Test – Respondents Gender

Using the information gathered, the gender analysis reveals that 46.5% of those who took part consists of the male gender and the female participants are 52.5%. While prefer not to say only 1.0%. The largest number are females.

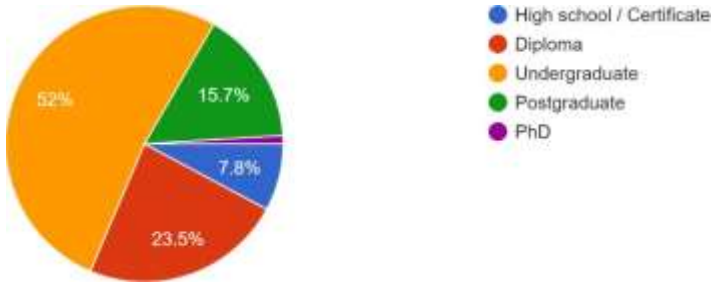

Chart 4.2.3 (e): Respondents Education Qualification Level Chart

Education Qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school / Certificate	8	7.9	7.9	7.9
	Diploma	24	23.8	23.8	31.7
	Undergraduate	52	51.5	51.5	83.2
	Postgraduate	16	15.8	15.8	99.0
	PhD	1	1.0	1.0	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (f): Frequency Test – Respondents Education Qualification

When analysing the individual's educational backgrounds, those possessing undergraduate are the largest number and these are 51.5%. Diplomas are 23.8%, high school certificates are 7.9% and postgraduates are 15.8% while minority are PhD, and these are 1.0%. It looks like all participants are educated from high school, diploma, undergraduate, postgraduate and PhD.

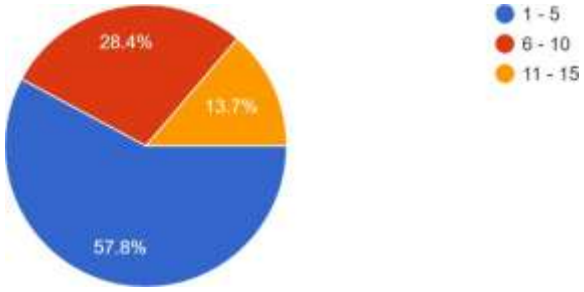

Chart 4.2.3 (g): Respondents Total Work Experience Chart

Total Work Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	58	57.4	57.4	57.4
	6-10	29	28.7	28.7	86.1
	11-15	14	13.9	13.9	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (h): Frequency Test – Respondents Total Work Experience

The frequency of test statistics are shows that the majority of 57.4% have the total work experience between 1 to 5 years, 28.7 have a total work experience of 6 to 10 years and the lowest number of 13.9% have a total work experience of 11 to 15 years.

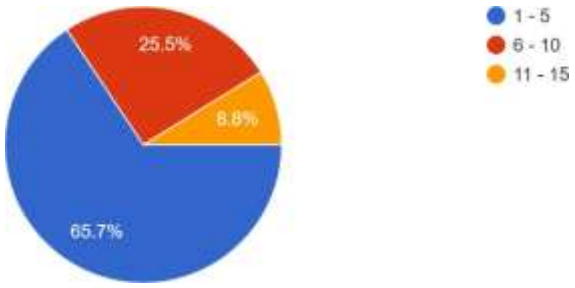

Chart 4.2.3 (i): Respondents Employment Years Chart

Employment Years in Procurement Sector					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	66	65.3	65.3	65.3
	6-10	26	25.7	25.7	91.1
	11-15	9	8.9	8.9	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (j): Frequency Test – Respondents Employment Years

The frequency of test statistics of employment years in procurement sector shows that participants working are the majority between 1 to 5 years are 65.3%, those working between 6 to 10 years are 25.7% while the minority are working between 11 to 15 years, and they are 8.9%.

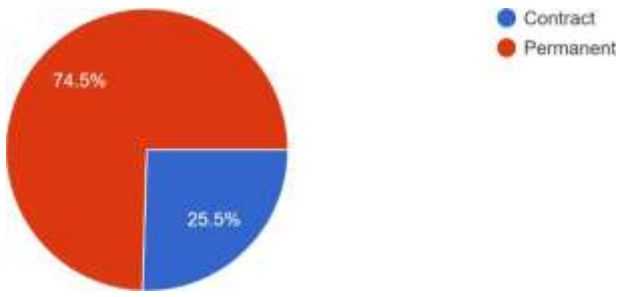

Chart 4.2.3 (k): Respondents Employment Type Chart

Employment Type					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Contract	25	24.8	24.8	24.8
	Permanent	76	75.2	75.2	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (l): Frequency Test – Respondents Employment Type

The frequency of test statistics for employment type, the majority of those taking part are permanent and these are 75.2% while the minority are the contract basis which occurs 24.8%.

