

-RESEARCH ARTICLE-

STRATEGIC LEARNING AND STRATEGIC AGILITY: THE MEDIATING ROLE OF STRATEGIC THINKING

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—Abstract—

This study investigates how strategic learning (St.Le.) enhances strategic thinking (St.Th.) for managers to achieve strategic agility (St.Ag.) in public sector organizations—developing their strategic capabilities through all types of learning and thinking to gain competitive advantages and strategic agility to compete with other companies, in global trade and particularly in Iraq. Given the business sector's openness to global and regional trade for various industries, products, services, etc., Al-Furat state company for chemical industries in Babylon was chosen to test the hypotheses of this

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study using a questionnaire designed for this purpose. The study sample comprised 289 employees in company representative positions (managers at all levels and some administrative and technical staff). The most significant statistical technique employed in examining the direct and indirect effect between variables was structural equation modeling. The study drew several results, including the sample's favorable view of the current study's factors. Strategic thinking serves as a partial mediator between strategic learning and strategic agility. The study suggests boosting strategic thinking in Al-Furat state firm for chemical industries and focusing on strategic learning techniques to increase the organization's long-term adaptability to environmental and competitive changes, as indicated in achieving strategic agility.

Keywords: Strategic Learning, Strategic Thinking, Strategic Agility, Babylon, Iraq

1. INTRODUCTION

In a complex and uncertain environment, strategic planning and management must be an ongoing and dynamic process; thus, many organizations strive to adopt unorthodox strategies and philosophies to address new problems and stay up with rapid advances. And the series of workplace adjustments produce a competitive edge (Elali, 2021). One of the significant characteristics of an Agile organization is its capacity to respond quickly to events and environmental changes while preserving the integrity of its information systems, technology, personnel, business processes, and materials. (Hussein et al, 2021 & Majid et al., 2021). Strategic agility, which can adapt to quick changes and capitalize on altering market possibilities, is the key to success in a rapidly changing company environment. In addition, it enables any organization to outcompete opponents by seizing chances and promptly overcoming hurdles. It also produces the correct items at the right time, place, and cost (Soltaninezhad et al., 2021). Because firms must take advantage of market shifts to compete in tumultuous situations, an organization with agility and adaptability will automatically improve the likelihood of innovation within it. But if it lacks agility, it will not only be susceptible to defeats but also miss out on chances (Glinska et al., 2012 ; Hussein, 2019 ; Majid et al., 2021).

Late in the twentieth century, organizational learning developed as a significant branch of strategy research, notably in strategic alliances and joint ventures. Its significance has been progressively recognized in various domains, such as the literature on strategic planning and strategic process (Sirén, 2014). It enables organizations to enhance their practices and prosper in a dynamic and competitive environment (Pietrzak & Paliszkievicz, 2015) because it occurs during the planning and implementation phases (Reese, 2020). Through the cognitive and affective skills that are essential for more successful learning. Because the quality of life in the world causes it to change every day, the previous paradigms are no longer appropriate. This prompted the search for new rules and procedures for work and living, which

highlighted the need for strategic thinking as a societal addition and guide in solving today's problems and making the right decisions, as well as a tool to assist managers in implementing plans and taking advantage of opportunities that improve organizational performance (Amanah, et al., 2022). Therefore, understanding the learning process of strategic thinking has become a need for competitive businesses (Sloan, 2019). Pietrzak and Paliszkievicz (2015) and Shaik and Dhir's (2020) investigation corroborated the same result. The research highlighted the importance of studying strategic organizational learning methods and their impact on strategic outcomes and the great interest in studying strategic learning in the public sector. Because the majority of previous research has been conducted in countries such as the United States and the United Kingdom, there is an opportunity for researchers to research strategic thinking in developing countries. However, Wong et al. (2019) noted an absence of conclusive and reliable studies examining the relationship between strategic thinking and different perspectives.

Therefore, the strategic learning process, the potential influence of strategic thinking, and the consequences on strategic agility comprise an exciting study technique that strives to reduce the knowledge gap in this sector. This research contributes to developing a strategy to confront organizational crises through strategic thinking and learning to achieve strategic agility in Iraqi public sector organizations employing a scientific methodology. Organizations with direct consumer contact should follow this path.

This article aims to define strategic learning and its potential and actual ties with strategic thinking and agility. The following research questions are addressed in this article: What is the relation between strategic learning and strategic agility? How does strategic thinking impact strategic agility, and what function do thinking processes play in building strategic agility in an organization? And c) how can strategic learning influence strategic agility, with strategic thinking serving as the intermediary? This article contributes to the body of knowledge in three ways: Beginning with a comprehension of the study variables (strategic learning, strategic thinking, and strategic agility) in the public sector, we proceed to examine the research questions. We then draw logical implications from our in-depth examination of the links between strategic learning, strategic agility, and strategic thinking. Third, present a fresh perspective on how strategic learning and strategic thinking operate in an Arab country like Iraq.

2. LITERATURE REVIEW

2.1 Strategic Learning

Strategic learning is learning that improves an organization's strategic efficiency and adjusts the fundamental assumptions underpinning the stable generation mechanism that facilitates the process of creating optimal strategic behavior (Hitt et al., 2021).

