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The Role of Strategic Agility in Enhancing Operational Performance in the Saudi Ministry of Health: The Moderating Role of Future Challenges

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ABSTRACT

The study aimed to examine the impact of strategic agility and its dimensions (environmental agility, technological agility, interactive agility, and marketing agility) on enhancing operational performance and its dimensions (quality, cost, flexibility, and delivery) in Saudi Ministry of Health. The study also sought to explore the moderating role of future challenges in the relationship between strategic agility and enhanced operational performance. The study employed a quantitative descriptive-analytical approach. SPSS was used to perform descriptive analysis of the study variables, including frequencies, percentages, means, and standard deviations. Smart PLS 4 was used for structural equation modeling, data analysis, results extraction, and hypothesis testing. The study population included all middle- and senior-level employees working in the Ministry of Health in Jeddah, totaling 2,837 employees. A stratified random sampling method was used to select a sample of 323 employees. The results indicated a statistically significant relationship between strategic agility and enhanced operational performance, with future challenges not moderating this relationship. The study recommended intensifying training programs and workshops aimed at enhancing employee participation in environmental agility initiatives, which would raise adherence to sustainable health standards and practices. It also recommended conducting future research to explore the impact of strategic agility on additional operational performance indicators, such as service innovation, decision-making quality, and responsiveness, to further understand the role of strategic agility in improving efficiency and effectiveness in healthcare operations.

Keywords: Strategic Agility, Operational Performance, Future Challenges, Saudi Ministry of Health
JEL Classifications: I18, M10

1. INTRODUCTION

Strategic Agility refers to an organization's ability to continuously monitor its internal and external environment in order to anticipate potential opportunities and threats. It relies on the regular collection and analysis of information to enable proactive decision-making that enhances adaptability to changes. Operational performance, on the other hand, reflects the efficiency and effectiveness of daily processes in achieving the organization's defined objectives. It encompasses improving service quality, accelerating task completion, and reducing costs while maintaining quality standards. It also serves as a key indicator of an organization's interactiveness and sustainability in dynamic work environments.

Given the accelerating pace of change in the business environment, organizations increasingly need to adopt effective strategies and approaches that enable them to adapt to transformations and enhance their interactiveness. This imperative is particularly crucial in vital sectors, especially healthcare, which remains one of the most sensitive and impactful sectors on individuals and society. The Saudi Ministry of Health has been chosen as the applied case for this study due to its central role in achieving the Kingdom's vision objectives, its ongoing efforts to enhance

operational efficiency and the quality of provided health services, and the challenges it faces related to increasing demand volume and diverse beneficiary needs (Ministry of Health, 2023).

Strategic Agility is considered an effective approach for monitoring and analyzing information about an organization's environment, including customers, suppliers, technology, regulations, and competitors. Given its reliance on large volumes of data, the importance of decision support systems emerges as a complementary tool, organizing data and transforming it into knowledge that contributes to improving the quality of administrative decisions. The more accurate and integrated the information, the greater the effectiveness and quality of the decisions made (Alnoukari and Hanano, 2023).

Operational performance is one of the fundamental pillars for measuring the efficiency and effectiveness of organizations in carrying out their daily activities and achieving their strategic objectives. It includes a set of indicators such as productivity, service quality, operational costs, response speed, and process flexibility. Improving operational performance is a central goal for organizations aspiring to achieve institutional excellence and sustainability, particularly in vital sectors such as healthcare, where operational efficiency directly impacts service quality and beneficiary satisfaction. To achieve this, organizations rely on advanced management practices such as continuous improvement, digital transformation, and strategic Agility to ensure optimal resource utilization and enhance delivered value (Gunasekaran et al., 2023).

This study seeks to reveal the role of strategic Agility in enhancing operational performance within the Saudi Ministry of Health, with a focus on the moderating role of future challenges.

1.1. Research Problem

The Saudi Ministry of Health is one of the most critical government entities facing several challenges. In its official report for 2022–2025, the Ministry highlighted weaknesses in digital infrastructure in peripheral and remote areas, which affects the integration of electronic health systems. Additionally, there is a shortage of healthcare personnel in fields such as nursing and medical rehabilitation, leading to delays in operationalizing some rehabilitation beds in hospitals. The Ministry also indicated that the coverage of the electronic PACS (Picture Archiving and Communication System) used to link radiology devices does not exceed 60% of hospitals, limiting the full integration between different medical service departments)Saudi Ministry of Health, 2025.

Amid the ongoing efforts of the Saudi Ministry of Health to enhance service efficiency and achieve sustainable operational quality, alongside rising societal demand for services and increasing pressures on human and financial resources, these factors collectively compel the Ministry to adopt more effective mechanisms to ensure operational efficiency and achieve an optimal response to environmental changes (Abu Hussein, 2025).

From this perspective, "strategic Agility" has emerged as a modern administrative concept concerned with monitoring changes in the internal and external environments and proactively analyzing threats and opportunities. This enables organizations to make decisions that ensure performance continuity and adaptability to changes. Despite the positive assumptions of this approach in improving operational performance, its effectiveness may be influenced by future challenges faced by organizations (Rosa, 2023).

The research problem stems from the researcher's review of several previous studies addressing the relationship between strategic Agility and enhanced operational performance. These include a study by Younus (2023), which emphasized the necessity of leveraging technology to support interactive capabilities and respond to environmental changes, and a study by Al-Halfi (2020), which recommended training administrative leaders in strategic Agility skills to contribute to improving service quality and reducing waste. Despite the contributions of these studies, most focused on analyzing the direct relationship between strategic Agility and operational performance, without delving into the impact of future challenges as a moderating variable. Moreover, they did not examine this relationship within the context of the Saudi healthcare sector, which faces increasing pressures due to population growth, rising demand for health services, and fundamental shifts associated with achieving the objectives of Saudi Vision 2030.

Among the most prominent future challenges facing the Saudi Ministry of Health is the need to manage qualified human resources amid the expansion of medical cities and specialized hospitals, alongside adapting to comprehensive digital transformation to provide smart health services based on artificial intelligence and big data. These challenges represent a realistic example of what may affect the effectiveness of the relationship between strategic Agility and operational performance (Saqqat, 2024). Based on the above, the main research question can be formulated as follows:

- What is the role of strategic agility in enhancing operational performance at the Saudi Ministry of Health, and to what extent is this relationship influenced by future challenges in light of the Kingdom's vision objectives?
- The research problem has thus centered on uncovering the role of strategic Agility in enhancing operational performance at the Saudi Ministry of Health, with a focus on the moderating role of future challenges.

1.2. Research Questions

The current study problem can be summarized by addressing the following main questions:

1.2.1. First main question

Is there an impact of strategic Agility, with its dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility), on enhancing operational performance, with its dimensions (quality, cost, flexibility, delivery), in the Saudi Ministry of Health?

From this main question, a number of sub-questions related to the dimensions branch out.

1.2.2. Second main question

Is there an impact of strategic Agility, with its dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility), on enhancing operational performance, with its dimensions (quality, cost, flexibility, delivery), when considering future challenges as a moderating variable in the Saudi Ministry of Health?