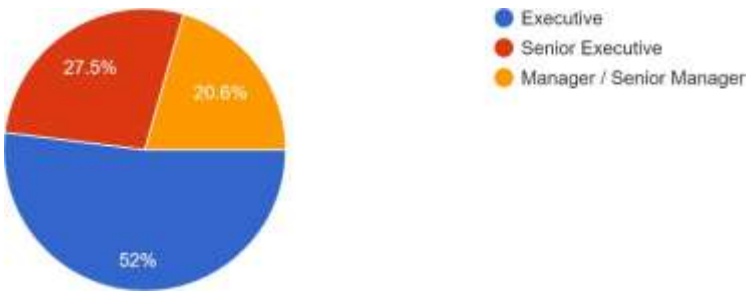

Chart 4.2.3 (m): Respondents Position Level Chart

Position Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Executive	52	51.5	51.5	51.5
	Senior Executive	28	27.7	27.7	79.2
	Manager / Senior Manager	21	20.8	20.8	100.0
	Total	101	100.0	100.0	

Table 4.2.3 (n): Frequency Test – Respondents Position Level

The frequency of test statistics for position level, the majority of those taking part are executives and these are 51.5%, senior executives are 27.7% and the minority are the manager/senior manager, and they are 20.8%.

4.2.4 Descriptive Test Analysis

According to (Villegas, n.d.) stated that summarising and characterizing a dataset's key characteristics is a crucial part of descriptive analysis, a stage in the data exploration process. The frequency distribution, central tendency, dispersion and identifying position of the data are all vitally revealed by this information. It helps researchers and analysts comprehend their data better.

The purpose of the descriptive analysis is to evaluate, grasp, and comprehend the meaning of the mean values. The survey's mean will indicate whether the majority agrees or disagree with each of the scaled responses or whether respondents choose to be neutral. In general, when the mean statistic lies between 1 and 2, it indicates that the majority is divided. There is neutrality if the mean equals 3. Most people are category in agree if the mean falls between 4 and 5.

4.2.4.1 Descriptive Tests of Procurement Planning

Statistics					
		Procurement planning enhances cost reduction	Procurement enhances quality specification	Procurement planning estimates the cost and human and physical resources required by the organizations which in turn	Procurement planning leads to proper management
N	Valid	101	101	101	101
	Missing	0	0	0	0
Mean		4.37	4.31	4.33	4.37
Std. Deviation		.869	.857	.929	.857

Table 4.2.5.1: Descriptive Tests of Procurement Planning

The statistics shows that procurement planning enhances cost reduction (Mean = 4.37). It is shown that procurement enhances quality specification to deliver to the customer (Mean = 4.31). Perhaps, procurement planning estimates the cost and human resources required by the organizations which in turn (Mean = 4.33). Also, procurement planning leads to proper management (Mean = 4.37).

4.2.4.2 Descriptive Tests of Buyer Supplier Relationships

Statistics					
		Collaborative relationship enhances reduction of cost in the organizations	Buyer-supplier relationship improves quality and delivery of services in the organization	Buyer-supplier relationship facilitates lower cost	Buyer-supplier relationship enables communications and information sharing, learning and the involvement of workers in the buying firm's programs and similarities in technologies and industry
N	Valid	101	101	101	101
	Missing	0	0	0	0
Mean		4.20	4.32	4.13	4.27
Std. Deviation		.938	.824	.891	.847

Table 4.2.5.2: Descriptive Tests of Buyer Supplier Relationships

In this study, the statistics shows that collaborative relationship enhances reduction of cost in the organizations (Mean = 4.20). It shown that buyer supplier relationship improves quality and delivery of services in the organization has the highest mean which (Mean = 4.32). Also, buyer supplier relationship facilitates lower has the minority participants (Mean = 4.13). And buyer supplier relationship enables communications and information sharing, learning and the involvement of workers in the buying firm's programs and similarities in technologies and industries (Mean = 4.27).