According to [Do et al. \(2022\)](#), it is a learning skill that enables the senior management of an organization to continuously integrate its experiences and knowledge at all organizational levels, allowing it to adapt to any changing and unforeseen environmental condition. [Ferreira et al. \(2020\)](#) highlighted that learning is an evolving method that becomes systematized over time. As the organizational capacity for strategic learning is the organization's ability to learn by establishing its strategies to produce strategic knowledge and achieve strategic transformation, it is also referred to as the organization's capacity for strategic learning. According to [Darling-Hammond et al. \(2020\)](#), it exemplifies the efforts to integrate verified evidence and continuous thinking into change initiatives. According to [Lapuschkin et al. \(2019\)](#), it is a multidimensional structure exhibited by the subprocesses of producing, distributing, understanding, and implementing strategic knowledge. It also enables the organization to use information better, capture opportunities faster, and enhance profitability.

[Lapuschkin et al. \(2019\)](#) demonstrated that it is a high-level learning process by which an organization absorbs strategic knowledge derived from strategic actions that strive to grab chances and seek advantages to improve its competitive position. [Idris et al. \(2013\)](#) view the formulation and implementation of new methods for continual adaptation to the environment and its variables as a learning-based process. [Sirén \(2014\)](#) emphasized that it is the organization's internal processes' dynamic capacity to acquire, communicate, understand, and use strategic knowledge. The long-term adaptive capacity allows businesses to disconnect from their current strategic direction and renew their essential competencies, according to [Lapuschkin et al. \(2019\)](#). As defined by [Kumar et al. \(2019\)](#), it pertains to obtaining knowledge about strategic value and consistently utilizing it to establish, extend, and alter integrative strategies for the organization's competitive advantage. According to [Mutlucan \(2018\)](#), the learning gained by work teams necessitates flexible abilities in the organization's dynamic environment to overcome competitors and recognize and grasp chances at the group level. It facilitates the free flow of strategic knowledge in the minds of its personnel, thereby ensuring that it is embedded in the organizational memory.

Moreover, [Price et al. \(2019\)](#) have shown that it is crucial for businesses to increase their adaptive ability as they seek strategic change. From the preceding, we can conclude that procedural strategic learning is a high-level learning ability that enables the organization to build strategic knowledge, continually consider renewing its core capabilities and formulate and implement new strategies to adapt to its environment to obtain the competitive advantages to sustain its position. The following is a procedural definition of the idea of strategic learning derived from the preceding: (It is a high-level learning capacity that enables the organization to acquire strategic knowledge and to think continuously about renewing its fundamental capabilities, formulating and implementing new strategies, adapting to its environment to obtain opportunities and benefits, and enhancing its competitive position and strategic agility)

In terms of the significance of strategic learning, [Ferreira et al. \(2020\)](#) have highlighted the importance of strategic learning in enabling the embodiment of the organization's strategic value, as well as its ability to provide the organization with several mechanisms through which it achieves numerous advantages that are difficult for competitors to imitate ([Ferreira et al., 2020](#)). The criticism leveled at traditional strategic planning research also indicates the interest in degrees of strategic learning. Scholars have suggested that the key to an organization's success is its capacity to construct and reformulate strategies in dynamic situations continuously. It is acquiring, accumulating, deploying, and renewing strategic resources to gain a competitive advantage and create value ([Sirén et al., 2014](#)). While [Lapuschkin et al. \(2019\)](#) noted that strategic learning facilitates an organization's achievement of long-term adaptation by enabling it to rapidly identify changes in the environment and seize the opportunities they present, the authors 2019 did not specify how strategic learning facilitates long-term adaptation.

In addition, it enables the organization to adjust its current objectives, methods, and strategies and to build new plans that will allow it to differentiate itself and compete. [Idris et al. \(2013\)](#) noted that implementing strategic learning processes offers the organization numerous benefits, including producing a higher performance for competition and maintaining competition. In addition to increasing the organization's dynamic skills and strategic innovation projects, it strengthens its ability to respond to changes in its work environment. [Moon and Lee \(2015\)](#) assert that through strategic learning, modern businesses can develop the capacity to plan proactively for future uncertainty. [Lapuschkin et al. \(2019\)](#) noted that the components of strategic learning are particularly significant in exploratory environments, where organizations must determine where to achieve a competitive advantage because they guide the process of variation, selection, and retention of entrepreneurial initiatives. [Price et al. \(2019\)](#) emphasize the importance of learning as a strategy for complex environments and problems, as strategic learning promotes a deeper exploration of the thinking that guides the organization's strategy and identifies the evidence that must be collected about the results generated by these strategies, enabling the organization to comprehend this evidence and improve the application of new knowledge in strategic decisions.

To measure the level of strategic learning, the scale defined by [Sirén \(2014\)](#) and [Idris et al. \(2013\)](#) and [Al Jawazneh et al. \(2016\)](#), and [Aldahhan et al. \(2018\)](#) was used as follows :

a. Generation of Strategic Knowledge: New strategic knowledge begins with strategic initiatives from individuals close to emerging technological developments and changing market conditions; individuals who interact with the organization's external environment develop potential knowledge in various organizational sectors. To have a more substantial influence on the organization, the strategic initiative must be

transmitted and disseminated at the group and team levels once it has been established at the individual level. [Lapuschkin et al. \(2019\)](#) and [Esterhuizen et al. \(2012\)](#) referred to it from two perspectives: the stock and the process. The stock indicates that it contributes to the organizational stock of knowledge and provides a measurable, tangible performance function, such as physical assets. While the process is dynamic, interactive, process-oriented, and focused on the interactions involved in creating new knowledge, relationships are the center of the process.