1.3. Study Objectives

The current study aims to demonstrate the role of strategic Agility in enhancing operational performance in the Saudi Ministry of Health, with future challenges acting as a moderating variable. From this first main objective, several sub-objectives branch out.

1.3.1. Second main objective

To clarify the impact of strategic Agility dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility) on delivery within the Saudi Ministry of Health.

1.3.2. Third main objective

To clarify the moderating effect of future challenges on the relationship between strategic Agility, with its dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility), and operational performance, with its dimensions (quality, cost, flexibility, delivery), in the Saudi Ministry of Health.

1.4. Study Hypotheses

The main study hypothesis and its sub-hypotheses have been formulated based on the research problem and objectives as follows:

1.4.1. Main hypothesis (H_{01})

There is no statistically significant effect at the level ($\alpha \leq 0.05$) of strategic Agility, with its dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility), on enhancing operational performance, with its dimensions (quality, cost, flexibility, delivery), in the Saudi Ministry of Health.

Four sub-hypotheses have been derived from this main hypothesis, as illustrated in the study model in Figure 1.

1.4.2. Second main hypothesis (H_{02})

There is no statistically significant effect at the level ($\alpha \leq 0.05$) of strategic Agility, with its dimensions (environmental Agility, technological Agility, interactive Agility, marketing Agility), on enhancing operational performance, with its dimensions (quality, cost, flexibility, delivery), with future challenges acting as a moderating variable in the Saudi Ministry of Health.

1.5. Study Model

Figure 1 illustrates the study model, which includes the independent variable (strategic Agility), the dependent variable (enhancing operational performance) and their dimensions, with the moderating variable (future challenges).

2. THEORETICAL FRAMEWORK

2.1. First Topic: Strategic Agility

Strategic Agility is a fundamental requirement for achieving sustainable success in the contemporary business environment, characterized by high dynamism and interactiveness. Amid rapid technological developments, shifting consumer preferences, and global economic fluctuations, organizations have an urgent need to adopt a proactive approach that enables them to systematically monitor their internal and external environment. This practice allows organizations to foresee opportunities, identify potential threats, and adapt their strategies in a way that enhances their long-term interactiveness. Therefore, strategic Agility is not merely a momentary tool, but rather a continuous process and an organizational mindset that contributes to enhancing organizational resilience and making decisions based on scientific and objective foundations (Sadeq Kanabi et al., 2025).

2.1.1. The concept of strategic agility

The concept of strategic Agility has received wide attention from researchers in the field of modern management, as a review of the literature indicates a multiplicity of definitions associated with it, and a lack of complete agreement on a unified formulation of this concept due to differing knowledge backgrounds and diverse organizational environments (Obeidat, 2022). A number of researchers have addressed the concept of strategic Agility with multiple explanatory attempts, including:

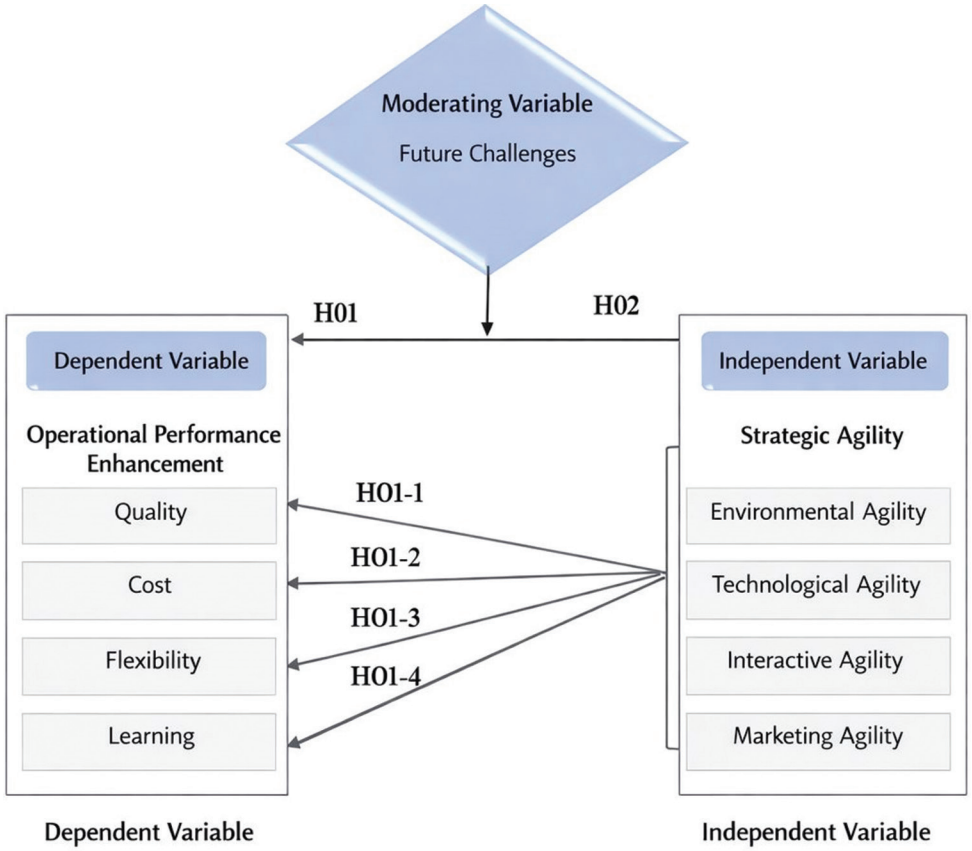
- Mesaadah and Miqdadi (2025) defined it as a systematic and proactive process through which the organization monitors its internal and external environment across multiple dimensions, including interactive Agility, environmental Agility, marketing Agility, and technological Agility. This process aims to foresee potential opportunities and challenges, and to utilize the resulting information to support strategic decision-making, enhance administrative innovation, and achieve sustainable interactive advantage.

According to Al-Mutairi (2025), strategic Agility is a systematic process adopted by organizations with the aim of achieving a sustainable interactive advantage, by collecting and analyzing relevant information about the surrounding environment, and identifying available opportunities and potential risks, which enables making strategic decisions that contribute to enhancing organizational performance and the ability to adapt to changes.

Aba Laila et al. (2025) defined it as the organization's ability to continuously and systematically monitor its various internal and external environments and foresee future opportunities and challenges, enabling it to make effective strategic decisions that contribute to achieving success, sustainability, and enhancing its interactiveness.

According to Al-Ayyash (2023), strategic Agility is the set of activities undertaken by the organization to monitor its internal and external environment, and follow up on relevant procedures,

Figure 1: Study Model



Source: Prepared by the researcher based on the studies and references cited in Table 1.

legislation, and laws, enabling it to facilitate business operations and make decisions more effectively.

Based on the preceding definitions, the researcher can define strategic agility as the perception and response of employees in the Saudi Ministry of Health to changes in the internal and external environment through monitoring environmental, technological, interactive, and marketing information. This is reflected in their ability to support the making of strategic decisions that contribute to enhancing the Ministry's institutional performance and future readiness. It was measured when designing the questionnaire items.