4.2.4.3 Descriptive Tests of Technology Utilization of Procurement

Statistics					
		Information technology enables lean channel for communication	Use of efficient specific technology enhances quality of service in organizational performance in oil and gas sector in Malaysia	Information technology enables e-purchasing in the organizational performance in oil and gas sector in Malaysia	Information technology enables e-payment in the organizational performance in oil and gas sector in Malaysia
N	Valid	101	101	101	101
	Missing	0	0	0	0
Mean		4.29	4.42	4.27	4.25
Std. Deviation		.817	.778	.847	.805

Table 4.2.5.3: Descriptive Tests of Technology Utilization of Procurement

In this study, the statistic shows the majority of mean use of efficient specific technology enhances quality of service in organizational performance in oil and gas in Malaysia (Mean = 4.42). Also, it is found that information technology enables lean channel for communication to them (Mean = 4.29). Besides, the information technology enables e-purchasing in the organizational performance in the oil and gas sector in Malaysia is easier to them (Mean = 4.27). Finally, it is easier that information technology enables e-payment in the organizational performance in oil and gas sector in Malaysia to them (Mean = 4.25).

4.2.4.4 Descriptive Tests of Procurement Policy

Statistics					
		Procurement policies enhance transparency in the organizational performance in oil and gas sector in Malaysia	Procurement policies ensure compliance with the Public Procurement and Disposal Act	Procurement policies contribute to the success of government operations and improved service delivery	Procurement policies improve accountability in the organizational performance in oil and gas sector in Malaysia
N	Valid	101	101	101	101
	Missing	0	0	0	0
Mean		4.29	4.24	4.33	4.31
Std. Deviation		.792	.826	.736	.797

Table 4.2.5.4: Descriptive Tests of Procurement Policy

The majority of those who responded to this poll (Mean = 4.33) stated the procurement policies contribute to the success of government operations and improved service delivery to the organizational. Perhaps, procurement policies enhance transparency in the organizational performance in oil and gas sector in Malaysia (Mean = 4.29). Besides, the majority for procurement policies improve accountability in the organizational performance in oil and gas sector in Malaysia (Mean = 4.31).

4.2.4.5 Descriptive Test of Organizational Performance

Statistics					
		Service Delivery	Efficiency	Effectiveness	Continuous quality improvement
N	Valid	101	101	101	101
	Missing	0	0	0	0
Mean		4.35	4.29	4.35	4.27
Std. Deviation		.741	.753	.754	.882

Table 4.2.5.5: Descriptive Tests of Organizational Performance

The large number state that in descriptive test of organizational performance are service delivery and effectiveness which occurs same amount of mean (Mean = 4.35). Meanwhile, the least is the continuous quality improvement to them (Mean = 4.27). Last, the minority is efficiency occurs (Mean = 4.29).

4.2.5 Correlation Tests

Correlations						
		Procurement Planning	Buyer Supplier Relationship	Technology Utilisation in Procurement	Procurement Policy	Organizational Performance
Procurement Planning	Pearson Correlation	1	.818**	.764**	.759**	.731**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	101	101	101	101	101
Buyer Supplier Relationship	Pearson Correlation	.818**	1	.848**	.825**	.821**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	101	101	101	101	101
Technology Utilisation in Procurement	Pearson Correlation	.764**	.848**	1	.897**	.876**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	101	101	101	101	101
Procurement Policy	Pearson Correlation	.759**	.825**	.897**	1	.786**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	101	101	101	101	101
Organizational Performance	Pearson Correlation	.731**	.821**	.876**	.786**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	101	101	101	101	101
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 4.2.6: Pearson Correlation Tests

4.2.5.1 Procurement Planning and Organizational Performance

The correlation test results of 0.731 was produced for the relationship between procurement planning and organizational performance. The correlation implies a week linear relationship between procurement planning and organizational performance. However, the relationship is positive meaning that procurement planning affects organizational performance.

4.2.5.2 Buyer Supplier Relationship and Organizational Performance

The correlation test results of 0.821 was produced for the relationship between buyer supplier relationship and organizational performance. The correlation implies a week linear relationship between buyer supplier relationship and organizational performance. However, the relationship is positive meaning that buyer supplier relationship affects organizational performance.

4.2.5.3 Technology Utilization and Organizational Performance

The correlation test results of 0.876 was produced for the relationship between technology utilization in procurement and organizational performance. The correlation implies a week linear relationship between technology utilization in procurement and organizational performance. However, the relationship is positive meaning that technology utilization affects organizational performance.

4.2.5.4 Procurement Policy and Organizational Performance

The correlation test results of 0.786 was produced for the relationship between procurement policy in procurement and organizational performance. The correlation implies a week linear relationship between procurement policy and organizational performance. However, the relationship is positive meaning that procurement policy affects organizational performance.