b. Distribution of Strategic Knowledge: Knowledge distribution is the internal dissemination of strategic knowledge gathered at the individual level via dialogues and interactions between individuals and groups within an organization. [Lapuschkin et al. \(2019\)](#) and [Sirén et al. \(2014\)](#) demonstrated that disseminating strategic knowledge is a crucial starting point for establishing common organizational knowledge, which is essential to capitalizing on exploration and exploitation tactics. According to [Idris et al. \(2013\)](#), it demonstrates the capacity of organizations to distribute or arrange knowledge into a framework and set of processes that makes it available to everyone interested in it. It is the process through which its operators generate new information and a shared understanding of its significance.

c. Interpretation of Strategic Knowledge: It is the process by which current information is given meaning, and a shared understanding is developed in a way that affects an organization's ability to manage employees and its operations. It also affects the appearance of conventional interpretations of information. Interpretation is comprehending knowledge, ideas, and information from an individual's perspective, considering the material's nature and context. The process described by [Lapuschkin et al. \(2019\)](#) and [Aldahhan et al. \(2018\)](#) is the act of understanding knowledge, ideas, and information from an individual's perspective based on the type of information and the moment at which it occurred.

d. Implementation of Strategic Knowledge: A process that institutionalizes knowledge in the organization's collective features (systems, structures, strategies, and tactics, collectively known as organizational memory) ([Lapuschkin et al., 2019](#)). [Al Jawazneh et al. \(2016\)](#) state that new strategic knowledge is formalized in non-human components of companies via a formal procedure or system which enhances the usefulness of knowledge for use in conducting organizational operations and its applicability to your work. [Aldahhan et al. \(2018\)](#) define knowledge management as optimizing or exploiting accessible expertise for an organization's long-term performance.

2.2 Strategic Thinking

Strategic thinking plays a significant role in attaining the organization's goals and ensuring its survival and success by strengthening its capacity to adapt to any internal or external changes that may arise and enhancing its performance. Strategic thinking

encompasses the design and implementation of strategies by corporate executives and the strategic performance of the firm as a whole. It consists of strategic analysis, strategic planning, organization, management, and leadership. It encompasses essentially all characteristics that might be referred to as "strategy" (Liedtka,1998). Strategic thinking is the identification, visualization, analysis, and interpretation of possible and reasonable alternative futures for the organization, as well as the application of acquired knowledge to strengthen thinking about possible options for effectively positioning the organization in the external environment in the future, to obtain better information and make more rigorous decisions about actions to be taken today. Moghaddam et al. (2013) defined it as an approach that employs qualitative comparisons and similarities to generate new creative ideas and design procedures based on newly acquired knowledge. growing distress

According to Norzailan et al. (2016), innovative and diverse thinking is focused on discovering new competitive approaches. It is also tied to letting go of the situation, and the dominant perspective entails insight, is enduring by nature, and demands creativity and intellect. It also involves anticipating the future and contemplating various scenarios. According to Arayesh et al. (2017), it is a unique method of thinking that can be regarded as a skilled approach. He believes that successful people analyze before acting and then make judgments, reducing the likelihood of failure. Strategic thinking also enables individuals to explore their decisions' risks, advantages, and costs before the operation, which aids in making the best option before the procedure.

According to Alomari (2020), it is a unique way of thinking that focuses on addressing insight, resulting in an integrated vision of the company through a synthesis process from applying intuition and creativity in establishing strategic directions. It is a creative intellectual process that aims to create fictitious methods that can rewrite the rules of a competitive game and imagine a possible future that is dramatically distinct from the present (Ferdushi et al., 2021). Based on the preceding, we can define procedural strategic thinking as (long-term goals and objectives, enabling the decision-maker to plan and prepare for the future. Strategic thinking emphasizes installation, employing intuition and creativity to develop an integrated perspective for the organization's management).

Strategic thinking is a necessary intellectual tool for thinking about the future because it enables a group to explore an important strategic issue, discuss its outcomes, and then create a new strategy that improves the organization's competence and excellence in competition as well as its strengths relative to competitors by preparing its members for strategic issues. (Liedtka,1998). Clarity of thought is one of the most successful techniques used by managers today. Moreover, it is essential to crucial decisions and planning for individuals, nations, and organizations, improving effectiveness and efficiency. When the world is undergoing rapid and unexpected change, without control over essential resources, it is difficult for many firms to predict the future and

design and implement a strategy. Therefore, strategic thinking is one of most businesses' most effective organizational methods. (Moghaddam et al., 2013).

According to Shahul Hameed et al. (2022), the significance of strategic thinking lies in the fact that it aims to produce a strategy with a coherent, unified, and integrated framework for decisions, particularly concerning the direction of the business organization and the utilization of resources. It employs primary and supplementary data, a qualitative synthesis of ideas and perceptions. Because it is observant, particular, and practical, and hence a potent arena for bringing organizations the correct benefits. Salamzadeh et al. (2015) assert that a combination of innovation, strategic planning, and operational planning is required to accomplish the greatest extent and identify the necessary strategies to achieve superior performance, fundamental business requirements, and expectations. While Alomari (2020) views it as a cognitive process that reveals how an organization thinks, sees, assesses, and constructs the future, through which the individual engages the past and present to consider the organization's future development.

As a result of globalization, technology, and intensifying rivalry, firms face numerous obstacles, and managers have begun to build their management plans with great care. It is required to determine the dimensions of strategic thinking, as it was based on the Liedtka (1998) scale, with which Moghaddam et al. (2013), Alatailat et al. (2019) agreed, and as follows:

a. Intent-focused is the conscious thought process capable of generating a goal based on external reality and the belief to accomplish that goal in the future. Strategic intent provides a long-term perspective as a process that occurs at various organizational levels. It differs from long-term goals in that their attainability is unknown, they are tied to fundamental competencies, and they are of significant importance. In contrast to the vision, which is attributed to the leader, the intent is attributed to the group's collaborative function. (Khajavi et al., 2020).

b. Thinking in Time: It is the component dealing with gap analysis, scenario development, and the utilization of comparisons to develop the strategy at the appropriate time. Understanding the relationship between the past, present, and future is fundamental. The gap analysis investigates past and present circumstances to anticipate the future. The more an organization emphasizes learning from precedents through gap analysis, the larger its capacity for innovation, survival, and better organizational performance (Alatailat et al., 2019).

c. Hypothesis-Driven: It is the process of representing causal models of action and orientation towards the future as hypotheses to formulate and develop the vision, possibilities, and plans based on the available information to deal rationally with stressful situations, challenges, and difficulties in the surrounding environment, and to transition from an operational or tactical leadership role to a strategic leadership role.

Guided hypotheses permit individuals to evaluate their assumptions and beliefs and modify their plans in response to cues and observations. (Norzailan et al.,2016).

d. Intelligent Opportunism: The company can adapt without relying on the extraordinary insight of senior management. Instead, the organization must be able to train workers at lower levels to seize opportunities. The organization must be able to formulate new open strategies when alternative strategies that are most appropriate to a changing environment fail. It must be broad and flexible in its approach to strategy formulation instead of developing a clearly defined plan to direct organizational efforts effectively and efficiently.

e. Systems Perspective: To comprehend the interconnections within the chain, it is necessary to have a mental picture of the entire system. It assists individuals in discovering their function in the broader strategy and the impact of their actions on the system's components and the outcome. Consequently, this method addresses the compatibility between the plan's organization, work, and functional levels. Systems thinking assists in understanding the interaction between organizations, enterprises, and functional levels of strategies and the external context from many perspectives. It is also beneficial to comprehend the relationships between departments and functions and between suppliers and buyers. (Moghaddam et al., 2013).

2.3 Strategic Agility

Recently, agility was introduced as a novel method for handling environmental problems, competitive factors, and diverse client needs. Adaptability is one of the most crucial criteria in ensuring the survival of modern enterprises in the dynamic and tumultuous commercial climate of today. Building strategic agility is a method for managing risks and unanticipated external changes, as it needs the ability to continuously adjust and adapt to the organization's strategic direction in a timely manner (Muema, 2019). It is the ability to constantly and adequately modify the strategic direction of the core business by adapting and responding to changing, sensitive environmental conditions while adapting at the incorrect moment. Nkuda (2017) defines resiliency as an organization's capacity to anticipate, respond, take proactive action, identify internal vulnerabilities, invest in opportunities, and address external challenges. According to (Barahma et al., 2019), a shift has been made from the traditional method of anticipating and managing change simultaneously to anticipating change and realizing its repercussions and requirements and transforming its risks into profitable investment opportunities that achieve and ensure the aspirations of current and future organizations.

It generates innovative concepts in the face of intense competition by developing a highly adaptable strategic system. It addresses changes in client needs, the need for new product creation, changes in product mix, competitor actions, product price, market expansion, selection of business partners, technology acceptance, and diffusion,

according to [Kurniawan et al. \(2020\)](#). At its core, according to [\(Elali, 2021\)](#), is the extent to which the organization's top management can adapt, be flexible, be creative, anticipate unexpected shocks within and outside the business environment in which it operates, and respond proactively, swiftly, and effectively to them so that threats become opportunities. In light of the preceding, strategic agility can be procedurally defined as (the organization's ability to manage the proactive change that ensures a flexible response to market changes and competition conditions, as well as its superiority over competitors in its business sector by relying on three superior capabilities that provide the sustainability of its superiority in an environment characterized by uncertainty and continuous change. Collective commitment and resource flow, which contribute to the achievement of inventiveness at the level of the organization through its strategic efforts to uncover knowledge resources and their efficient investment from various sources, contribute to the company's inventiveness).

Their responsiveness and adaptability also exemplify the significance of strategic agility in firms to customer requirements. At the same time, risks of supply shortages or disruptions are mitigated by pooling inventory or other capacity resources. Strategically resilient organizations can respond to the changing, diversified, and unexpected needs of their front-end consumers while limiting the back-end risks of supply disruptions. [Muema \(2019\)](#) and [Chamanifard et al. \(2015\)](#) believe that it supports internal systems, structures, and organizational processes reflected in the rapid response to environmental requirements by promoting an agile culture within the organization, demonstrating its significance for achieving efficiency and effectiveness. It makes quick decisions, puts them into action, and facilitates the participation of individuals and workgroups.

[Wiraeus et al., \(2019\)](#) noted that for a company to be agile, it must prioritize constant innovation, development, and adaptation while preserving and focusing on the strategy and the customer and using data and analyzing it to find out. In addition, strategic agility indicates a synchronized process between the pace of the structured response and the rate of internal and external environmental change and facilitates proactive decision-making. [Kurniawan et al. \(2020\)](#) believe that the significance of strategic agility becomes apparent when it has become one of the most significant capabilities that contribute to the success of organizations that are characterized by a high degree of business and environmental fluctuations because it enables these organizations to seize opportunities as they arise through the implementation of successive experiments and disposal of failed projects swiftly. According to [\(Elali, 2021\)](#), its significance derives from the attempts of many firms to adopt unorthodox tactics and ideologies to tackle new problems, stay up with quick advances and successive changes in the workplace, and gain a competitive advantage. It is the key to success in a quickly changing business environment because it can adapt to sudden changes to capitalize on

shifting market opportunities. It also enables any firm to outperform rivals by seizing chances and overcoming obstacles quickly.

Strategists highlight three characteristics of strategic agility to preserve flexibility, growth, and competitive advantage in the face of abrupt changes (Elali, 2021; Oventhal, 2016):

a. Strategic Sensitivity: The organization's ability to comprehend and see its external and internal environment combines early and acute awareness of beginning trends and converging forces with the intensive real-time perception of strategic circumstances and their evolution. It is an effective strategy process that is externally focused and internally collaborative; a high level of tension and concentration and a rich, intense, and open internal dialogue enhance strategic sensitivity. (Elali, 2021; Mace, 2016; Arbussa et al., 2017).

b. Collective Commitment: Taking crucial judgments through collaboration (avoidance of individual decisions) with highly agile and clever teams and granting them extensive problem-solving and decision-making authority. The capacity to preserve flexibility and agility while maintaining effective collaboration is becoming increasingly vital. The quicker executives make crucial decisions, the quicker a business seizes opportunities (Oventhal, 2016). Several authors and researchers have noted that the concept of collective commitment is similar to the unity of command discussed by (Doz et al., 2008) in their model of strategic agility and defined by them. The team's most excellent capacity is to make rapid, decisive judgments without becoming mired in a "win and lose" mentality. (Elali, 2021; Arbussa et al., 2017; Bulthuis, 2018).

c. Resource Fluidity refers to the internal ability to rearrange capabilities and quickly transfer resources (particularly people) to new opportunities or activities in a system with changing activities. (Elali, 2021; Arbussa et al., 2017; Bulthuis, 2018). It is also the intelligent and speedy reconfiguration and restructuring of people, processes, and ideas. Strategic agility is not a characteristic of an organization whose human resources cannot transfer other fundamental resources when the environment necessitates such measures. (Mace, 2016) describes the organization's capacity to attract and transfer the essential resources, talents, and expertise to ensure its survival, sustainable growth, and competitive edge. (Elali, 2021)

3. HYPOTHESIS BUILDING

This study aims to investigate the influence of strategic learning on boosting the strategic agility of businesses through strategic thinking by optimizing strategic intent, thinking in time, grabbing opportunities, and guiding hypotheses.

Strategic learning is a subset of organizational learning that pertains to an organization's capacity to extract knowledge from strategic actions and then apply that knowledge to improve corporate strategy (Ferreira et al., 2020). Strategic learning begins with establishing the common goal the entire business seeks to realize. The use of analogy as a language facilitates the translation of complex and frequently ambiguous concepts into a more precise form that coordinates and mobilizes all individuals in pursuit of organizational objectives (Vladimir et al., 2020). Strategic thinking skills are acquired through informal learning. It consists of three stages represented by preparation, experience, and re-evaluation (Sloan, 2019), so strategic learners set interrelated educational goals, use appropriate learning and study strategies to achieve learning goals, and engage in continuous thinking to identify areas that require further improvement (Mason, 2017). Consequently, the following hypothesis can be formulated:

Hypothesis 1: Strategic learning positively affects strategic thinking

Strategic learning consists of the behaviors and processes that enable companies to adapt over the long term (Mintzberg et al., 1985); it allows the organization to modify its current objectives, procedures, and strategies, as well as to develop new strategies that will enable it to stand out and compete (Lapuschkin et al., 2019). "learning strategies" (O'Neil et al., 1979) refers to the broad and comprehensive approach that incorporates emotional and physical procedures as well as cognitive strategies. Organizational learning is also a crucial part of dynamic capabilities in commercial organizations, as this circumstance represents a facet of strategic agility and a necessity. The following hypothesis can be formulated regardless of the needs of current organizations that exist in continuous situations of strong rivalry and environmental unpredictability (Saeidi et al., 2019).

Hypothesis 2: Strategic learning positively affects strategic agility

Strategic thinking is significant because it shifts from a mechanical to a more creative approach. It emphasizes applying cognitive concepts and depends on environmental scanning and scenario planning to create a new future (Amanah et al., 2022). It solves strategic problems that blend rational, convergent thinking with creative, divergent thinking (Wong et al., 2019). And because strategic agility is the organization's ability to respond quickly to changes in the internal and external business environment and to work proactively to achieve opportunities that arise as a result of the change (Majid et al., 2021), investing knowledge ideas in solving strategic problems can increase the organization's ability to respond to changes in the external environment; thus, the following hypothesis can be formulated:

Hypothesis 3: Strategic thinking positively strategic agility

Strategic agility is a phenomenon that emphasizes strategic thinking and clear vision rather than strategic planning (Soltaninezhad et al., 2021) because strategic thinking is essential for the ultimate goal of envisioning future changes and making strategic choices (Salavati et al., 2017), as it creates a competitive advantage for the organization by identifying actions that build and reinforce distinct customer values (Amanah et al., 2022). Through three essential components: (a) allowing the company to change its strategy and strengthen its competitive position; (b) applying knowledge at a strategic level; and (c) acquiring strategic knowledge about the process of strategic behaviors. All of these include the distinguishing definition of strategic learning (Sirén, 2014), which is represented in the capacity of businesses to dynamically change their strategy to a changing business environment by continuously monitoring the environment and seizing potential opportunities. Consequently, the following hypothesis can be developed:

Hypothesis 4: Strategic thinking mediate the relationship between strategic learning and strategic agility

4. METHODOLOGY

Al Furat State Company for Chemical Industries provided the information used in the present study. As the primary instrument for data collection, the questionnaire included three scales. All scores were measured using a 5-point Likert scale. The study investigated three variables, as depicted in Figure 1. (1).

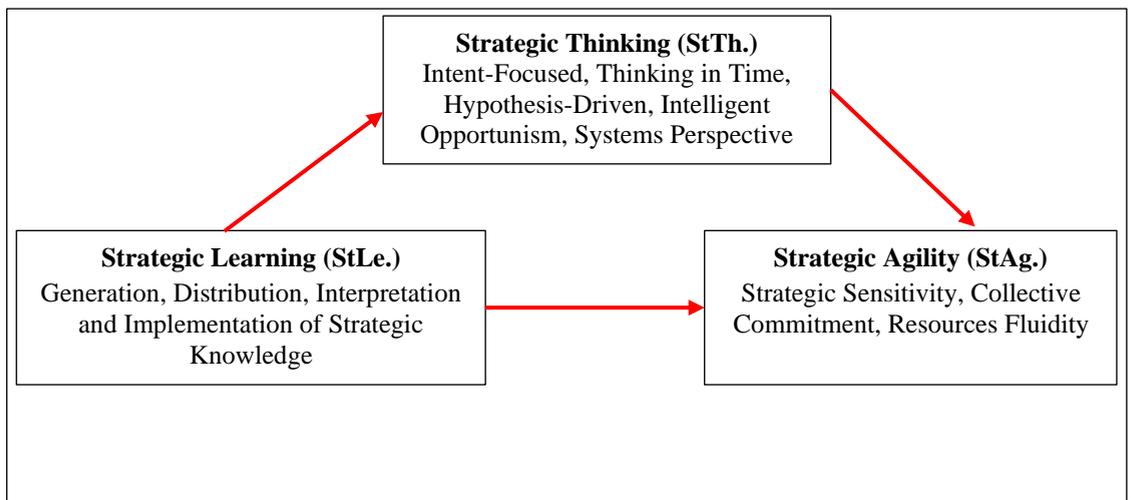


Figure 1. Research Model

All primary scales were derived from those in the scientific literature. A structure with four key elements have been developed for strategic learning: generation of strategic knowledge, distribution of strategic knowledge, interpretation of strategic knowledge,

and application of strategic knowledge. Following the criteria, this study employed 19 items (Siren, 2012; Idris et al., 2013; Al Jawazneh et al., 2016). Strategic thinking was measured using the scale (Liedtka, 1998; Moghaddam et al., 2013; Alatailat et al., 2019) and was designed based on five dimensions: strategic intent, thinking. The scale of (Doz & Kosonen, 2008; Oventhal, 2016; Elali, 2021) was adopted to measure the strategic agility variable based on three dimensions: strategic sensitivity, collective commitment, and resource flow, with a total of twenty-two items.

The sample size (289) using essential random sampling was responsive. The nature and aim of the questionnaire were explained to the respondents after getting the agreement of the company's management for the research community, specifically from the company's top management. Respondents were contacted to provide truthful responses to questionnaire questions to the best of their abilities. This measure tries to mitigate the possible influence of employee reluctance and social desirability-based prejudice. Rodriguez-Ardura et al. (2020) controlled for the potential influence of common bias in data collection techniques by administering questionnaires at different intervals. In the initial phase, questionnaires were mailed directly to the research sample. In the second period, the administration disseminated the questionnaire to respondents without the involvement of researchers—an acceptable response rate for paper-based questionnaires in Asian workplaces. The respondents' ages varied from (25-54). Participants obtained a bachelor's degree at a rate of 65%, a technical diploma at a rate of 15%, a higher diploma at a rate of 11%, a master's degree in a variety of disciplines at a rate of 5%, and a doctorate at a rate of 4%, with specializations that serve the field of the company for which they work. The demographic profile of participants is shown in Table (1).

Table 1. Demographic Information of Respondents

Characteristics	Frequencies	Percentage
Gender		
Male	211	73%
Female	78	27%
Age		
< 25	81	28%
25-34	74	26%
35-44	63	22%
45-54	56	19%
55-65	15	5%
Education		
Bachelor's	189	65%
Technical Diploma	42	15%
Higher Diploma	33	11%

MAS	14	5%
PHD	11	4%
Job Position		
Assistant General Manager	3	1%
Executive Director	18	6%
Head of Department	29	10%
Division Manager	34	12%
Unit Official	46	16%
Administrative work official	159	55%
Specialties		
Engineer	39	13.5%
Technical	33	11.5%
Chemical	94	33%
Administrative	123	42%

5. RESULTS

5.1 Measurement Model Analysis

5.1.1 Descriptive statistics and correlation

Table (2) presents the results of descriptive statistics and correlation analysis. The mean and standard deviation values for Strategic Learning, Strategic Thinking, & Strategic Agility are $M= 3.7979$, $SD= .71489$, $M= 3.9420$, $SD= .46195$, & $M= 4.0514$, $SD= .77422$, respectively. Pearson correlation coefficient shows a positive and significant relationship between Strategic Learning and Strategic Agility ($r=.156$, $p < 0.1$) and also a positive and significant relationship between Strategic Learning and Strategic Thinking ($r=.590$, $p < 0.1$). It also indicates a positive relationship between Strategic thinking and agility ($r=.541$, $p < 0.1$). These correlations were expected in the study hypotheses.

Table 2. Mean, Standard Deviations & Correlations Between Main Variables

Variables	M	SD	1	2	3
Strategic Learning	3.7979	.71489	1	.590**	.156**
Strategic Thinking	3.9420	.46195	.590**	1	.541**
Strategic Agility	4.0514	.77422	.156**	.541**	1

Note N=289, ** $p < 0.01$

5.1.2 Reliability and Validity Measurement

The Confirmatory Factor Analysis analysis findings are shown in Table 3. (CFA). As parameter estimates, values beyond 40% are conceivable and acceptable. As for standard errors, the lower they are, the more statistical parameter estimates may be relied upon, and vice versa, the statistical significance of parameter estimates is

defined by the significance of the critical ratio (CR), which indicates statistical scale. The significance of parameter estimates is significant if they exceed the critical ratio (1.96 at the level of significance (%)5 and 2.56 at the level of significance (%)1 (Rodrguez-Mantilla et al., 2019). A value greater than 0.40 indicates loading, accepted statistically, except for goods (2 from Generate strategic knowledge dimension, 2 from Strategic knowledge distribution dimension, 4,5 from Interpretation of strategic knowledge dimension, 2 from resources Fluidity dimension, that has been removed from measurement). In addition to indicators and baseline conformance quality, structural equation modeling has exceeded the statistically allowed limitations. This Table similarly offers the analysis of reliability using Cronbach's alpha. The scores are more significant than 0.7, indicating that the internal consistency of this study's research instrument is strong (Elnegaard et al., 2022). Therefore, this study's measurement paradigm conforms to reliability and validity requirements.

Table 3. Confirmatory Factor Analysis & Cornbrach's Alpha

Variables (dimensions)	Cranach's alpha	Loading	quality indicators
Strategic Learning	.921		
Generate strategic knowledge	.784	.458	CIMN/DF=2.370 GFI=.912 CFI=.947 TLI=.933
		.822	
		.810	
		.655	
distribution of Strategic knowledge	.851	.678	IFI=.955 RMSEA=.064
		.814	
		.611	
		.800	
		.791	
Interpretation of strategic knowledge	.827	.760	
		.636	
		.676	
		.644	
		.767	
Implement strategic knowledge	.795	.725	
		.745	
		.612	
		.708	
Strategic Thinking	.839		
Intent-Focused	.742	.648	CIMN/DF=1.852 GFI=.904 CFI=.934 TLI=.917 IFI=.936
		.732	
		.726	
		.525	
		.437	

Thinking in time	.706	.548	RMSEA=054
		.437	
		.462	
		.489	
Hypothesis-Driven	.701	.585	
		.735	
		.655	
Intelligent Opportunism	.832	.731	
		.654	
		.641	
		.728	
		.704	
Systems Perspective	.822	.498	
		.766	
		.812	
		.731	
		.513	
Strategic agility	.910		
Strategic sensitivity	.874	.532	CIMN/DF=2.185 GFI=.901 CFI=.927 TLI=.905 IFI=.928 RMSEA=.64
		.482	
		.650	
		.732	
		.705	
		.573	
		.744	
		.766	
		.734	
		Collective commitment	
.541			
.455			
.886			
.511			
.467			
.445			
.456			
.428			
Resources Fluidity	.769		.559
		.786	
		.862	

5.2 Tests of Hypotheses

This study examined the impact of Strategic Learning on Strategic agility through Strategic Thinking. Table (4) and the structural model illustrate the direct effect, CR, and P-value. The Structural Modeling Equation was used to show the immediate impact, as shown in Table (4). The result shows Strategic Learning positively relates to Strategic thinking ($\beta = 0.283$, $p < .001$), supporting H1. Strategic Learning positively correlates with Strategic Agility ($\beta = 0.151$, $p < .001$), supporting H2. Similarly, H3 shows a positive relationship between Strategic Thinking and Strategic agility ($\beta = 0.849$, $p < .001$). To test H4, bootstrapping analysis was run to test the correlation of bootstrapping samples with a 95% confidence interval (CI) on 5,000 sub-samples, as Preacher and Hayes (2018) suggested. Using Amos software, Strategic Thinking's mediating effect on the relationship between Strategic Learning and Strategic Agility was validated. Hence, H4 is also supported.

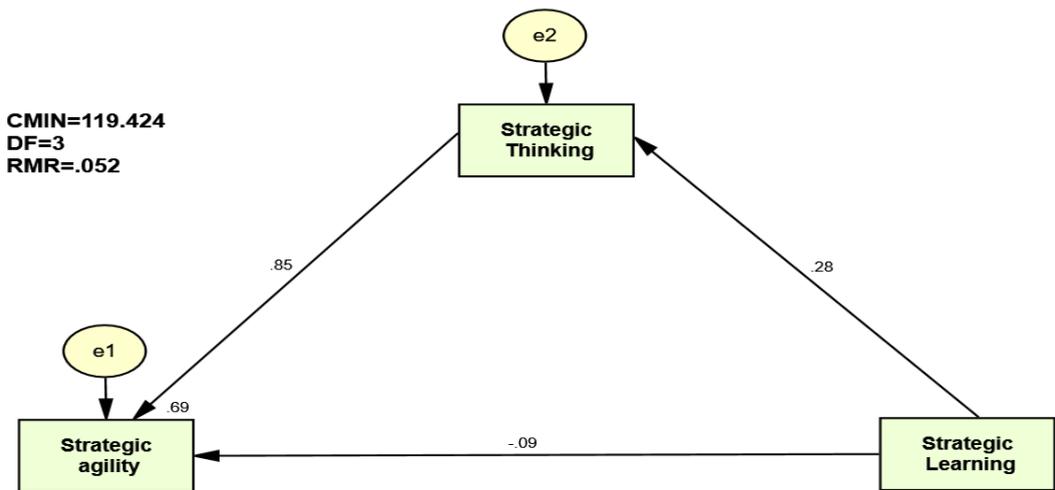


Figure 2. Structural Model

Table 4. Path Coefficients, SE, CR &P-Values

Effect	Hypotheses	B	SE	CR.	P
Direct effect	Strategic Learning → Strategic Thinking	.283	.070	5.000	***
	Strategic Learning → Strategic agility	.151	.070	2.593	.010
	Strategic thinking → Strategic agility	.849	.033	24.708	***
Indirect effect	Strategic Learning → Strategic thinking → Strategic agility	.240	Lower Bounds	Upper Bounds	.005
			.150	.329	

6. DISCUSSION AND CONCLUSIONS

This study aimed to determine the relationship between strategic learning, strategic thinking, and strategic agility at Al-Furat State Company of Chemical Industries in Iraq. We hypothesized that StLe and StTh would favor StAg and StLe would have a good effect on StTh. Additionally, it studied the role that StTh plays in the connection between StLe and StAg as a mediator. The study evaluated a total of 289 replies for their content. The results indicated that StLe. has a positive effect on StAg. There is empirical evidence (Idris et al., 2013; Arman et al., 2017) that strategic learning influences strategic agility. Saeidi et al. (2019) say that by "learning by doing" organizational processes, or skill sets, businesses can develop distinctive capabilities that result in more efficient infrastructure utilization, hence gaining a competitive edge. These findings are consistent with prior studies. For instance, Idris et al. (2013) and Arman et al. (2017) offer empirical data. In addition, it has been shown that StTh influences StAg. Previous studies have demonstrated a significant relationship between strategic thinking and agility (Salih et al., 2014). In addition, the authors of another study (Amanah et al., 2022) emphasized the significance of this link. Likewise, these outcomes are consistent with those findings. Utilizing strategic thinking to respond to opportunities on time and systemic thinking, which will also improve the organization's response to opportunities, can improve the organization's response to opportunities. When a company engages in strategic thinking, its ability to seize opportunities increases. The effect of StLe on StTh. is also clear, given that having the insight or a good understanding of the current situation enables managers to learn about the reality and regulations of the market, as well as to develop fresh and valuable strategies (Tajpour et al., 2018). This study is in keeping with the findings of other research studies, which have indicated a significant association between organizational learning and strategic thinking, such as (Hosseini et al., 2020). (Hosseini et al, 2020). An organization with high levels of organizational learning enables its members to consistently improve their ability to generate the desired results, build a new and expansive mental pattern, and learn how to execute the tasks required to reach their objectives (Karim et al., 2017). Moreover, the data validated the moderating role that strategic thinking plays. This result is also consistent with the findings of other studies, such as (Amanah et al., 2022), which emphasized that organizations should investigate mediating elements that can assist in predicting future opportunities and risks, and (Lin et al., 2018), which developed a map of strategic thinking to compare and differentiate between planning, thinking, and strategic momentum, as he concluded that strategic planning is strengthened at the level of the organization, where strategic momentum is generated. As a result, the organization must research the moderating variables that could assist a rapid response to changes in the internal and external business environments and work proactively to capitalize on the opportunities that arise due to the transition.

7. RESEARCH IMPLICATIONS

High levels of strategic learning in the company by creating new strategic initiatives, distributing, interpreting, and implementing them will increase the company's ability to predict, respond, take proactive action, and confront external threats, as well as employ strategic thinking through conscious thought promptly, according to the findings of the current study. And the adoption of hypotheses aimed at exploiting opportunities can increase the organization's capacity to adopt non-traditional strategies and philosophies to meet new challenges, keep up with rapid developments and successive changes in the workplace, and achieve a competitive advantage. Consequently, organizations can rely on strategic learning to increase their dynamic capabilities and agility by enhancing their ability to respond to changes in their work environment. Moreover, increasing levels of strategic thinking can increase the organization's capacity to comprehend and perceive its external and internal environment, thereby enhancing its capacity to respond to the circumstances you face positively.

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