2.1.2. Characteristics of strategic agility

A review of previous studies indicates that strategic Agility is characterized by several features that underscore its importance and vital role in enhancing organizational interactiveness and performance sustainability. Recent studies have highlighted a set of characteristics that make strategic Agility a pivotal tool in modern management. The most prominent of these characteristics can be summarized as follows (Al-Otaibi and Al-Jenaini, 2023; Atwan, 2024):

- Agility and early detection of future changes: Strategic Agility helps the organization anticipate and detect potential changes in its external environment early on, enabling it to prepare to effectively deal with those variables.
- Providing future-oriented information for decisions: Strategic Agility is not limited to providing information about current and recurring processes only; it also contributes to supplying management with the necessary information for making future-oriented decisions, thereby enhancing the organization's ability to adapt to a changing socio-economic environment.
- Supporting innovation and formulating creative hypotheses: Strategic Agility information points to opportunities for creativity, as it does not merely describe past events but allows for the formulation of prior creative hypotheses and insights that aid in innovation and renewal.
- Comprehensiveness of internal and external environment: Strategic Agility is not limited to monitoring the surrounding environment only; it also requires strong will and intensive activity from the organization's members to obtain and analyze proactive information in a way that serves the achievement of strategic objectives.

2.1.3. Dimensions of strategic agility

The dimensions of strategic Agility are the fundamental pillars that enable organizations to foresee their internal and external environment and adapt to surrounding variables. These dimensions encompass four main axes:

1. Environmental Agility, which focuses on monitoring economic, social, political, and regulatory changes.
2. Technological Agility, concerned with tracking technological developments and innovations affecting the organization's activities.
3. Interactive Agility, dedicated to analyzing competitors' movements and market strategies.
4. Marketing Agility, which relates to monitoring customer behavior, market trends, and shifts in consumer needs.

Through these integrated dimensions, the organization can form a proactive vision that helps it formulate effective strategies and achieve a sustainable interactive advantage (Al-Mutairi, 2025; Mohammed, 2025; Hussain et al., 2022).

2.1.3.1. Environmental agility

Environmental Agility is the systematic activity aimed at monitoring, tracking, and collecting information related to the economic, social, legal, political, and cultural environment. Its purpose is to anticipate changes and developments that may occur in these elements, and subsequently capitalize on available opportunities and avoid emerging threats (Al-Munzu et al., 2023). It is a continuous process aimed at gathering, analyzing, and disseminating information relevant to the organization's internal and external environment, particularly concerning social, cultural, political, and legal dimensions, in order to foresee changes that may affect the organization's activities (Mahmood et al., 2020).

2.1.3.2. Technological agility

Technological Agility refers to the organization's ability to follow technical and scientific developments through systematic monitoring and analysis processes. This helps in anticipating opportunities and threats in the market, and developing products or methods of service delivery to achieve a interactive advantage (Mohammed, 2025).

Technological Agility is the activity that focuses on monitoring and gathering information from the technological environment to keep pace with emerging developments and prepare a interactive technological environment that enables the organization to enhance its technological capabilities (Al Mutairi, 2025).

Technological Agility is a continuous and recurring activity aimed at effectively monitoring the technological environment to predict and capitalize on future developments in a way that serves the organization's objectives and strategies (Mohammed, 2021).

2.1.3.3. Interactive agility

Interactive Agility is a systematic process aimed at monitoring competitors' activities and analyzing their products, services, marketing strategies, and various initiatives. This enables organizations to maintain a leading position within the interactive environment. This process also involves continuously gathering information related to competitors, studying and analyzing the new products they introduce to the markets to understand their strategies and utilize them in formulating strategic decisions (Hawamirah and Khalafallah, 2025).

Interactive Agility is a systematic process based on collecting and analyzing available information about competitors in order to formulate effective interactive strategies. This process aims to monitor competitors' marketing and production activities, analyze their products, services, and working methods, in addition to studying their strengths and weaknesses, and monitoring shifts in markets, relationships, and partnerships they form (Abdul-Muti, 2025).

It means the organization's ability to track the movements of current and potential competitors and analyze their future plans. This enables the organization to make well-considered strategic decisions that prevent falling into the trap of interactive surprises and ensure seizing opportunities (Butkuk, 2024).

2.1.3.4. Marketing agility

Marketing Agility is a continuous process aimed at gathering and analyzing information related to markets, customers, and competitors. This is done to understand changes and new trends in the marketing environment. This process helps organizations identify potential marketing opportunities, anticipate future challenges or threats, and build effective marketing strategies that ensure meeting customer needs and strengthening their market position (Abdul Wahid, 2025).

Marketing Agility is a systematic process aimed at collecting and analyzing information related to current and potential customers, markets, competitors, and developments associated with products and services. This process enables organizations to foresee changes in the marketing environment (Al-Ajmi and Al-Tuwaijri, 2025).

It is concerned with the continuous monitoring and analysis of the market and interactive environment by employing marketing intelligence to enhance the organization's ability to respond quickly to opportunities and build a strong mental image and reputation in the minds of customers (Dawood and Abbas, 2019).

2.2. Second Topic: Operational Performance

Enhancing operational performance represents a fundamental strategic goal that organizations strive for in a business environment characterized by constant change and accelerated technological development. Digital technological capabilities emerge as one of the key factors contributing to improving process efficiency and achieving flexibility and innovation in lean management, which supports the achievement of distinguished operational performance. Additionally, both continuous learning and employee satisfaction play an important role in enhancing the impact of these technological capabilities on operational performance (Bag et al., 2025).

2.2.1. Concept of operational performance

The concept of operational performance has received increasing attention from researchers in management and operations fields, due to its pivotal role in enhancing organizational efficiency and its ability to achieve strategic objectives. A review of the literature indicates a diversity of definitions associated with operational

performance and differing perspectives in addressing it, depending on varying organizational and technical contexts. The following presents the most prominent of these definitions:

- Barua and Kaiser (2025) defined it as the process of developing the internal systems and processes of organizations to ensure achieving higher levels of efficiency, flexibility, safety, and responsiveness to customer requirements. This is done by employing modern technologies such as cloud computing, artificial intelligence, and blockchain technologies, with the aim of raising service quality and increasing process reliability.

According to Song (2025), operational performance is the process of improving the efficiency and effectiveness of the internal activities and processes of organizations through the integration of modern technologies. This contributes to simplifying procedures, reducing operational botlenecks, and supporting a smoother work environment that meets the needs of both users and customers.

Pak et al. (2025) indicate that operational performance is represented in raising the efficiency and ability of systems or devices to operate more effectively and stably, by improving operating mechanisms, developing components or catalysts, and reducing operational obstacles, leading to increased productivity and operational reliability across various applications.

Obiki-Osafiele et al. (2024) defined it as the organization's ability to deliver its products or services with the highest levels of cost-efficiency and effectiveness, while maintaining high quality standards. This is achieved through process improvement, waste reduction, maximizing resource utilization, and using technology as a key tool to streamline procedures and increase productivity.

According to Mahdi (2025), operational performance is a continuous process aimed at raising the efficiency and effectiveness of the organization's activities, particularly in supply chain management, through continuous performance monitoring and evaluation, and adopting digitalization and modern technologies to enhance the ability to adapt to changing market dynamics and improve supply chain flexibility. This ensures better operational outcomes and enhances the organization's interactiveness.

Based on the preceding definitions, the researcher can define enhancing operational performance as the level of efficiency achieved by the Saudi Ministry of Health in managing costs, the quality-of-service delivery, flexibility in operations, and accuracy in adhering to delivery schedules. This reflects the effectiveness of performance within the Ministry and was measured when designing the questionnaire items.

2.2.2. Dimensions of operational performance

2.2.2.1. Quality

It represents the organization's ability to deliver products or services that conform to the specifications and standards required by customers, and even exceed their expectations. This reflects the organization's efficiency and contributes to maintaining its position and enhancing its interactiveness in the markets (Al-Tamimi and Abdul-Hamid, 2025). It is represented in the product's ability to be distinguished by adhering to the specifications desired by customers, aiming to achieve the highest levels of their satisfaction. This contributes to improving the organization's performance and ensuring its survival in a interactive environment (Al-Janabi, 2020).

2.2.2.2. Cost

Cost refers to the organization's focus on reducing expenses and improving operational efficiency, enabling it to deliver products or services at a lower cost than its competitors. This grants it a interactive advantage in the market and allows it to meet customer needs at suitable prices without affecting quality (Al-Tamimi and Abdul-Hamid, 2025).

Cost is the fundamental dimension through which efficient and effective managerial performance can be distinguished from low or poor performance. This is achieved by identifying deviations and taking necessary corrective actions in a timely manner. This dimension aims to reduce expenditures, minimize wasted resources while ensuring the quality of inputs, processing, and maintenance operations. It also aims to improve the quality of decisions related to production processes to achieve operational efficiency and enhance the overall performance of the organization (Younus, 2023).

It pertains to the organization's ability to reduce costs and time in the production process, enabling it to deliver products at a lower cost than its competitors. This positively reflects on delivery speed and operational efficiency (Treacy et al., 2019).

2.2.2.3. Flexibility

Flexibility is the ability of a system or organization to adapt and change quickly and effectively to keep pace with constantly changing environments. This is achieved by possessing the capacity to modify processes, activities, and resources in a way that ensures the continuity of effective performance and responsiveness to evolving work requirements (Younus, 2023).

Flexibility is the organization's ability to respond swiftly and effectively to sudden changes in production requirements or market conditions, and to develop new products or services with high efficiency while improving operational costs and optimally utilizing resources. This ensures meeting customer needs and enhancing their satisfaction (Liu et al., 2020).

It is defined as the ability of an organization's processes to produce a large variety or range of products, introduce new products, and modify existing products quickly. This enables the organization to maintain its market share and strengthen its interactive position among other organizations (Noor Al-Huda, 2025).

2.2.2.4. Delivery

Delivery is the organization's ability to provide goods and services consistently and at the time needed by the customer. It is considered one of the fundamental interactive priorities and an important dimension of interactive advantage, as customers desire to receive their needs in the required quantities and at specified times (Noor Al-Huda, 2025).

It is the company's ability to deliver orders to customers at the specified time or faster than competitors. Delivering products to customers constitutes the final value that generates revenue for the company. The shorter the delivery time, the more positive the impact on reducing customer complaints (Al-Haythami et al., 2024).

Delivery is the company's ability to provide products or services to customers at the specified time or within a shorter period than agreed upon, while ensuring customer needs are met and adherence to agreed-upon deadlines. This enhances their satisfaction and trust in the company (Khalifa, 2023).

2.3. Thierd Topic: Future Challenges

2.3.1. Concept of future challenges

The concept of future challenges has received increasing attention in contemporary management and technical literature, due to the accelerating pace of change in economic, technological, and social environments, and the resulting growing pressures on organizations and institutions of all types. A review of the literature reveals a diversity of definitions associated with the concept of future challenges, differing in their starting points depending on the field of research and application.

Kamel (2025) indicated that future challenges are represented in the necessity of ensuring security and protecting privacy, enhancing the accuracy of intelligent systems, confronting cyber threats, along with dealing with new laws and regulations associated with the use of advanced technologies, especially artificial intelligence in the fields of surveillance and institutional use.

Chauvet (2025) defined them as the obstacles and problems that institutions or systems may face in maintaining the quality and efficiency of operations under modern constraints, such as difficulty in complying with required standards, the impact of unexpected factors on performance, and the need to adopt advanced technologies that contribute to reducing costs while ensuring the achievement of desired objectives.

From a technical context, Chen et al. (2025) views future challenges as the potential problems that researchers and practitioners may face when developing advanced applications. This includes improving performance, achieving a balance between efficiency and quality, and exploring innovative solutions and technologies capable of keeping pace with rapid developments. From a managerial and organizational perspective.

Ali (2021) indicates that future challenges reflect a set of potential obstacles and changes resulting from rapid shifts in economic, technological, and social environments, such as digital transformation, sustainability requirements, changes in customer behavior, and intensifying competition. This necessitates strategic readiness to ensure the continuity of the organization and enhance its interactiveness.

Furthermore, Mohammed (2025) clarified that future challenges may materialize in obstacles facing the success of projects, among which are limited funding allocated for initiatives, weak legislative frameworks and policies related to privacy protection and personal data security, in addition to the potential social risks arising from modern technologies, such as widening the gap and inequality among societal groups.

Based on the above, the researcher can define future challenges as the set of anticipated challenges that may affect the Saudi Ministry of Health's ability to maintain its operational performance, such as the expansion of digitalization, sustainability requirements, and changing beneficiary needs. They were measured when designing the questionnaire items.

2.4. Fourth Topic: Commentary on Previous Related Studies

This commentary covers the study's objective and the location of its application, presented as follows:

- Regarding the Study Objective: The current study is distinguished by its focus on identifying the role of strategic Agility in enhancing operational performance within the Saudi Ministry of Health, with particular attention to the moderating role of future challenges. In this respect, it differs from previous studies that addressed the relationship between strategic Agility and operational performance in general, without clearly delving into the moderating role of these challenges. This constitutes a novel contribution addressing a significant research gap in the literature.
- Regarding the Location of the Study Application: The current study also differs in terms of its application field, as it is specifically directed at the Saudi Ministry of Health. In contrast, most previous studies focused on industrial, educational, or other service organizations without concentrating on this vital sector. This choice reflects the specific organizational context of the Ministry, with its unique challenges and opportunities that require specialized approaches.
- By applying the study tools in this specific context, precise results can be obtained that reflect the nature of work within the Ministry. This enhances the accuracy and reliability of the findings and helps provide practical recommendations that align with the needs of the Saudi Ministry of Health.

2.5. What Distinguishes this Study from Previous Studies?

Following the review of previous studies and in the context of achieving the research objective, the factors that distinguish this study from the aforementioned previous studies have been identified. These factors are as follows:

- The study links strategic Agility and operational performance while introducing future challenges as a moderating variable, forming a tripartite model that has not been addressed in an integrated manner in previous studies.
- The study was applied within the Saudi Ministry of Health, reflecting the specificity of the health sector and its operational challenges, unlike previous studies that focused on other industrial, educational, or service sectors.

- While most previous studies focused on quality, interactive advantage, or decision-making, this study directly and in-depth addresses operational performance.
- The study is concerned with examining the moderating role of future challenges, an aspect not addressed by most previous studies, which enhances the understanding of the relationship between strategic Agility and operational performance in a changing environment.
- The study provides practically applicable recommendations to support decision-making and improve operational performance within the environment of the Saudi Ministry of Health, in line with its unique challenges and opportunities.

3. METHODOLOGY AND DATA

This study aims to demonstrate the role of strategic Agility in enhancing operational performance in the Saudi Ministry of Health, considering the moderating role of future challenges. The current study relied on the descriptive-analytical approach as the main methodology to achieve its objectives and answer its questions. The descriptive-analytical approach is a well-known statistical method in the field of quantitative research due to its ability to provide an accurate description of the phenomena under study. This approach involves clarifying the characteristics of phenomena and the relationships between their dimensions and variables through descriptive classification. It also provides a quantitative description reflecting the size, magnitude, and quantities of the phenomena. The importance of this approach lies in analyzing the primary data collected using study tools, as well as in testing hypotheses and reaching generalizable results. Data will be analyzed using PLS4 software. Comparative analysis of previous studies and the current study are presented in Table 2.

3.1. Study Population

The study population consists of all middle and upper-level category employees working in the Ministry of Health in Jeddah Governorate. Their estimated number is 2,837 employees, distributed across the hospitals, health centers, and administrative units affiliated with the Ministry in the governorate.

3.2. Sampling Unit

The research sample was selected using the proportional stratified random sampling method to ensure an accurate and unbiased representation of all working categories in the Ministry of Health in Jeddah Governorate. The study population, consisting of 2,837 employees, was divided into two main strata: Middle Management and Upper Management. The total sample size was determined to be 323 participants, based on the Krejcie and Morgan (1970) table for determining appropriate sample sizes for large populations. To determine the number of participants from each stratum, the following formula was used:

$$n \times \frac{{}_hN}{N} = {}_hn$$

Table 3 shown in sample distribution by category.

3.3. Study Instrument

To collect primary data, the researcher developed a questionnaire based on the theoretical literature and previous studies that examined the research variables. The researcher formulated the study items based on items from studies that are globally validated for each of the study variables. A five-point Likert scale was adopted to measure the agreement of the sampling unit individuals as follows: Strongly Agree (5 points), Agree (4 points), Neutral (3 points), Disagree (2 points), and Strongly Disagree (1 point), in order to determine the level of agreement of the sampling unit individuals with the questionnaire items. The validity and reliability of the study instrument were verified.

3.4. Statistical Methods Used in the Study

To analyze the collected data and achieve the study objectives, the researcher used a set of appropriate statistical methods, as follows:

- Frequencies and Percentages: To describe the demographic characteristics of the study sample individuals.
- Arithmetic Mean and Standard Deviation: To describe the items of the study variables and indicate the level of respondents' responses.

Table 1: Sources of the study model

Study variables	Dimensions	Supporting Studies
Independent Variable (Strategic Agility)	Environmental Agility	Al-Mutairi (2025); Mohammed (2025); Butkuk (2024); Hussain et al. (2022); Mahmood et al. (2020)
	Technological Agility	Al-Mutairi (2025); Mohammed (2025); Abu Mohammed (2025); Al-Ajmi and Al-Tuwaijri (2025); Butkuk (2024); Hussain et al. (2022); Mesaadah and Miqdadi (2025)
	Interactive Agility	Al-Mutairi (2025); Mohammed (2025); Abu Mohammed (2025); Al-Ajmi and Al-Tuwaijri (2025); Butkuk (2024); Hussain et al. (2022); Jaaz and Jaamal (2021)
	Marketing Agility	Al-Mutairi (2025); Mohammed (2025); Al-Ajmi and Al-Tuwaijri (2025); Abu Mohammed (2025); Butkuk (2024); Hussain et al. (2022); Al-Noori and Al-Janabi (2022)
Dependent Variable Enhancing Operational Performance	Quality	Mujalli (2023); Khalifa (2023); Al-Qadi (2023); Salahuddin (2023); Younus (2023); Khawaldeh (2021); Mohammed (2021); Al-Janabi (2020)
	Cost	Mujalli (2023); Khalifa (2023); Al-Qadi (2023); Salahuddin (2023); Younus (2023); Khawaldeh (2021); Al-Janabi (2020)
	Flexibility	Mujalli (2023); Khalifa (2023); Salahuddin (2023); Younus (2023); Mohammed (2021); Al-Janabi (2020)
	Delivery	Mujalli (2023); Khalifa (2023); Salahuddin (2023); Al-Qadi (2023); Younus (2023); Mohammed (2021); Al-Janabi (2020)
Moderating Variable (Future Challenges)		Khayyati (2024); Al-Saidi (2025); Casino (2025); Warner and Zaranko (2025); Al-Qahtani (2024)

Table 2: Comparative analysis of previous studies and the current study

Researcher (s) and Year	Objective	Methodology and sample	Key Findings	Points of difference from the current study	Points of benefit/Contribution
Al-Mutairi (2025)	To examine the effect of strategic Agility on decision-making.	Methodology: Descriptive-analytical approach, questionnaire. Sample: 227 administrative leaders.	Strategic Agility was found to be high and has a significant effect on all stages of decision-making.	1. Dependent Variable Focus: Focused on decision-making as the outcome variable, rather than operational performance with its specific dimensions (quality, cost, flexibility, delivery) 2. Model Complexity: Did not include a moderating variable (like future challenges) in its research model.	1. Supports the importance of strategic Agility as an effective managerial approach. 2. Provides evidence for the significant role of Agility in organizational processes, reinforcing the foundation for its study in other contexts like. performance
Abu Mohammed (2025)	To examine the effect of strategic Agility on sustainable interactive advantage.	Descriptive approach, questionnaire.	A positive effect of strategic Agility on interactive advantage was found.	1. Dependent Variable and Sector: Focused on interactive advantage within the banking sector in Khartoum State, unlike the focus on operational performance in the public health sector. 2. Model Scope: Examined a direct relationship without incorporating a moderating variable like future challenges.	1. Illustrates the role of Agility in supporting interactiveness, a related organizational outcome. 2. Confirms the positive impact of Agility across different sectors (banking), suggesting its potential applicability in health.
Al-Ajmi and Al-Tuwaijri (2025)	To examine the relationship between strategic Agility requirements and interactive advantage.	Descriptive-analytical approach, questionnaire.	Statistically significant differences based on gender and a high importance level for strategic Agility.	1. Scope and Focus: Primarily focused on human resource requirements for Agility and their link to interactive advantage, without directly addressing operational performance or its dimensions. 2. Analytical Emphasis: Included demographic analysis (gender differences), which was not a primary focus of the current study. 3. Model Structure: Did not incorporate a moderating variable like future challenges.	1. Confirms the importance of the foundational requirements for implementing strategic Agility. 2. Highlights the potential influence of demographic factors, which can inform future research.
Mohammed (2025)	To examine the effect of strategic Agility on the quality of health services.	Descriptive-analytical approach, questionnaire. Sample: 100 individuals.	A strong positive relationship between strategic Agility and service quality.	1. Dependent Variable Scope: Focused specifically on service quality, which is only one dimension of the broader operational performance construct examined in the current study (which also includes cost, flexibility, and delivery). 2. Model Simplicity: Investigated a direct relationship without testing the moderating role of external factors like future challenges.	1. Directly supports the importance of strategic Agility within the health sector, providing a strong contextual precedent. 3. Validates the positive link between Agility and a key performance outcome (quality), reinforcing part of the current study's framework.
Mesaadah and Miqdadi (2025)	To examine the role of strategic agility in strategic success.	Quantitative descriptive approach, questionnaire.	Positive impact on performance, innovation, and interactive advantage.	Sector Context: Applied in private hospitals, differing from the public sector context (Ministry of Health) of the current study. Did not study the influence of future challenges as a contextual or moderating factor.	1. Strengthens the theoretical and empirical link between strategic agility and overall institutional performance. 2. Provides evidence from the healthcare sector (private hospitals), suggesting the relevance of agility across different healthcare models. 3. Highlights the role of agility in fostering innovation, a relevant aspect for organizational development.