4.2.6 Multiple Regression Tests

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.791	.783	.32478
a. Predictors: (Constant), Procurement Policy, Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement				

Table 4.2.7 (a): Multiple correlation coefficient statistic

The first analysis will consist of the multiple correlation coefficient statistic in the R column, which is 0.890. This gives a decent indicator of a forecast level. The coefficient of determination, which 0.791, is the second statistic that must be examined. This demonstrates that all independent factors 79.1% of the organizational performance.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.424	4	9.606	91.067	.000[b]
	Residual	10.126	96	.105		
	Total	48.551	100			
a. Dependent Variable: Organizational Performance						
b. Predictors: (Constant), Procurement Policy, Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement						

Table 4.2.7 (b): Anova Table

The ANOVA table provides statistics which indicate that the regression model is a good fitof the data. This is because the significance of value is below 0.0005. (F 4,96) = 91.067

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.596	.204		2.921	.004
	Procurement Planning	.053	.075	.059	.703	.484
	Buyer Supplier Relationship	.251	.096	.268	2.603	.011
	Technology Utilisation in Procurement	.666	.112	.700	5.974	.000
	Procurement Policy	-.103	.106	-.108	-.972	.334
a. Dependent Variable: Organizational Performance						

Table 4.2.7 (c): Dependent Variable Significance

The most important statistics here are the significance values for each of the independentvariables. Typically, it must be less than 0.05 for the independent variables to be statistically significant. According to diagram above, it is obvious that the Sig values for the independent variables of procurement planning, Buyer Supplier Relationship and Technology Utilization. Unfortunately, procurement planning showing that the Sig values 0.484 which means nearer to 0.05.

This means that there is statistically significant for each of these independent variables (P<0.05). Therefore, the observation is that all these variables statistically significant predict the organizational performance. From this analysis, it is found that Procurement Planning, Buyer Supplier Relationships, Technology Utilization and Procurement Policy can affect organizational performance, and this will produce better retention levels in the organization itself.

Summary of Chapter 4

This chapter focuses on providing outcomes for analysis. With the quantitative research data that was gathered, statistical tests were used to analyse the outcomes of this study. This chapter has offered analysis of the findings of specified statistical tests that have been carried out in the statistical tool known as SPSS, as was described in the methodology chapter of the study. In this chapter, a descriptive analysis has been provided regarding the profiles of the respondents with respect to “Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement, Procurement Policy”.

The mean has been presented with a central tendency analysis, the standard deviation has been examined and the average response of respondents on organization performance and procurement practices constructs have been illustrated. Additionally, an ANOVA analysis and the significance of differences to Procurement Policy, Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement constructs have been analysed. The results of a correlation analysis and the degree of correlation has been analysed between Procurement Policy, Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement.

CHAPTER 5

CONCLUSION

5.1 Conclusion

According to (Carr, 1997) states that procurement practices are activities made by the purchasing organization to navigate and integrate its performance to boost productivity to boost productivity while reducing cost and time. Selecting suppliers, conducting strategic screening, establishing payment conditions, choosing negotiating contracts and acquiring items are all part of the procurement process (Weele & A, analysis, strategy, planning and practice). Public procurement is a topic of debate and concern across the world, restructuring laws and regulations mentioned in (Kabega, C., J. W., & R., 2016).

With the erratic nature of the oil and gas production industry, procurement is crucial to guaranteeing budget allocation for the supply of products and services, on-site delivery on time, and cost reductions without compromising quality and safety. As many professionals in the oil and gas industry are aware, there are numerous very sophisticated commodities and services that need to be acquired. According to (Kiplel, 2018) Due to its nature, processes, activities, technical complexity, and organizational structure, the oil and gas industry has a significant level of risk. High number of essential hazards are a result of interaction with numerous parties, including designers, owners, suppliers, contractors, and subcontractors. According to (Mian, 2019) states an effective procurement strategy includes a financial plan to control the budget as well as timetables for workflow and development while remaining in accordance with the objectives of the business.

5.2 Summary of the Statistical Analysis

The most relevant data in this situation to note are the significance levels for each of the independent variables. The p-value must be lower than 0.05 for independent variables to be considered statistically significant. The significance values for the independent variables of procurement planning, buyer supplier relationships, technology utilization and procurement policy are all clearly lower than 0.05 based on the findings of this study. Each of the independent variables reaches statistical significance (p0.05) proving their relevance.

The conclusion therefore suggests that the variable of procurement practices in organizational performance is statistically significantly predicted by all the independent components. Accordingly, to the findings of this research, procurement practices may be affected by or influenced by procurement planning, buyer supplier relationship, technology utilization and procurement policy. The first analysis will consist of the following multiple correlation coefficient statistic in the R column which is 0.890 and will be the basis for the subsequent analyses. This is a sign that the forecast was quite accuracy.

