

العنوان :

تأثير عمليات اتخاذ القرار على كفاءة الإدارة في الشركة السعودية للكهرباء
(SEC)

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Abstract

This study comprehensively evaluates the decision-making processes implemented at the Saudi Electricity Company (SEC) to understand their structure, scope, and role in enhancing management efficiency. By systematically analyzing these processes, the research identifies key factors contributing to operational success while addressing challenges that hinder effective decision-making within the organization. A quantitative research approach was employed, utilizing both primary and secondary data sources. Primary data was collected through a structured questionnaire distributed electronically to a randomly selected sample, with responses analyzed using the Statistical Package for the Social Sciences (SPSS). Secondary data was gathered from academic books, research papers, and relevant studies to provide contextual support. The findings indicate that decision-making at SEC significantly impacts management efficiency, with both centralized and decentralized approaches demonstrating strong positive correlations with operational effectiveness. The analysis revealed that centralized decision-making enhances regulatory compliance, resource allocation, and strategic alignment, while decentralized decision-making improves agility, responsiveness, and workforce engagement. A hybrid approach balancing centralized oversight with decentralized flexibility is recommended to optimize decision-making efficiency. This study contributes valuable insights into the decision-making frameworks at SEC, offering practical strategies for enhancing management efficiency while aligning with national energy and sustainability objective

Chapter1: Introduction

1.1. Introduction

In today's fast-paced and technologically advanced world, effective decision-making is one of the most critical aspects of management that directly influences the efficiency and success of organizations. The strategic significance of decision-making processes extends across all levels of management, impacting the formulation and execution of policies, allocation of resources, and the achievement of organizational goals. For large-scale entities such as the Saudi Electricity Company (SEC), which plays an essential role in the energy sector of Saudi Arabia, efficient decision-making is paramount to maintaining operational excellence, achieving sustainability, and aligning with national visions such as Saudi Arabia's Vision 2030 (Hosseini et al.,2022).

Since the Saudi Electricity Company is the dominant electric power provider in the Kingdom, it faces increased competition, fast-changing technologies, and uncertainties in demand, as well as strict legal guidelines. Because of the special nature of operations at SEC, they require an effective and flexible AM system that can address various issues such as supply of power successfully and integration of renewable energy into the system. At the core of this model is the decision-making system within the management teams, which needs to be both top-down and bottom-up in order to adapt to internal and external forces (Hristov et al.,2022).

The decision-making management at SEC entails tactical formulation, decision making on risks, adjustments within operations, and choices of resources. These processes are not only data driven by using quantitative data and analysis techniques but also contain qualitative inputs and managerial judgement and stakeholder issues. Management decision-making processes presented herein are critical to management efficiency and impact areas like cost control, time, dependability of services, and organizational performance. That is why decisions, if made improperly, can result in volumetric and cost overruns and lost chances, while good decisions increase performance, optimize resource use and

encourage creativity. Knowledge of the effects of decision-making strategies on management effectiveness is important to SEC because it faces a myriad of issues in satisfying the nation's electricity demands sustainably while incorporating renewable energy technologies into the solution. Consequently, this research will aim at investigating the complex relationship between the decision-making practices and management efficiency in SEC so as to establish how these strategic decisions enhance the organizational efficiency and sustainability of the firm which is a fundamental aspect of positive competitive advantage as pointed by Ejimabo, (2015).

This study will analyze the factors that contribute to or hinder effective decision-making, examining both the procedural and human elements that influence outcomes. It will also assess how SEC's decision-making aligns with the best practices in the energy sector and identify areas for improvement. By doing so, the research aims to provide actionable insights that can help the SEC enhance its management practices, ensuring greater alignment with industry standards and national energy objectives.

1.2. Problem Statement

This work centers on the Saudi Electricity Company (SEC) and its important role of delivering key electricity services within a highly competitive, dynamic technological landscape, growing demand, and bearing the mandate of Saudi Arabia's Vision 2030. Primarily, despite the critical roles played by SEC in the energy sector of the country, there are some difficulties in improving management processes including decision-making processes to achieve the optimum organizational efficiency according to the current and future needs of the industry and the entire nation. Tasks that SEC has been conducting for decision-making at the moment may be limited in a way that concerns flexibility, utilization of innovative technology, and strategical and tactical framework choices. Poor decision-making affects communication leading to operational hold-up, higher labor costs, utilization of funds, jeopardizing reliability of services and organizational outcomes. On the other hand, an efficient decision-making

framework that includes data analysis quality, managerial opinion and consultation from stakeholders can enhance the management performance and aligns with SEC's mission and the general goals of the nation's development.

Therefore, the issue appreciates the effects of decision-making processes on management efficiency at SEC as well as understanding the facilitators and barriers to these processes. The purpose of this study is to identify these challenges and evaluate how SEC's existing decision-making system may be reconstructed to conform to the approaches that are appropriate to the energy industry and provide the maximum value for the management.

1.3. Research Significance

The research on The Impact of Decision-Making Processes on Management Efficiency at the Saudi Electricity Company (SEC) holds significant theoretical and practical implications. This study aims to contribute to the existing body of knowledge and offer actionable insights that can enhance management practices within the SEC and similar organizations in the energy sector.

1.3.1. Theoretical Significance:

1. **Contribution to Decision-Making and Management Literature:** This research will expand the current academic understanding of how decision-making processes affect management efficiency in large-scale energy organizations. While much literature exists on decision-making in general business management, specific studies focusing on public utility companies, particularly within the Middle Eastern context, are limited. This study will bridge this gap by providing evidence-based findings related to SEC's operations.
2. **Enhancing Theoretical Frameworks:** By examining the interplay between decision-making models, leadership influence, and management outcomes, the study will contribute to refining and expanding existing theories on decision-making and management efficiency. It will provide

empirical data that either supports or challenges established management theories, offering a basis for future research.

3. **Contextual Insights:** The study will provide a unique perspective on decision-making within the context of a government-linked organization in Saudi Arabia. This contributes to understanding cultural, economic, and regulatory factors specific to the region shape decision-making processes and management outcomes.

1.3.2. Practical Significance:

1. **Guidance for Management Practices:** The findings of this research will offer practical recommendations for managers and decision-makers within the SEC on how to optimize their decision-making processes to improve management efficiency. By understanding the factors that lead to better decision-making, SEC can enhance its operational effectiveness, reduce costs, and improve service delivery.
2. **Policy Development:** This research can serve as a basis for developing or refining policies within SEC to better support management practices. Recommendations stemming from the study can guide strategic initiatives that align with Saudi Arabia's Vision 2030 goals, particularly in terms of sustainability, innovation, and national economic development.
3. **Improvement of Decision-Making Tools and Techniques:** By highlighting the impact of technology, data analysis, and collaborative practices on decision-making efficiency, this research can inform SEC's investment in and adoption of advanced decision-support systems. This will enable the company to better respond to operational challenges and align with the industry's best practices.
4. **Training and Development:** The research can support the development of targeted training programs that improve managerial decision-making capabilities. By identifying key

competencies and practices that enhance decision-making, SEC can strengthen its leadership pipeline and foster a culture of informed, data-driven management.

5. **Benchmark for Other Energy Organizations:** The results of the study can serve as a benchmark for other public and private organizations in the energy sector looking to improve their decision-making processes. Insights from the research can be adapted and applied to different operational contexts to achieve better management efficiency.

1.4. Research Objectives

1. Comprehensively evaluate the current decision-making processes implemented at the Saudi Electricity Company (SEC) to understand their structure, scope, and application in management practices.
2. Systematically investigate the role of these decision-making processes in enhancing the efficiency and effectiveness of management at SEC, highlighting their contributions to operational success.
3. Identify and thoroughly analyze the challenges SEC encounters in applying effective decision-making practices within its management framework, focusing on both internal and external factors influencing these processes.
4. Develop and propose targeted strategies and best practices to optimize decision-making processes at SEC, with the ultimate goal of improving management efficiency and aligning with national energy and sustainability goals.

1.5. Research Questions

1. What is the impact of decision-making processes on management efficiency at the Saudi Electricity Company (SEC)?
2. How do diverse types of decision-making approaches (centralized vs. decentralized) influence management efficiency within SEC?

3. What challenges do managers at SEC face in implementing effective decision-making processes, and how do these challenges affect overall management efficiency?
4. To what extent do leadership involvement and technological tools used in decision-making contribute to the enhancement of management efficiency at SEC?

1.6. Research hypotheses

It is clear to us from the earlier figure, that the current research attempts to The Impact of Decision-Making Processes on Management Efficiency at the Saudi Electricity Company (SEC)

- ✓ Independent Variable : Decision-Making with Dimensions (centralized vs. decentralized)
- ✓ Dependent Variables: Management Efficiency

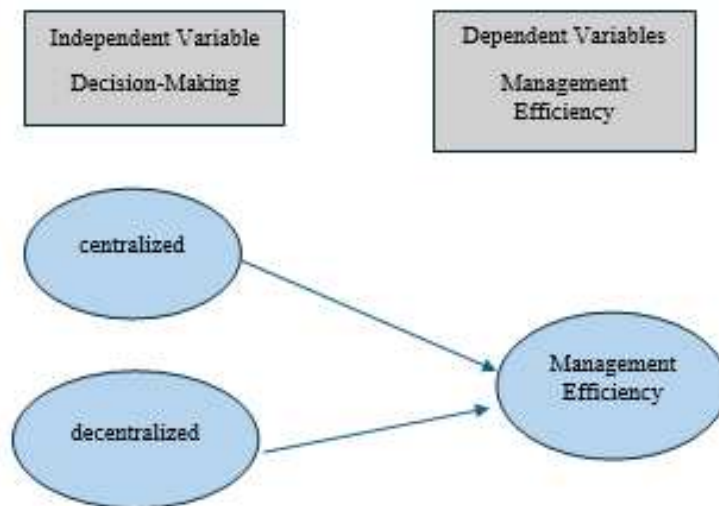


Figure 1 The Variables of Studies

1. **H1:** There is a statistically significant difference in the impact of decision-making on management efficiency at the Saudi Electricity Company (SEC).
2. **H2:** There is a statistically significant effect of centralized decision-making on management efficiency at the Saudi Electricity Company (SEC).
3. **H3:** There is a statistically significant effect of decentralized decision-making on management efficiency at the Saudi Electricity Company (SEC).

1.7. Study limitations

1. Temporal Limitations: This study will be conducted over the course of 2024, ensuring that data collection and analysis capture the current decision-making processes and management practices within the Saudi Electricity Company (SEC). The study will reflect contemporary challenges and practices as they exist within this specific time.
2. Spatial Limitations: The research will be limited to the Saudi Electricity Company, focusing specifically on its operations and management practices within various departments and operational units across its network. This focus will allow for an in-depth analysis of SEC's decision-making processes and their impact on management efficiency.
3. Objective Limitations: The study aims to Comprehensively evaluate the current decision-making processes implemented at SEC. Systematically investigate the role of these decision-making processes in enhancing the efficiency and effectiveness of management at SEC. Identify and thoroughly analyze the challenges SEC encounters in applying effective decision-making practices within its management framework. Develop and propose targeted strategies and best practices to optimize decision-making processes at SEC, with the ultimate goal of improving management efficiency and aligning with national energy and sustainability goals.
4. Human Limitations: The study will involve a targeted sample of employees at SEC, including senior leaders, managers, operations specialists, and other relevant staff members. These

participants will provide critical insights into the practical application, strengths, and weaknesses of decision-making processes within the organization. The perspectives of these individuals will be used to evaluate the effectiveness of current practices and suggest improvements.

Chapter 2: Literature review

2.1. Introduction

In an era characterized by rapid transformations, evolving global markets, and continuous technological advancements, decision-making emerges as a critical cornerstone for institutional success and sustainability. The modern work environment is no longer static or predictable; instead, it presents organizations with dynamic challenges that demand exceptional adaptability, innovative thinking, and strategic foresight. As businesses strive to maintain competitiveness and operational efficiency, the ability to make informed, precise, and effective decisions becomes the defining factor between organizational growth and stagnation. The Saudi Electricity Company (SEC) stands as a prime example of an institution operating within an overly complex and strategically significant industry. As the primary provider of electricity in Saudi Arabia, SEC plays a pivotal role in ensuring a stable and efficient energy supply to millions of individuals and businesses. Given the increasing global focus on sustainable energy solutions, digital transformation, and regulatory compliance, SEC faces an intricate set of challenges that necessitate the adoption of advanced decision-making strategies. These strategies must balance short-term operational efficiency with long-term strategic vision, incorporating technological innovations, regulatory frameworks, and evolving market demands.

2.2. Literature review

The study of Mansar, Reijers, and Ounnar conducted in 2009 was focused on the development of the decision-making framework for improvement of Business Process Reengineering efficiency. This paper seeks to analyze the application of Business Process Reengineering, BPR, a technique that is well

known for its capability in redesigning business processes to improve measures of performance that are considered critical, where application of this technique necessitates strategic decisions. According to the authors, the decision-making challenges that need to be accepted and the inefficiency in decision making concerning BPR arise from multiple changes, which are interrelated. A scholarly style of approaching BPR was adopted which encompasses the development of an expert system approach which could be useful in decision making for BPR. To gain insight into the variety and depth of such a hierarchy, the researchers applied both empirical results and theories to design a well-organized decision-making thought-process that could be incorporated into expert systems. The primary goal of this system was to enhance the capacity for managers and decision makers to understand aspects involved in BPR projects, and to enable efficient prioritization and well informed decision-making processes in regard to BPR project priorities. The study highlighted that the efficiency and effectiveness gains, in organizations, implementing BPR projects through expert system based decision-making resulted in vast improvements. Due to the system, it was easy to decide because the managers were able to go through a number of possibilities and come up with the best choice. On the same note, the strategy was able to incorporate the expertise and decision making frameworks for enhancing project plans, lowering down risks and enhancing the efficiency of the overall performance. Therefore, the study proved that a structured decision making strategy with the help of expert systems can enhance the effect of BPR to a significant extent. This development pointed to the ability of technology to enrich the burgeoning field of businessperson query support and enhance business process change. The authors stressed the need to incorporate some of the best practices of adopting an innovative approach that taps into the use of technology to support BPR while at the same increasing the success rates.

Concepts of rational behavior and efficiency appeared as the topics of the research Neuert, Hoeckel, and Woschank (2014) focused on. The main motivation for the study was to adopt theoretical foundations and construct a model to effectively quantify rationality as well as the efficiency that goes

with it in management decision making contexts. Reasoned action was identified as a key component that affects the efficiency and results of managers' actions in the study done. To this end, the authors developed a conceptual framework that is based on literature on decision theory and management science. It included such concepts as cognitive activities, decision making and functionality features influencing rationality/efficiency of managerial decisions. The model that was designed by the researchers was focused on the evaluation of the measure to which rational behavior could be incorporated as well as its implication on the measures of organisational performance in managerial settings. The work also contained some experimental explorations for the empirical confirmation of the suggested model as well as theoretical framework. As a result of the experiments the authors obtain the empirical data supporting the main assumptions of the model they put forward. The outcomes demonstrated that the concept of rational behaviour can be quantified and if so, there is a correlation between the application of rational decisions and effectiveness of organizational operation management processes. Other work demonstrated that there are differences in rationality depending on certain cognitive and contextual parameters; these, in turn, affected overall effectiveness of decision-making by managers. In sum, Neuert, Hoeckel, and Woschank examined rational behaviour and its managerial implication in this research which has presented a new method. Their study was done to intimate a model that may help in understanding the ways in which management decision making may be enhanced by focusing on logical, economizing behaviour. This set the stage for additional empirical research and real-life applications that may improve upon the way that decision-making effectiveness was measured and increased across various organizational settings.

This study by Ejimabo (2015) analyzed the centrality of decision making in organisational leadership and management processes. The concern assessed here was to find out how Decision-making impacts on the Leadership process and productivity and overall success of the organization. The author of the study was central on the interaction between decisions and leadership behavior that supports or

hinders management practices. Data collection in this research is mainly through case studies and interview methods with organizational leaders of several organizations. This approach enabled the author to gather rich understanding of how decision making is viewed by the leaders and how it influences their management practices. According to the study, decision-making is not merely a social activity in leadership but a strategic activity in an organization impacting even on everyday management decisions and far reaching strategic planning. Some of the important learning factors identified were Decision making is crucial for leadership. Managers who involve both reason and hunch and also consideration of others as beneficial to organizational outcomes. The study noted that a common consequence of inadequate decisions, and often due to prolonging the time taken in making the decision, was decreased morale, low productivity, and low organisational trust. On the other hand, those leaders who focused more on areas such as openness and getting informed decisions enhanced confidence and performance of the employees thus creating a good organizational culture. Consequently, Ejimabo (2015) posited that decision-making is an indispensable facet of leadership and plays a key role in the efficiency of management, as well as in the organization. From the study the importers were charged to develop good decision making skills demonstrated by the fact that the ability is not fixed but change with the dynamics of the environment and the various challenges that the leaders are faced with. In summary, it was recommended that organizations should embark on leadership training programs with special emphasis on decision-making techniques to increase efficiency and effectiveness in managerial task.

The study done by Alnuaimi, Alzubi, Alzoubi, and AL-Shinewi (2015) aimed at finding out the relationship between managers' efficiency and the effectiveness of strategic decisions in crisis management in private hospitals in Baghdad, Iraq. Thus, the purpose of the present study was to examine the job of managerial competency for strategic decisions of organizations that face the pressures of crisis. The study of private health-care institutions helped explain how the skills and capabilities of managers increase the survivability and functionality of their organizations in the face of

adversity. To this end, the researchers used an empirical research strategy that aimed at gathering questionnaires that are administered on managers and other decision-makers in private hospitals. In this regard, purposive sampling was employed in order to make sure only those participants who were directly involved in crisis management and strategic decisions were selected. The results obtained from these survey were statistically analyzed by tools like regression analysis and correlation tests, which was used to determine relationship existing between the variables used in the survey. The analysis of the results of the research conducted demonstrated a positive link between the efficiency of managers and the quantity and quality of strategic decisions made in critical situations. The elevated level of managerial skills and efficiency in the hospital under discussion also enabled the former to produce more qualitatively good decisions that promoted successful navigation of the crisis. The study highlighted the values of experience, sound problem solving skill and flexibility amongst the care managers in their line of duty. These qualities were discovered to be core in the desire to ascertain that strategic decisions made were proper and resulted in increased hospital gains. Thus, the study pointed out that efficiency is inexorable for the managers to decide the strategic quality at times of crisis. Further, the findings recommended that ON RBHS should focus on investment in the creation of new managerial posts and improvement of its staff' extending and updating decision-making skills. By doing so, these organizations would be better equipped to manage crises effectively and ensure operational continuity and success. This research emphasizes the value of investing in managerial development as a key strategy for strengthening organizational resilience.

Abubakar et al. (2019) examined the KM perspective that integrated perception towards decision making style and organizational performance. The primary research question was to determine the impact of knowledge management practices as well as the assorted styles of decision making on organisational performance. The authors intended to present a connection between those important factors and the improved organisational results on strategic and operational levels due to better

knowledge management and decision making. Since the researchers were interested in how different values of decision-making affected organizational performance, they based their research design around a theoretical model where KM practices were combined with different decision-making styles, analytical, intuitive, and participative decision making. Data were obtained from a survey conducted among professionals in various occupations which could Support the formulated hypotheses. To evaluate the hypothesized relationships and to make meaningful conclusions, statistical analysis including structural equation modeling (SEM) was used. The research findings shown that knowledge management played an important role in determining organizational performance. Concerning the difference in performance, the study found that organizations that had professionally managed their knowledge resources had enhanced their capability to make quality decisions resulting in better performance. In addition, of the discovered relationships, the moderating effect of decision-making style over the knowledge management and performance was established. In particular, the organizations in which decision making styles selected as ‘participative’ or ‘analytical’ achieved higher value of results supported by effective knowledge management. These styles enabled the integration of some broad scope and group contributions that enriched the course of action and the results of the decision making. Consequently, knowledge management was identified as important in improving decision making and overall organizational performance [22]. It underlined that in a knowledge management environment, the reality is for it to improve performance, which is again enhanced when embraced alongside the right decision-making approach. The authors posited that organizations should pay attention to improving both their knowledge management systems and decision making models to enhance organizational performance and sustain competitive advantage. The research provided actionable insights for managers and leaders aiming to enhance their strategic planning and operational efficiency through integrated knowledge and decision-making processes.

Narawish, Sharma, Rajest, and Regin (2021) aimed at understanding the impact that cost

efficiency has on the decision-making of the banking institutions. The main research question focused on examining the role of cost efficiency as a management constraint affecting decisions made by bank managers particularly when resource optimisation and financial moderation in provision of services is a signaled prerequisite for sustainability of the outlet. To determine the link between cost efficiency and quality of decision, the research used an evaluation of various banking sectors with high efficiency levels. To determine various degrees of cost efficiency in the decision-making process as well as the investment decisions, resource allocation and the operating adjustments the authors used theoretical frameworks together with empirical evidence. In order to gain general information regarding banks' approaches to apportioning cost control as a crucial factor in strategic planning and decision making, the study was undertaken. The results of the study as shown revealed that cost efficiency is an important criterion, which cannot be left out of the entire decision making process in banks. Research also revealed that first stringers, who engage in cost focused activities have better informed and sustainable strategic choices for the benefit of their organizations' fiscal health. The research pointed out that cost control does more than help to avoid unnecessary expenses but also contributes to risk management by making certain that most of the decisions are financial. Further, it noted that cost control also offers banks an ability to effectively manage economic changes and policy standards more effectively. Therefore, Narawish et al. (2021) stressed that cost efficiency as one of the core aspects driving decisions in banking organizations. In their sum up, the authors reasoned that for banks to remain on the competitive frontier while aiming at long term strategic success, managers have to incorporate efficiency in cost into their decision making. This integration also help in using the resources constructively, controlling risks and also improving overall financial performance. The study provided valuable insights for banking leaders aiming to enhance their decision-making frameworks through cost-effective strategies.

2.3. Theoretical foundations of the study

2.3.1 Introduction to Decision-Making in Management

Decision-making is a fundamental aspect of management that significantly influences the success and efficiency of an organization. It refers to the process by which managers identify problems, evaluate workable solutions, and choose a course of action that best aligns with organizational goals. The ability to make sound decisions is essential for leaders as it directly impacts strategic planning, resource allocation, problem-solving, and the overall functionality of the organization (Alnuaimi et al.,2015).

In the realm of management, decision-making extends beyond individual choices; it encompasses a structured approach that includes gathering relevant data, analyzing information, and considering the implications of potential outcomes. Effective decision-making ensures that managers can respond adeptly to changing circumstances, navigate challenges, and seize opportunities that drive organizational growth and sustainability. The complexity of decision-making arises from numerous factors, including the dynamic nature of business environments, diverse stakeholder interests, and the potential risks involved in each decision. Consequently, developing strong decision-making skills is crucial for managers to balance short-term operational needs with long-term strategic goals. This chapter introduces the importance of decision-making in management and sets the stage for exploring how it impacts management efficiency and organizational performance (Mansar et al.,2009).

2.3.2 Defining Decision-Making Processes

Decision-making processes are systematic approaches through which managers and leaders identify issues, evaluate options, and choose the best course of action to achieve organizational objectives. These processes are essential components of management and involve both strategic and operational levels of an organization. Decision-making can be thought of as a structured series of steps that guide managers from recognizing a problem or opportunity to implementing a solution and reviewing its outcomes (Narawish et al.,2021).

1. **Problem Identification:** The process begins with recognizing the need for a decision, which could arise from identifying a problem, seizing an opportunity, or responding to a change in the external or internal environment. Clear problem identification ensures that managers focus their efforts on the right issues and set the stage for effective solutions.
2. **Information Gathering:** After identifying the problem, gathering relevant information is crucial. This involves collecting data and insights from internal records, market research, expert opinions, and other reliable sources. Comprehensive information gathering helps managers understand the context, potential constraints, and implications of the decision.
3. **Defining Objectives:** Setting clear objectives is a critical part of the decision-making process. These objectives function as benchmarks that guide the evaluation of potential options and align the decision with the organization's strategic goals. Defining what the decision aims to achieve helps narrow down workable solutions.
4. **Developing Options:** This step involves brainstorming and developing a range of workable solutions or courses of action. Effective decision-making processes include exploring multiple alternatives to ensure that managers consider a diverse set of options before committing to a particular path.
5. **Evaluating Alternatives:** Once options are developed, managers must evaluate them against the defined objectives. This involves weighing the pros and cons of each option, analyzing potential risks, and estimating the expected outcomes. Tools such as SWOT analysis, cost-benefit analysis, and decision matrices can help systematically comparing alternatives.
6. **Choosing the Best Option:** After evaluating all feasible alternatives, the decision-maker selects the option that best meets the objectives and aligns with the organization's needs and constraints. This selection is often based on the balance of benefits, risks, and resources.

7. **Implementation:** Implementing the chosen course of action involves putting the decision into practice. This step may include developing an action plan, allocating resources, assigning responsibilities, and setting timelines to ensure that the decision is effectively executed. Clear communication is essential during this stage to inform stakeholders and coordinate efforts.
8. **Monitoring and Review:** The decision-making process concludes with monitoring and evaluating the results of the implemented decision. Managers assess whether the decision meets the intended objectives and analyze the impact on the organization. This step is vital for continuous improvement, as it provides insights that can be applied to future decision-making processes.

2.3.3 Key Components of Effective Decision-Making

Effective decision-making is essential for ensuring that management actions lead to desirable outcomes and sustainable growth within an organization. The process involves several key components that help managers navigate complexities and uncertainties while making informed choices. Understanding and mastering these components is crucial for leaders to optimize their decision-making abilities (Abubakar et al.,2019).

1. **Clear Objective Setting:** One of the primary components of effective decision-making is having a clear understanding of the objectives or goals that the decision aims to achieve. Defining clear and measurable objectives helps managers stay focused and ensures that the decision-making process aligns with the organization's strategic direction.
2. **Comprehensive Information Gathering:** Collecting relevant data and information is fundamental for informed decision-making. This involves seeking both quantitative and qualitative data from various internal and external sources to provide a well-rounded understanding of the situation. Comprehensive information gathering minimizes uncertainty and equips managers with the knowledge needed to make sound decisions.

3. **Critical Analysis and Evaluation:** Once information is gathered, it is crucial to analyze and evaluate it critically. This involves assessing the pros and cons of different options, predicting potential outcomes, and understanding the risks involved. Analytical tools and frameworks, such as SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) and decision trees, can aid managers in weighing their options effectively.
4. **Consideration of Alternatives:** Effective decision-making involves exploring multiple options and not limiting the process to a single solution. Considering alternatives allows managers to compare various courses of action and choose the one that best meets the set objectives while mitigating potential risks. This component ensures that decision-makers remain flexible and creative in their approach.
5. **Risk Assessment and Management:** Every decision carries some level of risk and recognizing this is essential for making informed choices. Managers must identify potential risks and develop strategies to manage or mitigate them. This initiative-taking approach ensures that the organization can manage unforeseen challenges that may arise from implementing the decision.
6. **Timeliness:** The timing of a decision can be as crucial as the decision itself. Managers need to balance thorough analysis with the need for prompt action, especially in fast-paced or competitive environments. Effective decision-making involves making timely decisions without unnecessary delays that could result in missed opportunities.
7. **Collaboration and Input from Stakeholders:** Engaging with relevant stakeholders and seeking their input fosters a collaborative decision-making environment. This can lead to more comprehensive solutions and increased buy-in from those who will be impacted by the decision. Collaborative efforts also tap into the collective expertise and insights of a diverse group, enhancing the quality of the final decision

8. **Implementation Planning:** An effective decision-making process includes developing a plan for how the chosen solution will be implemented. This involves assigning responsibilities, setting timelines, and identifying resources needed to conduct the decision. Proper planning ensures that the transition from decision-making to execution is smooth and efficient.
9. **Monitoring and Evaluation:** After a decision is implemented, it is essential to monitor its outcomes and evaluate its effectiveness. This helps managers learn from experience, identify what worked well, and address any unforeseen issues that arise. Continuous monitoring allows for adjustments to be made to keep the decision aligned with the organization's objectives.

2.3.4 The Role of Decision-Making in Management Efficiency

Decision-making plays a pivotal role in enhancing management efficiency, which is fundamental to the success and sustainability of any organization. The process of making informed, timely, and strategic decisions influences not only the quality of managerial actions but also how effectively resources are utilized, challenges are managed, and opportunities are leveraged. **Driving Strategic Alignment and Goal Achievement:** Effective decision-making ensures that managerial actions are aligned with the overarching strategic goals of the organization. When decisions are made with a clear understanding of the company's objectives, they contribute to cohesive efforts across various departments and teams. This alignment streamlines operations and directs resources toward initiatives that drive progress and growth, thus improving overall management efficiency (Hristov et al.,2022).

Optimizing Resource Allocation: One of the key aspects of efficient management is the optimal allocation of resources, including time, money, and workforce. Strategic decision-making enables managers to prioritize tasks and allocate resources where they are most needed, preventing waste and maximizing productivity. By basing decisions on comprehensive data and careful analysis, managers can ensure that resources are directed toward activities that yield the highest returns. **Enhancing Problem-Solving Capabilities:** The ability to make sound decisions is intricately linked to effective

problem-solving. In a complex and rapidly changing business environment, managers are often faced with unexpected challenges. Decision-making skills allow them to analyze problems, evaluate potential solutions, and implement the most effective course of action quickly. This agility in addressing issues reduces downtime and prevents small problems from escalating into larger, more disruptive crises (El Khatib et al.,2022).

Fostering Innovation and Adaptability: Management efficiency is greatly enhanced by the ability to innovate and adapt to contemporary trends and market demands. Decision-making plays a crucial role in fostering an environment where innovative solutions are encouraged and embraced. Managers who are skilled in making decisions are better equipped to explore creative approaches, evaluate their feasibility, and integrate them into existing processes. This adaptability ensures that the organization remains competitive and resilient in the face of change.

Mitigating Risks and Reducing Uncertainty: Every decision carries an inherent level of risk. Effective decision-making involves assessing potential risks and preparing for contingencies, which minimizes the impact of uncertainties. By considering possible outcomes and developing risk management strategies, managers can make decisions that protect the organization's interests while still pursuing growth and innovation. This initiative-taking approach to risk management contributes significantly to the stability and efficiency of management practices (Bag et al.,2021).

Strengthening Team Cohesion and Motivation: The process of decision-making often involves collaboration and input from various stakeholders. When managers include team members in the decision-making process, it fosters a sense of ownership and engagement, which can improve morale and productivity. Team members who feel that their opinions are valued are more likely to contribute positively, support the implementation of decisions, and work efficiently to achieve common goals.

Improving Communication and Execution: Efficient decision-making enhances communication within the organization by establishing clear directives and expectations. When decisions are made

transparently and communicated effectively, it reduces ambiguity and ensures that everyone involved understands their roles and responsibilities. This clarity enables smoother execution of tasks and initiatives, contributing to higher operational efficiency and better overall performance (Hosseini et al.,2022).

Continuous Improvement Through Evaluation: Decision-making is not a one-time process; it involves ongoing evaluation and learning. Managers who consistently assess the outcomes of their decisions gain valuable insights into what works and what doesn't. This feedback loop enables them to refine their decision-making processes over time, contributing to continuous improvement in management efficiency. By learning from past experiences, managers can make more informed and effective decisions in the future.

2.3.5 Factors Influencing Decision-Making Processes

The effectiveness and outcome of decision-making processes in management are shaped by a variety of factors. These factors determine how decisions are approached, analyzed, and ultimately executed. Understanding these influencing elements is crucial for managers to enhance their decision-making capabilities and improve overall organizational efficiency (Al-Shammari et al.,2021).

1. **Organizational Culture:** The culture within an organization significantly affects how decisions are made. A culture that promotes openness, collaboration, and innovation encourages managers to consider a wide range of perspectives and take calculated risks. On the other hand, a rigid, hierarchical culture may limit creativity and lead to more conservative decision-making. The values, norms, and attitudes embedded in the organizational culture shape the decision-making environment and influence the choices managers make.
2. **Leadership Style:** The approach taken by leaders can directly impact decision-making processes. Authoritative leaders may make decisions quickly and independently, potentially overlooking

collaborative input. Conversely, participative leaders often involve their teams, leading to a more inclusive and comprehensive decision-making process. Leadership style determines how much input is gathered, the speed at which decisions are made, and the level of employee buy-in.

3. **Access to Information:** The availability and quality of data play a crucial role in informed decision-making. Managers need access to accurate, relevant, and timely information to analyze options effectively. Poor information quality or a lack of access can lead to suboptimal decisions that may negatively impact organizational performance. The use of data analytics and modern information systems can enhance the decision-making process by providing managers with robust data and insights.
4. **Cognitive Biases:** Human biases can influence decision-making, often leading to flawed judgments. Common biases such as confirmation bias (favoring information that supports pre-existing beliefs), anchoring (relying too heavily on the first piece of information), and overconfidence can affect the objectivity of decision-makers. Recognizing and mitigating these biases is essential for improving decision quality.
5. **Risk Tolerance:** The level of risk that a manager or organization is willing to accept greatly affects decision-making. Managers with an elevated risk tolerance may pursue bold, innovative solutions, while those with minimal risk tolerance might opt for safer, more conservative strategies. The industry, organizational objectives, and past experiences can all shape risk tolerance and influence decision outcomes.
6. **Time Constraints:** Time pressure is a common factor that impacts decision-making. Urgent situations may require quick decisions, sometimes at the expense of thorough analysis. Managers must balance the need for speed with the necessity of due diligence to ensure that decisions are both timely and effective. The ability to make quick yet sound decisions is often a distinguishing factor of effective leaders in high-pressure environments.

7. **Resource Availability:** The resources at a manager's disposal, such as budget, workforce, and technology play a significant role in the decision-making process. Limited resources may force managers to prioritize certain options over others and find creative solutions within constraints. Conversely, abundant resources can provide more flexibility but may also lead to complacency or resource wastage.
8. **Stakeholder Influence:** Decisions within an organization often involve multiple stakeholders, including employees, customers, investors, and partners. The interests and expectations of these stakeholders can impact decision-making. Managers need to consider stakeholder feedback and balance their needs to arrive at decisions that align with broader organizational goals while maintaining relationships and trust.
9. **External Environment:** Factors outside the organization, such as economic conditions, regulatory requirements, market competition, and technological advancements, can heavily influence decision-making. Managers must stay informed about external trends and challenges to adapt their strategies accordingly. Analyzing the external environment helps managers make initiative-taking decisions that position the organization for long-term success.
10. **Personal Experience and Expertise:** A manager's background, experience, and expertise contribute significantly to their decision-making approach. Experienced managers may rely on their intuition and past successes to make decisions more efficiently, while less experienced managers may need to conduct more thorough research and seek additional input. The knowledge and skills that a manager brings to the table help shape their confidence and effectiveness in making decisions.
11. **Technological Support:** The availability and use of decision-support technologies, such as artificial intelligence, data analytics tools, and management software, enhance the decision-

making process. These tools can process vast amounts of data, provide predictive insights, and offer scenario analysis, aiding managers in making more informed and strategic decisions.

2.3.5 Types of Decision-Making Styles and Their Impact

Decision-making styles refer to the manner in which individuals or managers approach and execute decisions. Each style has its distinct characteristics, advantages, and potential drawbacks, influencing the efficiency, adaptability, and outcomes of management processes. Understanding these styles can help managers choose the most appropriate approach for specific situations, ensuring optimal organizational performance (Alojaiman, 2023).

1. **Analytical Decision-Making Style** The analytical style is characterized by a thorough and meticulous approach. Managers who use this style prefer to gather extensive data, conduct in-depth analysis, and explore various alternatives before reaching a decision. This style is often adopted when decisions are complex and require careful consideration of multiple factors.
 - **Impact:** Analytical decision-makers tend to make well-informed and logical decisions that minimize risks. However, the process can be time-consuming, which may delay the implementation of urgent solutions. The comprehensive nature of this style is well-suited for long-term strategic planning but less effective in fast-paced scenarios where speed is essential.
2. **Intuitive Decision-Making Style** Intuitive decision making relies on the manager's instincts and past experiences rather than extensive data analysis. Managers using this style often make decisions quickly, drawing from their gut feelings and accumulated knowledge to assess situations.
 - **Impact:** This style is beneficial in dynamic environments where quick decisions are needed, such as crisis management. It allows for agile responses and leverages the expertise of seasoned managers. However, intuitive decisions can sometimes be less structured, leading to potential oversights if not balanced with factual analysis.

3. Directive Decision-Making Style: The directive style is a fast, decisive approach that focuses on achieving short-term results. Managers using this style rely on minimal data, often preferring straightforward, clear-cut solutions. This method is action-oriented and structured, with a focus on efficiency and direct communication.
 - Impact: Directive decision-making is highly effective for routine and low-stakes decisions where quick action is needed. It enhances operational efficiency and can reduce decision fatigue by simplifying choices. However, it may lead to suboptimal decisions in complex scenarios where a deeper analysis is warranted, and it can sometimes stifle input from others, affecting team collaboration.
4. Collaborative (Consultative) Decision-Making Style: The collaborative style involves seeking input and feedback from team members and stakeholders before making a decision. Managers using this approach value consensus and collective intelligence, often involving discussions and meetings to gather diverse perspectives.
 - Impact: This style fosters a sense of ownership and inclusivity, leading to higher morale and commitment among team members. It can result in more creative and well-rounded decisions due to the variety of viewpoints considered. However, the process can be time-consuming and may delay decision-making, especially when consensus is difficult to achieve.
5. Behavioral Decision-Making Style: Behavioral decision-makers prioritize the impact of decisions on people and their relationships. This style is centered around collaboration, empathy, and the well-being of team members. Decisions are made with a focus on maintaining a positive work environment and ensuring that individuals feel heard and valued.
 - Impact: Behavioral style can improve team dynamics, foster trust, and increase loyalty within the organization. It is especially effective in roles that require strong people skills and when managing

change. The main drawback is that the emphasis on people's satisfaction may sometimes override practical considerations, potentially compromising the efficiency of decisions (Bag et al.,2021).

6. **Conceptual Decision-Making Style** :The conceptual style is characterized by an open-minded and long-term perspective. Managers who adopt this style are creative, explore assorted options, and consider multiple aspects and potential future impacts. They value innovative ideas, strategic thinking, and innovative solutions.

- **Impact:** This style is advantageous for complex and uncertain situations where multiple variables must be considered. Conceptual decision-makers can drive innovation and strategic initiatives that prepare the organization for future challenges. However, this approach can sometimes lead to indecision due to overanalysis and an abundance of ideas.

Effective management often requires flexibility in adopting different decision-making styles based on the specific context. For instance, a directive approach might be best in emergencies, while an analytical or collaborative style could be more appropriate for strategic planning or complex projects. Leaders who can adapt their decision-making style to fit the situation are better equipped to manage various challenges and optimize outcomes.

2.3.6 Challenges in Decision-Making and Management Efficiency

Effective decision-making is essential for achieving management efficiency and driving organizational success. However, managers often face a myriad of challenges that can impede their ability to make sound decisions. These challenges, if not properly addressed, can lead to inefficiencies, suboptimal outcomes, and even failures in meeting organizational objectives. Understanding these challenges is the first step toward developing strategies to overcome them and enhance management practices (Gherboudj et al.,2021).

1. **Limited Information and Uncertainty:** One of the most significant challenges in decision-making is dealing with incomplete or unreliable information. In fast-paced and complex business

environments, it is often difficult to gather all the data necessary to make fully informed decisions. This uncertainty can lead to decision-making based on assumptions or inadequate analysis, increasing the risk of poor outcomes. Managers must learn to navigate uncertainty by utilizing tools such as scenario planning and risk assessment to make the most of available data.

2. **Time Constraints:** In many cases, managers face pressure to make decisions quickly due to deadlines, competitive pressures, or unforeseen circumstances. Time constraints can limit the thoroughness of the decision-making process, leading to hasty choices that may not be well thought out. Balancing the need for speed with the importance of comprehensive analysis is crucial for maintaining management efficiency. Effective time management and prioritization skills can help mitigate the negative impact of time constraints.
3. **Cognitive Biases:** Human cognitive biases are natural tendencies that can distort rational judgment and impact decision-making. Biases such as confirmation bias (favoring information that supports existing beliefs), overconfidence bias (excessive confidence in one's own knowledge or decisions), and anchoring bias (relying too heavily on initial information) can lead to flawed decisions. Awareness and mitigation of these biases are essential for managers to make more objective and effective decisions.
4. **Stakeholder Pressure and Conflicting Interests:** Decision-making in management often involves balancing the expectations and interests of various stakeholders, including employees, customers, investors, and partners. These conflicting interests can complicate the decision-making process, making it challenging to arrive at a solution that satisfies all parties. Managers must possess strong negotiation and communication skills to manage stakeholder expectations and navigate conflicting priorities effectively.
5. **Risk Aversion :** Many managers face challenges related to their own or their organization's risk tolerance. Excessive risk aversion can lead to missed opportunities and a reluctance to pursue

innovative solutions, while an overly aggressive risk-taking approach can endanger the stability of the organization. Finding the right balance between caution and innovation is crucial for making decisions that align with the organization's strategic goals. Managers must develop a nuanced understanding of risk management to make decisions that are both bold and calculated.

6. **Resistance to Change:** Organizations and individuals within them can be resistant to change, which poses a challenge for managers trying to implement new decisions or strategies. This resistance may stem from fear of the unknown, entrenched habits, or concerns about the potential impact on job security or processes. Overcoming resistance to change requires effective communication, transparent decision-making, and strategies that engage employees in the change process.
7. **Resource Limitations :** Constraints related to budget, workforce, technology, or time can limit the range of feasible decisions that managers can make. Resource limitations force managers to make tough choices about prioritizing projects or scaling down initiatives. These constraints can lead to compromises that affect the overall efficiency of management. Managers need to be adept at resource allocation and optimization to make the most of what is available.

2.3.7. Strategies to Improve Decision-Making for Better Efficiency

Effective decision-making is crucial for improving management efficiency and achieving organizational success. To enhance decision-making, managers can adopt specific strategies that facilitate better analysis, faster action, and more impactful outcomes. Implementing these strategies can help managers overcome familiar challenges, reduce risks, and maximize the effectiveness of their decisions (El Khatib et al.,2022).

1. **Foster a Data-Driven Culture:** One of the most effective ways to improve decision-making is by embracing a data-driven approach. Managers should leverage data analytics tools to gather relevant information, analyze trends, and generate insights. By using accurate data, managers can

make informed decisions that are less influenced by assumptions and more grounded in fact. Implementing business intelligence platforms and encouraging data literacy within teams ensures that decisions are based on comprehensive and reliable data.

2. **Encourage Collaborative Decision-Making** :Involving multiple perspectives in the decision-making process can lead to more well-rounded and creative solutions. Managers should encourage collaboration by seeking input from team members, stakeholders, and experts who bring different viewpoints and expertise. This approach fosters a sense of ownership and buy-in, which can lead to smoother implementation. Brainstorming sessions, cross-functional meetings, and workshops can facilitate collaborative decision-making.
3. **Develop and Use Decision-Making Frameworks**:Using established frameworks, such as the SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), decision trees, and cost-benefit analysis, can help structure the decision-making process. These tools provide a systematic way to evaluate options and anticipate potential outcomes, making it easier for managers to choose the best course of action. By breaking down complex decisions into smaller, manageable components, frameworks can simplify the process and enhance decision accuracy.
4. **Prioritize Effective Communication**:Clear and effective communication is essential for efficient decision-making. Managers should ensure that relevant information is shared promptly and transparently across teams. Effective communication reduces misunderstandings and allows everyone involved to have a mutual understanding of the objectives, challenges, and potential solutions. Regular updates, clear directives, and open lines of communication contribute to faster and more informed decision-making.
5. **Enhance Emotional Intelligence** :Emotional intelligence (EI) helps managers navigate stressful situations and make decisions without being swayed by emotions or external pressures. By developing EI, managers can maintain composure, think clearly, and assess situations

objectively. Techniques such as mindfulness and stress management practices can improve emotional regulation, leading to more rational and balanced decision-making.

6. **Balance Intuition with Data:** While data is essential for informed decision-making, intuition can play a role, especially in situations where data may be incomplete or ambiguous. Experienced managers can use their instincts alongside data to make decisions that consider both the quantitative and qualitative aspects. Balancing intuition with data allows for quicker decisions in high-pressure situations without sacrificing thoroughness.
7. **Implement Decision-Support Tools and Technologies:** The use of decision-support systems (DSS) and technologies such as artificial intelligence (AI) and machine learning (ML) can significantly enhance the decision-making process. These tools can process copious amounts of data, identify patterns, and predict outcomes, helping managers make informed decisions more efficiently. Implementing AI-driven analytics can provide real-time insights and facilitate adaptive decision-making.
8. **Train and Develop Decision-Making Skills:** Continuous professional development is essential for managers to refine their decision-making skills. Workshops, training programs, and courses focused on critical thinking, problem-solving, and strategic planning can help managers build the skills they need to make better decisions. Encouraging learning from past experiences and analyzing the outcomes of previous decisions can also enhance decision-making capabilities over time.
9. **Establish Clear Objectives and Criteria :** To make efficient decisions, managers should define clear objectives and criteria for evaluating potential solutions. Knowing the specific goals that need to be achieved and the metrics by which success will be measured helps streamline the decision-making process. This clarity ensures that decisions are aligned with the organization's strategic priorities and that choices are made with purpose and precision.

10. **Manage Risks Proactively:** Effective decision-making includes assessing potential risks and planning for contingencies. Managers should develop risk management plans that identify potential obstacles and outline steps to mitigate them. This initiative-taking approach allows for informed decision-making that anticipates challenges and incorporates strategies to minimize negative impacts. Tools such as risk matrices and scenario analysis can aid in understanding the likelihood and impact of potential risks.

11. **Practice Agility and Flexibility :**In a rapidly changing business environment, flexibility is key to making efficient decisions. Managers should be prepared to adapt their plans and strategies as added information emerges or conditions change. Agile decision-making practices involve continuously reviewing and refining decisions, enabling managers to pivot when necessary to stay on track with organizational goals.

12. **Monitor and Evaluate Decision Outcomes:**Effective decision-making does not end with implementation. Managers should monitor the outcomes of their decisions and evaluate their impact on management efficiency. This ongoing assessment allows managers to learn from successes and failures, adjust their strategies, and apply these lessons to future decision-making. Regular feedback loops ensure that decisions are continuously improved for better outcomes.

2.3.8. Characteristics of the Centralized System and Its Impact on Decision-Making

The centralized system represents the traditional approach to organizational management, where decision-making authority is concentrated at the highest levels of administration. This system is characterized by several key features:

- **Authority Consolidation and Strategic Vision Alignment:** In a centralized system, all authority and decision-making powers are concentrated at the top management level, ensuring uniform policies and strategies across different departments. This consolidation helps maintain

strategic coherence and precise alignment of efforts toward achieving the organization's overarching goals.

- **Strict Control Over Decision-Making:** A centralized system allows top management to oversee all operations and make decisions based on well-defined, objective criteria. This level of control helps minimize deviations and ensures adherence to the organizational framework, facilitating consistent decision implementation across the institution (Amanchukwu et al., 2015).
- **Efficient Decision-Making in Stable Environments:** In organizations operating in relatively stable environments, the centralized system can enhance execution speed, as decisions do not require extensive coordination among multiple units. However, this system may suffer from slow responses in times of sudden changes or crises, as decisions must pass through higher administrative levels for approval.
- **Limitations in Adaptability and Flexibility:** While centralization ensures uniformity and policy coherence, it may pose challenges in dynamic work environments where rapid adaptability is crucial. The concentration of authority can slow down responses to urgent situations or local demands that differ from one unit to another (Karam et al., 2019).

2.3.9. Advantages and Challenges of the Decentralized System in Work Environments

Decentralization distributes authority across various administrative levels within an organization, fostering greater participation among teams and employees in the decision-making process. This system offers several advantages but also presents certain challenges that must be addressed to ensure its effectiveness:

- **Advantages of the Decentralized System:**
 - **Faster Response Times:** Delegating decision-making authority enables local teams to make timely decisions that align with their specific needs. This autonomy allows for swift responses

to workplace challenges without awaiting approvals from higher management, thereby enhancing organizational agility (Zimmerman et al., 2011).

- **Increased Employee Engagement and Innovation:** Employees in a decentralized system feel a greater sense of involvement in decision-making, fostering creativity and innovation. This participation enhances a sense of responsibility and commitment, encouraging diverse perspectives that improve decision quality.
- **Diverse Expertise and Perspectives:** When decision-making is distributed across multiple levels, organizations can leverage the diverse knowledge and experience of employees and managers from different departments. This diversity enriches the decision-making process, leading to more comprehensive and well-informed choices.

- **Challenges of the Decentralized System:**

- **Potential Fragmentation and Coordination Difficulties:** Distributing authority can lead to a lack of alignment between different units, making effective coordination essential to ensure consistency in policies and procedures. Without proper coordination, conflicting decisions may arise, negatively impacting overall organizational performance (Shamim et al., 2019).
- **Higher Administrative Costs:** A decentralized system requires a well-structured organizational framework and robust monitoring mechanisms to ensure that decisions are made efficiently. These requirements may increase operational and administrative costs, particularly in large organizations that need advanced communication and coordination systems.
- **Challenges in Performance Monitoring and Evaluation:** With multiple decision-making levels, evaluating administrative performance becomes more complex. Organizations must establish clear performance indicators and integrated evaluation systems to ensure that strategic objectives are achieved consistently across all units (Karam et al., 2019).

In summary, both centralized and decentralized decision-making systems offer distinct approaches to

authority distribution and decision execution. While centralization ensures strategic consistency and uniform policy implementation in stable environments, decentralization enables greater flexibility and responsiveness in dynamic work settings. The choice between these systems depends on the organization's nature and operational environment. Large institutions, such as the **Saudi Electricity Company (SEC)**, may benefit from adopting a hybrid approach that integrates the strengths of both models, ensuring a balanced and efficient administrative performance.

2.3.10. The Evolution of Decision-Making Models: From Traditional to Intelligent

In a competitive and rapidly changing work environment, the decision-making process has become the cornerstone of successful management strategies. This process has undergone significant evolution—from traditional models based on rational thinking and systematic analysis to intelligent models that harness modern technologies and big data. This transformation is not merely a technological shift; it is the result of the interplay between the increasing challenges in the work environment and the evolving needs of organizations to enhance their operational efficiency and achieve outstanding strategic performance. The following sections detail this evolution by first discussing classical models and their foundations and then moving toward modern models and their role in enhancing performance (Shamim et al., 2019). Classical decision-making models are considered the primary cornerstone in the development of traditional management theories, as they rely on the principles of rational thinking and systematic analysis. These models are based on a set of assumptions that presume the availability of complete and accurate information, enabling decision-makers to follow defined steps to arrive at the optimal choice. The key characteristics of these models include:

- **Rational Approach and Systematic Analysis:**

The rational decision-making model begins by accurately identifying the problem, followed by collecting relevant data, determining available alternatives, and then evaluating these alternatives according to specific criteria to reach a decision based on logical analysis. Herbert Simon introduced the

concept of "bounded rationality," highlighting that decision-makers often face constraints related to information, time, and analytical capacities, which necessitates the adoption of procedures based on estimates and certain assumptions.

- **Practical Application and Organizational Framework:**

Classical models played a pivotal role in establishing strict organizational structures, as they were used to set objectives and devise strategies in stable work environments. These models enabled managers to monitor performance and make decisions based on objective foundations, thereby strengthening the administrative system in traditional institutions. However, weaknesses have emerged when these models encounter environments characterized by uncertainty and rapidly changing information, as is the case in some contemporary business sectors (Donovan et al., 2015).

- **The Impact of Classical Models on Institutions:**

Although classical models provided a solid theoretical framework that helped establish the foundations of decision-making in organizations, they often face difficulties in environments that demand rapid responses and adaptability. For example, routine procedures based on fixed steps may be unsuitable for dealing with emergencies or swift market changes, prompting researchers and practitioners to search for more effective alternatives. With the advancement of technology and the increasing complexity of the business environment, it has become necessary to adopt models that are more flexible and responsive to modern challenges. In this context, intelligent models have emerged as an advanced alternative that integrates human expertise with sophisticated technical tools, thereby enhancing the decision-making process on multiple levels:

- **Utilizing Modern Technologies:**

Modern models rely heavily on applications of artificial intelligence, machine learning, and big data, allowing managers to analyze vast amounts of information quickly and accurately. Advanced decision support systems can analyze multiple scenarios and provide recommendations based on innovative

analytical algorithms, thus reducing the risks associated with decision-making and enhancing its effectiveness. For instance, these systems can help the Saudi Electricity Company (SEC) predict future trends and identify opportunities and challenges in the energy sector (Duan et al., 2019).

- **Flexibility and Adaptation to Changing Environments:**

Intelligent models enable institutions to respond swiftly to sudden changes in the market by employing methods that analyze future scenarios and anticipate trends. Furthermore, these models promote collective participation among different departments, allowing each unit to contribute insights that shape the final decision in a more comprehensive and balanced manner. This participatory approach fosters a spirit of innovation and renewal within the organization, positively impacting overall performance.

- **Enhancing Management Efficiency:**

By integrating technical tools with strategic management principles, modern models improve management efficiency by reducing the time required for decision-making and enhancing the quality of decisions made. Management information systems and intelligent analytics contribute to striking a balance between short-term and long-term objectives, enabling institutions such as SEC to adapt to rapid changes and implement flexible, effective strategies (Griffin et al., 2022).

- **Challenges and Opportunities in Adopting Modern Models:**

Despite the numerous advantages offered by intelligent models, their implementation requires significant investments in technological infrastructure and human resource training. Institutions must also tackle challenges related to integrating legacy systems with modern technologies and shifting the corporate culture to embrace this transformation. Nonetheless, the benefits of transitioning to modern models outweigh these challenges, as they contribute to enhancing innovation and competitiveness in global markets.

In summary, the transition from classical to intelligent models represents a qualitative transformation in how institutions approach decision-making. While classical models provided a solid theoretical

framework and clear methodological approaches, modern models offer analytical and technical tools that enable rapid and effective responses to environmental changes. The constructive collaboration between human expertise and modern technology forms the foundation for achieving flexible and efficient management, capable of meeting future challenges and attaining exceptional strategic performance—as exemplified by major institutions such as the Saudi Electricity Company (SEC) (Viswanadham et al., 2015).

2.3.11. The Impact of Organizational Structures and Corporate Culture on Decision-Making Processes

Organizational structures and corporate culture play a fundamental role in shaping decision-making processes within institutions. The way an organization is structured determines how authority is distributed and how decisions are made, while corporate culture influences employees' attitudes toward decision-making, collaboration, and innovation. Understanding the relationship between these elements is essential for enhancing management efficiency and ensuring effective decision-making practices. This section explores the impact of organizational structures on power distribution and decision-making, as well as the role of corporate culture in either supporting or hindering management efficiency.

2.3.12. The Effect of Organizational Structure on Power Distribution and Decision-Making

The organizational structure defines the framework within which authority and responsibilities are allocated across various levels of an institution. It directly impacts decision-making by determining who has the power to make critical choices and how those decisions are communicated and implemented. There are several key aspects through which organizational structure affects decision-making (Swanson et al., 2022):

- **Hierarchical vs. Flat Structures:**

In hierarchical organizations, decision-making is typically centralized at the top management level, ensuring consistency but sometimes leading to slow decision execution. Conversely, flat structures distribute authority more evenly, allowing for faster decision-making at various levels but sometimes resulting in a lack of uniformity across departments.

- **Functional vs. Divisional Structures:**

- In a functional structure, decision-making tends to be specialized within departments (e.g., finance, operations, marketing), leading to greater expertise but sometimes causing silos that hinder cross-functional collaboration (Ren et al., 2020).
- In a divisional structure, decision-making is decentralized within business units or geographic regions, improving responsiveness but potentially leading to inconsistencies in a strategic direction.

- **Matrix Structures and Their Influence on Decision-Making:**

Matrix structures combine elements of both functional and divisional frameworks, allowing employees to report to multiple managers across different projects or functions. This structure enhances flexibility and collaboration but can complicate decision-making due to overlapping authority and the need for extensive coordination.

- **Power Distribution and Autonomy in Decision-Making:**

The extent to which decision-making authority is delegated within an organization determines its efficiency. Highly centralized structures ensure control but may slow down responses, whereas decentralized organizations empower managers at various levels, leading to quicker adaptability but requiring robust mechanisms to maintain alignment with strategic goals (Bossert et al., 2014). Ultimately, the effectiveness of decision-making is highly dependent on the alignment between the organizational structure and the institution's operational needs. A well-designed structure should balance authority distribution and operational flexibility to enhance management efficiency.

2.3.13. The Role of Corporate Culture in Supporting or Hindering Management

Efficiency

Corporate culture encompasses the values, beliefs, and behavioral norms that shape how decisions are made within an organization. It plays a critical role in influencing management efficiency by either enabling an initiative-taking and adaptive decision-making environment or creating resistance to change.

Several key factors determine the impact of corporate culture on decision-making:

- **Encouraging Innovation and Risk-Taking:**

Organizations with a culture that promotes innovation encourage employees to take calculated risks and explore creative solutions in decision-making. Companies such as tech-driven firms thrive by fostering an experimental mindset, whereas rigid corporate cultures may discourage risk-taking and hinder progress (Nayyar et al., 2011).

- **Trust and Open Communication in Decision-Making:**

A culture that values transparency and open communication facilitates more effective decision-making processes. Employees feel empowered to share insights, challenge ideas, and collaborate across departments. On the other hand, organizations with a culture of secrecy or bureaucracy may suffer from inefficiencies due to slow decision-making and limited information flow.

- **Leadership and Decision-Making Autonomy:**

The leadership style within an organization significantly impacts its decision-making culture. Transformational leaders who empower teams to contribute to decision-making tend to create agile and efficient management structures. In contrast, autocratic leadership may centralize control, potentially limiting responsiveness and adaptability (Cole et al., 2018).

- **Resistance to Change and Bureaucratic Barriers:**

Some corporate cultures resist change due to deep-rooted traditions, hierarchical power dynamics, or bureaucratic obstacles. This resistance can delay decision-making, reduce responsiveness to market

changes, and hinder overall efficiency. Overcoming this requires a shift in mindset and the implementation of change management strategies to align employees with new decision-making approaches.

- **Employee Engagement and Decision Ownership:**

When employees feel a keen sense of ownership in their roles, they are more likely to contribute actively to decision-making processes. An engaged workforce helps streamline decision execution, reduce operational bottlenecks, and improve overall productivity. Conversely, a disengaged culture leads to delays, inefficiencies, and a lack of accountability in implementing decisions (Seshadri et al., 2016).

2.3.14. Challenges and Obstacles in Implementing Decision-Making Processes within SEC

Effective decision-making is crucial for organizational success, but its implementation is often met with various challenges. The **Saudi Electricity Company (SEC)**, as a major entity in the energy sector, faces numerous obstacles that affect its ability to streamline decision-making processes and enhance management efficiency. These challenges range from organizational and cultural barriers to technical and human resource limitations. Understanding these difficulties is essential for developing strategies to improve decision-making and achieve greater operational efficiency.

2.3.15. Organizational and Cultural Challenges Faced by Managers

Managers at SEC operate within a complex organizational structure that demands strategic decision-making at multiple levels. However, several organizational and cultural factors can hinder the effectiveness of these processes:

- **Bureaucracy and Hierarchical Barriers:**

SEC, like many large corporations, follows a hierarchical structure where multiple layers of approval are required for decision-making. This bureaucracy can slow down critical decisions, leading to delays in project execution, increased operational costs, and a lack of responsiveness to market changes (Feizy et

al., 2015).

- **Resistance to Change and Risk Aversion:**

A key cultural challenge within SEC is the resistance to adopting new decision-making frameworks, especially when they involve innovative or technology-driven approaches. Many employees and managers may prefer traditional methods due to familiarity, leading to reluctance in embracing decentralized decision-making models or digital transformation initiatives.

- **Coordination Across Departments:**

As a large organization with multiple operational units, SEC faces difficulties in ensuring seamless coordination between different departments. Decision-making processes often require input from various divisions such as finance, operations, and engineering, which can lead to communication gaps and inefficiencies. Misalignment between teams may result in inconsistent strategies and delays in decision implementation (Mutambara et al., 2019).

- **Leadership and Decision-Making Autonomy:**

The extent to which middle and lower-level managers are empowered to make decisions significantly affects efficiency. In highly centralized organizations, managers may lack the autonomy to act independently, causing bottlenecks in decision-making. Encouraging a more decentralized approach, where appropriate, can improve responsiveness and accountability.

- **Stakeholder and Regulatory Influence:**

As a publicly regulated entity, SEC must adhere to governmental policies and industry regulations. External regulatory constraints can limit the flexibility of decision-making processes, requiring additional approvals and compliance measures that may slow down operational execution (Johnson et al., 2016).

2.3.16. Technical Barriers and Human Resource Constraints and Their Impact on Efficiency

In addition to organizational and cultural obstacles, SEC faces significant technical and workforce-related challenges that impact decision-making efficiency. These challenges include:

- **Integration of Digital Decision-Making Tools:**

While SEC has adopted various technologies for operational management, integrating advanced decision-support systems remains a challenge. Many traditional decision-making processes still rely on manual reporting and legacy systems, which lack real-time data analytics and predictive modeling capabilities. This limitation reduces the accuracy and speed of decision-making.

- **Data Management and Accessibility Issues:**

Effective decision-making requires access to reliable and comprehensive data. SEC, like many large organizations, may struggle with fragmented data sources, outdated record-keeping methods, and data silos that prevent seamless information sharing across departments. Without a unified data infrastructure, decision-makers may face difficulties in obtaining accurate insights for strategic planning (Aktaş et al., 2011).

- **Cybersecurity Risks and Data Privacy Concerns:**

As SEC moves toward digital transformation, ensuring the security and privacy of decision-making data becomes increasingly critical. Cybersecurity threats, including data breaches and unauthorized access, pose risks to the integrity of sensitive information. Developing robust cybersecurity measures is essential to maintain trust and efficiency in digital decision-making processes.

- **Shortage of Skilled Workforce in Decision Analytics:**

The effectiveness of modern decision-making is heavily dependent on human expertise in data science, artificial intelligence, and analytics. SEC may face challenges in recruiting and retaining professionals with advanced technical skills who can leverage data-driven insights for informed decision-making. Upskilling the existing workforce through training programs can help address this gap (Zhu et al., 2015).

- **Operational Constraints in Resource Allocation:**

Decision-making efficiency is often influenced by how resources—such as budget, personnel, and technology—are allocated. In some cases, resource limitations may lead to delays in implementing strategic initiatives. Ensuring optimal allocation of financial and human resources is key to enhancing decision-making capabilities.

- **Challenges in Adopting AI and Automation:**

Artificial intelligence (AI) and automation technologies have the potential to revolutionize decision-making processes. However, integrating AI-driven decision support systems within SEC requires significant investment in infrastructure, training, and change management. Overcoming resistance to automation and ensuring seamless AI integration remain critical challenges (Zhu et al., 2015).

The implementation of effective decision-making processes within SEC is hindered by a combination of **organizational, cultural, technical, and workforce-related barriers**. Addressing these challenges requires a **multi-faceted approach** that includes reducing bureaucratic inefficiencies, fostering a culture of adaptability, enhancing digital capabilities, and investing in workforce development. By leveraging modern technologies and empowering decision-makers at all levels, SEC can enhance its efficiency and responsiveness, positioning itself for sustained growth and innovation in the energy sector.

2.3.17. The Role of Leadership and Governance in Enhancing the Effectiveness of Decision-Making

Decision-making is at the heart of organizational success, and its effectiveness is significantly influenced by leadership and governance. Strong leadership provides strategic direction, while governance ensures that decision-making processes adhere to ethical, legal, and operational standards. In an organization like the Saudi Electricity Company (SEC), where large-scale operations require timely and well-informed decisions, leadership and governance play a crucial role in maintaining efficiency, accountability, and overall corporate performance (Innocent et al., 2015). This section explores how leadership serves as a driving force in shaping decision-making strategies and how governance and

transparency contribute to enhancing management efficiency.

2.3.18. Leadership as a Driving Force for Decision-Making Strategies

Leadership is one of the most critical factors influencing decision-making. Effective leaders guide organizations by setting clear objectives, fostering collaboration, and ensuring that decisions align with corporate goals. In a complex and highly regulated industry like energy, leaders must balance strategic vision with operational realities to optimize efficiency and performance (Osman et al., 2023) .

Key Roles of Leadership in Decision-Making:

- **Setting a Clear Strategic Vision:**

Strong leaders provide a well-defined strategic direction that aligns decision-making processes with the organization's long-term goals. At SEC, leadership must anticipate industry trends, assess emerging challenges, and establish a roadmap for sustainable growth. Without clear leadership, decision-making can become reactive rather than initiative-taking, leading to inefficiencies and missed opportunities.

- **Facilitating a Decision-Oriented Organizational Culture:**

Effective leaders cultivate an environment where decision-making is data-driven, innovative, and aligned with organizational values. They encourage employees to take ownership of their roles, fostering a culture of accountability and continuous improvement. When employees feel empowered to make decisions within their scope of authority, operational efficiency improves significantly (Keir et al., 2016).

- **Encouraging Innovation and Adaptive Decision-Making:**

In today's rapidly changing business landscape, static decision-making models are no longer sufficient. Leadership must promote flexibility and adaptability by integrating modern technologies, encouraging creative problem-solving, and embracing change. Leaders who support experimentation and calculated risk-taking help organizations stay ahead of the competition.

- **Enhancing Collaboration and Cross-Departmental Decision-Making:**

Decision-making is rarely a solitary process; it requires input from multiple stakeholders across various organizational units. Strong leadership fosters collaboration by breaking down silos and encouraging cross-functional teams to work together. At SEC, for example, coordination between engineering, finance, operations, and regulatory departments is essential for making informed and effective decisions (Osman et al., 2023).

- **Crisis Management and Rapid Decision-Making:**

In times of crisis—such as power outages, regulatory changes, or market disruptions, leaders must make quick yet well-calculated decisions. Crisis leadership involves the ability to assess risks, prioritize actions, and implement solutions under pressure. A decisive leader can prevent minor issues from escalating into major operational failures.

- **Developing Future Leaders and Succession Planning:**

Leadership is not just about making decisions today; it is also about preparing the next generation of decision-makers. Effective leaders at SEC must invest in leadership development programs to ensure that emerging managers are equipped with the skills needed for strategic decision-making in the future. While leadership sets the tone for decision-making, governance provides the structure, policies, and accountability mechanisms that ensure decisions are ethical, transparent, and aligned with corporate objectives (Tzeng et al., 2011).

2.3.19. The Importance of Governance and Transparency in Elevating Management Efficiency

Governance refers to the systems, policies, and frameworks that regulate decision-making processes within an organization. Strong governance ensures that decisions are made based on clear guidelines, reducing risks, and increasing efficiency. Transparency, as a core component of governance, fosters trust among employees, stakeholders, and regulatory bodies.

- **Establishing a Clear Decision-Making Framework:** Governance structures provide standardized protocols for decision-making, ensuring that choices are made consistently and in alignment with corporate policies. This framework helps prevent arbitrary decisions that may compromise efficiency or create conflicts within the organization.
- **Enhancing Accountability and Risk Management:** Good governance holds decision-makers accountable for their actions, ensuring that every decision is justifiable and backed by data. At SEC, where decisions affect national infrastructure and energy distribution, a well-defined governance system minimizes risks related to fiscal management, regulatory compliance, and operational integrity (Biresselioglu et al., 2018).
- **Compliance with Regulatory and Ethical Standards:** As a state-affiliated organization, SEC operates under strict governmental regulations. Governance mechanisms ensure that all decisions comply with national laws, environmental policies, and industry standards. Transparent decision-making processes help avoid legal complications and build credibility with regulators and stakeholders.
- **Improving Financial and Operational Efficiency:** Transparent governance reduces inefficiencies related to mismanagement, fraud, or resource misallocation. When decision-making processes are well-documented and guided by governance principles, organizations can optimize resource allocation and reduce operational costs (Conejo et al., 2010).
- **Fostering Stakeholder Confidence:** Transparency in governance reassures shareholders, employees, and customers that decisions are made with integrity. Public disclosure of major strategic decisions, financial reports, and corporate policies enhances trust and strengthens SEC's reputation as a dependable energy provider.
- **The Role of Digital Governance in Decision-Making:** Digital governance tools, such as decision-support systems and AI-driven analytics, enhance transparency by providing real-time data on

corporate performance. These technologies enable SEC to track key performance indicators (KPIs), monitor decision outcomes, and adjust strategies accordingly (Ejimabo et al., 2015).

➤ **Challenges in Governance and Transparency:**

Despite its benefits, implementing strong government and transparency policies comes with challenges. Some of the most common obstacles include:

- **Resistance to Change:** Employees and managers accustomed to informal decision-making processes may resist adopting new governance protocols.
- **Complex Bureaucracy:** While governance improves accountability, excessive regulations can slow down decision-making and create administrative bottlenecks (Tzeng et al., 2011).
- **Ensuring Data Integrity:** Transparency depends on reliable and accurate data but ensuring data consistency across large organizations like SEC requires significant investment in digital infrastructure.

Leadership and governance are two essential pillars that shape the effectiveness of decision-making within SEC. Strong leadership drives strategic direction, fosters innovation, and enhances crisis management, while governance ensures accountability, transparency, and compliance with regulations. When both elements work in harmony, they create an efficient decision-making environment that improves operational performance, reduces risks, and strengthens stakeholder confidence (Zhu et al., 2015). For SEC to maintain its position as a leading energy provider, it must continue investing in leadership development programs and governance improvements, ensuring that its decision-making processes are efficient, transparent, and aligned with long-term corporate objectives. By embracing a leadership-driven and governance-focused approach, SEC can navigate industry challenges with agility and achieve sustainable growth in an evolving global energy market.

2.3.20. Technological Innovation and Decision-Support Tools

In the era of digital transformation, technological advancements have revolutionized decision-

making processes across industries. Organizations, including the Saudi Electricity Company (SEC), increasingly rely on data-driven decision-making to enhance operational efficiency, improve service delivery, and maintain a competitive edge. With the vast amount of data generated daily, leveraging modern technologies and decision-support tools is no longer optional but a necessity (Smith et al., 2012). This section explores the role of technological innovation in decision-making, focusing on how modern technologies aid information analysis and how management information systems (MIS) contribute to improving organizational efficiency.

2.3.21. Utilizing Modern Technologies in Information Analysis and Decision Support

Decision-making has evolved from an intuition-based approach to a data-driven process powered by analytics, automation, and emerging technologies. The integration of big data, artificial intelligence (AI), machine learning (ML), predictive analytics, and other advanced tools has significantly enhanced the ability of organizations to make well-informed and strategic decisions (Nisar et al., 2021). These technologies enable businesses to process vast amounts of data, identify patterns, anticipate risks, and optimize operations with greater accuracy and efficiency.

One of the fundamental enablers of modern decision-making is big data and predictive analytics, which allow organizations to analyze massive datasets generated from customer interactions, operational processes, and market conditions. By leveraging these insights, businesses can detect trends, correlations, and emerging risks, enabling them to prepare initiative-taking strategies (Koop et al., 2018). Similarly, AI and ML technologies enhance decision-making by processing complex data in real-time, identifying optimal courses of action, and continuously improving predictive accuracy through learning from historical patterns (Wandersman et al., 2012). AI is increasingly being utilized in areas such as risk assessment, energy demand forecasting, and maintenance scheduling, contributing to smarter resource allocation and operational efficiency.

Another crucial technology is the Internet of Things (IoT) and smart infrastructure, which plays a transformative role in industries such as energy and utilities. IoT-powered smart grids collect real-time data from sensors, equipment, and distribution networks, providing insights that improve power reliability, detect faults, and enhance service quality. This real-time monitoring capability ensures more efficient energy distribution and consumption management. Additionally, cloud computing and edge computing facilitate seamless data storage, analysis, and collaboration across stakeholders, allowing businesses to make informed decisions with minimal latency (Wandersman et al., 2012). While cloud computing enables large-scale data processing, edge computing ensures real-time decision-making by processing data closer to its source, reducing delays in critical applications.

Blockchain technology further enhances decision-making by ensuring transparency, security, and immutability in transaction records and approvals (Sauter et al., 2014). It is particularly useful in areas such as regulatory compliance, financial transactions, and contract management, where secure and verifiable decision records are essential. By integrating blockchain, organizations can mitigate fraud, enhance accountability, and improve trust in decision-making processes. The adoption of these technology-driven decision support systems offers several benefits. Improved decision accuracy is achieved by reducing errors and biases through data-driven insights. Faster response times are facilitated by automation, which speeds up analysis and enhances real-time decision capabilities (Sauter et al., 2014). Additionally, AI-powered simulations help in risk mitigation by identifying potential threats and developing initiative-taking strategies. Cost optimization is another key advantage, as advanced analytics allow organizations to allocate resources efficiently, eliminating unnecessary expenditures.

By embracing these innovative technologies, organizations like SEC can significantly enhance their decision-making capabilities, ensuring operational efficiency, reliability, and long-term sustainability. The seamless integration of big data, AI, IoT, cloud computing, and blockchain will not only improve strategic planning but also position companies to navigate complex challenges with

confidence and agility.

2.3.22. Management Information Systems and Their Role in Enhancing Performance and Efficiency

The structured system of Management Information Systems (MIS) enables businesses to gather process and analyze data which spreads across different operational functions. The Management Information Systems at SEC serve as a critical component to handle organizational operations with financial planning and strategic decisions. Multiple departments such as finance, human resources, operations and customer service can access accurate consistent historical records through MIS data consolidation (Eastwood et al., 2012).

MIS data processing together with reporting enables users to generate valuable insights from untapped source data through interactive displays and analytical reports. The management tools generate live performance indicators which enable decision-makers to take swift data-based choices. Through integration with both AI and Decision Support Systems (DSS) MIS enables managers to run simulations which evaluate strategy outcomes before actual implementation. Strategic planning becomes enhanced through MIS by providing forecasting models combined with key performance indicators (KPIs) that help organizations track their goals toward long-term objectives (Rose et al., 2016).

MIS helps organizations maintain regulatory compliance together with risk management through automated compliance assessment and business and security risk detection capabilities. Automated systems deployed within these areas decrease the potential for regulatory violations alongside providing a robust system for effective risk management to the organization. The efficiency impact of MIS on organizations becomes significant because it enhances productivity through the automation of tasks and improves department communication (Hepbasli et al., 2011) and enables real-time decision-making and resource optimization to reduce costs.

Various challenges exist during the implementation of a successful MIS framework. The major

implementation barrier involves data interoperability because organizations need to invest heavily in changing outdated legacy systems to adopt contemporary MIS platforms. The SEC must solve privacy and data security difficulties because it manages many delicate datasets which need robust cybersecurity methods to stop data breaches. The successful use of MIS tools by employees depends on their adequate training and adoption which enables both staff and managers to achieve maximum operational benefits for their decision support systems.

SEC needs to make decisive changes to improve analytics capability and digital systems and protect critical data as part of its plan to achieve tech-driven decision-making success. The organization should implement AI decision-support systems while integrating MIS with current IT infrastructure and strengthen cybersecurity protection of valuable data and train staff for improved digital competence. SEC's technological approach will optimize its decision-making operations and strengthen its leadership position as well as improve its organizational governance in the energy sector. The integration of AI, big data, IoT, and predictive analytics into MIS frameworks will ensure that SEC remains agile, efficient, and competitive in an increasing data-driven industry (Nisar et al., 2021).

2.3.23. Case Study: Practical Applications in the Saudi Electricity Company (SEC)

Bringing decisions to life remains essential for modern companies that want operational efficiency alongside sustainable growth in their current dynamic business environment. The Saudi Electricity Company (SEC) functions as the leading utility provider across the area and must navigate through a controlled market sector whose choices affect business outcomes and service quality together with operational effectiveness. The analysis focuses on how SEC applies decision-making strategies through hands-on observations of managerial outcomes combined with specific recommendations derived from existing company practices.

- **Understanding Decision-Making at SEC**

The energy distribution sector requires decision-making at SEC for critical elements such as energy

distribution as well as infrastructure investment regulations and customer service management. Performance at SEC depends on the various levels of decision-making management because the company combines centralized operations with decentralization components at operational levels (Rose et al., 2016). SEC divides decision-making processes into three distinct organizational levels throughout the organization.

- **Strategic Decision-Making (Top Management Level):**

- Includes long-term planning, investment in renewable energy, regulatory compliance, and strategic partnerships.
- Requires alignment with national energy policies and Vision 2030 sustainability goals.
- The Saudi Electricity Company implements investments in renewable energy coupled with smart grids to achieve both sustainability goals and operational efficiency.

2. Tactical Decision-Making (Middle Management Level):

- Focuses on resource allocation, maintenance scheduling, workforce management, and operational improvements.
- Through this approach managers properly convert strategic objectives into operational projects (Rose et al., 2016).
- The company executes predictive maintenance of power plants through decisions to minimize service interruptions which enhances reliability.

3. Operational Decision-Making (Supervisory & Field Management):

- Involves real-time problem-solving, response to outages, and on-the-ground execution of policies.
- The system needs fast data evaluation and decision assistance functions to prevent operational disturbances (Hepbasli et al., 2011).

- The organization implements automated electricity distribution monitoring systems which reduce dependency on human operators.

Impact of Decision-Making on Managerial Performance

Current decision-making effectiveness levels directly affect performance outcomes at the SEC. Research data collection for managerial outcomes reveals several key findings:

1. Improved Decision-Making Enhances Productivity:

- Managers who utilize data-driven decision support systems report faster and more accurate decision-making capabilities.
- Example: Managers using AI-based predictive analytics for maintenance scheduling experienced a 20% reduction in downtime and improved service efficiency.

2. Centralized Decision-Making Improves Strategic Alignment but Reduces Flexibility:

- While centralized control ensures compliance and consistency, it sometimes delays response time in handling operational challenges.
- Example: Approval delays in procurement decisions due to multiple layers of hierarchy led to slower response times in supply chain management (Taleb et al., 2011).

3. Decentralization at Operational Levels Increases Responsiveness:

- Empowering regional managers to make autonomous decisions regarding energy distribution adjustments has improved efficiency.
- Example: Field managers using IoT-based monitoring systems can now automatically adjust energy flow, reducing human intervention and improving power distribution balance.

4. Use of Digital Governance Enhances Managerial Accountability:

- Decision transparency through digital governance platforms has resulted in better risk management and regulatory compliance (Taleb et al., 2011).

- Example: SEC's adoption of blockchain technology in financial transactions has reduced fraudulent activities and enhanced governance.

5. Challenges Faced by Managers in Decision-Making:

- Data Overload: Some managers struggle to extract meaningful insights from vast amounts of real-time data.
- Resistance to Change: Traditional management styles and risk aversion sometimes hinder digital transformation efforts.
- Regulatory Constraints: Managers often face delays due to extensive approval processes for large-scale projects.

These findings indicate that while SEC has made significant advancements in decision-making, there is room for structural improvements to optimize decision efficiency.

2.3.24.Strategic Recommendations Derived from Practical Experiences within SEC

The empirical research findings serve as a foundation to develop strategic recommendations that will boost SEC's decision processes while improving their speed and adherence to industrial standards. The implementation of AI together with big data processing and decentralized governance and automated systems will enable SEC to reach improved operational effectiveness as well as secure long-term sustainability.

- **Building improved predictive capabilities through artificial intelligence applications will enhance executive decisions at organizations.**

SEC needs to develop broad-scale AI-driven decision-support systems because they enhance demand forecasting together with outage management and grid performance monitoring capabilities. Managers across all levels will get real-time analytics through an AI-powered dashboard which enables them to make decision faster with higher accuracy (Amran et al., 2020). This initiative will boost private sector electricity company (SEC) systems by enhancing failure prediction along with better resource

distribution and operational efficiency optimization.

- **Decisions made at operational levels can improve their efficiency through decentralized decision-making initiatives**

The centralization of strategic decisions should be combined with an increased authorization of operational issues to regional managers and field personnel to enhance their instant reaction capabilities (Hepbasli et al., 2011). Engineers working at field locations should be granted immediate access to control systems for managing grid operations while bypassing central authorization processes. By implementing this method operations during critical times will become more flexible while at the same time decreasing service disruption duration and increasing reliability.

- **SEC should establish a Dynamic Decision Governance Framework for their operations.**

SEC should use real-time decision-tracking software to improve approval processes and automate compliance testing along with shorter response intervals (Koop et al., 2018). The framework allows governance policies to uphold regulatory requirements without creating unnecessary bureaucracy in administrative processes. The automated workflow system will enhance rapid data-based decisions at all organizational levels.

- **The company should dedicate resources to training their employees for digital decision-making abilities.**

The managerial training programs at SEC need to teach staff how to analyze data and evaluate risks and make decisions using technological tools. SEC should launch a corporate training academy that will teach employees to handle AI, big data and digital governance concepts for accurate complex data analysis and improved decision-making abilities. The organization's dedication to worker development will boost digital skills and decision abilities throughout every department..

- **Security Enterprise Company should establish data integration systems that facilitate smooth decision execution.**

Operational efficiency together with collaborative decision-making remain restricted by departmental data silos. The company needs a unified data storage platform that will provide live access to executives for making decisions (Nisar et al., 2021). A single data integration platform which combines operational and customer service and financial data provides stakeholders with accurate real-time information for delivering well-informed critical decisions.

- **Blockchain technologies enhance organizational decision making transparency through their implementation.**

Major corporate decisions benefit from smart contracts and blockchain-based decision records because they deliver accountability together with traceability and prevent fraud. All procurement and investment choices are digitally recorded on blockchain ledgers allowing organizations to conduct transparent assessments while taking away possibilities of fraud or mismanagement risks. Enhanced governance together with better regulatory compliance and financial accountability appear throughout all operations at SEC.

- **Automating Crisis Response Decision-Making**

SEC should implement AI-driven crisis management models that will help prevent dangers from power outages alongside cybersecurity threats and regulatory shifts as described in Sauter et al., 2014. AI-based predictive risk models should automatically activate contingency frameworks when power interruption or cybernetic incidents occur unexpectedly. The proactive approach will decrease operational interruptions while sustaining customer services along with building SEC's ability to manage emergency events securely. SEC demonstrates through its evaluation that decision processes determine both operational achievements and managerial results. The advantages gained from technological breakthroughs have introduced better decision effectiveness, but SEC continues to encounter problems caused by administrative delays along with government restrictions and extensive data collections. SEC will develop an agile and efficient decision-making environment through the deployment of AI analytics

together with decentralized frameworks and automated governance and workforce training functions. As SEC drives its digital transformation ahead, maintaining efficient decision-making processes will serve to protect energy efficiency standards while keeping compliance regulations and customer fulfillment interests strong to ensure global leadership status in energy operations.

Chapter 3: Methodology

1.1. Introduction

The methodology of the study will be presented, including a description of the sample, the research tools used, and the method of preparation. This section will also detail the validity and reliability of the tools. Furthermore, it will clarify the statistical methods and treatments employed, which were primarily used to analyze the study's hypotheses, aiming to achieve reliable scientific results.

1.2. Research Approach

This study was conducted to answer the questions raised, and therefore, it relied on a quantitative approach. During **this study, the researcher relied on two types of data:**

- **Primary Data:** This was collected through a field study where a data collection tool, namely a questionnaire designed by the researcher, was used. The questionnaire was distributed to the study sample, and the data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) to reach scientific results.
- **Secondary Data:** This includes reliable scientific information gathered from academic books, research papers, and studies related to the study topic, as well as published research articles relevant to the study variables.

-

1.3. Research Design

1.3.1. Research Sample

A random sampling method was employed to select the study sample. The questionnaire was distributed electronically through social networking sites to gather responses. The study sample comprised (132) The table below presents the characteristics of the sample.

Table 1 Characteristics of the Research Sample

Characteristics	Sub Characteristics	N	%
Gender	Female	87	65.9%
	Male	45	34.1%
Age Group	18 - 29 Years old	36	27.3%
	30 – 40 years old.	54	40.9%
	41- 50 years old.	34	25.8%
	51 – 59 Years old	7	5.3%
	60 or more years	1	0.8%
Educational Level	High School	19	14.4%
	Bachelor's degree	63	47.7%
	Master’s degree	48	36.4%
	Doctorate degree	2	1.5%
Years of experience	Less than 5 years	56	42.4%

	From 6 to 10 years	30	22.7%
	From 11 to 15 years	17	12.9%
	16 or more years.	29	22%
Total		132	100%

1.3.2. Data Collection

The study tool consisted of a questionnaire divided into two sections as follows:

- **Section One:** This section gathered basic demographic data of the sample members, including educational qualifications, years of experience, and age.
- **Section Two:** This section included the core items of the questionnaire, comprising items divided into two principal areas:

The questionnaire will be used in order to collect data through the five-point Likert scale, which can be expressed through the following table:

Table 2 The Five- Point Likert Scale

Term	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Answer Degree	1	2	3	4	5

1.3.3. The Validity

Internal consistency was used to measure the validity of the tool by assessing the extent to which each item of the questionnaire is consistent with its corresponding construct. Pearson correlation coefficient was used to measure the correlation between each item and the total score of the construction it belongs to, as shown in the following table:

Table 3 The results of the correlation coefficient for the validity of the tool

Decision-Making						Management Efficiency		
Centralized Decision-Making			Decentralized Decision-Making					
No	Pearson Correlation	Sig.(2 Tailed)	No	Pearson Correlation	Sig.(2 Tailed)	No	Pearson Correlation	Sig.(2 Tailed)
1	0.654	0.000	1	0.865	0.000	1	0.817	0.000
2	0.730	0.000	2	0.848	0.000	2	0.808	0.000
3	0.864	0.000	3	0.768	0.000	3	0.838	0.000
4	0.734	0.000	4	0.624	0.000	4	0.806	0.000
5	0.716	0.000		0.721	0.000	5	0.778	0.000

Table 3 presents the results of the correlation coefficients for the validity of the questionnaire tool across different dimensions affecting the feasibility of real estate projects. The table shows significant positive correlations for all items across the dimensions: Economic Factors, Regulatory and Legal Factors, Market Demand, and Technological and Environmental Factors, with correlation coefficients ranging from 0.624 to 0.974 and all p-values at 0.000 (indicating high statistical significance). This demonstrates that each item within the dimensions is strongly and positively correlated with the overall constructing measures, confirming the tool's validity and reliability for assessing factors impacting real estate project feasibility.

1.3.4. Reliability

Table 4 The results of Cronbach's alpha coefficient for the reliability of the tool.

Variables		Number	Axis Stability
Decision-Making (Independent Variable)	Centralized Decision-Making	5	0.921
	Decentralized Decision-Making	5	0.931
Management Efficiency (Dependent Variable)		5	0.964
Total Cronbach's Alpha		25	4.729

To calculate the questionnaire's reliability, we used Cronbach's alpha coefficient to determine the tool's stability. The following table shows the reliability coefficients. The table indicates that the questionnaire has an elevated level of reliability, with Cronbach's alpha values for the questionnaire's axes ranging from 0.921 to 0.968. This demonstrates that the scale has an elevated level of stability, meaning the results are consistent each time the scale is applied. Therefore, this questionnaire can be reliably used to generalize the results

To calculate the questionnaire's reliability, we used Cronbach's alpha coefficient to determine the tool's stability. The following table shows the reliability coefficients. The table indicates that the questionnaire has an elevated level of reliability, with Cronbach's alpha values for the questionnaire's axes ranging from to This demonstrates that the scale has an elevated level of stability, meaning the results are consistent each time the scale is applied. Therefore, this questionnaire can be reliably used to generalize the results.

1.3.5. Study Procedures

Initially, the questionnaire was designed by reviewing previous studies related to the research topic and the collected theoretical frameworks. After designing the questionnaire, it was

presented to several experts for review, and necessary amendments were made through deletion and addition.

Next, the validity and reliability of the tool were assessed. The questionnaire was then prepared electronically and distributed via social networking sites such as Facebook and WhatsApp. After the survey was administered, data were collected to achieve reliable scientific results.

1.3.6. The Statistical Method

The data collected from the sample were entered using the program (SPSS-V.22). The statistical methods that were used to process the data varied, including:

- Cronbach's Alpha coefficient to ensure consistent performance.
- Use frequencies and percentages to determine the significance of the sample's responses to the questionnaire items.
- Correlation coefficient for the calculation of honesty.
- Regression analysis

Chapter 4: Analysis and Results

4.1. Introduction

This chapter details the statistical analysis of the collected data, outlining the analytical processes used to derive clear and meaningful scientific information. These processes are designed to achieve the study's objectives and address its research questions.

4.2. Statistical Analysis and Results Interpretation

4.2.1. Decision-Making (Independent Variable)

Centralized Decision-Making

Table 5 The result of Centralized Decision-Making

No	Items	Mean	SD	Order	The reliability
1	Most major decisions in SEC are made at the top management level with minimal input from lower levels.	3.93	.661	1	-
2	Centralized decision-making ensures consistency and alignment with corporate strategy.	3.78	.816	2	-
3	Employees have limited autonomy in making operational decisions.	3.46	.872	4	-
4	Centralized decision-making helps in maintaining strict regulatory compliance and risk management.	3.29	.956	5	-
5	Approval processes for decisions take a long time due to hierarchical structures.	3.69	.908	3	-
Total		18.15	4.213		0.921

The findings in Table 6 provide insights into the impact of centralized decision-making at SEC. The highest-rated statement, "Most major decisions in SEC are made at the top management level with minimal input from lower levels" (Mean = 3.93, SD = 0.661), indicates that decision-making is heavily concentrated at the senior management level. This suggests that while

centralized control ensures strategic oversight, it may limit the involvement of lower-level employees in operational decisions. The second-highest rated item, "Centralized decision-making ensures consistency and alignment with corporate strategy" (Mean = 3.78, SD = 0.816), reflects the advantage of maintaining a unified approach across different departments, reducing the risk of misaligned decision-making. However, the results also highlight some challenges associated with centralized structures. The statement "Approval processes for decisions take a long time due to hierarchical structures" (Mean = 3.69, SD = 0.908) ranks third, suggesting that while centralization helps with control and oversight, it may slow down decision execution, leading to delays in operational responses. Additionally, "Employees have limited autonomy in making operational decisions" (Mean = 3.46, SD = 0.872) ranks fourth, indicating that lower-level employees may experience constraints in executing tasks without approval from senior management. The lowest-rated statement, "Centralized decision-making helps in maintaining strict regulatory compliance and risk management" (Mean = 3.29, SD = 0.956), suggests that while compliance is a priority, there may be opportunities to enhance regulatory efficiency without relying solely on a top-down approach. Overall, the total mean score (18.15) and the high reliability coefficient (0.921) confirm strong internal consistency in responses. These findings suggest that while centralized decision-making at SEC ensures consistency and regulatory control, it may also introduce bureaucratic inefficiencies, slower response times, and limited employee autonomy. A potential

recommendation could be to explore a more balanced decision-making approach, incorporating elements of decentralization where necessary to improve operational flexibility and efficiency.

Decentralized Decision-Making

Table 6 The results of Decentralized Decision-Making

No	Items	Mean	SD	Order	The reliability
1	Regional managers and field teams have the authority to make operational decisions without waiting for approval from top management.	3.38	.784	5	-
2	Decentralized decision-making allows for faster responses to unexpected challenges.	3.73	.757	1	-
3	Employees are encouraged to contribute ideas and participate in decision-making processes.	3.50	.906	4	-
4	Decentralization improves efficiency by reducing bureaucratic delays.	3.55	.825	2	-
5	Empowering lower-level employees with decision-making responsibilities enhances problem-solving capabilities.	3.55	.947	3	-
Total		17.71	4.219		0.945

The statistical findings on decentralized decision-making at SEC provide valuable insights into how distributed authority impacts operational efficiency and responsiveness. The highest-rated statement, "Decentralized decision-making allows for faster responses to unexpected challenges" (Mean = 3.73, SD = 0.757), highlights a key advantage of decentralization—enhanced agility in addressing urgent operational issues. This suggests that when decision-making is delegated to lower levels, SEC can react more efficiently to unforeseen events, reducing delays caused by hierarchical approval processes. The second and third-highest rated statements, "Decentralization improves efficiency by reducing bureaucratic delays" (Mean = 3.55, SD = 0.825) and "Empowering lower-level employees with decision-making responsibilities enhances problem-solving capabilities" (Mean = 3.55, SD = 0.947), further reinforce the efficiency benefits of decentralization. By reducing bureaucratic obstacles and enabling employees to make operational decisions, SEC can enhance productivity and optimize workflow management. However, some challenges remain. The statement, "Employees are encouraged to contribute ideas and participate in decision-making processes" (Mean = 3.50, SD = 0.906), ranks fourth, indicating that while there is some level of employee involvement, further efforts may be needed to foster a more inclusive decision-making culture. Additionally, the lowest-rated item, "Regional managers and field teams have the authority to make operational decisions without waiting for approval from top management" (Mean = 3.38, SD = 0.784), suggests that decentralization is not fully implemented and that certain operational decisions may still require top-level approval, which could slow down efficiency gains. The total mean score (17.71) and high reliability coefficient (0.945) indicate strong internal consistency in responses, confirming that decentralized decision-making plays a crucial role in improving responsiveness and operational efficiency at SEC. However, to maximize its benefits, SEC may consider expanding the scope of decision-making

authority at regional and operational levels, encouraging a more collaborative decision-making culture, and further streamlining approval processes to enable faster execution of key decisions. A more balanced hybrid model, combining centralized oversight with decentralized operational flexibility, could enhance both efficiency and strategic alignment within the organization.

4.2.2. Management Efficiency (Dependent Variable

Table 7 The result of Management Efficiency

No	Items	Mean	SD	Order	The reliability
1	The decision-making structure at SEC enhances overall productivity and operational efficiency.	3.58	.799	1	-
2	Employees can execute tasks effectively without unnecessary delays caused by approval processes.	3.49	.862	4	-
3	The decision-making process contributes to optimizing financial and human resources.	3.58	.852	2	-
4	The clarity of decision-making roles and responsibilities helps streamline workflow.	3.44	1.011	5	-
5	There is effective communication between decision-makers and employees, ensuring smooth execution of decisions.	3.50	.917	3	-
Total		17.59	4.441		0.931

The statistical findings in Table 7 provide insights into the impact of decision-making structures on management efficiency at SEC. The highest-rated statements, "The decision-making structure at SEC enhances overall productivity and operational efficiency" (Mean = 3.58, SD = 0.799) and "The decision-making process contributes to optimizing financial and human resources" (Mean = 3.58, SD = 0.852), suggest that the existing decision-making framework plays a positive role in enhancing productivity and optimizing resource allocation. These results indicate that SEC's leadership structure supports operational efficiency and effective utilization of financial and human capital, contributing to better performance outcomes. However, the findings also highlight areas for improvement. The statement, "Employees can execute tasks effectively without unnecessary delays caused by approval processes" (Mean = 3.49, SD = 0.862), ranks fourth, indicating that while some efficiency gains have been made, bureaucratic hurdles still exist, causing occasional delays in task execution. Similarly, "There is effective communication between decision-makers and employees, ensuring smooth execution of decisions" (Mean = 3.50, SD = 0.917), suggests that communication between management and employees is generally effective but could be further strengthened to improve clarity and decision execution. The lowest-rated statement, "The clarity of decision-making roles and responsibilities helps streamline workflow" (Mean = 3.44, SD = 1.011), indicates that there is room for improvement in defining and communicating decision-making roles within SEC. Ambiguity in responsibilities may cause inefficiencies in workflow execution and decision implementation. The total mean score (17.59) and high reliability coefficient (0.931) confirm strong internal consistency in responses, suggesting that decision-making processes at SEC significantly impact management efficiency. However, to further enhance efficiency, SEC should focus on reducing bureaucratic delays, strengthening communication channels, and improving role clarity within the decision-making framework.

Implementing a more balanced decision-making structure that integrates centralized strategic oversight with decentralized operational flexibility could help streamline workflow, improve execution speed, and optimize resource allocation across the organization.

4.3. Test Hypotheses

- ✓ **H1: There is a statistically significant difference in the impact of decision-making on management efficiency at the Saudi Electricity Company (SEC).**

Table 8 The impact of decision-making on management efficiency

Hypothesis		
The impact of decision-making on management efficiency	Pearson Correlation	Sig. (2-tailed)
	0.327	0.000

The hypothesis H1: There is a statistically significant difference in the impact of decision-making on management efficiency at SEC is supported by the results of the Pearson correlation analysis, which show a moderate positive correlation ($r = 0.327$, $p = 0.000$) between decision-making structures and management efficiency. The statistical significance ($p < 0.05$) confirms that this relationship is not due to chance, indicating that improvements in decision-making—whether through centralized strategic control or decentralized operational flexibility—positively impact management efficiency. While the correlation suggests that structured decision-making enhances productivity, resource optimization, and workflow execution, the moderate strength of the relationship implies that other factors, such as workforce competency, technology integration, and organizational culture, may also play a role in overall efficiency. To maximize the benefits of effective decision-making, SEC should focus on balancing centralized oversight with

decentralized agility, reducing bureaucratic delays, and strengthening communication between decision-makers and employees to enhance operational responsiveness and strategic alignment.

✓ **H2: There is a statistically significant effect of centralized decision-making on management efficiency at the Saudi Electricity Company (SEC).**

Table 9 The effect of centralized decision-making on management efficiency

Hypothesis		
Effect of centralized decision-making on management efficiency	Pearson Correlation	Sig. (2-tailed)
	0.675	0.000

The hypothesis that there is a statistically significant effect of centralized decision-making on management efficiency at SEC is supported by the Pearson correlation analysis, which reveals a strong positive correlation ($r = 0.675$, $p = 0.000$) between centralized decision-making and management efficiency. The statistical significance ($p < 0.05$) confirms that this effect is not due to chance, indicating that a structured, top-down decision-making approach contributes significantly to improving operational efficiency, consistency, and strategic alignment within SEC. The strong correlation suggests that centralized decision-making enhances regulatory compliance, resource allocation, and workflow standardization, ensuring that decisions align with corporate objectives. However, while centralization provides control and stability, it may also introduce bureaucratic inefficiencies that slow down responsiveness. To optimize management efficiency, SEC should consider maintaining centralized strategic oversight while incorporating selective decentralization in operational areas to allow for greater agility and faster decision execution when needed.

- ✓ **H3: H3: There is a statistically significant effect of decentralized decision-making on management efficiency at the Saudi Electricity Company (SEC)**

Table 10 The effect of decentralized decision-making on management efficiency

Hypothesis		
Effect of decentralized decision-making on management efficiency	Pearson Correlation	Sig. (2-tailed)
	0.622	0.000

. The hypothesis H3: There is a statistically significant effect of decentralized decision-making on management efficiency at SEC is supported by the Pearson correlation analysis, which shows a strong positive correlation ($r = 0.622$, $p = 0.000$) between decentralized decision-making and management efficiency. The statistical significance ($p < 0.05$) confirms that this effect is not due to chance, indicating that allowing lower-level managers and field teams to participate in decision-making significantly enhances operational efficiency, responsiveness, and problem-solving capabilities within SEC. The strong correlation suggests that decentralization helps reduce bureaucratic delays, improve agility in handling unexpected challenges, and foster a more engaged workforce. However, while decentralization enhances flexibility and efficiency, it may also introduce inconsistencies in decision-making across different departments. To optimize management efficiency, SEC should consider a hybrid decision-making model that balances strategic centralization for oversight and control with decentralized operational autonomy, ensuring both efficiency and consistency in decision execution.

Chapter 5: Discussion and Conclusion

5.1. Discussion

The statistical analysis of decision-making structures at the Saudi Electricity Company (SEC) provides critical insights into their impact on management efficiency. This discussion explores the key findings, emphasizing the advantages and challenges of both centralized and decentralized decision-making approaches while offering recommendations for a balanced model. The findings indicate that centralized decision-making at SEC ensures strategic alignment, consistency, and regulatory compliance. The highest-rated item in the analysis—"Most major decisions in SEC are made at the top management level with minimal input from lower levels" (Mean = 3.93, SD = 0.661)—confirms a strong hierarchical structure that centralizes decision authority at senior management levels. This approach benefits SEC by maintaining a unified corporate strategy and reducing risks associated with inconsistent decision-making. However, despite its advantages, centralization presents significant operational inefficiencies. The study highlights that approval processes take considerable time due to hierarchical layers (Mean = 3.69, SD = 0.908), which can delay decision execution. Moreover, limited employee autonomy (Mean = 3.46, SD = 0.872) suggests that lower-level employees may struggle with responsiveness in operational tasks, potentially affecting efficiency and innovation. These results align with the strong positive correlation ($r = 0.675$, $p = 0.000$) between centralized decision-making and management efficiency, reinforcing the need for structured control while also identifying inefficiencies that could be mitigated by a more agile system.

Decentralized decision-making at SEC demonstrates clear benefits in enhancing responsiveness and agility. The highest-rated item, "Decentralized decision-making allows for faster responses to unexpected challenges" (Mean = 3.73, SD = 0.757), highlights how

empowering lower levels of management leads to improved operational efficiency. Additionally, reduced bureaucratic delays (Mean = 3.55, SD = 0.825) and enhanced problem-solving capabilities (Mean = 3.55, SD = 0.947) further validate the advantages of decentralization in streamlining workflow processes. However, challenges remain in fully implementing decentralized decision-making. The lowest-rated item, "Regional managers and field teams have the authority to make operational decisions without waiting for approval from top management" (Mean = 3.38, SD = 0.784), suggests that decision-making autonomy is still limited. While decentralization aims to delegate authority, residual hierarchical control may be hindering its full potential. The strong correlation ($r = 0.622$, $p = 0.000$) between decentralized decision-making and management efficiency underscores the importance of further empowering lower-level management to maximize efficiency gains while maintaining strategic coherence.

The study confirms a statistically significant relationship between decision-making structures and management efficiency at SEC ($r = 0.327$, $p = 0.000$). Both centralized and decentralized approaches contribute positively to efficiency, but each has distinct advantages and trade-offs. Centralization ensures consistency, regulatory control, and alignment with corporate strategy but introduces bureaucratic inefficiencies that slow down decision execution. Decentralization enhances operational flexibility, responsiveness, and problem-solving but may lead to inconsistencies in decision-making across different departments. The findings suggest that SEC's current decision-making framework enhances productivity (Mean = 3.58, SD = 0.799) and resource optimization (Mean = 3.58, SD = 0.852), yet bureaucratic delays (Mean = 3.49, SD = 0.862) and unclear decision-making roles (Mean = 3.44, SD = 1.011) remain areas for improvement.

Given the strengths and challenges of both centralized and decentralized decision-making, a hybrid model that integrates strategic oversight with operational flexibility appears to be the optimal solution for SEC. The following recommendations can enhance decision-making effectiveness: Maintain centralized control over strategic and regulatory decisions while granting more autonomy to regional managers and operational teams to improve responsiveness. Reduce bureaucratic layers by implementing faster approval mechanisms, leveraging technology to expedite decision-making. Strengthen the interaction between senior management and employees to ensure better clarity in decision-making roles and responsibilities. Invest in training programs to equip lower-level managers with the necessary decision-making skills, fostering a culture of accountability and efficiency. By adopting a balanced decision-making approach, SEC can enhance operational efficiency while maintaining strategic control, ultimately improving overall management performance.

5.2. Future work

While this study provides valuable insights into the impact of decision-making structures on management efficiency at SEC, several areas warrant further exploration:

1. Longitudinal Analysis: Future research should conduct longitudinal studies to assess the long-term impact of decision-making structures on organizational performance and adaptability.
2. Comparative Industry Analysis: Examining decision-making models across different industries could provide broader insights into best practices and potential areas for improvement.

3. **Impact of Digital Transformation:** Investigating the role of digital technologies, such as artificial intelligence, machine learning, and blockchain, in enhancing decision-making processes at SEC.
4. **Employee Perception and Engagement:** Further research should analyze employee perceptions of decision-making structures and their impact on motivation, job satisfaction, and organizational commitment.
5. **Crisis Decision-Making:** Studying how centralized and decentralized decision-making models perform under crisis conditions, such as economic downturns or emergency situations, could provide valuable lessons for improving resilience.

By implementing these recommendations and exploring future research directions, SEC can further enhance its decision-making efficiency, operational effectiveness, and strategic agility, positioning itself for sustained success in an evolving business landscape.

5.3. Recommendation

Based on the findings, the following recommendations are proposed to enhance decision-making efficiency at SEC:

1. **Adopt a Hybrid Decision-Making Model:** SEC should maintain centralized strategic oversight for consistency and regulatory compliance while delegating operational decision-making to regional managers and field teams. This approach will balance control with flexibility.

2. **Streamline Approval Processes:** Reducing bureaucratic delays by implementing faster approval mechanisms, such as digital workflow automation, can enhance efficiency without compromising strategic control.
3. **Improve Communication and Role Clarity:** Strengthening internal communication between senior management and employees will enhance decision-making clarity, ensuring that employees understand their roles and responsibilities within the organization.
4. **Enhance Employee Training and Autonomy:** Providing targeted training programs for mid-level managers and employees can equip them with the skills necessary for effective decision-making, promoting a culture of accountability and agility.
5. **Leverage Technology for Decision Support:** Integrating data analytics and AI-driven decision-support systems can optimize decision-making by providing real-time insights, predictive analytics, and automation capabilities.

5.4. Conclusion

This study provides a comprehensive analysis of decision-making structures at the Saudi Electricity Company (SEC) and their impact on management efficiency. The findings highlight the advantages and challenges associated with both centralized and decentralized decision-making approaches. While centralization ensures strategic alignment, regulatory compliance, and consistency, it also introduces bureaucratic inefficiencies that can slow down decision execution. Conversely, decentralization enhances responsiveness, agility, and problem-solving capabilities but may lead to inconsistencies in decision-making across different departments. The study confirms a statistically significant relationship between decision-making structures and

management efficiency, emphasizing the need for a balanced approach. A hybrid model that integrates the strengths of both centralization and decentralization emerges as the optimal solution for SEC. By maintaining centralized oversight for strategic and regulatory matters while empowering lower-level managers with greater decision-making autonomy, SEC can enhance operational efficiency without compromising strategic coherence. To achieve this, the company should focus on reducing bureaucratic delays, leveraging technology to streamline approval processes, clarifying decision-making roles, and investing in training programs to build decision-making competencies at all levels. By adopting these strategies, SEC can create a more efficient, adaptive, and high-performing management system that aligns with its long-term corporate goals while improving day-to-day operational effectiveness.

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Appendix

SURVEY INSTRUM

Introduction to the Questionnaire

The questionnaire used in this study was designed to systematically evaluate the impact of decision-making processes on management efficiency at the Saudi Electricity Company (SEC).

The objective was to gather empirical data on how different decision-making approaches—centralized, decentralized, or a hybrid model—affect operational performance, resource allocation, and organizational responsiveness.

The questionnaire was structured to include various sections that examined key aspects of decision-making within SEC. It covered topics such as decision-making authority, communication effectiveness, bureaucratic challenges, and the perceived impact of decision-making structures on workflow efficiency and strategic alignment. Respondents were selected through a random sampling method, and the survey was distributed electronically via social media and professional networks to ensure broad participation.

A Likert-scale format was primarily used to measure respondents' perceptions and experiences, allowing for quantitative analysis of trends and correlations. The collected data was analyzed using the Statistical Package for the Social Sciences (SPSS) to identify patterns and relationships between decision-making processes and management efficiency.

The insights derived from this questionnaire provide a data-driven foundation for evaluating SEC's current decision-making strategies and formulating recommendations to enhance overall management effectiveness.

Section 1: General Information

Please answer the following questions

Gender:

Male

Female

Age group:

- ✓ Under 30 years old.
- ✓ 30 –40 years old.
- ✓ 40- 50 years old.
- ✓ 50 or more.

Educational level:

- ✓ Bachelor's degree
- ✓ Master's degree
- ✓ Doctorate degree

Years of experience:

- ✓ 1 – 5 years.
- ✓ 6- 10 years.
- ✓ 11- 15 years.
- ✓ 16 or more years.

1. Questionnaire terms

Please, mark with (✓) on your selection.

No	Term	Strongly agree	Agree	Neutral	disagree	Strongly disagree
4.2. 1. Decision-Making (Independent Variable)						
Centralized Decision-Making						
1	Most major decisions in SEC are made at the top management level with minimal input from lower levels.					
2	Centralized decision-making ensures consistency and alignment with corporate strategy.					
3	Employees have limited autonomy in making operational decisions.					
4	Centralized decision-making helps in maintaining strict regulatory compliance and risk management.					
5	Approval processes for decisions take a long time due to hierarchical structures.					

Decentralized Decision-Making						
1	Regional managers and field teams have the authority to make operational decisions without waiting for approval from top management.					
2	Decentralized decision-making allows for faster responses to unexpected challenges.					
3	Employees are encouraged to contribute ideas and participate in decision-making processes.					
4	Decentralization improves efficiency by reducing bureaucratic delays.					
5	Empowering lower-level employees with decision-making responsibilities enhances problem-solving capabilities.					

Management Efficiency (Dependent Variable)						
1	The decision-making structure at SEC enhances overall productivity and operational efficiency.					
2	Employees can execute tasks effectively without unnecessary delays caused by approval processes.					
3	The decision-making process contributes to optimizing financial and human resources.					
4	The clarity of decision-making roles and responsibilities helps streamline workflow.					
5	There is effective communication between decision-makers and employees, ensuring smooth execution of decisions.					

Midocean University

College of Management

Department of Business Administration

Proposal Title:

**The Impact of Decision-Making Processes on Management
Efficiency at the Saudi Electricity Company (SEC)**

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Year: 2025