(*Contd...*)

Table 2: (*Continued*)

Researcher (s) and Year	Objective	Methodology and sample	Key Findings	Points of difference from the current study	Points of benefit/Contribution
Butkuk (2024)	To examine the role of strategic agility in strategic alliances.	Descriptive-analytical approach, questionnaire. Sample: 35 questionnaires.	Reduced costs without a direct impact on quality and productivity.	Focus: Focused on digital transformation as the key driver, not strategic agility.	1. Highlights the role of technology as one potential enabler within the broader framework of strategic agility (technological agility dimension). 2. Provides a nuanced view that technological adoption alone may not comprehensively enhance performance without a vigilant strategic framework.
Lee et al. (2024)	To examine digital transformation and operational performance.	Quantitative approach. Sample: 107 companies.	Reduced costs without a direct impact on quality and productivity.	Focused on digital transformation as the key driver, not strategic agility.	1. Highlights the role of technology as one potential enabler within the broader framework of strategic agility (technological agility dimension). 2. Provides a nuanced view that technological adoption alone may not comprehensively enhance performance without a vigilant strategic framework.
Casino (2025)	To examine digital transformation, artificial intelligence, and challenges.	Quantitative approach.	Quality improvement alongside structural challenges.	Sector Focus: Conducted in the higher education sector, not healthcare.	1. Illustrates the impact of challenges in the context of technological adoption and change management. 2. Provides a parallel for how future challenges (including technological ones) can influence outcomes in organizational settings.
Warner and Zaranko (2025)	To examine organizational culture and digital transformation.	Quantitative approach. Sample: (Details not specified).	Digital transformation improves performance.	1. Focused on organizational culture and digital transformation, not on strategic agility as an antecedent or enabler. 2. Scope: Did not incorporate a variable representing external or future-oriented challenges.	1. Confirms the role of organizational culture and innovation in facilitating successful change, which aligns with the internal dimension of strategic agility. 2. Reinforces the idea that internal organizational factors are critical for performance improvement.
Current Study (Abu Joma, 2026)	To examine the role of strategic agility in enhancing operational performance in the Saudi Ministry of Health, with future challenges as a moderating variable.	Descriptive-analytical approach using PLS-SEM. Sample: 323 middle and upper-management employees from the Saudi Ministry of Health, Jeddah Governorate.	1. Strategic agility significantly enhances operational performance (β=0.803, P<0.05). 2. All agility dimensions positively affect performance dimensions. 3. Future challenges moderate the agility- performance relationship.	N/A (Baseline Study)	1. Provides a validated, comprehensive model for the public healthcare sector. 2. Introduces an integrated framework with a moderating variable (future challenges). 3. Offers actionable, context-specific recommendations.

- Cronbach's Alpha Coefficient: To verify the reliability of the study instrument and measure the internal consistency of its items.

Additionally, the current study relied on using PLS4 software to analyze data and extract results. A set of statistical methods was applied within Partial Least Squares Structural Equation Modeling (PLS-SEM), as follows:

- Convergent Validity, by using a number of indicators, most notably Factor Loadings, Composite Reliability, and Average Variance Extracted (AVE), in accordance with what was indicated by Hair et al. (2010).

Table 3: Sample distribution

Category	Number of employees in the population ($_hN$)	Category percentage	Sample size ($_hn$)
Middle management	2,037	71.80	232
Upper management	800	28.20	91
Total	2,837	100	323

- Discriminant Validity, to verify that each variable is distinct from the other study variables.
- Hypothesis Testing, by analyzing the paths in the PLS-SEM model to determine the nature and strength of the relationships between the study variables.

4. RESULTS OF THE DESCRIPTIVE ANALYSIS OF THE STUDY VARIABLES

This section of the study describes the study variables by calculating the arithmetic means and standard deviations for all study variables, as shown in Table 4. Validity and reliability of the measurement model results are presented in Table 5.

4.1. Testing the Study Hypotheses

After verifying the validity and reliability of the measures used in this study, the next step involves testing the study hypotheses, as detailed in Table 6. While all null hypotheses posited no statistically significant effect between the variables at a significance level of 0.05, the structural model of the current study—represented in Tables 4 and 5 for the main and sub-hypotheses, respectively—indicates an effect of strategic Agility with its dimensions on enhancing operational performance.

To verify the credibility of the structural model and understand the extent to which the independent variables explain the dependent variable, the best test to use in this case, as indicated by Hair et al. (2017), is the Bootstrapping test, as it is more reliable and can handle small samples. Table 6 presents the results of this test, which evaluated the path coefficients between the study variables using the T-Value. Paths are considered significant if the T-Value exceeds 2, as is the case with most results of the current study's hypotheses. The calculated T-Value for both hypotheses exceeded the critical value of (1.96). Furthermore, the calculated P-value of (0.000) was below the threshold of (0.05), indicating the significance of the effect between the variables. All results demonstrated a statistically significant effect of strategic Agility with its dimensions on enhancing operational performance.

4.2. Testing the Moderating Role

To examine the moderating role of future challenges between strategic agility and the enhancement of operational performance, the study used the Bootstrapping method in the PLS4 program. According to what was indicated by Ramayah et al. (2018), two conditions must be met for a moderating variable. The first condition is that the effect of the moderating variable must be statistically significant and important. The second condition is that the moderating variable should improve the relationship between the independent and dependent variables.