The second statistic to be examined has a coefficient of determination with a value of 0.791. This demonstrates that 79.1 percent of the variability in organizational performance can be accounted for by the interplay of all independent factors. For descriptive analysis in organizational performance number of respondents occupied for effectiveness and service delivery (Mean = 4.35 percent) which most respondents focus on effectiveness and service delivery more rather than efficiency and continuous quality improvement. The respondents mostly focus on not only effectiveness and service delivery but also efficiency in procurement practices on organizational performance (Mean = 4.29; standard deviation = 0.05).

The majority of those who responded to this poll (Mean = 4.33) stated the procurement policies contribute to the success of government operations and improved service delivery to the organizational. Perhaps, procurement policies enhance transparency in the organizational performance in oil and gas sector in Malaysia (Mean = 4.29). Besides, the majority for procurement policies improve accountability in the organizational performance in oil and gas sector in Malaysia (Mean = 4.31).

5.3 Implications of the Study

5.3.1 Managerial Implications

An important part of Malaysia's economy is the oil and gas industry. Organizations in this industry must optimize their procurement procedures if they want to be competitive and sustainable. The influence of procurement practices on organizational performance in the Malaysian oil and gas sector is discussed in this research in terms of its management ramifications. This study has provided with valuable information.

In every oil and gas industry should match their overall company goals with their procurement methods. Teams responsible for procurement must work closely with senior management to accomplish the workload. Managers must make sure that procurement initiatives help the business achieve its long-term objectives, including cost cutting, risk management and how to sustain in a long-term market. According to (Fallen, 2016) stated that due to the continued employment of archaic and outmoded techniques been used.

Managers should put their efforts into creating enduring, mutually beneficial partnerships with important suppliers. Regular communication, performance reviews and the identification of cost cutting, and innovation potential are all part of this. Investing SRM technology expenditures can accelerate these procedures and enhance performance. Perhaps, implementing sophisticated automation, data analytics and procurement software. These technologies can offer in the moment insights on expenditures, supplier performance and market trends, facilitating wise choices and potential for cost savings.

5.4 Limitations

The main limitation is the due to the wide variety of working approaches each study procedure appears with few restrictions which researcher must deal with senior managers and managers. The principal approach of the research's restriction is that it only used primary quantitative techniques to gather data and analyse it. Although the main data have a high degree of reliability, they cannot be certified in contrast to secondary sources. According to (Tue, n.d.) mentioned that utilising the mixing approach to evaluate and compare the data might be more advantageous than using the basic quantitative method.

5.4.1 Designing of Questionnaires

The questionnaire design must be straightforward and clear throughout to ensure that respondents can finish the surveys in a minimal amount of time. To construct a questionnaire. It must be able to acquire the most information possible to get reliable information and accurate statistics. Before it is made public, the questionnaire must also go through several revisions and evaluations. Furthermore, the study's scope could be constrained, and it might not be possible to take other factors into account.

5.4.2 Size and Scope of Research

The scope of the research is limited because only one individual is conducting it. The survey's size restriction may result in insufficient data being collected for analysis. Only those who indicated interest in taking part in the survey received questionnaires. In addition, the sample size is very small (101 respondents), making it impossible to draw conclusions that are both reliable and accurate.

5.4.3 Time Consuming

In this research procedure, it is important to consider how long it takes to develop a research title, gather data, produce a questionnaire, distribute surveys, and assess the results. Furthermore, researcher might not be able to dedicate as much time to the research as a full-time student researcher would because the researchers are full-time students and the study's time frame is just three months. The time required to contact responders. It does require a lot of our personal and family time as well as effort.

5.5 Recommendations for Future Research

The results showed that the independent factors (Procurement Planning, Buyer Supplier Relationship, Technology Utilisation in Procurement and Procurement Policy) explained organizational performance to a degree of 89.0%. There are other aspects that 11% of the study's suggested model does not account for but which are considered by other components. Given the context and breadth of the previous study, another investigation may be conducted to identify other factors contributing to the 11% performance difference.

The researcher did not assess several elements that affect organizational success in business in Malaysia's oil and gas industry, such as quality, delivery, and flexibility. Future studies would concentrate on the strategic impact of these variables on organizational success in oil and gas sector business. There are several procurement practices that affect management of organizations, some of which the researcher did not specifically focus on, including reverse auctioning, and invoicing, among others. Future research would concentrate on determining how these affected the organizational performance of businesses in the oil and gas industry.

