

The impact of asset management on achieving competitive advantage for companies in the petroleum services sector, Al-Khobar – Kingdom of Saudi Arabia.

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Graduation Project – 1

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To Dr. Mona Mustafa Al-Ashry and Medocian University, I extend my heartfelt thanks for your invaluable contributions, guidance, and unwavering support throughout my academic journey.

Dedication

“In heartfelt gratitude to Dr. Mona Mustafa Al-Ashry and Medocian University For their unwavering support and guidance throughout this project.”

The impact of asset management on achieving competitive advantage for companies in the petroleum services sector.

Companies dealing with dilapidated assets face a multitude of challenges, stemming primarily from neglected asset management practices. These practices can negatively impact various aspects of the organization, leading to a domino effect of problems.

Dilapidated assets refer to assets that are in a state of disrepair or ruin due to neglect, lack of maintenance, or obsolescence. When companies have dilapidated assets in their portfolio, they may encounter difficulties in terms of operational efficiency, regulatory compliance, financial performance, and overall reputation.

Asset management is a process that involves planning, acquiring, operating, maintaining, and disposing of physical and intangible assets in an organization. It aims to optimize the performance, value, and risks of assets throughout their lifecycle. Asset management is especially important in the oil and gas industry, where assets are costly, complex, and critical for the production and delivery of energy. However, many oil and gas companies face challenges in managing their assets effectively, due to factors such as aging infrastructure, volatile market conditions, environmental regulations, and technological changes. These challenges can have negative impacts on the efficiency, profitability, and sustainability of the companies, as well as their competitive advantage. (Ford, G. L., Ancell, G., Hill) (2022).

The concept of competitive advantage refers to the ability of an organization to create and sustain superior value for its customers and stakeholders, relative to its competitors. Competitive advantage can be achieved by exploiting the unique resources and capabilities of the organization, or by implementing distinctive strategies that create differentiation or cost leadership. In the oil and gas industry, competitive advantage can be influenced by various factors, such as the quality and quantity of reserves, the operational efficiency and reliability, the innovation and technology adoption, the customer satisfaction and loyalty, and the social and environmental responsibility.(G. Chattopadhyay, H. K. Menta Venkata) (2022). Competitive advantage in the oil and gas industry is crucial for companies to thrive in a highly competitive market. Organizations must leverage their resources, capabilities, and strategies to differentiate themselves from competitors and create superior value for their stakeholders. Factors such as reserves quality and quantity, operational efficiency, innovation, customer satisfaction, and social responsibility play a significant role in determining competitive advantage in this industry.(Al-Qahtani, S., & Zayed, T.)(2012).

Neglected asset management practices can result in increased maintenance costs, decreased asset lifespan, safety hazards, regulatory fines, and potential legal liabilities. Moreover, the presence of dilapidated assets can tarnish the company's image and credibility among stakeholders, including customers, investors, and regulatory bodies. Addressing these challenges requires a strategic approach to asset management, including regular inspections, proactive maintenance programs, timely repairs and upgrades, and proper documentation of asset conditions. Companies dealing with dilapidated assets must prioritize effective asset management practices to mitigate risks, ensure compliance with regulations, optimize operational performance, and safeguard their reputation in the market.(Hiba, 1998)

Operational efficiency and reliability are critical for maintaining a competitive edge the oil and gas sector.

Companies that can optimize their operations, minimize downtime, and ensure consistent production levels are better positioned to meet market demands and outperform competitors. Efficient operations also

contribute to cost savings and profitability, further enhancing competitive advantage. Innovation and technology adoption are key drivers of competitive advantage in the oil and gas industry.(Rau et al., 2017).

Companies that invest in research and development to enhance exploration, production, and extraction processes can gain a significant edge over rivals. Adopting cutting-edge technologies allows companies to improve efficiency, reduce costs, and differentiate their offerings in the market. Building strong customer relationships through exceptional service, reliability, and responsiveness can be a source of competitive advantage for oil and gas companies. Satisfied customers are more likely to remain loyal to a company's products or services, providing a stable revenue stream and a competitive edge in the market.(Rau et al., 2017). Companies that prioritize customer satisfaction can differentiate themselves from competitors and strengthen their market position. Social and environmental responsibility have become increasingly important factors in determining competitive advantage in the oil and gas industry. Companies that demonstrate a commitment to sustainable practices, environmental stewardship, and community engagement can enhance their reputation, attract investors, and build trust with stakeholders. Embracing social responsibility not only differentiates companies from competitors but also contributes to long-term success and resilience in a rapidly changing business environment.(Baek & Lee, 2023)

The study delves into the intricate challenges faced by companies dealing with deteriorating assets and the repercussions of neglecting asset management protocols. It investigates the multifaceted impacts on various organizational performance metrics. The analysis provides a comprehensive examination of the core issues and their far-reaching consequences. Escalating maintenance expenses, straining financial resources, and diminishing available resources for further investments can lead to underestimation of costs. The swift depreciation of well-maintained assets reduces their book values, complicates financing, and hampers businesses in attracting investors. All these factors, whether positive or negative, have implications on the company's reputation and competitive edge.(Porter & Millar, 1985) While existing literature provides valuable insights into asset management and its relationship to competitive advantage and investment in preventive maintenance, there are many shortcomings that need to be addressed. Some of these shortcomings include: limited focus on the role of planning and lack of commitment to effective implementation in successful asset management. Failure to apply proper asset management practices and instructions from leaders and their impact on competitive advantage and business and enterprise loss. By identifying these shortcomings, we can narrow the focus of our research and contribute to filling gaps in current knowledge by sensitizing companies, managers and staff to engage in asset-care training and preventive maintenance and thus solving the problem. This study reveals the complex issues facing companies dealing with their degraded assets, as well as the consequences of ignoring asset management procedures. The study explores the complex impacts on a range of organizational function variables. (Ngulumbu & Waswa, 2022). This is a thorough examination of key issues and their wide implications. Increased maintenance costs, pressure on financial resources and reduced resources available for additional investments could lead to lower costing. The rapid decline in the value of well-maintained assets reduces its book value, makes financing more difficult and makes it difficult for firms to attract investors. All these factors reflect positively or negatively on the company's reputation and competitive advantage. Senior managers use strategically important information that influences their beliefs, actions, and commitments, which is known as strategic intelligence. The generation and transformation of information or knowledge that can be employed in high- level decision-making is referred to as strategic intelligence. Strategic intelligence entails bringing together various sorts of intellectuals and forming synergies between business intelligence, competitive intelligence, and knowledge management to give value-added data and knowledge for strategic decision- making in organizations. As a result, the right quality of the provider's system is required for organizational benefit and success, since it is favorably Associated with increased

profitability and competitive advantage. Organizations, on the other hand, are Beginning to realize that a strategic approach to asset management can provide long-term competitive advantages and survival In a

turbulent environment. The various levels of organizational strategy correspond to asset management strategies. Strategic Asset management is a holistic approach to long-term sustainable development that centers on the asset portfolio, allowing for Decision-making and the development of competitive advantages throughout the organization. (Vanier, D. J. “Dana”)(2001).

Building great client connections through exceptional service, dependability, and responsiveness provides another source of competitive advantage for oil and gas companies. Satisfied clients are more likely to stay loyal, maintaining a consistent revenue stream and a competitive advantage in the market. Companies that focus customer satisfaction can set themselves apart from competitors and improve their market position. Furthermore, social and environmental responsibility are increasingly essential aspects in determining economic advantage in the oil and gas business. Companies that demonstrate a commitment to sustainable practices, environmental stewardship, and community engagement can improve their reputation, attract investors, and foster trust among stakeholders. Embracing social responsibility not only distinguishes businesses from competitors, but it also adds to long-term success and resilience in a continuously changing business landscape. (“Asset Management ,” n.d.)

This study looks into the complex issues that companies confront when dealing with deteriorating assets, as well as the consequences of failing to follow asset management guidelines. It looks at the multidimensional effects on numerous organizational performance metrics, giving a thorough study of the key challenges and their far-reaching consequences. The study demonstrates how rising maintenance costs, financial resource constraints, and limited investment options can lead to cost underestimation. Additionally, the rapid depreciation of well-maintained assets can have a negative influence on book values, complicate financing, and make it difficult to recruit investors. All of these elements, whether positive or negative. (Agyekum et al., 2021)

This study claims that effective asset management is critical for organizations in the petroleum services sector seeking a competitive advantage. Companies can improve their operational efficiency, financial performance, and overall market position by tackling the difficulties associated with decaying assets and implementing a strategic asset management approach.(Norquvvatova & Saidova, 2023)

Table of Contents

Graduation Project 1-

Cover Page.....	1
Acknowledgement	2
Dedication	3
Abstract	4
Research Problem	8
Research Significance	9
Table of Contents.....	7

Components of Graduation Project-1..... 1

1. Cover Page	1
2. Project Title	1
3. Acknowledgement.....	2
4. Dedication.....	3
5. Abstract	4
6. Table of Contents.....	7
7. List of Figures	8
8. List of Tables	11
9. Introduction	13
10. Research Problem	15
12. Research Questions.....	16
13. Research Objectives.....	17
14. Research Hypotheses	18
15. Research Model.....	18
16. Research Methodology	20
17. Literature Review	22
18. Conclusion	23

List of Figures

The second stream deals with the employees perceptions and beliefs in relation to the status of asset managemem in the four manufacturing sitex.63 employees responded to the questionnaires and the responses w inputted into SPSS for analysis, This perception stream is classified into categories as illustrated in figure 1 below.

According to Liddy and Ormrod (2010), descriptive. Quantitative research involves identifying characteristics For a noticeable phenomenon; He also confirmed that this The type of research often involves gathering information Through data review, surveys, interviews, or observation. Descriptive research describes the way things are. To achieve the research goal and address the problem Research question, exploratory descriptive analysis Nature is used. Quantitative data is collected and Analyze them in an attempt to gain insights and knowledge Regarding the state of asset management as it deems it appropriate Employees. The exploratory approach seeks to determine Patterns and perceptions to enhance Recommendations for asset implementation Administration. Leidy and Ormrod (2010) define triangulation as The process of using multiple sources of data to hopefully The data will converge to demonstrate consistency and support Recommendations for implementing asset management principles.

Measuring Instruments

The questionnaire consists of 66 questions that are divided into 4 categories; category A concentrates on biographical information of the respondents, category B. concentrates on general issues pertaining to Asset Management, this category is further sub-divided into five Sub-categories. Category C dealswith issues that are identified specifically for Asset Management, this category is further sub-dividedinto six sub-categories. The last Category of the questionnaire is category D, this category deals with PAS 55 and it is further sub-divided into two categories. This study deals with complex constructs relating to personnel opinions, attitudes and perceptions about the status of Asset Management understanding and implementation as prescribed by PAS 55. Three types of measurement scales wereused in this study to capture the responses; Data collection was done using two methods applied in parallel; the first method was to collect data through questionnaires, as shown in appendix A, and the second method entailed gathering information pertaining to KPI's from the SAP system. This was done for triangulation purposes.

This is a questionnaire from previous studies. Of the variables and the effects of Each of them :

3. Research Findings

The investigation and data collection was conducted in two streams; stream one entailed gathering data from the SAP system of the four manufacturing site, and the second stream was conducted through the Asset Management questionnaires to employees.

The data collected through stream one was fed into the excel spread sheet and the average of the four manufacturing sites was used answer the research question and draw conclusions on the proposal.

3.1. Stream 1 – KPI's – Developed from SAP

Maintenance KPI's	Keys	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	6 Months Average
Backlog Status - Weeks	< 1							
	Between 1&3	2.9	2.9	4.2	3.0	2.4	1.0	1.4
	> 3							
% Emergency Ratio - Hours (Target 5%)	> 7%							
	5 - 7%	9.0	32.0	21.0	33.0	25.0	7.0	10.6
	0 - 5%							
% Urgent Ratio - Hours (Target 10%)	> 15%							
	10 - 15%							
	6 - 9%	20.0	6.0	13.9	7.2	5.9	21.0	6.2
	0 - 5%							
Schedule Attainment - Count (Target 80 - 90%)	< 60%							
	60 - 80%							
	80 - 90%	63.0	37.0	84.4	87.6	87.9	72.9	36.1
	90 - 100%							
	> 100%							
Actual vs. Plan on Scheduled work - Hours (Target 80 - 90%)	< 60%							
	60 - 80%							
	80 - 120%	82.6	59.0	75.7	127.0	81.7	69.8	41.3
	120 - 140%							
	> 140%							
Capacity Planning - Hours (Target 80%)	< 49%							
	50 - 60%							
	60 - 85%	30.0	57.3	57.0	48.6	57.0	66.0	26.3
	85 - 100%							
	> 100%							
PM Attainment - Count (Target 90%)	< 60%							
	60 - 80%							
	80 - 90%	78.4	30.0	27.8	77.0	66.0	79.0	29.8
	90 - 100%							
	> 100%							

Figure 1. Maintenance KPI's – 12 months rolling average (Targets adopted from SAMICORP).

The second stream deals with the employees' perceptions and beliefs in relation to the status of asset management in the four manufacturing sites. 63 employees responded to the questionnaires and the responses were inputted into SPSS for analysis. This perception stream is classified into categories as illustrated in figure 2 below.

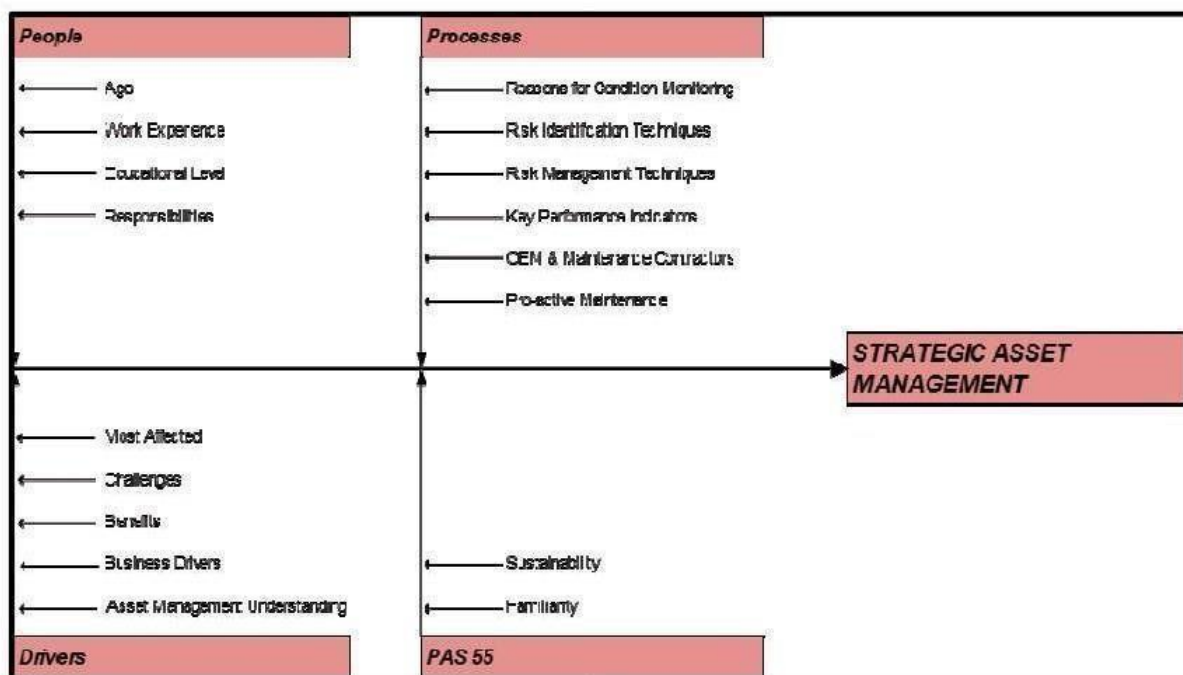


Figure 2. Study Hierarchy.

List of Tables

Methodology

This paper aims to assess strategic intelligence and asset management to achieve competitive advantage in the presence of the modified variable cybersecurity in Jordanian telecom companies. To achieve the goal of this paper, the community and the sample of this research are all employees of Jordanian telecom companies. However, the descriptive analytical approach was used to test the research hypotheses. A questionnaire was designed, and 300 questionnaires were collected out of 350 that were distributed to respondents working in Jordanian telecom companies.

Results

test the hypotheses of the study, the researcher used appropriate statistical methods to test the hypotheses; ANOVA and multiple Regression Loading were used to test the main hypothesis. To determine the probability of affirmative action and acceptance of this hypothesis, the researcher used simple regression analysis to test these hypotheses, and regression variance analysis as shown in Table 1 as follows:

Table 1
Simple linear regression analysis of the hypotheses one and two

Dependent Variable	Model Summery		ANOVA			variables	Coefficients			
	R	R ²	F	DF	Sig F*		B	Standard error	T	Sig t*
Enhancing Competitive Advantage	0.738	0.582	143.684	4	0.000	Strategic Intelligence	0.492	0.038	7.684	0.000
Enhancing Competitive Advantage	0.762	0.539	138.109	4	0.000	Asset Management	0.457	0.034	4.895	0.000

*The effect is statistically significant at the level ($\alpha \leq 0.05$)

Table 1 shows a significant statistical role of Strategic Intelligence in promoting competitive advantage in Jordanian telecommunications companies. The correlation coefficient ($R = 0.738$) indicates an important relationship between the independent variable (Strategic Intelligence) and the dependent variable (enhancing competitive advantage). The value of the determination factor ($R^2 = 0.582$) indicates that Strategic Intelligence interpreted the variability 58.2% (enhancing competitive advantage), and the remainder due to other variables not included in the model, as assessed ($F = 143.684$) at a level of confidence equal to ($\text{sig} = 0.000$), which underscores the importance of declining at an indicative level (0.05).

It also indicates a linear relationship between asset management in promoting competitive advantage in Jordanian telecommunications companies. The correlation coefficient ($R = 0.738$) refers to the important relationship of the independent variable (asset management) and the dependent variable (promotion of competitive advantage). The value of the restriction factor ($R^2 = 0.582$) indicates that asset management explains 58.2% of the difference in (enhancing competitive advantage), and the remainder due to other variables not included in the model, as estimated ($F = 143.684$) at a confidence level equal to 0.000, which underscores the importance of declining at an indicative level (0.05).

Table 2
Pyramid Regression Analysis Results for the third and the fourth hypothesis

Dependent Variable	Independent Variables	First Model			Second Model		
		B	T	Sig**	β	T	Sig**
Enhancing Competitive Advantage	Strategic Intelligence	0.641	12.715	0.000		-	
	strategic intelligence $\times$ Cybersecurity		-		0.374	4.717	0.000
	R		0.661			0.701	
	R ²		0.437			0.492	
	Δ R ²		0.435			0.478	
	Δ F		161.683			100.228	
	Sig. Δ F		0.000			0.000	
Enhancing Competitive Advantage	Asset Management	0.624	11.694	0.000		-	
	Asset Management $\times$ Cybersecurity		-		0.362	3.654	0.000
	R		0.638			0.694	
	R ²		0.418			0.472	
	Δ R ²		0.436			0.490	
	Δ F		173.683			103.548	
	Sig. Δ F		0.000			0.000	

* The effect is statistically significant at the level ($\alpha \leq 0.05$)

Table 2 presents the results of a hierarchical multiple regression analysis based on two models. In the first model, the value of the impact degree was ($B = 0.641$), which means that a one-degree increase in the level of interest in strategic intelligence leads to an increase in competitive advantage by a value of (0.641), which is This indicates that strategic intelligence explains 64.1% of the variance in competitive advantage. In the second model, the median variable (Cybersecurity) was introduced into the regression model, where the value of the correlation coefficient increased to become ($R = 0.701$), as well as the value of the coefficient of determination (R^2), which increased by 48.7%. and the level of significance ($Sig = 0.000$) is less than (0.05).

It also presents the results of the last hypothesis consisting of two models, in the first model, the value of the impact degree was ($B = 0.624$), which means that a one-degree increase in the level of interest in asset management leads to an increase in competitive advantage by a value of (0.624), which is This indicates asset management explains 62.4% of the variation in competitive advantage. In the second model, the median variable (cybersecurity) was introduced into the regression model, where the value of the correlation coefficient increased to become ($R = 0.694$), as well as the value of the coefficient of determination (R^2), which increased by 49%, and importance level ($Sig = 0.000$) was below 0.05.

Research problem

Research problem the research problem around “The impact of asset management on achieving competitive advantage for companies in the petroleum services sector.” Pose significant challenges for organizations.

Theoretical Gaps: This study aims to explore these challenges comprehensively, offering insights into the potential solutions for fostering a positive work environment and improving environmental sustainability working in Utilizing key performance indicators (KPIs) to identify areas for improvement and optimize asset utilization, contributing to both employee satisfaction and environmental sustainability.(Keykhosravi et al., 2023)

Implementing technologies like RFID technology predictive maintenance and condition monitoring to provide real-time insights, reduce downtime, and improve overall working conditions. Employee awareness and participation in asset care to foster responsible usage and timely reporting of issues, contributing to a positive workplace culture. Comprehensive Asset Management Plan Developing a plan outlining maintenance schedules, budget allocations, and risk mitigation strategies to ensure a conducive work environment.(Duffuaa & Raouf, 2015)

Empirical Gaps: Through a thorough examination of these issues, this study hopes to shed light on viable strategies for enhancing environmental sustainability and creating a healthy work environment in the petroleum services industry. Employers may lower their environmental effect, increase employee happiness, and gain a sustained competitive edge in the market by using key performance indicators (KPIs) to pinpoint areas for improvement and maximize asset usage.(Agyekum et al., 2021)

Organizations face substantial obstacles as a result of asset management’s influence on gaining a competitive edge for businesses providing petroleum services. Enhanced operational efficiency, competitive advantage, and resource optimization are the main reasons why businesses in this industry need to implement effective asset management. However, there are unique challenges and difficulties associated with asset management in the oilfield services sector. Illustrate the importance of organizations continually improving their asset management capabilities, in order to systematically improve performance or service levels, modeling and forecasting costs, managing failure risks and finding strategies to fund both their long-term investment needs. In addition, reported that innovation capacity, the intangible assets of a company, such as knowledge management and intellectual capital, have a favorable impact on competitive advantage. Furthermore, the competitive edge has a positive impact on the company’s performance.(McMillan, 2017)

Research Significance

The findings aim to guide decision-makers, HR professionals, and operations managers in adopting proactive measures that not only improve the working conditions but also contribute to a sustainable and responsible corporate culture. This research is significant in offering practical solutions for Investment in Preventive Maintenance Advocating for regular maintenance practices to identify and address issues early, preventing costly breakdowns and promoting a positive workplace atmosphere. Organizations to enhance employee morale and business sustainability.

The findings above are concurred to by (Duffuaa & Raouf, 2015) when he suggests that reliability-Centered Maintenance (RCM) seeks to achieve, among others, the following; Greater safety and environmental integrity – RCM considers the safety and environmental implications of every failure mode. Improved operating performance (output, product quality and customer service) – RCM recognizes that all types of maintenance have some value, and provides guidance in deciding which is the most Suitable in every situation. Greater maintenance cost-effectiveness – RCM Focusses on the maintenance activities which have the most effect on the performance of the plant. Longer life-span of assets successful implementation and sustainability of asset management is dependent on employees believing in benefits this phenomenon has on the business as well as individuals. It is revealed that majority of the employees believe that discipline cohesion (bringing the different organization disciplines closer together) is the most important benefit of implementing Asset Management Processes. further to discipline cohesion stated above, the research also reveals that employees believe that the following, in the order of their importance, are also the important benefits of implementing Asset Management processes; Improved decision making. The organization learning experience during the Implementation process. Enhanced systems thinking in terms of equipment life cycle view. Becoming the learning organization (continuous improvement). Process transparency. It is clear from above that employees believe there are benefits in implementing the processes of asset management. To succeed in implementing and sustaining asset management, obstacles and challenges should be identified and eliminated.

Research Question

Main Research Question: What are the long-term economic and social benefits of investing in preventive maintenance and enhancing asset care within organizations?

Sub-Question 1: What are the effectiveness of preventive maintenance strategies, leveraging KPIs and technologies like RFID and predictive maintenance, in addressing challenges associated with dilapidated assets?

Sub-Question 2: How can promoting employee awareness and participation in asset care contribute to improving working conditions and fostering a culture of responsible asset use in organizations?

Sub-Question 3: How can the findings of this study inform decision-makers, HR professionals, and operations managers to adopt proactive measures that simultaneously improve working conditions and promote a sustainable corporate culture?

Sub-Question 4: How does the size and budget of an organization influence its ability to implement effective asset management practices?

Research Objectives

Criteria for Research Objectives

Research objectives are essential in guiding a research study. They help to clarify the Objective Of the research and outline what the researcher aims to achieve. Here are some criteria for good Research objectives:

1. Research Objective: To explore the effectiveness of various preventive maintenance strategies, leveraging KPIs and technologies like RFID and predictive maintenance, in addressing challenges associated with dilapidated assets in the petroleum services sector.
2. Research Objective: To investigate how promoting employee awareness and participation in asset care contributes to improving working conditions and fostering a culture of responsible asset use within organizations in the petroleum services sector.
3. Research Objective: To determine how the findings of this study can inform decision-makers, HR professionals, and operations managers in adopting proactive measures that simultaneously improve working conditions and promote a sustainable corporate culture in the petroleum services sector.
4. Research Objective: To analyze the influence of an organization's size and budget on its ability to implement effective asset management practices. Focusing on specific practices is clear in stating the relationship: preventive maintenance independent leads to increased operational efficiency dependent through reduced downtime and higher equipment availability. It is specific by mentioning a specific practice of preventive maintenance and measurable outcomes downtime, availability, efficiency. It is testable through data collection on maintenance practices, equipment performance metrics, and operational efficiency measures.

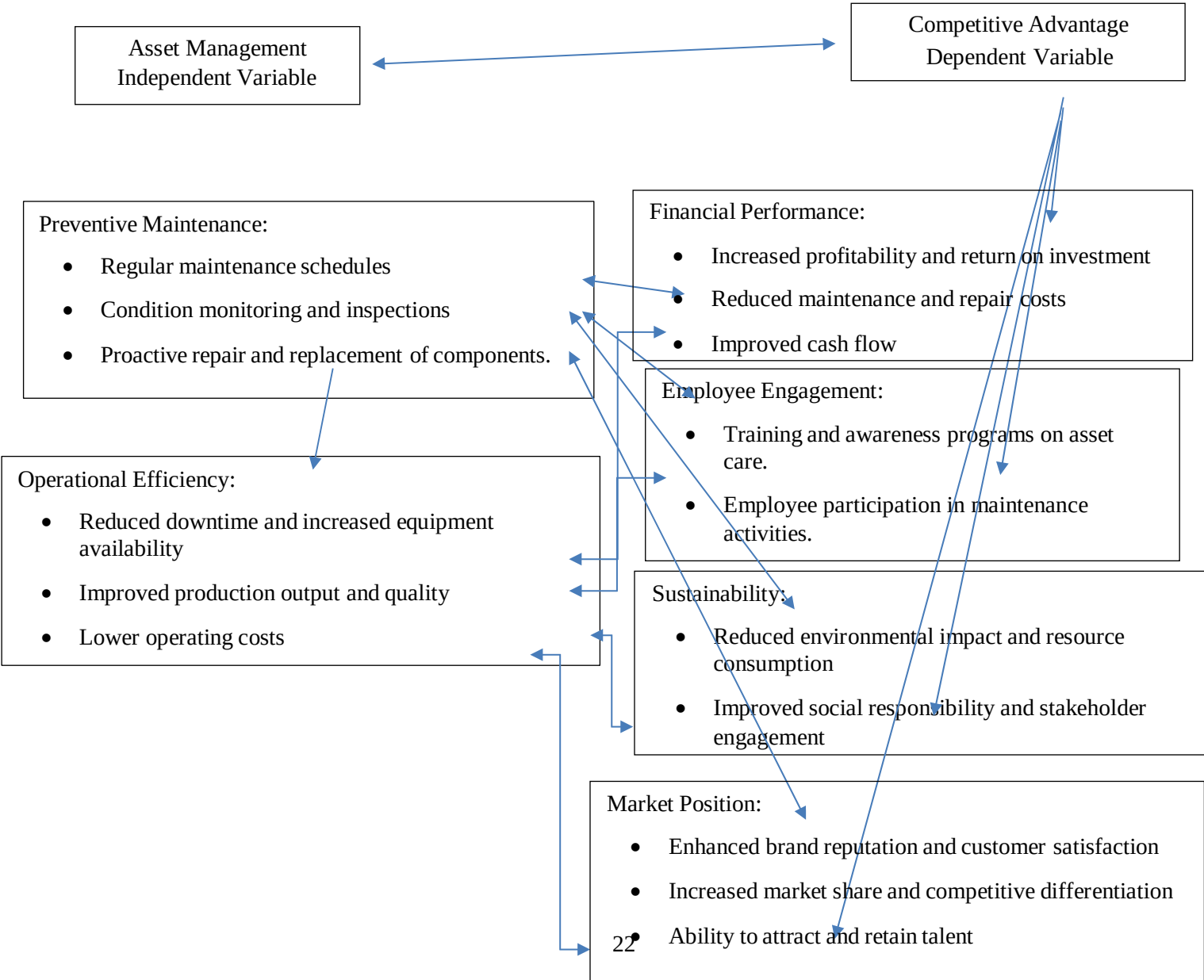
Research Hypotheses

- Focusing on specific practices is clear in stating the relationship preventive maintenance independent leads to increased operational efficiency dependent through reduced downtime and higher equipment availability. It is specific by mentioning a specific practice of preventive maintenance and measurable outcomes downtime, availability, efficiency. It is testable through data collection on maintenance practices, equipment performance metrics, and operational efficiency measures.
- Focusing on employee involvement is specific in focusing on employee involvement independent and its impact on failure rates and maintenance costs dependent. It provides a clear cause-and-effect relationship, with employee involvement expected to lead to better asset care, fewer failures, and reduced maintenance costs. It is testable through data collection on employee training programs, equipment failure records, and maintenance cost data.
- Focusing on long-term benefits takes a broader view, focusing on long-term asset management strategies independent and their impact on sustained competitive advantage dependent through resource optimization and environmental performance. It is specific in mentioning the long-term approach and its expected benefits. While testing might require a longer timeframe, it can be done by comparing the performance of companies with different asset management strategies over time.

Research Model

Impact of Asset Management on Competitive Advantage in Petroleum Services relationships

The model proposes that effective asset management practices, implemented through a combination of preventive maintenance, employee engagement, and resource allocation, positively influence various dimensions of competitive advantage. Preventive maintenance can lead to reduced downtime operational efficiency and lower maintenance costs financial performance. Employee engagement in asset care can contribute to improved equipment availability operational efficiency and a positive brand reputation market position. And resource allocation plays a crucial role in enabling these practices, as sufficient budget and skilled personnel are essential for effective asset management.



Research Methodology

for Investigating the Impact of Asset Management on Competitive Advantage in Petroleum Services.

Research Philosophy: Interpretivist:

This research will adopt an Interpretivist philosophy, acknowledging the subjective experiences and interpretations of individuals and organizations regarding asset management practices and their impact on achieving competitive advantage.

Research Approach: Mixed Methods:

A combined deductive and inductive approach will be utilized. The study will begin by reviewing existing literature and theories on asset management and competitive advantage (deductive), followed by the collection of qualitative and quantitative data to gain deeper understanding and explore the phenomenon in the context of the petroleum services sector (inductive).

Research Strategy: Survey (Case Studies):

This project will employ a multiple case study design, focusing on company in the petroleum services sector, Al-Khobar – Kingdom of Saudi Arabia the petroleum services sector, asset management practices, and competitive positions. This approach allows for in-depth exploration of the real-world complexities and potential variations in the relationship between asset management and competitive advantage.

Mixed Methods: Qualitative and Quantitative

This research will combine both qualitative and quantitative data collection and analysis techniques to gain a comprehensive understanding of the phenomenon.

Qualitative data: Semi-structured

interviews with key personnel (managers, engineers, maintenance technicians) from each case study company to gather insights on their experiences, perceptions, and challenges regarding asset management practices and their perceived impact on the organization's performance. Document analysis of company reports, policies, and procedures related to asset management. Quantitative data Collection of secondary data from industry reports, financial databases, and relevant performance metrics (maintenance costs, equipment downtime, productivity levels, customer satisfaction) to assess the potential associations with asset management practices.

Cross-sectional:

This study will capture data at a single point in time, offering a snapshot of the current state of asset management practices and their perceived impact on competitive advantage within the selected

case companies.

Data Collection and Analysis Techniques:

To identify recurring themes and patterns in the interview transcripts and document analysis, allowing for the construction of detailed case narratives. Quantitative data analysis

Descriptive statistics will be used to summarize the collected data, while correlation analysis will be employed to explore potential relationships between asset management practices and performance metrics. Data triangulation from both qualitative and quantitative data sources will be compared and contrasted to enhance the overall research validity and trustworthiness.

Research Philosophy: Interpretivist

Research Approach: Mixed Methods(Inductive/Deductive). Research Strategy: Survey

Research Choice: Quantitative Time Horizon: Cross-sectional

Data Collection and Analysis Techniques: Statistical analysis of survey results

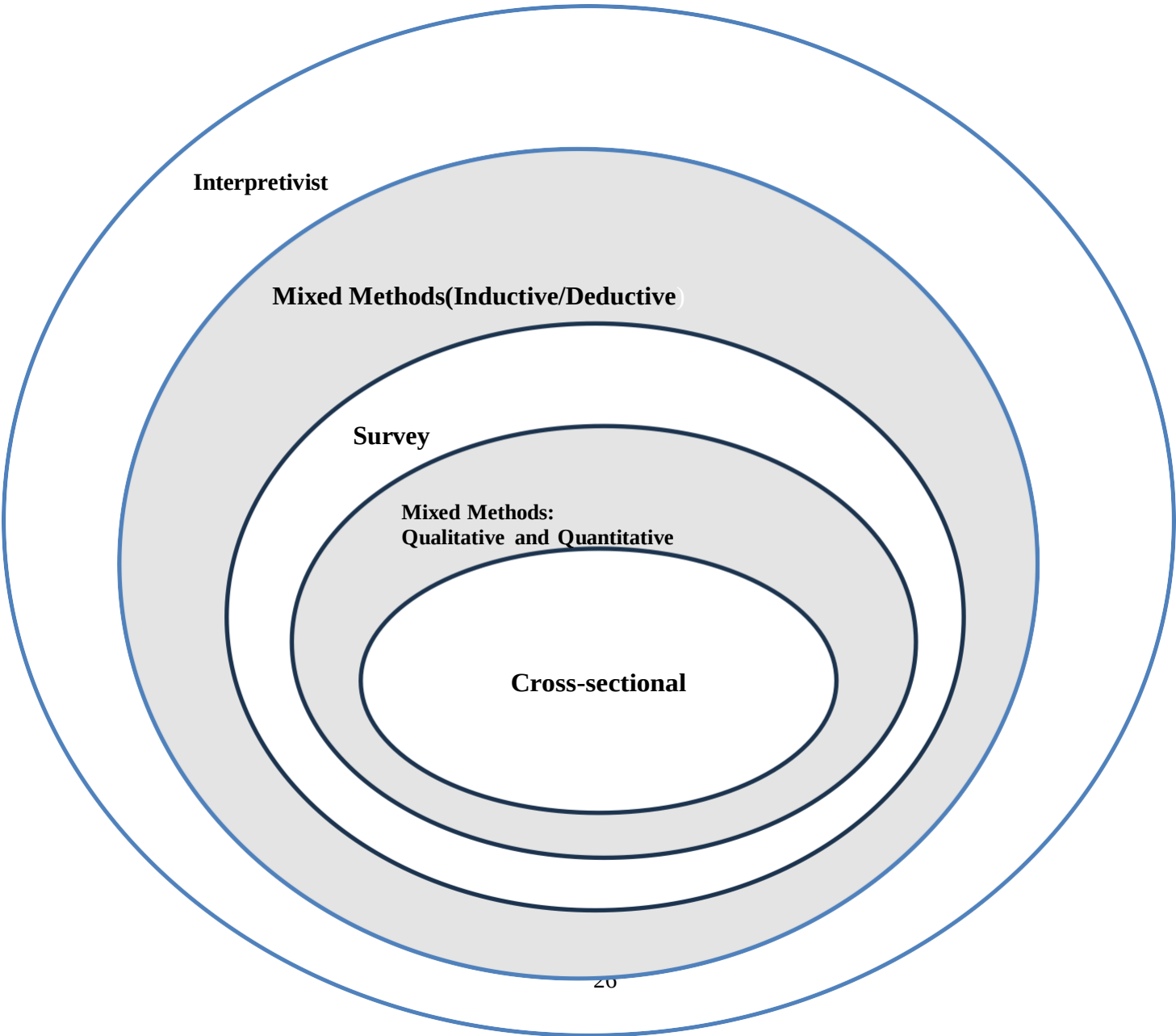
Empirical Study

The impact of asset management on achieving competitive industry. They highlight the company's commitment to reliability, efficiency, and cost-effectiveness, demonstrating a competitive advantage in the marketplace, it explored the multifaceted benefits of implementing effective asset management practices, highlighting positive impacts on operational efficiency, financial performance, market position, and sustainability.

The chosen industry sector is : company in the petroleum services sector,
<https://www.almasaoodenergy.me/>

The place for applying the research : Al-Khobar – Kingdom of Saudi Arabia.

Research Onion



Conclusion

The intricate between asset management and competitive advantage in the petroleum services sector has been the focal point of this research project. The investigation exposed the detrimental consequences of neglecting proper maintenance, leading to the rapid deterioration of assets and hindering organizational performance across multiple dimensions. Business development and asset management are intricately connected, fostering a symbiotic relationship that drives growth and profitability in the petroleum services sector.

The study has highlighted the strategic importance of asset management practices as a cornerstone for securing new contracts and establishing a market edge. Business development professionals have been shown to capitalize on well-maintained assets and robust asset management protocols to underscore a company's dedication to reliability, efficiency, and cost-effectiveness. The proposed research model advocates for a holistic asset management strategy, integrating preventive maintenance, employee engagement, and judicious resource allocation as pivotal elements for fostering sustainable competitive advantage.

Business development professionals leverage a company's well-maintained assets and proven asset management practices as key selling points when securing new contracts. They highlight the company's commitment to reliability, efficiency, and cost-effectiveness, demonstrating a competitive advantage in the marketplace, it explored the multifaceted benefits of implementing effective asset management practices, highlighting positive impacts on operational efficiency, financial performance, market position, and sustainability. The research model proposed a comprehensive approach to asset management, encompassing preventive maintenance, employee engagement, and resource allocation, as a key driver of sustainable competitive advantage. It further acknowledged the potential moderating influence of factors like company size, industry standards, and technological advancements on the effectiveness of these practices. The impact of asset management extends far beyond the proposed model, significantly influencing the strategic landscape of businesses within the petroleum services sector. Effective asset management practices directly contribute to enhanced Business Analysis Capabilities By gathering and analyzing data on asset performance, maintenance costs, and resource utilization, companies gain valuable insights for informed decision-making. This empowers business analysts to identify trends, predict potential equipment failures, and optimize resource allocation strategies. Improved Business Development Efforts a strong asset management framework fosters a culture of reliability and operational efficiency, which translates into a competitive advantage during business development activities. Companies can leverage their well-maintained assets and proven track record of performance to build trust with potential clients and secure lucrative contracts. Selecting the most appropriate key performance indicators (KPIs) is crucial for monitoring and controlling asset management practices. Successful business development efforts translate into increased revenue streams. This influx of capital allows for further investment in asset management initiatives. Companies can allocate resources for preventive maintenance programs, employee training, and the adoption of new technologies that enhance asset performance and overall operational efficiency. This virtuous cycle strengthens the company's competitive edge and positions it for long-term success in the dynamic and challenging world of petroleum services, the research model provides a valuable theoretical framework, translating these concepts into practical application requires a multi-pronged approach. Executive leadership plays a crucial role in fostering a culture of asset care within the organization.

The cultivation of a strong asset management framework is essential for nurturing a culture of reliability and operational efficiency, which in turn, serves as a competitive lever during business development pursuits. The selection of pertinent key performance indicators (KPIs) is vital for the oversight and governance of asset management practices. Like ISO 55001 can help establish consistent asset management policies, objectives, processes, and governance. This ensures that asset documentation aligns with the organization's strategic goals and complies with global standards. The successful execution of business development strategies leads to augmented revenue streams, facilitating further investments in asset management initiatives. This creates a virtuous cycle that fortifies a company's competitive position and paves the way for enduring success in the dynamic and demanding realm of petroleum services.

This research has meticulously examined the interplay between asset management and competitive advantage within the petroleum services sector. The findings underscore the perilous outcomes of neglecting asset maintenance, which precipitates a swift degradation of assets and a consequent decline in organizational performance across various dimensions. The symbiotic relationship between business development and asset management has emerged as a critical driver of growth and profitability within the industry.

The research acknowledges the moderating role of external factors such as company size, industry benchmarks, and technological advancements on the efficacy of asset management practices. The impact of these practices extends significantly, shaping the strategic framework of businesses within the sector. Effective asset management is revealed to be instrumental in bolstering Business Analysis Capabilities, enabling companies to harness data for informed decision-making, trend identification, and optimization of resource allocation.

Executive leadership is paramount in instilling an ethos of asset stewardship within the organization, ensuring that asset management is not merely a policy but a fundamental aspect of the corporate identity. It is this commitment to excellence in asset management that will ultimately distinguish industry leaders from the rest, propelling them towards a future of sustainable growth and competitive superiority.

Suggested Project Structure

Chapter 1: Introduction

- **Chapter 2: Literature Review**
- **Chapter 3: Research Methodology**
- **Chapter 4: Statistical Analysis**
- **Chapter 5: Findings` Discussion and Conclusion**

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Statistical Analysis

**Chapter 5: Findings` Discussion and
Conclusion**

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The impact of strategic intelligence and asset management on enhancing competitive Advantage: The mediating role of cybersecurity.

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It`s Never Too Late to START. Just Begin!

Best of Luck *Dr. Mona Moustafa Elashry*