Table 4: Descriptive analysis of all study variables

Variable	Arithmetic mean	Standard deviation	Level of importance
Strategic agility	4.07	0.541	High
Operational performance	4.1	0.563	High
Future challenges	4.1	0.606	High

Table 5: Validity and reliability of the measurement model

Variable	Item loadings (≥0.50)	Composite reliability (≥0.60)	Average variance extracted (AVE) (≥0.50)
Environmental Agility	0.724	0.848	0.527
	0.725		
	0.759		
	0.697		
	0.724		
Technological Agility	0.744	0.885	0.606
	0.801		
	0.801		
	0.811		
	0.734		
Interactive Agility	0.79	0.895	0.63
	0.82		
	0.822		
	0.746		
	0.789		
Marketing Agility	0.772	0.89	0.618
	0.775		
	0.785		
	0.82		
	0.777		
Future Challenges	0.763	0.896	0.633
	0.799		
	0.855		
	0.786		
	0.772		
Quality	0.75	0.907	0.663
	0.481		
	0.863		
	0.852		
	0.757		
Cost	0.824	0.896	0.633
	0.809		
	0.825		
	0.813		
	0.699		
Flexibility	0.798	0.907	0.66
	0.806		
	0.82		
	0.862		
	0.775		
Delivery	0.797	0.891	0.621
	0.821		
	0.847		
	0.726		
	0.742		

The results in Table 7 indicate that future challenges did not improve the relationship between strategic agility and the enhancement of operational performance. Consequently, we accept the null hypothesis H02, which states that: "There is no statistically significant effect of strategic agility on enhancing operational performance through future challenges".

Table 6: Results of hypothesis testing using bootstrapping

Hypothesis	Path (relationship)	Path coefficient (β)	Standard deviation (STDEV)	T-value	P-value	Decision and Interpretation
H_{01}	Strategic Agility → Operational Performance	0.803	0.034	23.779	0	Reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the level (α≤0.05) of strategic Agility with its dimensions on enhancing operational performance with its dimensions in the Saudi Ministry of Health."
$H_{01.1}$	Strategic Agility → Quality	0.763	0.037	20.859	0	Reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the level (α≤0.05) of strategic Agility with its dimensions on quality in the Saudi Ministry of Health." (Note: Corrected to Saudi Ministry)
$H_{01.2}$	Strategic Agility → Cost	0.706	0.051	13.984	0	Reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the level (α≤0.05) of strategic Agility with its dimensions on cost in the Saudi Ministry of Health." (Note: Corrected to Saudi Ministry)
$H_{01.3}$	Strategic Agility → Flexibility	0.696	0.049	14.195	0	Reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the level (α≤0.05) of strategic Agility with its dimensions on flexibility in the Saudi Ministry of Health." (Note: Corrected to Saudi Ministry)
$H_{01.4}$	Strategic Agility → Delivery	0.676	0.04	16.96	0	Reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the level (α≤0.05) of strategic Agility with its dimensions on delivery in the Saudi Ministry of Health." (Note: Corrected to Saudi Ministry)

Table 7: Testing the hypothesis of the moderating role of future challenges

Hypothesis	Path	Beta value	Standard deviation	T-value	P-value	Result
H_{02}	Future Challenges×Strategic Agility → Enhancing Operational Performance	−0.005	0.02	0.259	0.796	The null hypothesis is accepted, which states: "There is no statistically significant effect at the level (α≤0.05) of strategic agility with its dimensions on enhancing operational performance with its dimensions, with the presence of future challenges as a moderating variable in the Saudi Ministry of Health"

5. DISCUSSION OF RESULTS AND RECOMMENDATIONS

5.1. Discussion of Results for the First Main Hypothesis

The study results showed a statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on enhancing operational performance with its dimensions (quality, cost, flexibility, delivery) in the Saudi Ministry of Health. This indicates that adopting strategic agility practices is a fundamental factor in improving the Ministry's operational performance.

Environmental Agility contributes to ensuring compliance with standards and sustainable practices.

Technological Agility enhances the ability to use modern technologies to improve service quality.

Interactive and Marketing Agility contribute to tracking beneficiary needs and improving the Ministry's responsiveness to market demands and health services requirements.

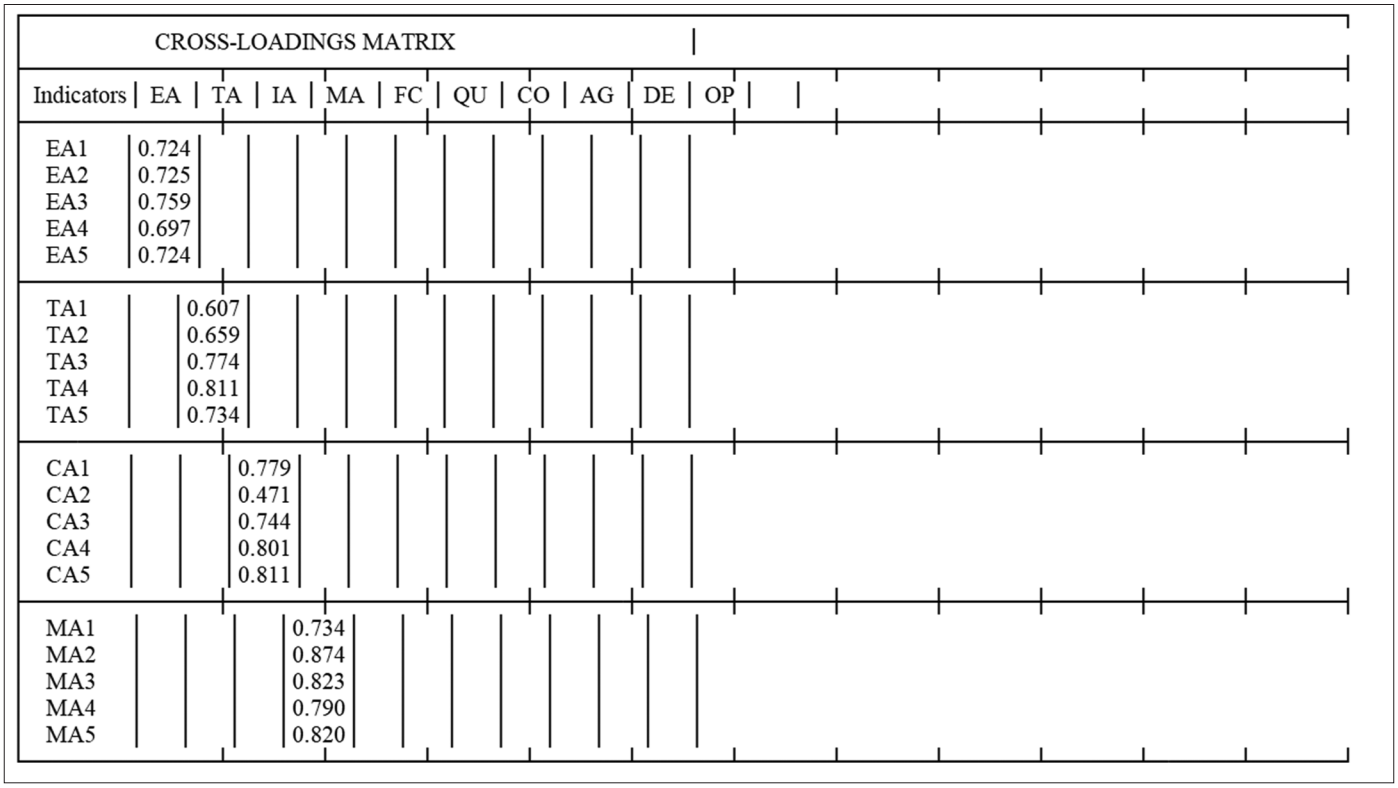
Overall, these results confirm the crucial role of strategic agility as an effective tool to support decision-making and enhance operational efficiency in the health sector. This finding is consistent with the studies by Mohammed (2025) and Mesaadah and Miqdadi (2025), both of which emphasized the pivotal role of strategic agility in improving performance and achieving organizational excellence.

5.2. Discussion of Results for the First Sub-Hypothesis

The study results indicated a statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on quality in the Saudi Ministry of Health.

This indicates that the Saudi Ministry of Health's adoption of strategic agility practices contributes directly to improving the quality of health services. Environmental agility ensures compliance with health standards and sustainable practices, technological agility enables the use of modern technologies to improve the accuracy and efficiency of processes, while interactive and marketing agility help track the needs of patients and beneficiaries, ensuring the provision of reliable and precise health services. Consequently, the results reflect the importance

Figure 2: Measurement Model



EA: Environmental Agility, TA: Technological Agility, IA: Interactive Agility, MA: Marketing Agility, FC: Future Challenges, QU: Quality, CO: Cost, AG: Agility (Operational Dimension), DE: Delivery

of strategic agility as a driving factor to enhance the quality of operational performance in the Ministry.

This result aligns with the findings of Mohammed (2025), which indicated a strong, significant positive relationship between the dimensions of strategic agility and improving the quality of health services at Al-Shifa Specialty Hospital. The study highlighted the role of technological, environmental, and interactive agility in raising the level of reliability, responsiveness, and the provision of high-quality health services. This supports the importance of implementing strategic agility practices in health institutions to achieve distinguished operational performance.

Note: Corrected "Saudi Ministry of Health" in the original text to "Saudi Ministry of Health" based on the study's consistent context.

5.3. Discussion of Results for the Second Sub-Hypothesis

The study results indicated a statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on cost in the Saudi Ministry of Health. This suggests that the Ministry's adoption of strategic agility practices contributes to improving resource utilization efficiency and reducing financial waste.

Environmental agility helps implement sustainable practices that reduce unnecessary material consumption.

Technological agility enables the improvement of planning and financial control processes through the use of digital systems and analytical tools.

Interactive and marketing agility contribute to guiding decisions toward effective strategies that achieve the best value for money.

These results are consistent with the findings of Lee et al. (2024), which showed that digital transformation and the adoption of smart technologies contributed to reducing operational costs and improving financial performance in industrial sector companies. This reinforces the importance of strategic agility as an effective factor in managing costs within health institutions.

5.4. Discussion of Results for the Third Sub-Hypothesis

The study results indicated a statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on flexibility in the Saudi Ministry of Health. This suggests that the Ministry's adoption of strategic agility practices enhances its ability to adapt to sudden changes and challenges in the work environment.

Environmental agility contributes to predicting environmental and health risks and taking preventive measures.

Technological agility enables the Ministry to adopt innovative technological solutions that allow for service continuity under various conditions.

Interactive and marketing agility support the ability to adjust policies and procedures in line with the needs of patients and beneficiaries.

Thus, the results reflect the importance of strategic agility as a fundamental factor for enhancing operational flexibility, ensuring the sustainable delivery of health services with high efficiency. This finding aligns with the results of the study by Mujalli (2023), which confirmed that adopting responsive manufacturing systems enhances process flexibility and enables rapid response to market demands, thereby boosting the operational performance of institutions.

5.5. Discussion of Results for the Fourth Sub-Hypothesis

The study results indicated a statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on delivery in the Saudi Ministry of Health. This suggests that the Ministry's adoption of strategic agility practices directly contributes to improving the accuracy and reliability of health service delivery schedules for beneficiaries.

Environmental agility helps predict operational problems and mitigate their impact on service continuity.

Technological agility supports the use of digital systems to track and coordinate processes, ensuring timely service delivery.

Interactive and marketing agility help monitor patient expectations and needs to ensure beneficiary requirements are efficiently met.

Consequently, these results reflect the vital role of strategic agility in enhancing delivery efficiency within operational performance, ensuring beneficiary satisfaction and the sustainability of service delivery. These results are consistent with the findings of Lee et al. (2024), which confirmed that adopting smart technologies within supply chains contributes to improving delivery accuracy and reducing delays, thereby enhancing the organization's operational performance.

5.6. Discussion of Results for the Second Main Hypothesis

The study results indicated that there is no statistically significant effect of strategic agility with its dimensions (environmental agility, technological agility, interactive agility, marketing agility) on enhancing operational performance with its dimensions (quality, cost, flexibility, delivery) with the presence of future challenges as a moderating variable in the Saudi Ministry of Health. This suggests that future challenges do not play a pivotal role in modifying the strength and impact of strategic agility on operational performance.

The results showed that employees' perception of future challenges—such as technical threats, digital shifts, organizational changes, and socio-economic variables—does not enhance the effectiveness of implementing strategic agility practices. The latter (strategic agility) functions to adapt to future variables and engage in proactive planning to ensure service quality continuity, reduce costs, improve operational flexibility, and guarantee timely service delivery.

This result highlights the importance of integrating foresight of future challenges within agility strategies to maximize their impact on operational performance. This aligns with the results of the study by Al-Saidi (2025) and the study by Al-Qahtani (2024), which emphasized the role of technical, ethical, and social challenges in guiding organizational strategies and improving their ability to adapt and achieve performance.

5.7. Study Recommendations

Based on the results reached by the study, and considering the items with the lowest achievement levels in enhancing operational performance and strategic agility, the study recommends the following:

- Enhancing Environmental Awareness among Employees: It is essential to intensify training programs and workshops aimed at increasing employee participation in environmental agility initiatives. This will elevate the level of commitment to sustainable health standards and practices.
- Actively Monitoring Competitors and Their Weaknesses: Develop precise mechanisms for tracking the strengths and weaknesses of competing or benchmark entities locally and regionally, to ensure the building of sustainable interactive advantages in the health sector.
- Developing Supplier Evaluation Mechanisms: Strengthen procedures for assessing the financial and operational status of suppliers prior to contracting with them. This ensures the continuity of supply chains and prevents any negative impact on the quality of health services.
- Proactively Keeping Pace with Technological Developments: Focus on monitoring and anticipating future technologies in the field of health information systems and integrating them into operational development plans.
- Enhancing Cybersecurity: Increase investment in cybersecurity protection systems and train personnel to confront potential digital threats. This ensures the protection of health information systems.
- Improving Facility Readiness: Ensure that health facilities are capable of delivering services in the required quantities during peak times and crises. This strengthens the "Delivery" dimension and increases beneficiary satisfaction.
- Supporting Innovation in Cost Reduction: Encourage the provision of health services with high operational efficiency and at the lowest possible cost, without compromising quality. This ensures the sustainability of financial efficiency within the Ministry.

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