5.6 Summary of Chapter 5

Since these suppliers provide the most risks to the organizational performance management programme, it is crucial for company personnel to concentrate on the higher value and more strategic suppliers. Including low dollar value, one-time business, or non-strategic suppliers in this kind of programme is frequently not financially viable. Some common characteristics will become clear by grouping these top suppliers together and looking at the ties the organization has with them. These relationships characteristics may be utilized to create the measurement domains and metrics.

Working with the suppliers is crucial when creating these KPIs and areas of focus. Some of the finest organisations at evaluating supplier performance regularly contact with their suppliers, engage in ongoing interaction with them, and employ measurements that are mutually acceptable. This fosters great collaboration with suppliers and guarantees that they are aware of what is expected of them. They can also create business strategies and take action to accomplish the objectives and goals established for them. The providers are likewise keenly aware of whether their performance has been good or bad.

Bibliography

Leenders, M. R., Johnson, F. P., Flynn, A. E., & Fearson, H. (2008). Purchasing and Supply Chain Management. *(13th Ed.)., New York: NY McGraw Hill.*

Aman, A. S. (2023, January 9). Malaysia's O&G sector to stay robust in 2023. *New Straits Times* .

Aref, A. H., Marilyn, M. H., & Joseph, S. (2005). Performance Measurement for Green Supply Chain Management. Benchmarking:. *An International Journal. Emerald Group Publishing Limited.*

Bhattacharya, P., & Hutchinson, F. E. (2022). Malaysia's Oil and Gas Sector: Constant Expectations despite. *ISEAS YUSOF ISHAK INSTITUTE* , No. 21.

Biklen, & Bogdan. (2006). An introduction to theory and methods. *Qualitative Research in Education*, ISBN 978-0-205-51225-6.

Carr, A. S. (1997). An empirically based operational definition of strategic purchasing. *European Journal of Purchasing and Supply Management*, 3(4), 199 – 207.

Davit , M., & Papagiannidis, S. (2023). *Technology Acceptance Model.* United Kingdom: TheoryHub Book.

Editing During Data Collection (Theme). (2023, September 15). Retrieved from European Union: https://cros-legacy.ec.europa.eu/content/editing-during-data-collection-theme_en#:~:text=Data%20editing%20is%20the%20process,various%20reasons%2C%20intended%20or%20unintended.

Edward , S. (2012). Supply Chain Integration. *Challenges and Solutions*, DOI: 10.4018/978-1-60960-585-8.ch001.

Fagan, M. L. (1991). A Guide to Global Sourcing. *The Journal of Business Strategy*, doi:10.1108/eb039398.

Gattorna, J. (2006). Living Supply Chains. Harlow, England. *Prentice Hall*.

Gay LR, M. G. (2018). Educational Research: Competencies for Analysis and Applications. *New Jersey: Merrill Prentice Hall.*, (1. ed., Gol.) .

Guth, S. R. (April 2010). Implementing Best Practice; The Procurement Maturity Model 95th ISM. *Annual International Supply Management Conference*, (pp.1-4) .

Jane Nduta Mwinga, & Dr.Anaya W. Senelwa. (2019). INFLUENCE OF PROCUREMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE OF ENERGY SECTOR IN KENYA. *International Journal of Social Science and Humanities Research*, Vol. 7, Issue 2, pp: (1086-1104).

Jason, G. (2023). What is the Resource-Based View of the Firm? *The Business Professor*.

Kabega, C., K., J. W., &. M., & R., Z. (2016). Effect of procurement practices on performance of public projects in Rwanda. . *International Journal of Economics, Commerce and .Management United Kingdom,*, IV(5) 377 – 397.

Kipkemoi, R. T. (2017). Effects of Procurement Practices on Organizational Performance Within the Public Sector: A Case of East African Portland Cement Company Limited. *Core*.

Kiplel, M. C. (2018). "Effect of Procurement Planning On Suppliers Performance in Public Institutions. *A Case of Moi University*.

Kothari, C. (1990). Reseach Methodology Methods and Techniques . *New Age International Publishers*.

Lambsdorff, J. (2007). An empirical investigation of bribery in international trade. *European Journal for Development Research*, 10(1), 40-49.

Magcamit, M. I. (2014). A Case for Cohabitative Security: The Philippine and Malaysian Experience. *scite_*.

McFalls, R. (2016). The impact of procurement practices in the electronics sector on labour rights and temporary and other forms of employment. *International Labour Office*, 978-92-2-129070-4.

Mian, A. K. (2019). "The Impact of Internal and External Factors on Sustainable Procurement. *A Case Study of Oil Companies," International Journal of Procurement Management*, vol. 1, no 10.

Minister, P. (2022). *Economic Planning Unit.* Putrajaya, Malaysia: Economic Planning Unit. Retrieved from NATIONAL ENERGY POLICY, 2022-2040.

Mugenda , O. M., & Mugenda, A. G. (2008). Research methods. *quantitative and qualitative approaches. Nairobi. Acts press*.

Narasimban, R., & Kim, S. W. (2002). Effect of Supply Chain Integration on the relationship between Diversification and Performance: evidence from Japanese and Korean Firms. *Journal of Operations Management*, 20, n.3, Jun, p.303-323.

Natalie Burclaff. (2005). *Oil and Gas Industry: A Research Guide*. Retrieved from Library of Congress: https://guides.loc.gov/oil-and-gas-industry

Nyaboke, J. M., Arasa, R., & Ombui, K. (2013). Effects of public procurement policies on organizational performance: A case of Water Services Regulatory Board. *International Journal of Social Sciences and Entrepreneurship*, 1 (5), 89-103.

Oso, W. Y., & Onen, D. (2009). Principles of Research. *Options Printers and Publishers*.

Pritish , B., & Francis, H. E. (2022). Malaysia's Oil and Gas Sector: Constant Expectations despite. *Diminishing Returns*, ISSUE: 2022 No. 21.

Procurement Policy and Procedures. (2018). *Sanlam* .

Rebelo, Ana Filipa, Nobre, H., & Szczygiel, N. (2019). Managing Relationships with Suppliers. *The case of a local subsidiary of a global company of components for the automotiveindustry*, 10.4018/978-1-5225-8157-4.ch003.

Ridhwan , S., & Mohsin , S. S. (2017). Legal Protection for Confidential Information in International Oil and Gas Contracts. *Research Gate*.

Ryandono, M. N., Wildan, M. A., & Imron, M. A. (2020). World Oil Prices and Exchange Rates on Islamic Banking Risks. *scite_* .

Suddaby, R. (2012). Institutional Theory. *Sage Knowledge*, (Vols. 1-2).

The Impact of Risk Management on the Oil & Gas Industry. (2022, May 29). Retrieved from London Premier Centre UK Training Provider : https://www.lpcentre.com/articles/the-impact-of-risk-management-on-the-oil-and-gas-industry

Tyler, B., & Handfield, R. (2007). The relationships between supplier development, commitment, social capital accumulation and performance improvement. *Academic.edu*, 10.1016/j.jom.2006.05.007.

Villegas, F. (n.d.). *Descriptive Analysis: What It Is + Best Research Tips*. Retrieved from Qestionpro : https://www.questionpro.com/blog/descriptive-analysis/#:~:text=Descriptive%20analysis%20is%20an%20important,%2C%20dispersion%2C%20and%20identifying%20position.

Weele, & A. (analysis, strategy, planning and practice). *Purchasing and supply chain management.* Andover: Cengage Learning.

Zach , H. (n.d.). *How to Overcome 2023's Top Procurement Challenges in the Oil and Gas Industry with AI and Technology*. Retrieved from Competitive Intelligence: https://www.evalueserve.com/blog/overcoming-2023s-top-procurement-challenges-in-the-oil-and-gas-industry-with-ai-and-technology/#:~:text=The%20oil%20and%20gas%20industry%20is%20facing%20various%20challenges%20that,and%20risk%20management%2C%20among%20othe

APPENDICES

INFORMATION SHEET FOR QUESTIONAIRE

IMPACT OF PROCUREMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN THE OIL AND GAS SECTOR:

A STUDY ON OIL AND GAS IN MALAYSIA PREPARED BY HANI RAIHAN BINTI ANUWAR

My name is Hani Raihan Binti Anuwar, a student in the Master in Business Management programme at Universiti Tun Abdul Razak(UNIRAZAK). I am working on my research paper entitled: A study on impact of procurement practices on organizational performance in the oil and gas sector in Malaysia. The study aims to assess and analyze the relationship between procurement practices and the overall performance of organizations in the oil and gas sector in Malaysia.

It will take you approximately 15 minutes to complete the survey. Please respond to all questions based on your genuine opinion. Please be assured that all information provided will be kept strictly CONFIDENTIAL and will only be used for research purposes.

Your participation in responding to the questionnaire is voluntary and you can decide to not participate without any penalty. However, your response will be highly useful for my academic progress.

The risk of participating in this evaluation is minimal. I thank you in advance for your time and kind assistance in completing this questionnaire. Please do not hesitate to reach out to me should you have any questions.

Thank you.

Kind Regards,
Hani Raihan Binti Anuwar (M22701078)
Master in Business Management (MIM) StudentGraduate Business School
University Tun Abdul Razak (Unirazak)h.

Supervised by,
Mr Sapowan Sanusi Graduate Business School
University Tun Abdul Razak (Unirazak)sapowan@unirazak.edu.my

CONSENT FORM

*Required

- Please tick all the boxes before moving on to the next section

☐ I have read and understand the details for the above study.

☐ I understand that my participation is voluntary, and I am free to withdraw at any time.

☐ I declare that by selecting this box, I am agreeing to and giving permission for the use of my data in scientific publication and presentation.

Appendix 1: Questionnaire

No	Question	Please select the appropriate answer
1	Age	• 25-30 • 31-35 • 36-40
2	Gender	• Male • Female
3	Education Qualification	• High School/Certificate • Undergraduate • Postgraduate
4	Total Work Experience	• 1-5 • 6-10 • 11-15
5	Employment Years in Procurement sector	• 1-5 • 6-10 • 11-15
6	Employment Type	• Contract • Permanent
7	Position Level	• Executive • Senior Executive • Manager/Senior Manager

Section B: Procurement Planning

Indicate how procurement planning procedures affect organizational performance.

Kindly rate the level of extent to which you approve with the following statements: _

Answer scale:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

No	Question	Please select the appropriate answer				
	Procurement Planning *(Market environment, Procurement workforce, Budgetary allocation)*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Procurement planning enhances cost reduction					
2	Procurement planning estimates the cost and human and physical resources required by the organizations which in turn					
3	Procurement enhances quality specification					
4	Procurement planning leads to proper management					

Section C: Buyer-Supplier Relationships

How does buyer-supplier relationship affect organizational performance?

Kindly rate the level of extent to which you approve with the following statements: _

Answer scale:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

No	Question	Please select the appropriate answer				
	Buyer-supplier relationship *(Cost control, delivery, quality and service dependency, Information sharing)*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Collaborative relationship enhances reduction of cost in the public organizations.					
2	Buyer-supplier relationship improves quality and delivery of services in the organization					
3	Buyer-supplier relationship facilitates lower cost					
4	Buyer-supplier relationship enables communications and information sharing, learning and the involvement of workers in the buying firm's programs and similarities in technologies and industry					

Section D: Technology Utilisation in Procurement

Indicate how technology utilization in procurement practices affects organizational performance.

Kindly rate the level of extent to which you approve with the following statements: _

Answer scale:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

No	Question	Please select the appropriate answer				
	Technology Utilisation in Procurement *(Electronic purchasing, Electronic payment, Electronic data)*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Information technology enables lean channel for communication					
2	Use of efficient specific technology enhances quality of service in organizational performance in oil and gas sector in Malaysia.					
3	Information technology enables e-purchasing in the organizational performance in oil and gas sector in Malaysia					
4	Information technology enables e-payment in the organizational performance in oil and gas sector in Malaysia					

Section E: Procurement Policy

Indicate how procurement policy in procurement affects organizational performance.

Kindly rate the level of extent to which you approve with the following statements: _

Answer scale:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

No	Question	Please select the appropriate answer				
	Procurement Policy *(Legal, Rule and regulations flexibility, Political environment)*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Procurement policies enhance transparency in the organizational performance in oil and gas sector in Malaysia					
2	Procurement policies ensure compliance with the Public Procurement and Disposal Act					
3	Procurement policies contribute to the success of government operations and improved service delivery					
4	Procurement policies improve accountability in the organizational performance in oil and gas sector in Malaysia					

Section F: Organizational Performance

Indicate how organizational performance affects in procurement practices in oil and gas sector.

Kindly rate the level of extent to which you approve with the following statements: _

Answer scale:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

No	Question	Please select the appropriate answer				
	Organizational Performance *(Service delivery, Efficiency, Effectiveness, Continuous quality improvement)*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Service delivery					
2	Efficiency					
3	Effectiveness					
4	Continuous quality improvement					

APPROVAL PAGE

TITLE OF PROJECT PAPER: **A STUDY ON IMPACT OF PROCUREMENT PRACTICES IN ORGANIZATIONAL PERFORMANCE IN OIL AND GAS IN MALAYSIA**

NAME OF AUTHOR : **HANI RAIHAN BINTI ANUWAR**

The undersigned certify that the above candidate has fulfilled the conditions of the projectpaper prepared in partial fulfilment for the degree of Master of Business Administration.

SUPERVISOR

Signature : _____

Name :

Date :

ENDORSED BY

_____

Dean

Graduate School of

BusinessDate: