

**T.C.
ISTANBUL GEDİK UNIVERSITY
INSTITUTE OF GRADUATE STUDIES**



**THE ROLE OF STRATEGIC MANAGEMENT AND MODERN
AGRICULTURAL TECHNOLOGY IN DEVELOPING FIELD CROPS
CULTIVATION IN IRAQ**

MASTER'S THESIS

Raad Fahad Sakran AL-MASHHADANI

Engineering Management Master in English Program

JUNE 2021

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Thesis Advisor: Assist. Prof. Dr. Redvan GHASEMLOUNIA

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LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ MÜDÜRLÜĞÜ

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Öğretim Üyesi Adı Soyadı

Tez Savunma Tarihi:

1) Tez Danışmanı:

2) Jüri Üyesi:

3) Jüri Üyesi:

DECLARATION

I, Raad Fahad Sakran AL-MASHHADANI, do hereby declare that this thesis titled as “The Role of Strategic Management and Modern Agricultural Technology in Developing Field Crops Cultivation in Iraq” is original work done by me for the award of the masters degree in the faculty of Engineering Management. I also declare that this thesis or any part of it has not been submitted and presented for any other degree or research paper in any other university or institution. (...../...../2021)

Yasser ALKHABATAH



DEDICATION

Before anything else, I'm thankful to God for installing me and bestowing me with the strength to complete this thesis.

First and above all, I thank Assist. Prof. Dr. Redvan GHASEMLOUNIA, my supervisor, has encouraged me in every aspect of my work.

I would like to tell everyone who has supported me over the years that I am thankful to convey my heartfelt appreciation and appreciation to my family and those who have believed in me. I love you all the same.

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I wish to express my gratitude to all who, in one way or another, were a part of this thesis

PREFACE

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June 2021

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THE ROLE OF STRATEGIC MANAGEMENT AND MODERN AGRICULTURAL TECHNOLOGY IN DEVELOPING FIELD CROPS CULTIVATION IN IRAQ

ABSTRACT

The research aims to define the role of agricultural systems managers in Iraq in strategic management and agricultural technology in developing field crop cultivation. The current research comes within the framework of survey research that falls within the descriptive approach. This approach is used in data collection and analysis to obtain information from many respondents who form a specific community and achieve its research goals. Prepare a five-pronged questionnaire with 40 items. Middle managers and executives are divided into five axes. It deals with (content, strategic analysis, vision formulation, important characteristics, objectives, types of strategies, levels of strategy, strategy characteristics, strategy implementation, and strategy evaluation. Tasks and tasks for the strategic manager: The research was conducted as a sample of circles. A random agricultural survey from Baghdad governorate, and after making the questionnaire in Google documents, the questionnaire was published on social media sites for workers in the agricultural sector. The research community was surveyed so that the total sample size reached 100. The weighted average and F and LSD tests to analyze the data and obtain the results using the SPSS program Experience in strategic management The number of agricultural system managers at the administrative (middle) and executive levels in the field of strategic management, in general, was moderate and so forth - managers of the e-agriculture sector. The system needs to be upgraded, and this is being reversed. In their cognitive abilities in strategic management to improve the units responsible for them, most respondents indicated the necessity of relying on modern agricultural technology and strategic management when planning a long-term strategy in developing field crop cultivation. The researcher recommends the need to qualify senior and middle management managers and send them outside the country to acquire new strategic management concepts and modern agricultural technology and increase their knowledge and skill capabilities in development.

Keyword: *Strategic management, Agricultural technology, Strategy formulation, Strategy implementation, Strategy evaluation*

IRAK'TA TARLA BİTKİLERİNİN GELİŞTİRİLMESİNDE STRATEJİK YÖNETİM VE MODERN TARIM TEKNOLOJİSİNİN ROLÜ

ÖZET

Araştırma, tarla mahsulü yetiştiriciliğinin geliştirilmesinde stratejik yönetim ve tarım teknolojisi alanında Irak'taki tarım sistemleri yöneticilerinin rolünü tanımlamayı amaçlamaktadır. Bu yaklaşım, belirli bir topluluğu oluşturan çok sayıda katılımcıdan bilgi almak ve araştırmacının araştırma hedeflerine ulaşmak için veri toplama ve analizinde kullanıldığından, mevcut araştırma, tanımlayıcı yaklaşıma giren anket araştırması çerçevesinde gelir. Buna yönelik, 40 maddeden oluşan beş yıllık bir anket hazırlandı. Beş temaya bölünerek tartışıldı ve üst, yönetici ve orta düzeydeki yönetici ve yöneticilere gönderildi. Stratejik analiz, vizyonun formülasyonu, önem özellikleri, hedefler, strateji türleri, strateji seviyeleri, stratejinin özellikleri, stratejinin uygulanması, stratejinin değerlendirilmesi. Stratejik Direktör: Araştırma, Bağdat valiliğinden tarım sistemi örneği, Google document kullanarak hazırlanıp, tarım sektöründe faaliyet gösteren kişilere sosyal medya üzerinden gönderildi, anket, tarım sektöründeki işçiler için sosyal medya sitelerinde yayınlandı, araştırma topluluğu SPSS programını kullanarak verileri analiz etmek ve sonuçları elde etmek için ağırlıklı ortalama ve F ve LSD testleri Stratejik yönetim tecrübesi İdari (orta) ve yönetici seviyelerindeki tarımsal sistem yöneticilerinin sayısı stratejik yönetim alanında genel olarak ılımlıydı ve böyle devam ediyor - e-ziraat yöneticileri yeniden sektör. Sistemin yükseltilmesi gerekiyor ve bu tersine çevriliyor. Katılımcıların çoğu, kendilerinden sorumlu birimlerin performans düzeyini iyileştirmek için stratejik yönetim alanındaki bilişsel yeteneklerinde, uzun vadeli bir strateji planlarken modern tarım teknolojisine ve stratejik yönetime güvenmenin gerekliliğini belirtmiştir. üst ve orta düzey yöneticilerin niteliklerini belirleme ve onları stratejik yönetim ve modern tarım teknolojisinde yeni kavramlar edinmeleri için ülke dışına gönderme ve kalkınma konusundaki bilgi ve beceri yeteneklerini artırma ihtiyacını önermektedir.

Anahtar Kelimeler: *Stratejik yönetim, Tarım teknolojisi, Strateji formülasyonu, Strateji uygulama, Strateji değerlendirmesi*

1. INTRODUCTION

Most companies today want to reach success, distinction, and distinction in their operations and activities, compete for their performance's efficiency and success, achieve their goals and objectives, and build a strong, distinguished, and successful strategic center. Grow, survive, improve, and improve performance in their environment, characterized by constant change and fierce competition for various means and ends.

To achieve these goals, these organizations must have a deep strategic vision, a clear mission, and a solid strategy; So in the long term, in light of what they can delve into in the strategic vision, a clear message and a deeper perspective for future expectations and they can look at the correct vision—environmental, technological, competitive, economic, political, and social variables. Information and management are facing business organizations and the opportunities and risks surrounding them in the era of globalization. However, the main challenge is the administrative challenge for those who implement the management process at all levels, especially the higher level of senior management where the strategic leadership has a high degree of awareness and perception of science, scientific knowledge, and practical ability to follow scientific methods in managing organizations because achieving success, distinction and excellence Survival in this era requires high managerial skills and competencies. Reading the environment, future perspectives, and dealing with no situation In the face of the current competition in which it manages the institution's corporate environment, all they have to do is achieve the goals contained in the establishment of this organization. It is only to ensure that this comes from following a modern management approach expressed by the strategic management. The glossary and concept of strategic management in an integrated way to achieve efficiency and effectiveness in the performance of these organizations represents the current management and to learn about the strengths and existing capabilities and the ability to compete in the changing external environment and the internal threats and opportunities that enable them to succeed in achieving the goals of the future of

commercial projects. "It is well known that most of the literature deals with theoretical concepts.

As for the idea of strategic management in developing countries and the scope of its practice in those countries, it is often overlooked in managerial thinking due to the absence of ample studies and knowledge on this, which leads to the question of the extent to which Modern strategic management principles can be implemented in developing nations.

Administrative agencies in the public and private sectors, both profitable and supportive, face great challenges due to rapid and persistent changes. These problems have generated several difficulties for all companies to undertake these rapid changes. Its objectives (Sulaitin, 2007), which imposes on organizations to use modern administrative methods that help them reach the targets they pursue and seek
Its media, improve the organization's ability to face obstacles and provide better services and develop its results. (Al-Douri, 2003) Strategic management is a new way of managing the organization towards performance in the result of the increased changes in the world in which it works, and as it allows the organization the opportunity to predict environmental changes and prepare its resources, which helps us to turn threats Into opportunities to offer the best facilities (Alexei, 2011) as the strategic management seeks to turn the organization's vision, mission and general objectives into concrete strategies that each unit of operation seeks inside the organization seeks to implement it to strengthen the competitiveness of the goods and services it offers at the level of business units (Mohammed, 2013), which helps the company to be more involved and critical in shaping the private future by designing the best plans to deal with the problems it faces in Future (Fred, 2011).

Organizations that work to reach their goals of sustainability, stability, and growth gave the difference in their goals and activities do not materialize in isolation from the existence of strategic management (Al-Douri, 2003), because of its ability to identify and formulate the vision, mission, and goals of an organization, and also diagnose and treat the strengths and weaknesses of the organization, whether it be in its internal or external environment. All international organizations that used strategic management methods have agreed on this (Hanna, 2012). The Agricultural System Organization in Iraq is one of the development organizations In the agricultural sector, which aims to alleviate extreme poverty and improve food

security; it is not immune to the various developments that take place around it (Kamar, 2005), as the reality of agricultural extension is described as weak (below what it should be) in an interview. The priorities can be assigned to many causes: the absence of good management and lack of performance (AL-Frayiji, 2010). There are general trends globally and in Iraq to view agricultural extension services as outdated. Look after the processes since it will increase the efficiency of the system.

With the conventional processes and modes, the enterprise has rendered it incapable of reaching its objectives, so strategic management's implementation adds capabilities to support future endeavors, including delivering services and better performance sustainably. Place in advance of those shifts (Bryson, 2003). quality and achieve the organization's strategic goals (Bryson, 2003).

The strategic planning of agricultural systems and programs for the organization's leadership helps to develop a future vision for the leaders of the agricultural organization for what they need to reach in the future, the importance of the mission of the organization and the objectives of agricultural and extension work by leading a four-dimensional environmental analysis (SWOT) to determine the following:

First: Elements of the internal environment for agricultural systems, which includes (Al- Shafei, 2012)

- **Strengths:** They are represented in the characteristics: the advantages and capabilities available to the organization help achieve the goals and objectives, support them and make the most of them.
- **Weaknesses:** They are represented in the characteristics, limitations, or obstacles that they suffer, Including the organization, and impede the achievement of goals and objectives, and how to reduce negative impacts
- **Second:** Elements of the external environment for agricultural systems, which include:
 - **Opportunities:** they are circumstances, situations, factors, and forces outside of the control
 - The organization can contribute positively to achieving goals and aims and making the most of them.
 - **Threats:** Every project has circumstances, situations, causes, and influences that impact priorities and objectives that are not under the organization's

control. How can we reduce or even eliminate these negative impacts on agriculture? The guiding director is a critical component of the overall company's success or failure since he occupies the direction. Competence and managerial experience in currency are now a prerequisite

Challenge facing the company (Al-Nuaimi, 2003). Suppose his goal is to explain to his team and stakeholders the organization's vision and mission and competencies and other influences on vulnerability and opportunities in the internal and external landscape. In that case, his mission requires a combination of intelligence and analysis. that is a strategy in which long-term strategies are developed and put into action over a long period. (Aber, 2013) Based on the importance above, the trend was towards developing the capabilities of the extension directors, as building the core capacities of the organization starts from building the knowledge and skill capacities of managers (Al-Kubaisi, 2011), with their various groups and levels of administrative, functional and organizational as the most prominent and most important tool in the extension system through them the system The indicative implementation of all programs and activities to achieve the set goals and objectives (Al-Taiy, 2014) Knowledge of the work, its principles and steps are the basis for its proper performance (Al-Bahr, 2010), which allows the agricultural extension system to have a positive impact on the beneficiaries by improving the quality of its extension services.to determine the level of knowledge of the extension managers.

1.2 The Study Problem

In a world where changes overlap, and changes lead to an accelerated spread of information rapidly. Where procedures and procedures are intertwined, to create new data that form the denominators of new procedures and procedures, our institutions and economic institutions must be managed in a meaningful way. And a conscious management method so that they can move in an informed context. Murad to overcome his current reality, which is burdened with many difficulties and obstacles, and to move to place them in an innovative stage that enables them to achieve the goals and tasks they established. This referred management method is the so-called strategic management. Therefore, the study problem will focus mainly on this vital area in the world of management Modern, highlighting the circumstances that make strategic management a very important management practice in business

organizations and the extent of its similarity with the circumstances surrounding the organization concerned with this study. In addition to clarifying the concept, importance, and steps of strategic management, making a realistic diagnosis of the actual practice of strategic management in those organizations, and the effect of applying this process on their performance, by responding to the following inquiries:

1. Do the circumstances surrounding the business organizations concerned need to be used for strategic management?
2. Do managers of the concerned organizations have a good knowledge of the concept of strategic management in addition to its components?
3. Are business organizations seriously involved in agricultural technology?
4. The work of the concerned organizations works well, and does the application of their strategic management style positively affect them?
5. Does agricultural technology application lead to field crop production development and be a positive factor?

1.3 Importance and Need for Research

All organizations are eager to enhance and sustain superior performance; thus, there will be variations in the degree of performance each organization will attain., the application of agricultural organizations and institutions to strategic management in its scientific sense becomes an urgent and imperative necessity because of the importance of the agricultural public sector in Iraq, especially since it is the main pillar of comprehensive development. Accordingly, the importance of the research stems from the fact that it will focus mainly on demonstrating the scientific and practical stages to be tracked in the management of corporate organizations' strategies and to identify the variances between them then the stages used in managing the strategies of business organizations in farming enterprises, and in particular the steps of designing strategies, as they precede each act and even control any conduct or behavior, in addition to showing the influence of the application of the strategic management method on the performance of those organizations.

1.4 Methodology of Research

The current research comes within the framework of survey research that falls within the descriptive approach, as this approach is used in data collection and analysis to obtain information from large numbers of respondents who form a specific community, as it is an appropriate method for collecting detailed data and information on strategic management and the obstacles to its application. In a specified period.

This style is apposite for this study because it provides exact and complete data on the case study. Its suitability for strategic studies (SPSS) also uses the comparison method and uses the statistical examination method, and a program to analyze questionnaires examination hypotheses.

1.5 The Data and Information Sources

The data and information sources for this study are divided into two types:

1-Sources of primary data and information:

This is reflected in the data and information about the research community and research vocabulary (field study) obtained through questionnaires published at government levels in the agricultural sector.

2- Sources of secondary data and information:

Includes sources, references, dictionaries, books, magazines, periodicals, research papers, theses, reports, journals, and publications of the country or its institutions or agencies, global, regional, and local organizations, and Internet sites

Related to the topics of strategic management and strategic planning

1.6 Research Limits

The study is limited to the Republic of Iraq and all departments, institutions, and companies operating in this sector and the private sector, including a group of companies, specialized in agricultural services

2. LITERATURE REVIEW

2.1 Strategic Management

In this part of the study, the basic concepts and related data related to Strategic Management have been tried to be examined.

2.1.1 The concept of strategic management

It is important to note that, among the most prominent concepts of strategic management areas strategic management are given below: - Long-term strategy is a set of decisions and actions that operates over the lifetime of the company." often called a strategy or an assemblage of decisions and actions relevant to the establishment and management of the overall goals" (Morsi N. M.-S., 2007).

Strategic management is a method of defining the available opportunities and their limitations and the objectives and goals and executing plans to achieve the former based on the latter. The strengths and weaknesses of the industry and career levels can be used to forecast market developments, along with the environment's influences, and strategic control can be used to adapt to these conditions." (Ayoub, 1997). Strategic management is defined as "the process that ensures the design, implementation, and evaluation of long-term impact decisions aimed at increasing the value of the organization from the perspective of customers, shareholders and society as a whole" (Awad, 2003).

Strategic management has also been definite as "the procedure of defining the organization's mission and trying to achieve it by similar the capabilities of the internal organization with the requirements of the external environment" (Al-Maqli, 2002).

Strategic management is defined as "the process of making and implementing strategic decisions" (Al-Sayed, 1993). The term 'strategic decision' describes decisions that result in a substantial alteration in the firm's operational process. These

are not strategic decisions because they shift the organization's strategic position substantially.

Strategic management is also defined as "the procedure needed to develop, improve and apply some of the actions essential to reach the desired results" (Al-Aref, 2002). Strategic management can be defined as "the science and art of shaping, applying and evaluating the overlapping functional decisions that enable the organization to achieve its goals" (Al-Aref, 2002).

Although the strategy is characterized as the collection of decisions and activities that influence strategic outcomes, the strategic management process is a means by which overall objectives and objectives can be decided upon, and strategies can be decided. It is at the time and place where you can assess the degree of accomplishment if any, and whether you've been able to meet those goals" (Al-Husayni, 2000).

It can be defined as "the process by which top management determines the performance and direction of the organization in the long run through careful preparation, proper implementation and continuous evaluation of the strategy" (Al-Maqli, 2002).

Another definition of strategic management is: "It is a set of administrative decisions and practices that determine the long-term performance of a facility, and this includes strategy-making, implementation, evaluation, and monitoring. Therefore, the study of strategy focuses on observing and evaluating opportunities and weaknesses in the internal environment and external" (Hanger, 1997).

Strategic management is also defined as "the process by which senior management determines long-term directions, as well as performance through careful design in the appropriate implementation and continuous evaluation of the established strategy." (Kahaf, 1997). Strategic management takes a managerial perspective of the major determinants of business performance. It has two important characteristics: it is a relatively new managerial concept, and it incorporates additions from the industrial organization, marketing, and administrative behavior, making it a complex concept as well. Consequently, the definition of strategy is still evolving. For our purposes

The researcher believes that the concept of strategic management reflects human specialization and disagreement and is therefore expected to be found in all social

sciences, but this does lead to different definitions, which is also considered normal in human studies. The main pillars of strategic management are represented as follows:

- 1- Strategic management follows a holistic method and style in managing the organization, different from the case in operational management that attention to a specific part of the organization, such as marketing. This confirms that strategic management contracts with the organization on the basis that it is one unit.
- 2- Strategic management approves a long-term view and is concerned with the overall (long-term) goals. These overall goalmouths are the result of each section of the organization's main aims.
- 3- Strategic management is based on considering the factors affecting the organization's internal and external environment and how to adapt to these changing environmental factors.
- 4- Strategic decisions are related to a major change in the organization's activities to keep pace with the environment's changes to enable the organization to achieve the specified strategic goals.

2.2 Defining the Concepts Associated with Strategic Management

One who sees the value of strategic management notices different strategic management principles and terminology. Strategic management principles should be made transparent and simple so that they can be grasped and absorbed. In academe and practice, these rules are almost always employed as follows:

2.2.1 Management

The strategic control of human, financial, information, tangible, material and technological capital in complex environments to meet set goals or objectives is all part of management. That is typically done by setting goals for the business and implementing plans to help them meet them. Success strategies over a long period provide the parameters for managers' actions and decisions in their departments. It is both a management and behavioral management purpose, guiding the day-to-day activity of all company levels, specifically: sales, manufacturing, finance, human resources, R&D, research, and development (Mustafa, 2005).

Management is also defined as: “a continuous process that aims to achieve specific results using available resources, with the highest degree of efficiency and “effectiveness” under existing or potential objective conditions (Al-Salami, 1972)

Management involves people with various skills and attributes to achieve such outcomes. Services have been used to meet existing needs.

2.2.2 Strategy

Its concept was linked to Strategos "When looking for strategy in the dictionary, we find that it comes from the Greek term used in battlefield command and the book on the art of military strategy, but it was later used in corporate organizations and other enterprises" (Al-Mursi, 2003).

The term strategy stemmed from two main sources: military strategy and game theory, as they constitute the scientific basis for the concept and meaning of strategy. Game Theory (Strategy) was used for centuries due to the original use of the word strategy.

To the military field, it is taken from the ancient Greek language. It is derived from the word strategy, which means general or military commander Strategos, how the commander (general) uses the force surrounding him in terms of behavioral and psychological skills to ensure that the (Alexander of Macedonia) victory in the war. It is also until the era of Alexander the Great (Steiner Georga A and John B, 1997).

The military consists of skilled soldiers who employ force to suppress civil unrest and suppress dissent and form a cohesive total rule structure. in the background of Napoleon's battles, he developed the science and art of confronting the enemy by force, but the military definition of strategy did as well. Using fighting as a means to an end (Qinaya, 2002).

And considering that for every war, many goals arise, and battles are used as one of the different methods to achieve these goals, depending on each goal's nature. It is clear from this that the military strategy has become not about the use of force only. It is not based on war and battles but rather uses all resources and capabilities and all diplomatic and moral methods and weapons to achieve objectives.

The strategy is one of the three routes military commanders use to obtain their objectives; a strategy is a basic approach, the pathway, or the route the commander

employs to get his objectives. In the past two decades, "relatively recent" has become the standard definition for the term. Strategy: The process of defining and analyzing available alternatives to achieve the goal is called a strategy. An organizational strategy is a pattern of responses to various environmental factors. as a symbol, this articulates the assets and liabilities of the company. The external environment around our customers (social, organizational, technological, etc.) drives the change in their preferences (Al-Maqli, 2002).

The strategy is also defined as "the organization's perception of what it wants to be in the future, not the organization's reaching this status, and it is the guiding framework for choices that determine the nature of an organization" (Tregoe, 1980).

2.2.3 Policies

"Policies" are characterized as policies that signal the decision-making process and thereby influence the outcome. The company's policies are generally set by the management and used to enhance organizational efficiency and deal with personality disputes. It has also been called a "job ethic" by some observers (Al-Rikabi, 2004). It is directed to subordinates and defines the scope of action and decision-making, reflects a unified framework for other types of plans, and assists the manager in delegating his powers to his assistants and retaining the right to monitor their performance (Al-Maqli, 2002). It is clear from the previous definitions that the policy is one of the mechanisms available to the higher management in the organization to set general guidelines that guide the lower administrative levels in the decision-making process for managers and workers' daily conduct in the field operation.

2.2.4 Plan

Plan as (Omar Al-Maqli) mentioned, One of the principles of strategic planning is identifying the long-term objectives the company desires to accomplish. Planning is like managing, which means planning is important regardless of position. It will help address three primary questions: (1) What will we do? (2) How will we do it? (3) when? (Al-Maqli, 2002).

The first issue includes evaluating the current state of affairs, the second a study on how to reach these targets, and the third answers these questions to put the strategy in

place. When planning for the future, one must consider any pending decisions but not those yet to be made. Concepts such as long-term strategies, medium- and short-term plans, overall strategies, and tactical strategies are found in the literature.

2.2.5 Strategic planning

Many words define strategic planning, whether they are about business management or educational administration (theory).

Strategy is the study of solving administrative problems using various strategies and techniques in different contexts

Strategic planning is the preparation and development of the company's mission, goals, and a thorough understanding of its current procedures, and the specification of how they will be used to reach those objectives.

Strategic planning can also be described as understanding the organization's optimal type and making the strategy this way. Then strategic planning is (Al-Aref, 2002):

- 1- Detecting the blocking of the company's future.
- 2- Insight into future company profiles.
- 3- Visualize the future direction and path of the company.
- 4- Seeing the company's mission and goals in the future.
- 5- Imagine the field of business and activities that the company is entering

Often, strategic planning means identifying planning objectives, developing policies and strategies, and putting the policies and strategies into practice, all tied together to form a plan, which is then executed to achieve the strategic goals." strategic planning looks ahead for the company's long-term needs and comes up with a long-term strategy to-solution" (Al-Maqli, 2002). Perhaps from the above, it can be said that three main characteristics characterize strategic planning:

First: Strategic planning focuses on developing a comprehensive plan for the organization as a whole, not planning for a specific department or department.

Second: This concept is based on long-term considerations, not short-term ones.

Third: strategic planning includes developing set procedures that go hand in hand with budgetary forecasting the mission, goals, and tactics, and long- and plans are documented in writing and reexamined by full-time "experts" to help to organize the

project. Our strategic planning and strategic management synonyms, and are they interchangeable?

This question's importance stems from the misunderstanding contained in some academic contributions and some managers' practices in their dealings with these terms. The short, logical, and objective answer to this question is negative for the following reasons:

- 1- The task of planning over-all, operational or strategic, is one of the manager's tasks, counting organization, direction, and control. So, the term strategic management is wider than strategic planning and has larger administrative connotations.
- 2- Strategic planning can also be thought of as part of strategic management. It characterizes the organization's purpose, designing an integrated mission, drafting a plan that helps it accomplish certain objectives, and looks at how well the strategy is executed. (Strategy implementation, performance monitoring, and strategic oversight).

2.2.5 Strategic thinking

Strategic thinking covers the set of capabilities and skills and is important in competition and crucial for the health of the company. The stock of money and other natural resources the government has granted has created some new problems, and there is a shortage of them (El Maghraby, 2004).

2.2.7 Objectives

Achievements or success are the end products of carrying out the implemented objectives. The goals describe what should be done and when quantified as well. All members of the company share a common purpose. The precise targets do not measure the wider objectives; for example, a business needs to get a leading market position (Thabet Abd al-Rahman Idris, 2000). Suppose the goals of the project would be completed over a longer time than the outcomes. In that case, it is part of long-term policy and long-term strategic planning. It pays special attention to strategizing and identifying the top-level administrative thought as a skill. Setting goals and achieving them is considered vital in all administration and at all stages of the game. strategies, plans, and procedures are based on the organization's goals Clarity of

goals lay the groundwork for deciding if the organization's output is on track and setting corrective steps accordingly. Performance and effectiveness are the key factors in determining an organization's success. He described the target as the company's hope and trying to do it in the long term (Kahaf, 1997).

Also defined the goal as: "It is a statement of what the organization intends to achieve. Usually, objectives are formulated to define the required achievement level in a specific time frame. The objectives can be quantitatively formulated, and formulated in a simplified manner that is easy for all stakeholders to understand and be measurable." (Al-Maqli, 2002). The objectives can be classified into short-term objectives (one year or less), medium-term objectives (one year to 3 years), and long-term objectives (3 years or more). They can also be classified based on their coverage and breadth of influence in the organization, which are holistic objectives applicable to the organization. The objectives that belong to a specific section of the organization are known as the department's objectives, and those that apply to a specific department are called the department's objectives. Among the objectives commonly used in organizations is the goal of profitability (net profits), the goal of growth, the goal of market share, the goal of efficiency and effectiveness (reducing cost and effort), the goal of Survival (avoiding bankruptcy), the goal of market expansion, the goal of innovation and development (technological leadership), the goal of Contributing to community service (employment, zakat, taxes, donations), the goal of workers' welfare (safety, wages, job benefits), etc.

The importance of setting objectives is as follows (Kahaf, 1997).

- 1- Defining the organization's environment, its legal legitimacy, and the reasons for its existence in the environment.
- 2- Defining the mission of the organization.
- 3- Coordination between decision-making centers.
- 4- Performance evaluation, where the foundations and standards for its measurement are provided at the organization's level, at the level of units, and at the business field to which the organization belongs.

2.2.8 Goals of the organization

Generally, the company's objectives can be stated as "a recital of what the facility aims to accomplish over the long term. Customers will be happier as they get higher-

quality sales and service but lose resources, and output will go up while unit costs go down. generate greater sales, thereby mitigating risk (Morsi, 2006).

2.2.9 Purpose

Does the focus of the institution match the business it's the purpose?" It is imperative to quickly and impress the customers the audience how the facility can meet their needs. Among the most critical criteria for a successful function is to be broad when formulated. A clear illustration of the goals of management consulting: helping bodies and organizations succeed" (Morsi, 2006).

2.2.10 Strategic vision

It is the company's aspiration and expectation to be effective, not the means to do so at this time. Because of the emphasis on generality, it does not reflect the strategies of the company. Concept and mission go hand in hand. Make do with what you have in the current situation, namely the current resources. Was left hanging out to dry, abandoned, on the razor's edge with the stroke of a pen. The company aims to be the world's leading service provider for a wide range of customers or markets in the pursuit of its dreams and ambitions. If the company is striving to fulfill a particular part of this goal, it can realize the remainder of the vision, no matter how far it goes (Awad, 2003) .

2.2.11 Mission

The organization's mission statement contains a great deal of writing, such as written descriptions of goals, mission, values, and other principles, that describes the organization and lays out its intentions and activities. In addition to indicating the organization's goal, the message explains its operation and its various products and services. Furthermore, it explains the consumer expectations the company sets for itself, and also the structure that differentiates it from other competitors in the industry" (Awad, 2003). The organization's mission is defined as "those unique characteristics in the organization that distinguish it from other similar organizations" (Al-Sayed, 1993).

2.2.12 Strategist

They are the linchpins that determine the organization's success or failure. They administer major tasks (Strategic Business Units) and major projects (projects that concentrate on strategy. Other titles include Chairman of the Board, President, Dean, or owner. These people have real power because they are the ones who are in control of long-term strategic decisions (Awad, 2003).

2.2.13 Opportunities and threats

"Opportunities are the advantageous changes in the organization's external environment that affects it, and threats are the variations that occur in the external environment in the disadvantage of the organization and affect it damagingly. Opportunities and threats are measured to the strengths and weaknesses of the organization" (Awad, 2003).

2.2.14. Strengths and Weaknesses

"The strengths are the advantages and capabilities of the organization associated with what the competitors enjoy. Weaknesses are the absence of capabilities and the difficulties that impede the organization from competing effectually, as they lessen the satisfaction of those dealing with it" (Awad, 2003).

2.2.15 The external environment

"The external environment consists of institutions, individuals, and socio-political and economic forces." Cultural and technological change influences in the organization influence the environment, and the environment is, in turn, a strong influence on the development of technological and cultural change. On both the inside and outside, organizations are found to be impacted as well as forming coalitions, and when they become part of cartels and networks, and coalitions and networks show this, The inside is made up of three major elements: water, minerals, and lifeforms, all of which have characteristics of mass, quantity, and flow (Awad, 2003).

2.2.16. Internal Environment

The moral characterizes the organization's administrative units and its human and material resources, which characterizes (civilization) the prevailing culture in it and

the values and customs that govern administrative, artistic, and human practices. (Awad, 2003).

2.2.17 Philosophy of the organization

The organization's philosophy is "the basic principles, values, and importance of its strategic decision-makers. The philosophy expresses the aims of the establishment in the performance of its action and its social accountability to the external community" (Morsi, 2006).

2.2.18 Strategic thrusts

Here are some examples of these issues: inclusive or exclusive selection of operations, adding or removing expenses, and increasing investments, lowering and rationalizing costs accessing, progressing, educating, and boosting the capabilities of its workforce (Morsi, 2006).

2.2.19 Customer

The consumer is the primary beneficiary of the corporation's good and service offerings. A company's ultimate viability depends on customer satisfaction achieved by using the product and service offerings. It must set out a particular aim for its mission statement of intent. The organization must specify in its mission a specific answer to the following question: To whom do you provide our products, services, or goods? (Awad, 2003).

2.2.20 Programs

It's a set of actions and measures used to obtain a well-defined goal." Any of these techniques can be employed to start new efforts: creativity, improving the community, transforming the organization, or beginning new research" (Salem, 2005).

2.2.21 Budgets

It is the translation of programs into monetary values. It includes setting lists of detailed costs for each program for planning and follow-up purposes, such as setting a budget for advertising, another for incentives, and a third for research and development" (Salem, 2005) .

2.2.22 Procedures

The company's routine procedures are referred to as standard operating procedures, which define the various activities required to accomplish the program. Other resources may be sourced from the domestic or international markets directly. Besides, procedures can include a list of suppliers who can be contacted and forms to collect data. The order should include all necessary payment information, as well as any specifics for processing the order, for the order, including payment information as well as delivery details" (Salem, 2005).

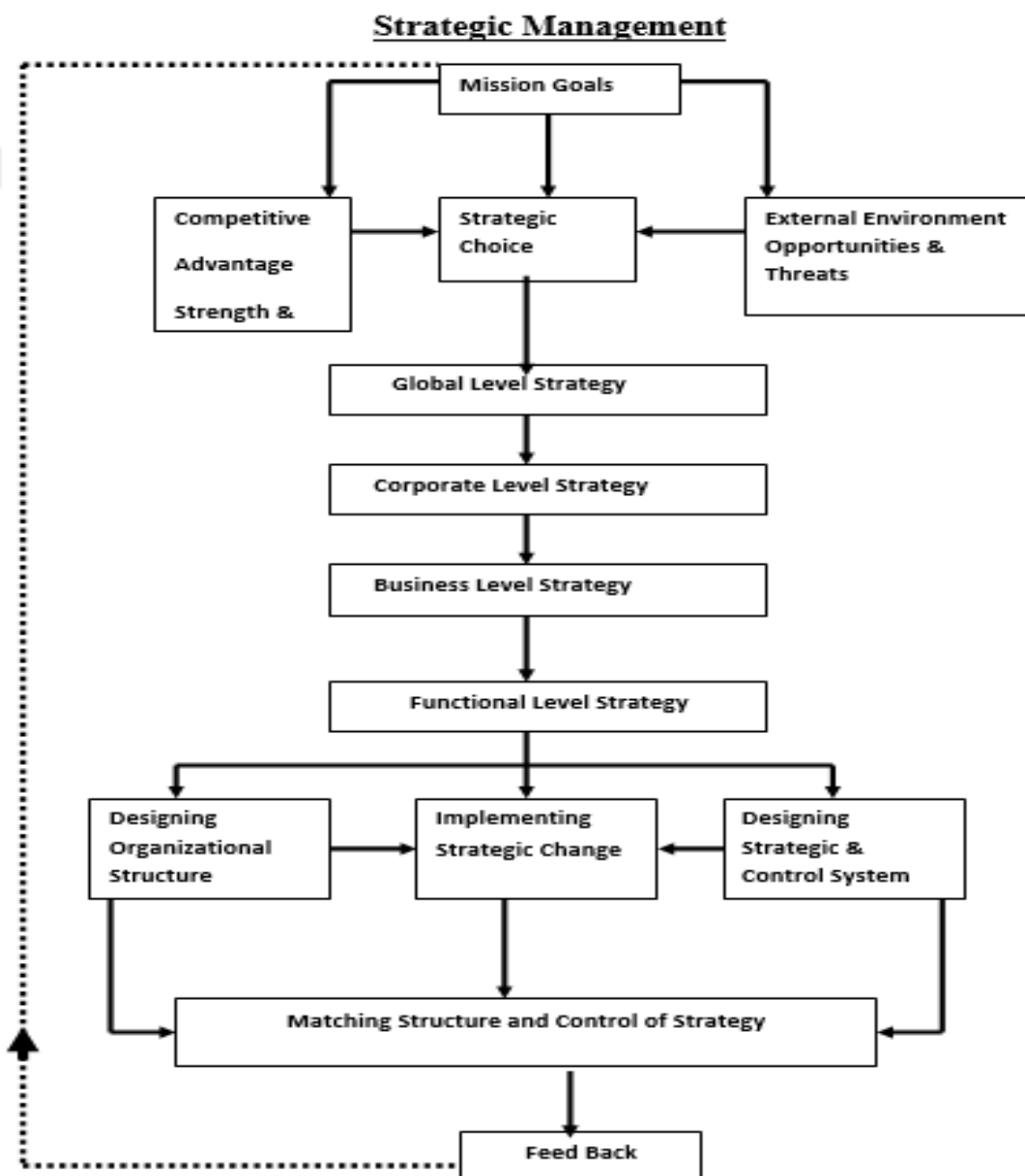


Figure 2.1: Functional Level Strategy

Source: (Sharma, 2021)

2.3 The Importance of Strategic Management

The importance of strategic management.

- 1- Managers are more aware of the environments they work in and what is happening around them.
- 2- Enabling new mental growth and "along the way."
- 3- It allows you to determine whether strategic decisions will have a positive impact on the outcome or not.
- 4- It may contribute to improving the financial results and growth of the company in the long run.
- 5- Bringing together the company's various components and operating them under one strategy and one vision control.
- 6- All the way down to the smallest level of management or office. Its purpose is to create a catalyst for administrative reform. It provides as many obstacles as any administrative opposition can lay the way to implement change.
- 7- Decide on the likely destination. Where should you target the organization?
- 8- Participate in identifying and assessing industry patterns as well as forecasting the effects of those trends.

In this sense, strategic management is described as allowing senior executives to define the long-term strategic directions of the organization and short-term results through innovative design and the continuous evaluation of their long-term strategies (Kahaf, 1997).

2.4 Objectives of Strategic Management

By building a superior position and maintaining dominance in the market, strategic management would attempt to beat out rivals and minimize their impact on the organization's share in the market, as well as increase and strengthen their value to the position of both consumers and shareholders, while still pursuing goals for the good of the entire community (Awad, 2003).

1. Empowering the company to better address the outside world through structural, procedural, managerial, and human resource changes
2. Maximize the overall gains for shareholders, society, and industry and competitive position at the sector level.

3. Set priorities, implement long-term, quarterly and monthly goals, and prepare policies according to their long-term importance level.
4. Adopting creative methods to improve organization goal orientation, alignment and control can allow anomalies to be detected and resolved, particularly when parameters are clearly defined and used in the decision-making process.
5. By objective standards, management's performance in achieving objectives measured by quantitative mathematical means. No matter how great the successes and success data are, management cannot achieve them as a failure.
6. Most successful companies are competitive and focus on external environments to manipulate them while stifling their opponents and risks.
7. Prototypes use strengths, weaknesses, opportunities, and challenges, identify problems before they arise, and take the lead rather than respond to competition (i.e., other organizations).
8. Apply the scientific method to issues so that employees test the importance of science.
9. If we encourage participation by sharing information, encouraging group dialogue, and engaging with employees. We will reduce their aversion to change while also being aware of the principles of performance appraisal.
10. Many different perspectives are presented through simplified teamwork and interdepartmental communication. Both disagreement and tension are avoided because guidelines and goals are used to make the entire picture transparent to all parts of the organization.
11. Maximize the available resources and allocate them among the options to obtain the best results
12. It facilitates mission-driven decisions by conveying the goals of the organization and standardizing target information (Salem, 2005).

2.5 Benefits of Strategic Management

- 1- Clarity of the future vision and strategic decision-making:

Good strategy formulation requires predicting events accurately, which is possessed by good managers, enabling good management to exercise strategic control and influence various activities.

- 2- A popular use of strategic management was able to find an organization's objectives through the logical method. While this is still the case in strategic management, recent studies have shown that since the mechanism, methodology, and approach are critical, strategic management plays a particularly vital role. The process's key objective is to promote understanding and engagement by all team members (managers and employees). Sincerity and dedication are also important for strategic management performance. Still, understanding is the most important, followed by these. If you have described the Manager, employee, and worker, everyone can understand. The institution would make each group member believe that he is completely integrated with the organization and make the group's objectives all the more attainable. studies done in the field show a rise in employee creativity when they have a clear understanding of the business's purpose, priorities, which they then apply creatively (Salem, 2005).
- 3- In the long term, the greater understanding and the organization has of the market and social conditions, the more it can adapt and serve the changing environment. It explains the shortcomings concisely.
- 4- Field studies show that businesses with strategic management have better outcomes. Increased productivity also coincides with increased revenues. The company's degree wishes to pursue long-term strategies should be kept in the firm's financial statements (Salem, 2005).
- 5- Strengthening the competitive position:

Strategic management strengthens the organization's position under severe competitive conditions and supports industries facing successive technological changes. It also helps the organization benefit from its various resources due to expanding its intellectual control over market matters.

- 6- Effective allocation of capabilities and resources:

Strategic Management helps direct the organization's efforts well in the long run. It also contributes to the proper use of its resources and capabilities effectively to ensure the exploitation of strengths and overcome weaknesses (Salem, 2005).

2.6 Phases of Strategic Management

Strategic management goes through three successive phases that together constitute a process with five basic characteristics.

First: It is not possible to start in the pre-completion phase,

Second: The quality of each phase depends on the quality of the previous phase.

Third: That the stages of strategic management are intertwined and integrated.

Without a change in either of them, the change occurs in each other point, whether before or subsequent. When the message's meaning changes, the environment and mindset can change as well. They both will be examined, and the message will change because of the environmental assessment.

Fourth: Strategic management is an ongoing process. The process of evaluating and monitoring changes in the internal and external environment takes place at periodic intervals.

Fifth: that strategic management should be viewed as a necessary process that requires a continuous flow of information. This process is reviewed, and corrective steps are taken in any of its components (Awad, 2003).

2.7 Basic Steps of Strategic Management

Strategic management contains of three basic phases (Awad, 2003):

- a. Information Collection and Design
- b. Implementation
- c. Evaluation

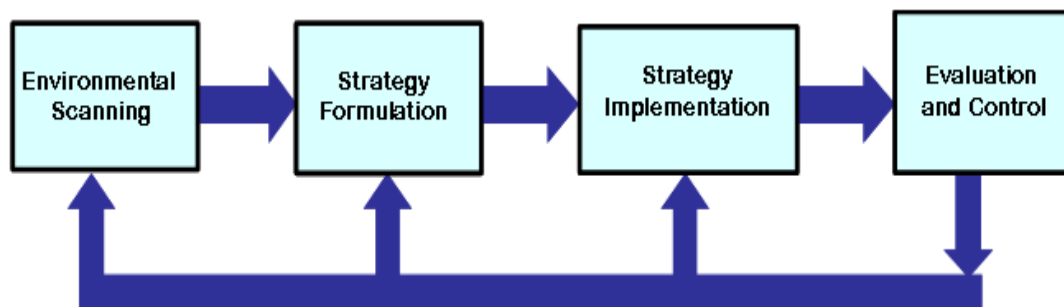


Figure 2.2: Basic Elements of the Strategic Management Process

Source: (Samair, 2021)

1. Design Phase: The strategic planning and design process called for a vision to be developed and a task to be determined, as well as long-term and short-term objectives, as well as an evaluation of the external factors. Through the process of recognizing strengths, vulnerabilities, opportunities, and risks, an organization's message may be changed. To arrive at a design, one needs to collect information and determine which choices result in the best alternative. So it can be used the most complete because it influences for long-in this much time-term what form of the organization an operation an organization chooses, the services and products it offers, the markets to serve, the technologies it goes to serve them, the study to do it, and the tools it uses for long periods.

2. Implementation Phase: This process is oriented toward executing short-term plans and allocating material and human capital. It is also necessary for the organization to be ready to make organizational structure changes, develop various structures, change concepts, duties, create systems, and distribute resources. Although the design phases must also have metaphysical thinking, they must also possess the ability to move people and objects efficiently and promptly to implement the strategies developed in the previous phase. Perhaps the most important basis for this phase's success is integrating and cooperating between the organization's different activities and administrative units to implement strategies efficiently and effectively.

3. Evaluation Phase: Any strategic plan goes through an assessment process to evaluate its current and future significance and accuracy with internal and external factors and then compare those with the results' anticipated results.

This organization could be in the design or development phase of its plan and thus needs to track its performance and make changes accordingly.

2.8 Levels of Strategic Management

It is important to look at levels of management, processes, and principles relevant to them in all cases. However, large and large-scale profit organizations have a greater need for them and more urgent and powerful applications. To facilitate the administrative processes, these organizations have been subdivided into several divisions so that each division can be viewed as a strategic business unit (Al-Sayed,

1993).

Strategic business divisions are sources of benefit for the rest of the company. Thus, it may be necessary for such units to gain total autonomy and independence to use the parent organization's resources. In other instances, the company may choose to fully implement all of its policies, laws, procedures, and operations. We can use the above information to identify three different levels of strategic management.

- 1- Organization-Wide Strategic Management Level
- 2- Strategic Management at the Business Unit Level
- 3- Strategic Management at the Functional Level



Figure 2.3: Levels of Strategic Management

Source: (Hidayat, 2021)

2.8.1 Organization-wide strategic management

Top management defines the organization's mission and strategic goals, the broad strategies, general organization; they also decide on the resources that the organization needs to make strategies feasible and easy to implement and distribute resources between different sections.

"This level of management is described as management of the distinctive characteristics of the organization, the product, and market, as well as the process of allocating resources" (Al-Maqli, 2002).

From the above, the most important objectives of Strategic Management at this level can be summarized as follows:

1. Classify the features that distinguish the organization from other organizations' competition in the marketplace.
2. Describe the organization's main and fundamental mission in society clearly, unambiguously, and unambiguously.
3. Generate a high degree of engagement between the strategic business units of the organization.
4. Identify and characterize the product and market with which the organization will deal.
5. Allocate the use of available resources to alternative uses.

2.8.2 Strategic management at the level of strategic business units

At this level, command, and control (and dominate) the larger units (department)

The sector or market in which it competes, and as well as one in which it is evaluated, is distinct. At the same time, it is all part of the same profit center, so it's viewed as an operating entity" (Al-Maqli, 2002).

The Strategic Business Unit is defined as one of the operational units (branches or departments) in an organization that help a specific commodity, market, sector, a certain group of customers, or a certain geographical organization. It has full freedom or authority in making decisions when this level the strategy focuses on how the secondary units (section) of the organization can compete in the market in which it functions, the strategic business unit specific sector, a certain group of consumers or a certain geographical organization and has full freedom or authority in making decisions.

Strategy within the organization's central directives frameworks long as it serves its objects (kahaf, 2000). It was also defined as "Managing the various strategic divisions so that they can stay competitive in the field and contribute to the company's ultimate goals" (Al-Sayed, 1993). As such, this level of strategic management is trying to provide a convincing answer to these questions:

- 1- What product or service will the strategic business unit deliver to the markets in which it operates?

- 2- Who are the potential consumers (customers) of the unit in the future?
- 3- This is the customer control concept, which states that the customer does not return a request as long as he does not object to the invoice's value.
- 4- Since the unit's mission and values are inseparable from the organization's overall objectives. The unit must continually obey the organization's philosophy and values to achieve success. These vice-presidents explicitly take the lead in strategic management positions and must bear responsibility for their strategy: Heads of Divisions of the company. The party must outrank and outdo its opponents if it is to thrive and prosper.

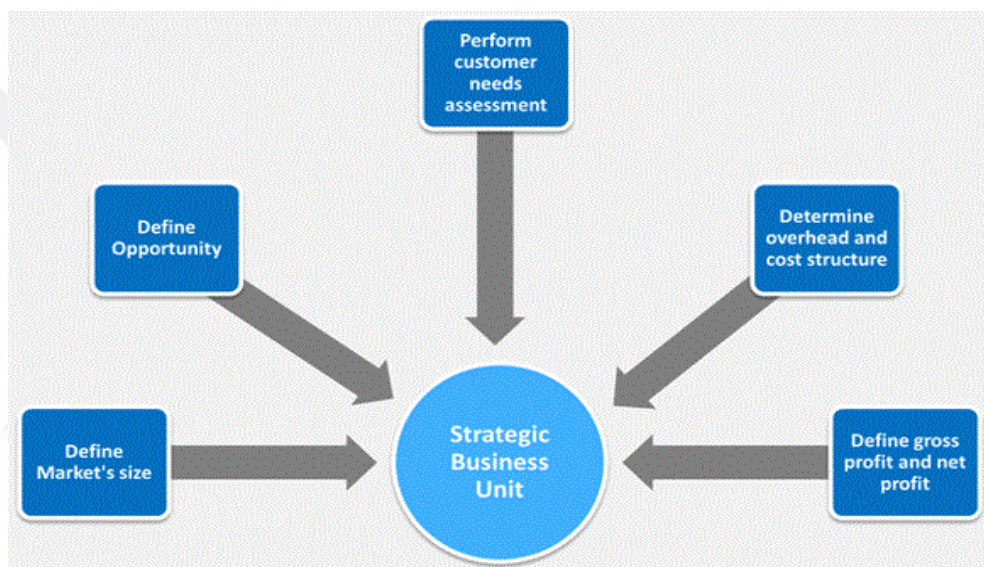


Figure 2.4: The Strategic Business Unit

Source: (Terms, 2020)

2.8.3 Strategic management at the functional level

Each component of an organization or corporation may be responsible for a particular role in carrying out the task or goal. Previous strategy designs seek to promote the organization's goals and embody those ideas. Although these techniques are all applied at the department (functional) level, the business plan's impact is at this place. That means that without proper strategic implementation, nothing can be achieved.

This technique is very different from most others because it takes less time to implement than normal. As an important part of the overall strategy, it's been delegated to execution, and it has a short lifetime (usually no more than a year). As it

should be known, the management that guides day-to-day activities has minimal influence on strategic decisions. These can be understood as setting the strategic course without having to go into the nitty-gritty details (Al-Sayed, 1993). It's also called a three-layered business model: strategic, tactical, and operational. On the other hand, though, it also contains steps in training: When techniques are employed that do not differ widely, planning is just a formality. Planning is important in generating the types and amounts of new ideas. Although these hypotheses are independent of each other, how they are used in practice is obvious; they are all related. The strategy should respond to, rather than the rule, to the concerns of others. When it comes to policy, it is important to develop policies at three levels: political, tactical, and operational. Build an informal list of concerns to raise awareness of company-wide

Fashion, to allow the effective use of resources changes besides this, other programs should be provided in a more structured organized



Figure 2.5: Strategic Management at The Functional Level

Source: (business jargons, 2020)

2.9 Elements of Strategic Management

Strategic Vision and Mission



Figure 2.6: Elements of Strategic Management, Adapted from Johnson and Scholes (1993)

Source: (Brodin, 2015)

2.9.1 Strategic vision

Many people make it easier to look back than to look forward, but effective leadership

And inspiring, starting with the outlook, we have to define our aspirations where to go in the long term, and our Insight will inspire (motivate) others to look to the future like us (Series, 2001). Every company must have an ideology and a clearly defined mission statement that differentiates it from others and explains its target markets in which it serves. The first step in developing a plan is to identify the various issues to be addressed during strategic management is:

- What is the future vision of the organization?
- What direction should the organization take?
- Why does the organization exist?



Figure 2.7: Strategic Vision and Mission

Source: (sketchbubble, 2021)

One of the key priorities of a corporation is to establish its strategic vision. With this knowledge, a company will answer questions like, "What will set us apart from our competitors for the next 30 years?" and "How much will we want to advance in our position? (Morsi, 2006).

The strategic vision is defined as "the future path of the organization that determines the destination it wants to reach, the market position it intends to achieve, and the quality of the capabilities and potential it plans to develop" (Salem, 2005).

If the vision also sets long-sets the organization's desires and objectives for the future, it is considered strategic. The design vision is narrowly conceived. This phrase does a marvelous job demonstrating what an organization can become and what can be done in the future. Indicative of the future of the company's vision. (Morsi, 2006).

- 1- Be clear.
- 2- To be meaningful to the market in which the company operates.
- 3- To look to the future and to take the past into account.
- 4- To be characterized by relative stability and contain a measure of continuous challenge.
- 5- Be targeted to stimulate employees and also any customers (customer interest).
- 6- Be concise, challenging, accomplished, and expressing excellence and continuous progress in a given market. For future goals, the future vision offers universality and inclusiveness. The best ideas encourage those within the company to look for even better ideas.

For the strategic vision to have an enduring impact, it must be shared and reassured within the organization. Vision is the strongest even in the face of adversity. If

people have a sense of personal, creative, creative, and business goals and personal, creative, business, and business, and business goals, they will strive to meet the objectives necessary to realize those goals. Employee vision removes the shackles that tie the company to a specific view of things, promotes innovation, enhances organizational flexibility, encourages innovative ideas, creates employee satisfaction, and encourages higher productivity (Ali, 2021).

having a strong and well-defined vision is essential for construction and achievement. The manager can do plenty of strategies without directly exercising leadership, particularly concerning the market position and consumer needs, which are strategic for many. Selecting an attractive, easy-to-remember mission-specific slogan is not enough. The quality-driven direction is a critical aspect of a good advertising strategy. The administration is completely committed to bringing about the expansion of its specified objectives (Thabet Abd al-Rahman Idris, 2000).

2.9.2 Organization mission

The mission of the organization is defined "as those unique characteristics of the organization that distinguish it from other organizations similar to it" (Al-Sayed, 1993).

The mission of the organization can also be defined as "its specific purpose that distinguishes it from other organizations similar to it" (Al-Maqli, 2002).

It defines the organization's operations, goods, clients, and markets and its reason for existence. The organization's name, the means of activities, their working methods, and the way they do business (Thabet Abd al-Rahman Idris, 2000).

It can also be defined as "verbal formulation that reflects the basic orientation/orientation of the organization. Whether written or implied" (Kahaf, 1997).

The organization's mission is also defined as "...a list that includes the organization's declaration of its goals and philosophy, The definition of the field in which it operates and distinguishes it from other organizations whether this area is related to the products it produces, the types of consumers who want to satisfy their needs and the technological aspect used." (Khattab, 2000). The mission explains why the organization exists and what it should do" (Jones, 1998). The administrative body

made a declaration on what it wants to do, who it works for, and how it aims to accomplish it, outlining its mission, priorities, and guiding principles. The sense of the task decides how a company devises the competing projects, where to find opportunities, what to watch out for and avoid in the world, and how to categorize its diverse resources. To better grasp the mission idea, one must become aware of one's intent. Pragmatism and the idea of having a goal (Mission) distinguishing of a mission.

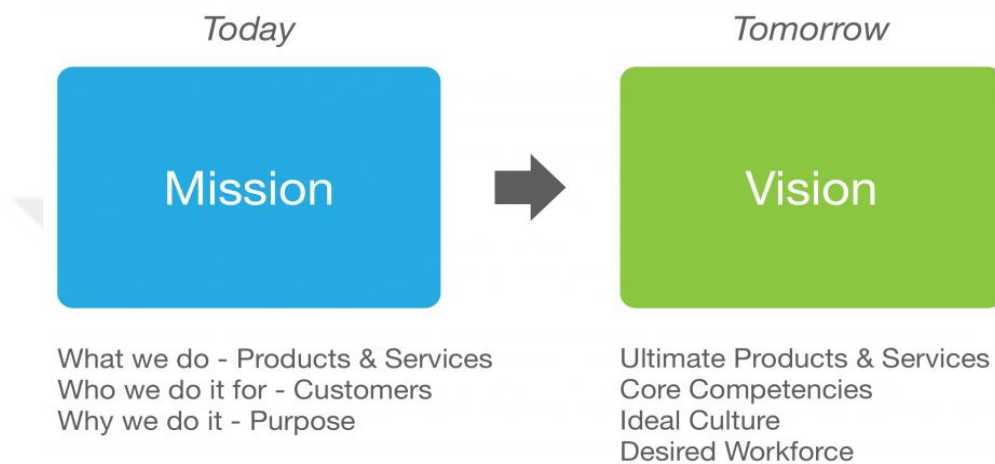


Figure 2.8: The Mission of the Organization

Source: (orgdesignstudio, 2020)

A community group should believe that other organizations will play their part, which is the same assumption for the industry. Every firm's goal is to make prudent use of community resources to create products and provide customers value (Jawad, 2000).

(Omar Al-Maqli) points out that "the purpose of the organization is its main role as determined by the society in which it operates, so the purpose is a broad purpose that applies not only to a particular organization. But on all similar organizations in society" (Al-Maqli, 2002).

The mission statement acts as the roadmap for the organization's plans, detailing the overall goals of the mission. When used by the organization, it is supposed to reflect the objectives the organization aims to accomplish. The company's mission represents the senior management's desires to have the organization's personnel and assets relocated and maximize the benefit for clients, shareholders, and society. It fails to give them the necessary information to allow them to concentrate. And

extremely innovative in incorporating more than one approach to accomplish mission goals (Awad, 2003).

It seems that all previous definitions focus on defining the organization's goals and intentions in words and making those intentions clear are contingent on understanding the philosophy of the organization, which necessitates forming them into specific directions and a clear image of the organization with precise and descriptive terms:

Besides, the message is an organization's special, differentiating, precise, and individual characteristics. the overall mission of the company reflects the organization's justification. It is necessary to set personal and business goals. These two things form the basis for strategic decisions. Scenarios should be addressed in a systematic manner rather than in a step-by-step manner. The importance of a clear corporate mission the importance of setting a clear mission in achieving effective strategic management stems from one recent study that conducted a comparative analysis of 500 companies to identify the impact of the organizations 'interest in developing a specific message and announcing it in some way. The study indicates that the interest of companies in developing and defining their mission. And its disclosure is one of the most important reasons for distinguishing it and its success (Al-Maghribi, 1998), the importance of having a clear and specific message as a component of management.

The strategy is as follows:

- 1- Ensuring consensus on the goals and objectives of the organization.
- 2- Provide clear bases or criteria for allocating organization resources.
- 3- Creating a unified organizational climate.
- 4- Define organizational values and trends.
- 5- Providing a unified framework to serve the purposes of regulation and limiting opposing or adverse efforts.
- 6- Facilitating the process of translating long and short-term goals into business structure and responsibilities.
- 7- Identify organizational objectives and translate them into detailed goals according to time and cost considerations and performance standards to facilitate the evaluation and control processes.
- 8- Supply with clear foundations and specific criteria for the strategic selection

process.

It is clear from the previous the importance of a clear and specific mission and that the management of the organization must put in place

An appropriate message through which you can ensure the unity of the goals and not conflict, and translate this

The goals are based on action plans and programs that include allocating resources and making good use of them. The mission is good and effective to help in the organization's success and distinction. It is easy to understand, absorb and remember when implemented by employees, and connect to customer's and stakeholders' minds. But it should Bearing in mind that the quality of the mission formulation does not necessarily mean the success of the organization and the achievement of goals

2.10 Analysis of the External and the Internal Environment of the Organization

2.10.1 Concept of analysis of the external environment of the organization

External environment analysis is defined as the process by which strategists pursue factors economic, governmental/legal, market / competitive, and supplier / technological to identify any opportunities or risks to the facility (Gharab, 1994).

The outside environment is examined for possible economic, technological, political, and cultural sources and other potential opportunities and dangers that may exist. It is known as economic and technological factors are divided into their components or aspects and studied for what is contained within the parts. Evaluation of the external environment aims to recognize positive opportunities while also identifying threat factors that could hinder development (Yasin, 1998).

Climate shift is the root cause of both opportunities and difficulties. That involves numerous influences that operate beyond the organization's perimeter and affect organizations in varying ways and degrees dependent on the sector, company size, and the operational level. The three phases a bug go through when it comes to life: egg, larva, and pupa.

The researcher believes previous definitions have noted the importance of looking for opportunities and addressing their potential risks to change in both the business and the business environment, both internal and external. Hence, they believe the

organization should constantly analyze the various factors of the business environment and its effects on the company.

2.10.2 Reasons for the study and analysis of the external environment elements?

The company must research and exploit the external environment to a great extent to identify, create, and execute its plans and strategies. Doing environmental impact studies helps an external team to define the following dimensions and their effects. A method of solving a problem (Al-Maghrab, 1998).

- 1- Identify the objectives to be pursued and the scope of these objectives, whether at the level of strategic objectives or operational objectives.
- 2- Indicate available resources and how to utilize them, and how they can achieve that benefit.
- 3- Determine the scope of the prospective market and the areas of transactions available to it, whether related to goods and services, methods and outlets of distribution, methods, and terms of payment, characteristics of permitted products, and restrictions imposed on the organization, whether legislative, legal or ethical...etc.
- 4- Indicate the relationships of influence and influence with the various organizations and whether they provide them, receive their products, or cooperate in their operations and activities.
- 5- Identify the characteristics of the society and the audiences with which the organization deals by identifying the patterns of values, customs, traditions, and priorities.
- 6- To diagnose the patterns of productive and consumer behavior of individuals and organizations representing their customer segments, which is useful in determining the characteristics, prices, the timing of production, and marketing of their products...etc.

In summary, the study and analysis of the components of the external environment is necessary when developing

These studies' results help identify two main aspects: the fulcrum in the formulation and formulation of its strategy (Al-Maghrabi, 1998)

- 1- Opportunities that the organization can exploit.

- 2- Risks or threats that the organization must avoid or minimize.

2.10.3 Analysis of the internal environment of the organization

Identification of strengths and weaknesses within the company in no way can the organizational opportunities be dissociated from the external world. That is why the company cannot exploit any potential opportunities before conducting an in-depth analysis of its internal dynamics. The results of this analysis reveal the internal strengths and limitations of the company. The organization's internal climate includes all the resources and capabilities of the organization and factors it and which are internal to the organization (Al-Zoubi, 2005).

The internal environment is also defined as: "is of activity includes the organization's social and physiological forces that influence its decision-making. The mechanism through which strategists examine all of the elements of the internal market (the factors of distribution, output, and operations, as well as the research and development,) as well as the macro resources and staff to determine the company's core strengths or weaknesses" (Al-Rikabi, 2004)

Organizations are interested in analyzing and evaluating all internal factors to indicate each of the internal factors' strengths and weaknesses to analyze external factors - to make their strategic decisions and choose the appropriate alternatives.

- 1- Contribute to the assessment of the material, human and moral capabilities available to the organization.
- 2- Clarify the position of the organization relative to other organizations in the industry.
- 3- Strengthen your advantages and seek ways to take advantage of your natural strengths
- 4- Identify weaknesses so that they can be overcome, addressed, or avoided by some of the current strengths of the organization
- 5- The need for correlation between internal analysis (strengths and weaknesses) and external analysis

If the true target is to aim is to know what their strengths or weaknesses are, then the research means to achieve that; this is an opportunity to take advantage of or prevent potential danger (Al-Husayni, 2000).

2.10.4 Elements of the internal environment of the organization

The internal environment consists of three main elements and is as follows

- 1- Organizational Structure
- 2- Organizational Culture
- 3- Common Resources

2.10.4.1 Organizational structure

One of the major parts of the implementation plan is the organization's structure. The organizational structure defines the departments, groups, and sub-units required to achieve the company's goals. "Different levels of management" are an example of complexity in a company. As a result, the organizational structure is crucial in achieving the plan. As the behavior of the people changes, the organizational structure does not remain the same. When we change our system to counteract these newly applicable variables' impact, we must take a new approach to work (Al-Husayni, 2000).

2.10.4.2 Organizational culture

Organizational culture is a "system of values, traditions, and norms shared by all members. Organization, where each organization has a special culture that expresses its personality" (Yasin, 1998).

It is also defined as "the belief, desires, and values passed down from the last generation of employees to the next. There are all related to one another. It follows that standards (do's and don'ts) from the management to the rank-and-and-file individual" (Hanger, 1997).

Organizational culture is an expression of company beliefs, customs, and standards expressed by those working there. An organization's culture does not grow on its own, nor does it emerge as a de facto state of mind. Actors in an organization must first emerge as social and cultural. They carry their own beliefs, practices, and customs, which affect the social and cultural fabric in which the organization is embedded. Consequently, the organization's internal climate can evolve in a nonstop manner because creativeness and creativity are inherent.

Having employees fully aware of the business's internal procedures makes them

aware of their roles in those processes and their responsibilities. Many previous studies indicate that cooperation with a shared objective leads to creativity. Without a strong tie of culture, an organization disintegrates. The management must recognize the company's core values to establish and implement an integrated strategic plan. Efficient, transparent, and multi-directional communication flows facilitate accurate decision-making with minimum effort and expense. This powerful and dominant organizational culture makes fast and easy decisions regardless of the difficulties involved or the amount of risk. The positive and generative role of organizational culture in establishing shared beliefs, rules, principles, and processes is apparent at the organization's management and decision-making levels (Waterman, 1995).

Strategic management presents the greatest difficulty because of the potential relationships between an organization's strategy and its culture.

2.10.4.3 Organizational resources

The most important principle of effective management is finding a proper balance between strategy and its capabilities. There are many management, marketing, science, and growth, and financial opportunities in the enterprise, among other things. One of the most critical considerations in the practice of good planning and good management is the consideration of future goals. Set in motion (Yasin, 1998).

- 1- Marketing resources: In the field of marketing possibilities, the most important function of marketing activity in an organization is to regulate the levels of demand for its products in a way that helps to achieve the set goals.
- 2- This is done through the degree of attention paid by the marketing department in the organization to its markets, its marketing mix, and the human and technological possibilities monitored to increase the marketing function's effectiveness.
- 3- Financial resources: in the area of financial resources, the primary function of the financial service is to manage the sources and uses of funds, which includes the development and control of sound scientific foundations for the collection and use of the funds of the enterprise. Strategic management requires a tight system that accurately balances the financial potential available and the size of the strategic plans developed. The finance department's key function is to provide a combination of means of generating

funds, whether external through borrowing and banking facilities or internal through the placement of new shares for public offering. All elements of financial operations management in an organization must take into account strict adherence to the goals, plans, and policies of the organization (Yasin, 1998).

- 4- Research and development resources: The role of resources in R & D design is particularly significant in enterprises that employ cutting-edge technology in their manufacturing processes. Those that cannot keep pace with innovation get left behind in the dust. Innovation and improvement of technology are typically done in this department, and it is from the point of view of management that results.
 - a. Choosing effective alternatives to the technology development process to be used in different enterprise activity
 - b. Developing new creative methods to use technology to develop production processes on various production lines, i.e., absorbing new technology in existing production lines.
 - c. Development and development of self-potential to successfully implement new technological options.
 - d. Human resources: The human forces department's first and most critical responsibility is to strengthen their employees' alignment with roles. The balance level in an organization's place has a major influence on productivity, job satisfaction, and HR management factors. In terms of hiring and training, empowering and inspiring their workers, providing them with the right resources, and creating an environment to let them express their individual and collective creativity, the company's management focuses on the pick and evaluate. Similarly, a picture is a two-dimensional representation of a three-dimensional shape, and a video image is a two-dimensional representation of three-dimensional sound. Functional tools include task analysis and design, labor relations, and performance management, each of which applies to a particular category of human resources management. It's not always a journey to the life destination, and it's a set of small steps in the right direction that cause a large shift in the journey (Jamal al-Din Mohammed Al-Marsa, 2003).
 - e. Management Information Systems (MIS): Today's dynamic and varied demands have increased this service's demand. As organizations grew in size,

so did the need for information-to-processing procedures to meet it. Information management technology in organizations has emerged as important due to strategic management's increased use over the last decade. Strategically relevant creative.

2.10.5 Identifying strengths and weaknesses in the internal environment

There are many tools and methods that management uses to evaluate and analyze their strengths and weaknesses. In the internal environment of the organization. Some of the most famous of these methods are described below (Gharab, 1994):

- 1- Boston Consulting Group Method: the first internal environment analysis method to be carried out by Boston Consulting Group identifies strengths and weaknesses. It is made to work with different business strategies and matrices. Diagnostic decisions guide the company's money to the market areas where the highest value can be gained. As long as the enterprise's market share in growth goods and services continues to increase, its profitability and competitive position should also improve. recovering this money even at the cost of the firm's market share
- 2- General Electric Method: This is focused on preparing a matrix that divides an industry according to various business-related criteria, such as size, growth, profitability, the industry's technical position, and the strength of the enterprise. Estimating an enterprise's strength in a particular business operation relies on market share, turnover, and profitability, scale, facility positioning, and place in the margin
- 3- The equipment's level of sophistication, the factory's reputation, and the degree to which the process emits pollution. This procedure should be evaluated for the setting up of a matrix for calculation
- 4- Hoover Method: this is a best-of-of-class model for differentiating businesses according to stages of growth. Although Hoover criticized Boston Consulting and tried to resist their bait, in his way, he failed. The dots in the supply matrix reflect total business operation in the industry. We have divided the market shares in the company's industries into circles. This portfolio strategy yields a more detailed picture of the firm's overall position. In whatever manner the management prefers, it is discovered to be operating with

decision-making based on knowledge that it has processed. According to Hoover, it's recommended that there be a resource description. Finally, the study of the internal environment encompasses a quantitative and qualitative systematic examination of the important aspects of the company's environment in that particular organization.

- 5- Strategic Analysis: As a “strategic tool in internal environment analysis (SWOT) defines strategic analysis external (competitive) by identifying internal strengths and weaknesses in a relative rather than absolute manner and opportunities and threats in the external(competitive) environment, thus giving strategic insight into the formulation. Its strategies” (Al-Zoubi, 2005).

This analytical method does not stand for identifying the strengths and faintness of the inner resources of the facility but also aims to link the results of the external environment analysis, which identifies opportunities and risks in these represent the initials of the elements of the analysis: environmental score (SWOT) and internal environment analysis. The word (S) strength, (W) weaknesses, (O) opportunities this analysis is a simplified method by which managers can form an idea. (T) Threats and risks. Quick on the strategic status of the organization (Al-Maqli, 2002).

It is to determine the relationship between the organization's current strategy (SWOT) to analyze its strengths and weaknesses with the variables that take place in its business environment. It also indicates what kind of strategy or strategic motivation an organization must use to gain a competitive advantage. The internal analysis must also be integrated with external analysis to formulate the strategy. Best by aligning strengths and weaknesses with opportunities and threats. (Al-Zoubi, 2005)

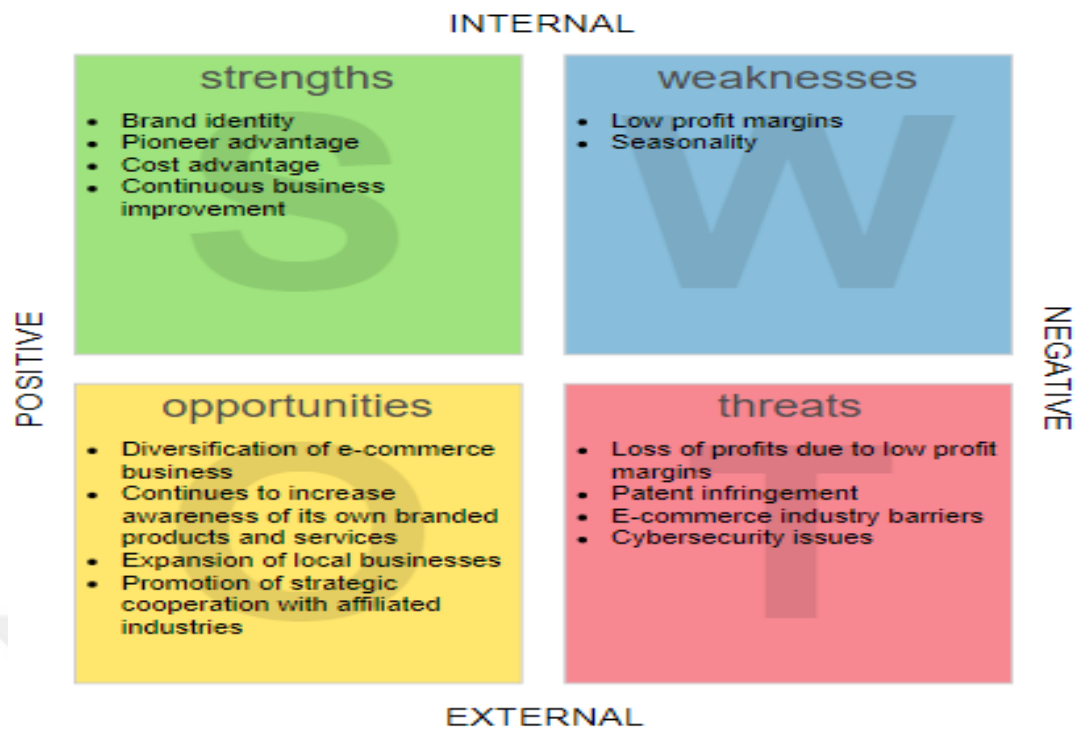


Figure 2.9: (S) Strength, (W) Weaknesses, (O) Opportunities. (T) Threats

Source: (warren2lynch, 2020)

2.11 Strategic Alternatives

2.11.1 Identification of strategic alternatives

Researchers in the field of strategic management have cited several strategic alternatives

(Strategies) that can manage the organization to choose among alternative strategic optimization or strategy is appropriate, this choice depends on the image that should be in the future, this is done by a variety of factors and the most important:

- 1- Does the organization want to continue its current activity in the future?
- 2- Will the organization leave its field of activity partially or completely through merger, merger, liquidation, or sale of some of its shares and shares to other companies?
- 3- Can the organization become more efficient or effective in its current field of work?
- 4- Does the organization want to grow and expand by increasing the volume of business or markets or buying other competing companies in the same industry?

5- should various strategies be used in different parts of the organization?

2.11.2 Strategic choice

Concept of strategic choice

Strategic choice refers to "the process by which senior management can select a strategic choice from a range of strategic alternatives and represents the best way to reach goals. Organization" (Al-Rikabi, 2004)

Strategic choice is also defined as: "The evaluation process to be carried out for alternative strategies. To select the greatest strategies that maximize the organization's objectives and under its previously defined mission. It is almost certain from research and applied practice that when an organization is faced with a dynamic environment, decisions to select the greatest alternative strategies existing are not simply reached and generally agreed upon, but often there is a difference of opinion on each alternative strategy, and this can lead to organizational conflicts and conflicts" (Thabet Abd al-Rahman Idris, 2000)

Due to the importance of Strategic choice in the strategic management process, there are many evaluation tools that senior management should use to evaluate and choose the appropriate strategy.

2.11.3 Process of strategic choice

The strategic selection process goes through the following stages (Salem, 2005).

- 1- Phase generate strategic alternatives: it had to be a set of strategic alternatives generated at the level of the region or the level of the business units are the level of posts. Such alternatives should be viable and commensurate with the objectives and future aspirations of the organization.
- 2- Evaluation of strategic alternatives: the evaluation process is based on a set of criteria, which reduces the number of available alternatives and facilitates the selection process itself. These standards vary from organization to organization but generally include some quantitative and non-quantitative criteria. Among the quantitative criteria are: net profit, market share, return on investment, return on equity, and turnover...non-quantitative/ qualitative criteria include environmental friendliness, flexibility, and others

- 3- The stage of choosing the appropriate strategic alternative: this stage begins after completing the evaluation process. The best alternative/alternatives are chosen in light of the advantages that each alternative has. Where the appropriate alternative is preferred after making the necessary balance between the negatives and positives of each alternative in light of the other alternatives.

2.12 strategy evaluation

The strategy evaluation procedure contains analyzing the organization's strategic proposal and evaluating its success in achieving its strategic goals.

Strategy assessment is an internal analysis tool and should be used as part of an organization's broader strategic analysis when making decisions about its strategy.

Usually, the strategy evaluation process involves answering questions like:

- How much progress have we made in our organization towards our vision?
- Are our strategic focus areas still relevant?
- Which of our goals did we complete?
- What goals are no longer needed?
- Do we have enough projects to present incomplete targets?
- Where we failed to achieve our goals, why did this happen?

At the very least, the organization needs to evaluate its strategy twice a year - or better yet, every quarter. Even if you feel that the organization's current strategy is "too much gone" and needs a fresh start, you will need to make a thorough strategic assessment of what went wrong the last time. The mistake people often make when it comes to implementing strategy is to think of their strategy as a linear set of steps. The strategy is a circular process of iteration and continuous development. A good strategy should never "end." Instead, it should transform into something more ambitious and sophisticated as goals are achieved. The following figure shows the strategy steps that do not end at a certain point but rather a circular process of repetition and continuous development (Wright, 2019)

2.13 Strategic Management and Development of Agricultural Objectives

Strategic planning is considered important in all organizations and institutions. It is a guide to steer the right course between two points, sometimes referred to as fundamental in every leadership position, and can be seen as institutional knowledge. What do we do now? Other points include: where do we want to be in the future and how to help us get there? As shown by the numerous effective strategies that have already been implemented, a strategic plan must be focused on expected obstacles and weaknesses and opportunities and resources (people, strength, materials, resources, and money) to be relevant to the task's overall objectives. Every developed country employs both strategies and plans for advancement in its various systems to provide well-being and to assure political and social stability. Science is used in developing those approaches. Also, Agriculture indeed is the most significant of these sectors in any region. The agricultural sector is the pillar upon which nations and their independence are founded and the vital national food security source and well-being. Besides, it gives nations a central role that enables them to obtain the other necessities of life while still needing others' help. The criteria adopted for building a good strategy in the agricultural sector?

One of the most important criteria necessary and adopted in building a good and successful strategy in the agricultural sector is:

1- General approach

- This strategy will focus on supporting target groups acquiring new agricultural knowledge, production capabilities, and using existing capital, underutilized resources, and strengthening the system's long-term to guarantee the strategy's overall sustainability.

2- Availability and relevance of resources and opportunities

- A good strategy depends on applicable business rules that take advantage of public and private resources and capabilities or capabilities that are used as tools for building strategies such as government willingness to amend laws, regulations, and instructions, and people's willingness to work and adopt the strategic items, and it also includes new opportunities in agricultural production, such as adopting modern agricultural techniques or cultivating new types of crops, for example.

- 3- Identify the constraints and limitations
 - It is determined, evaluated, and dealt with realistically and by scientific, administrative rules. These strategies are not a reason for the opponents (despite the possibility of a conflict of interest that does not fall within this concept) to attack the strategy. Good strategies attract allies and deter opponents.
- 4- Targeting the relevant group and reaching the affected groups
 - The strategy depends on achieving benefit and directing it to the beneficiaries as target groups, with realistic plans and programs that suit the situation, address slackness, increase productivity, and ensure sustainability.
- 5- Check letter planner and developed
 - Can strategies together make a difference and improve the mission and goals set and desired by the planner? Suppose one of the strategy's objectives is to reduce a problem, such as decreasing agricultural products' prices. Are the strategies sufficient to make a difference in improving prices? If the purpose is to avoid a problem, such as the degradation of agricultural lands, are mechanisms and tools for changing and preventing the factors contributing to the deterioration of agricultural lands sufficiently?

The importance of strategic management in the development of the agricultural sector that works to achieve:

- 1- Preserving water resources, ensuring their sustainability, and increasing the return from the water unit.
- 2- Protect agricultural and arable lands and increase the yield per unit area
- 3- Providing the requirements of agricultural production
- 4- Achieving national food security, providing strategic crops, and increasing investment on the import and export bill
- 5- Improving the income level of agricultural workers
- 6- Creating direct and indirect job opportunities for the youth, especially the unemployed.
- 7- Improving quality and competitiveness locally, regionally, and internationally

2.14 Developing an Agricultural Strategy

To start developing an agricultural strategy at the state level, it is necessary to understand the agricultural strategy is? What is strategic management? And who is in charge of developing the agricultural strategy?

First of all, it must be noted that the official body responsible for developing an agricultural strategy, for example, in Iraq, is the Ministry of Agriculture. Here, the Ministry of Agriculture is the strategic planner for the agricultural strategy in Iraq. Accordingly, to start effectively and overcome the obstacles facing agriculture in Iraq, it is necessary first that the strategic planner has the willingness to start, think and cooperate with all stakeholders in the agricultural sector, whether governmental or non-governmental sectors, and collect them One integrated team and start setting general and then specific goals that the strategic planner for the agricultural sector wants.

The function of the strategic planner for the agricultural strategy is to work under all circumstances (natural, political, economic, social, and scientific) through the strategic planning team to receive general ideas and classify them according to national topics and priorities and discuss them.

2.15 Steps to Prepare the Strategic Plan

2.15.1 Set goals

Here, the question arises on which the goals are constructed, which is what we want for efforts to be gathered and unified in the agricultural sector. They are goals, hopes, and aspirations that we seek to realize and their presence in the agricultural sector. They are at levels in the close, medium, and long-term investigation, leading us to the outputs or results.

Objectives are the specific, measurable results that are intended to be achieved through the strategy. Which builds on the important and public question of any strategist.

What do we want? We want a sustainable agricultural sector... when? By 2030.

How many? Achievement of 30% in 2020, 60% in 2025, and 100% in 2030.

For these goals to be achievable and to obtain the desired results, conditions and

standards drawn from the global concept of planning must be fulfilled and summarized by the word (SMART + C), the most important of which are:

- 1- That the objectives be specific, describing the research point (what) and how much will be achieved (achievement rate), with a specific period (when).
- 2- That the goals are measurable, whether quantitative or qualitative. Here, previous records and data must be based on monitoring and evaluation at all levels. Measurable.
- 3- That the objectives are applicable and achievable, depending on the type of work required and the ease of application, whether at the level of understanding and familiarity with the method or technology intended to be adopted by farmers, for example, or the availability of the financial capabilities to provide them or the level of skill required to be provided by the operator, regardless of the farmer or engineer. Agricultural or factory. Achievable.
- 4- That the goals be within the mission of planners and strategic plan makers, as a general vision, and even those involved in agricultural production. Relevant
- 5- That the goals are limited and specified in appropriate periods commensurate with the goal and the ability to achieve. Timed.
- 6- That these goals achieve national collective action, which does not contradict the concept of competitiveness and achieve returns for workers in public and private agricultural sectors. Challenging.

These goals can be divided so that they are directed to include:

- 1- Behavioral goal:
 - And through it, efforts are made to change the behavior of workers in the agricultural sector at all levels (what they do and say) through awareness programs, administrative, professional, and economic training, and the products (or results) of their behavior and practices by evaluating agricultural productivity in terms of quality and quantity in the sustainable scientific concept.
- 2- Objectives at the level of farmers:
 - Agricultural workforce activity has contributed to improvements in the agricultural industry. Agricultural efficiency continues to concentrate is put at the community level. The detailed agricultural reports are obtained

through detailed types of agricultural products, such as citrus and tree and farm produce producers, field crops, olive-producing, food factories, and different types of agricultural materials. Also, each target has unique parameters, and the benchmark is to raise the percentage of farmers in sustainable agriculture. It could be an outlet for those who work in the agricultural sector.

3- Practical objectives in the agricultural unit:

- They are the goals that provide the practical basis or the necessary implementation on the ground and in the field, where the group can adopt a comprehensive plan to change the agricultural pattern, change agricultural practices, or use and transfer technology to improve the final agricultural product in terms and quality, and in this case, the adoption of the plan itself is Goal.

2.15.2 Developing the strategic agricultural plan

In the light of the long-term objectives to be set, an approach plan and a strategy can be formulated. Before deciding on the best course of action to improve the sector composition and structure, an agricultural sector-related team of experts was formed first to define the issue and gather the required data.

2.15.3 Collect base line data

First, the team must understand what they want to be accomplished and the necessary baseline data to get there. The next step is to gather and compile facts and statistics to support it. It indicates how far along in advance a construction is at the moment or implementation strategy they are now and how far it might extend in the future. Here, the baseline data serves as the team's main data, facts, and figures that can be measured against it later in the strategic planning process. After the data has been collected, the technique can expose new problems or flaws in the agricultural system. The raw data could capture the issue's difficulty and certain people's attitudes towards it, for example.

Baseline data is handled scientifically "collected through surveys, questionnaires, as well as personal interviews." We draw from official departments, scientific references, published research studies, or information collected from local authorities.

A short-term target or objective that is realistic but not simple is set when one collects and quantifiable baseline data and sets objectives. It must be possible to calculate, monitor, and track these results. After the goals are defined and formulated, it is logical for the team members to review them again, and it may require the use of references, bodies, and experts in addition to those who are members of the team to review the goals and even to cover the topics addressed by the goals and follow-up. Ideally, it may require the participation of those not involved in building and developing goals and reviewing them. The opinions of local experts, and/or stakeholders and agents of change, and/or people doing similar work in other countries of similar composition of the production structure may be sought and sought to review what has been built. It may require identifying review points and commenting on specific issues, bearing in mind the following:

- Does each goal meet the criteria for sound planning?
- Is the list of goals complete?
- Was any important goal omitted or missed from this list?
- Are the goals appropriate?
- Does any of them cause controversy?

If so, then the team has to decide whether the mandate-holder, in consultation with it, is prepared to address the pitfalls that may arise. For example, a program may decide to reduce customs duties, or tax duties on goods from production inputs since the provision of production inputs at reasonable prices is a goal they wish to pursue. Still, it may cause governmental problems related to the state's financial income from these commodities or production requirements. This does not mean that the team should not adopt this goal. Rather, it must be accompanied by a clear understanding of the consequences and the possibility of developing solutions or alternatives or developing an appropriate justification for this type of goal.

3. MODERN AGRICULTURAL TECHNOLOGY

3.1 Agricultural Technology

The word Technology stems from the Greek root (Techno logia), which has two syllables -tech (skill) and -logy, which means "artistry" and "science" is, and thus they are pronounced similarly.



Figure 3.1: Agricultural Technology Contributes to Sustainability

Source: (tech-mag.net, 2021)

The term technology is used in multiple meanings where the views differ according to the different sciences that deal with technology based on whether they are natural or social. This difference arises as a result of technology in its nature be related to applied aspects. Therefore, those concerned with it and technology with applied aspects vary according to technology, which is always associated with society's problems." Technology as the artistic means that includes all the topics of material culture and therefore includes all the Applied Science of material matters, as "Love" pointed out that technology is the benefit of scientific knowledge and the developments in different fields of production, which requires the existence of interdependence and correlation between scientific progress and technological progress, and has defined 0 thus, it leads to a division of business that makes

organized knowledge possible and makes it easier to perform its requirements, as defined by Omonsfield 0 as a container containing knowledge related to the arts Industries, defined by the United Nations Industrial Development Organization as the results of improving and accumulating knowledge, experience and human skills in the form of material means of production and production arts used by man to manufacture products or to establish units that manufacture these products in other words what is known as means of production.

Technology is defined as the use of the results of scientific research in the development of methods of performing production processes, including administrative, organizational, and social services and activities to reach methods (Abdul Rehman, 2017).

3.2 Methods of technology

Agricultural technologies can be separated into five main groups. In the field of mechanical, biological, chemical and regulatory technology in the various fields of agricultural production developments in order to develop agriculture and increase agricultural production and improve it in order to achieve the goals of development, as defined as the change in the production matrix of inputs and outputs, whether through the improvement in the current quality or the upgrading known before, these physical changes are reflected in their economic impact on both production, costs and revenue, as they are known as modern methods in the organization of production, development of the way of performance, Organization of behavior and provision of services as well Agricultural technology is defined as the use of the results of science and technical knowledge, whether acquired from the local environment or imported from abroad, and adapted to suit the local conditions politically, socially and economically with the aim of creating and developing means that will increase the quantity and quality of agricultural production to achieve the highest level of quantitative and qualitative satiation of man.

3.3 Agricultural Technologies Groups

3.3.1 Mechanical technology

Replacing the machine with human or animal work, Agricultural Mechanical Technology is a kind of labor-saving or money-intensive technology; there is a lengthy history of the growth of methods of Agricultural Mechanical Technology and his role in saving costs or growing productivity, and reducing the time required to conduct various operations agricultural soil processing, seed machines, control and crawling, fertilizer dispersion machines, pesticide spraying machines, harvesting machines and Threshers in addition to irrigation machines whether traditional or irrigation means Modernity



Figure 3.2: Traditional Farming System

Source: (Al-Dweikat, 2018)

3.3.2 Biotechnology

In-plant and animal fields, Bioengineering and Biotechnology and the propagation of inferior plants or animals can increase their productivity and resistance to diseases. Agricultural biotechnology is the type of land-saving technology because it yields greater outputs per ground unit.

3.3.3 Chemical technology

The energy created by the interactions among the chemical elements is used, and the Chemical Technology is represented in chemical pesticides, development organizations, agricultural fertilizers, and Fertilizers, and the use of Chemical

Technology approaches is aimed at addressing the shortcomings of the agricultural land and compensate for any deficiency

In addition to the basic structure related to the collection of marketing transactions in the post-harvest phase, both related to the storage of agricultural products, which are characterized by their high perishable nature, as well as transportation and the structure of processing agricultural products for export, as well as the structure of the preparation of agricultural products for export, basic agricultural information.

3.3.4 Basic structure technology

They are represented in the modern mechanisms related to irrigation equipment and covered drainage and programs for maintaining soil fertility through improving lands by deep plowing below the soil and clearance canals and drains, in adding to the basic infrastructure.

It is related to all post-harvest marketing transactions, whether about the storage of agricultural products, which are of a high perishable nature, and means of transport, processing, and processing of crops for export and the infrastructure of agricultural information.

3.3.5 Organizational technology

It is considered an essential condition for the achievement and application of all other agricultural technological systems. These methods require an appropriate regulatory framework for their application and balance their economic and social application aspects.

Systems technology works to employ and use data to achieve maximum benefit from all previous technology types, meaning that organizational technology aims to prepare the appropriate environment. To accommodate the different types of technology for the material, organizational, legal, and cultural changes, they require the technological change's circumstances to be accommodated.

And apply all other agricultural technology methods and as a result that those methods need to have an appropriate regulatory framework for their application and achieve a balance in the aspects related to their application economically and socially, that is, systems technology works to employ the data and use it in a way that makes the maximum use of all types of it requires material, regulatory, legal and

civilized changes to the surrounding conditions Technological change so that it can be absorb.

3.4 Stages of the Process of Technological Development

The process of technological development is carried out through one of two methods, the first of which is the development of technology locally and through the flood of technology produced by research institutions at the micro-level, and the second is the transfer of technology at the macro level where the process of technology transfer is described as the transfer of knowledge.

The stages of technological growth in the situation of the transfer and development of local technology vary according to the types of technology used, and the stages of the transfer and development of agricultural technology are represented in the following stages (Gabriel, 2021).

1- The First Phase

- Agricultural practical research is carried out to develop or modify agricultural technology, and this stage is carried out in universities and research centers, and researchers in various laboratories and research stations design agricultural research that works to reach useful results in solving the problems faced by agricultural producers, hence the value of agricultural research applied on the ground it is applied

2- The second stage

- The researchers are involved with the experimental specialists at this stage in conducting confirmatory experiments with a representative sample of farmers to trust the safety of the results reached in the research stations and their success to an appropriate degree under farmers' normal production conditions.

3- The third Stage

- In it, experiments are carried out on specific factors in the fields of farmers, and agricultural guides participate in this stage to ensure the compatibility of the results reached with the productive conditions of the farms, and economic division of the results obtained by estimating some of the developing economic indicators by costs, procedures and net yield obtained by farms as a result of.

- This economic assessment is carried out using several economic methods, the most important of which is the analysis of the partial budget and the role of agricultural guides will be useful in the selection of sites of Agricultural Experiment fields and prepare farmers to participate in those experiments and interact with them during their implementation. These experiments and the economic and applied evaluation of the results of agricultural experiments is the criterion for determining the feasibility of spreading those experiments between farmers or not. The experiments are published in the case of positive results of the evaluation. In the case of negative results of the Applied and economic evaluation of the experiments, Research stations redesign research and apply and work to solve the problems that appeared in the application.

4- The fourth stage

In which the technology reached is deployed:

- Through experiences with positive economic assessment in several selected extension fields, which are known as extension fields, the agricultural guides directly and closely supervise the implementation of new technologies after providing the farmer with sufficient knowledge about those technologies' technical recommendations.

5- The phase five

- The technical scope is expanded through the extension fields by selecting a larger number of these fields with their direct supervision on implementing technical recommendations related to these technologies, which helps farmers adopt them and implement those technical recommendations.

3.5 Conclusion of Research on the Technology Used In Agriculture

At the end of a study on the technology used in agriculture, it can be said that the future of agriculture will depend on its digital transformation and that farmers will benefit from all digital transformations within the agricultural process.

This helps them be free from the anxiety related to environmental changes and allows them to obtain a better productive crop and ensure the ability to manage their crops in new and effective ways (Gabriel, 2021).

Recent agricultural technology has been advanced, keeping two important things in mind: the primary thing is to gain the maximum yields possible. The additional thing is to grow the maximum economic profit possible. To achieve these goals, six undeveloped and significant practices have come to procedure the backbone of agriculture production: organic fertilizer, irrigation, intensive tillage, monoculture, chemical pest controller, and enatic manipulation of crop plants. Autopilot tractors, crop sensors, swath control technology, intensive care and controlling crop irrigation systems via smartphone, documentation of fields via GPS, biotechnology, and ultrasounds for livestock has the backbone for making and is using for its contribution to productivity (Abdul Rehman, 2017).

The following figure shows the GDP in a million US dollars for some countries that use agricultural technology, compared to third world countries

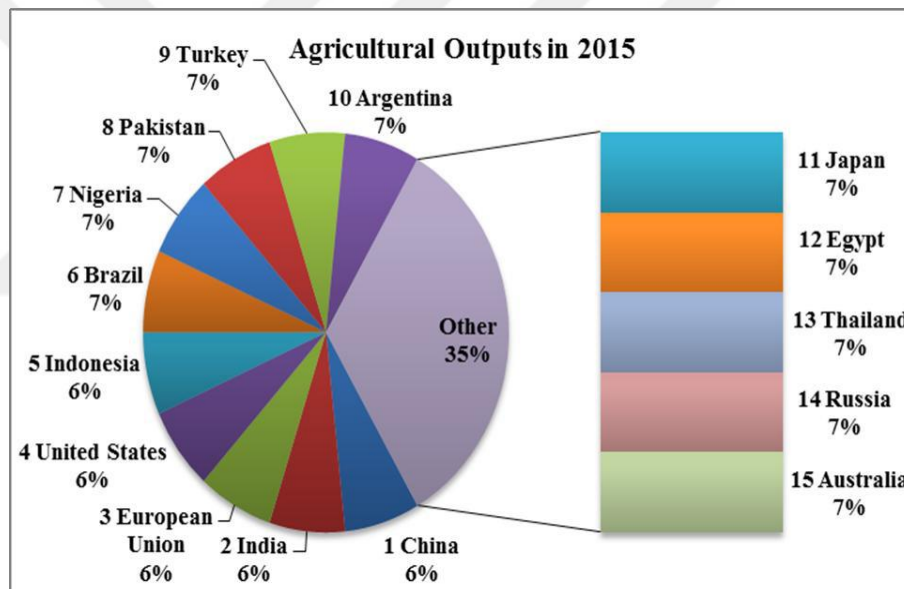


Figure 3.3: Top Fifteen Countries GDP in Million USD Data

Source: (cia.gov, 2020)

3.6 Previous Studies and Researchs

3.6.1 Strategic management and its application constraints to the managers of agricultural system units in the central region of Iraq

The Objective of this research to determine the knowledge level of agriculture extension managers in strategic management. To reach the goals of this study, using a questionnaire involved with a quadrant scale and consists of 75 paragraph for the managers of the middle zone and the executive directors, distributed in 12 sectors

(Concept, the importance, goals, types of strategies, level of strategies, Vision Characteristics, Mission Characteristics, strategic analysis, strategy formulation, strategy application, adjustment of the strategy, role and duties of the strategic manager). A random sample of 50 managers and vice managers has been taken from the middle zone of Iraq. Another random sample represents 40% of each of the directors and executive management categories of 80 employees to be a total sample of 130 Directors. The study's outcomes displayed the average level of knowledge was 143,46 degrees for the middle zone managers and 135,88 degrees for the executive directors on a knowledge scale ranges from 225 degrees and consists of 75 paragraphs. 48% of the middle zone managers and 55% of the executive directors have a medium level of knowledge; accordingly, this study recommends that managers in the agricultural extension be adequately and providing training to master strategic management abilities to support farmers (Aldulaimi, 2016).

3.6.2 Strategy for the development of agricultural extension and rural development systems and programs in the Arab countries

It aimed to study a range of strategies to develop agricultural and rural development, particularly system planning that had an eye on individuals and groups of farmers and farmers' overall efforts and community assets. A qualitative methodology was used in conducting the research.

The study found that the stages of developing a strategy for developing agricultural extension and rural development systems and programs are summarized as follows:

- 1- Development of the vision: The vision is the starting point for any strategic framework. It reflects the institutional values of agricultural extension systems, ideas, and beliefs about what is important and crucial in extension work, development, and rural life quality improvement.
- 2- Drafting the mission's text: When preparing a strategic plan for agricultural extension and rural development, the emphasis is placed on the reason or goal established from the term of the extension and development organization, and the services that will be provided must be emphasized.
- 3- Defining and formulating goals and aims: The ultimate goals and objectives are the benefits farmers and rural residents receive upon extension work's success. These goals are directly related to the most important problems

identified and defined through the SWOT analysis that we talked about earlier.

- 4- Of a creative approach to a dilemma (developing an action plan) for an efficient implementation, it is usually preferred to use the log frame in agricultural extension and rural development. It's a management tool that highlights the issue and all of the stakeholders involved (AL-Shafi, 2012).

3.6.3 Sustainable development of agriculture: modeling of strategic management in transition countries

It will take a new and unique approach to describe the practice, values, and growth of strategic management in light of returning to the planned economy (Nadiia, 2019).

The lack of in-depth research in this direction makes the topic of study promising for consideration. This study provides evidence-based explanations for the problem. As a result of the research, steps were taken:

- 1- The components of the action algorithm have been identified for the principal implementer of the strategy;
- 2- The strategic planning realization chart is presented;

Several pre-statistical predictions have been made, which form the foundation for the agricultural industry's growth trends and forecast its development. Sustainable regional development requirements and principles were identified, as well as an implementation plan was developed.

In this case, three separate techniques were used to accomplish the research: induction, deduction, contrast, and hypothesis building.

The main part of the agricultural enterprises in Ukraine studied their strategic policies and made an effort to enforce them. This study discovered several facts, some of which are as follows:

- 1- Deepening market relations in the economy and the attempt of some institutions to use the principles of the planned economy requires a new perspective to implement the strategic objectives of the sector and apply the concept of development,

- 2- The strategy's practical preparation requires implementing strategic planning in specific administrative decisions by individual agricultural producers, municipalities, regions, and countries to achieve the goals.
- 3- Everyone in developing and implementing strategy is the entire management team's work (both at the appropriate level), not just the executive level.
- 4- The process of implementing strategy often affects every element of the department's organizational structure.

In this context, all agricultural managers' use of the technique lies within their sphere of control, while everyone else has to go through this process. It advances the strategy's effectiveness. It is essential for management to be transparent and compelling to all. We'll need to reorganize continually so that each team member believes they have a hand in executing the plan and fulfilling the targets that have been set for them. Strategic and monetary goals are both met. We have financial and development activities to finish. The procedure was a resounding success, and the way we envisioned it and the solution corresponds to any situation. However, even so, some of the basic requirements that must be met regardless of the management goal include the following:

- Create an organizational management structure that can successfully implement strategic objectives;
- Review budgets to allocate adequate resources to activities that define strategic success.
- Establish appropriate strategic courses and procedures;
- Provide best practices and proven techniques to ensure continuity

3.6.4 The impact of modern agricultural technologies on smallholder welfare: evidence from Tanzania and Ethiopia

This research assesses the potential impact of adopting improved legume technologies on rural household well-being as measured through consumer spending in rural areas of Ethiopia and Tanzania (Asfaw, 2012).

A survey was conducted at the household level in 2008 from a random sample of 1313 farmlands. The influence of technology is suspected to be a causal factor.

By using the Internal change regression methodology. Luxury will help us boost the effect of the new technologies in production decisions. This study reveals that adopting improved agricultural technologies leads to a positive increase in consumption spending (at rates equal per adult) in Ethiopia and Tanzania. This approves that technology adoption by rural households will boost their welfare. Spending on improved technologies translates into less poverty, higher food security, and more ability to take risks. The determinants of adoption analysis highlighted insufficient local supply

Seeds, access to data, and perception around novel varieties as major limitations of technology adoption.

3.6.5 Determinants and impacts of modern agricultural technology adoption in West Wollega: the case of Gulliso district

This research studied other than on-farm factors affecting new technology adoption, such as technology decisions on families' welfare. For the research project's duration, data was taken from 145 randomly selected households in the study zone. A logit model was used to analyze modern technology's impact on-farm productivity and growth factors on the farmers. The implementation of new budgeting has had a major impact on revenues, spending, and even on the adopted family's expenditures. The head of the household and the household's size, and the credit situation on the farm have a significant effect on the source of off-farm income. Non-adopters have a greater average income and expenditure than adopters. To be accomplished, these organizations need to contact farmers and help them raise their level of knowledge and skill in the most up-to-date techniques. Farmer relatives would need to be included in discussing what can be expected of the farm's productivity (Merga Challa, 2014).

3.6.6 Economic analysis of the most important factors affecting sustainable agricultural development in Iraq for the period 2000-2017

This study's main goal is to ascertain the factors influencing the overall economic growth of Iraq's agricultural sector. Iraq's agriculture and food trade with the impact on long-term food security.

The researcher used the self-regression approach for slow distribution (ARDL). The results indicated a long complementary relationship between the variables through degrees of 10.30, which is the largest value between the minimum values at the levels of importance and short. The long commercial factor showed that the reality of agricultural and agricultural exports impacted agricultural development in Agricultural areas in rural areas and crop value, the R2 value of 0.83, and the model is significant as a whole. The F statistic reached 7.01, at a significant level of 0.05, for the agricultural sector's advancement, especially investment in agricultural lands' reclamation to preserve their work and stop immigration and heading to jobs. (Shukry, 2020).

3.6.7 Conclusions related to previous studies

Summary of earlier studies on strategic management:

After reviewing earlier studies that dealt with the subject of strategic management in various countries

It is very beneficial to summarize these studies in command to clarify the greatest important findings and references reached by these studies:

- 1- All studies differ in methodology and style in defining strategic management, which results from the wide difference between developed and emerging countries.
- 2- Most of the previous studies agreed that there is a lack of senior management knowledge with concepts and strategic management methods in business organizations, whether agricultural or non-agricultural.
- 3- Emphasized the weakness of the application and practice of strategic management in agricultural organizations and other sectors.
- 4- Weak implementation of strategic management is one of the most important determinants of these organizations' deteriorating performance. And the leadership style (management) used in these organizations Still traditionally,
- 5- Regulatory and practical considerations can influence strategic decision-making in both the business and private sectors. Previous research has indicated that strategy should be used in business operations. The modern rule of thumb is that the more you emphasize training and development, the more

successful you will be. However, this kind of research, on the other hand, found that there was much variation in senior management's regard for the significance of strategic management application and practice, depending on age. According to some preliminary research, understanding the significance of applying strategic management was only moderate. To some, it is said that in most businesses, employees know the value of strategy and creativity.



4. FIELD STUDY

If the course syllabus is the help of research design, as well as the focus on studying the relevant concepts, the appropriate data, and the delineation of the subject area of investigation." These concepts, procedures, and stages, then, form the outline for the researcher's analysis of the problem. often known as "the empirical method" is also referred to as "a universal laws:" The researcher applies it to data to arrive at conclusions. This might be new, or the researcher may feel the need to assert it. The purpose of the program is to enlighten the public about science" (Obeidat, 1999).

In this study, the descriptive and analytical approach describes the phenomena and events of the study subject—research hypotheses. The case study method aims at (SPSS) a program to identify the characteristics and content of a single case or phenomenon or a group of cases or phenomena in an image.

Detailed and accurate information, then collecting detailed and accurate information about it and analyzing the data and information collected scientifically and objectively to obtain specific results that can be generalized and suggesting methods of dealing with them on other similar cases.

4.1 Study Hypotheses

The agricultural system in Iraq faces various problems with all its components in developing the cultivation of field crops, foremost of which is the lack of strategic planning in all components of the agricultural system in addition to the non-use of modern agricultural technology in agricultural work and from this standpoint the following hypotheses have been put forward

- 1- In the agricultural system, agricultural unit managers are ineffective in implementing their strategies and supervising administrative and extension activities.

- 2- The weakness of unit managers in managing the administrative and extension units and managing their agricultural programs and activities related to the implementation of the strategic management
- 3- Managers of agricultural system units face obstacles in applying agricultural technology to develop crop cultivation and manage their agricultural programs and activities.
- 4- There are no statistically significant differences between researchers and experts in upper and middle administrations regarding the problems of the agricultural system in developing field crops cultivation.

4.2 Objectives of the Study

The research seeks to achieve the following purposes:

- 1- To explain the idea of strategic management, its components, its importance, and the details for its application in the agricultural system's organizations and institutions.
- 2- A need to analyze the facts to obtain an objective diagnosis of the working conditions of the public agricultural organizations in Iraq, to know whether they are strategic institutions.
- 3- Identify the actual practice of the strategic management method in agricultural organizations and institutions in Iraq and then determine the stage at which they are going through the stages of the development of strategic thought, in adding to knowing the obtainability of the maximum important requirements for the effective plan of strategies in them.
- 4- Show the effect of the application of the strategic management system on the presentation of agricultural institutions
- 5- To reach a set of proposals, which are expected if adopted to improve and develop the performance of agricultural institutions

4.3 Research Methodology

The current research comes within the framework of survey research that falls within the descriptive approach, as this approach is used in data collection and analysis to obtain information from large numbers of respondents who form a specific community, as it is an appropriate method for collecting detailed data and

information on strategic management and the obstacles to its application. In a specified period.

This approach is suitable for this research because it provides accurate and detailed data on the case under study. Its suitability for strategic studies (SPSS) also uses the comparison method and uses the statistical analysis method, and a program to analyze questionnaires and test hypotheses.

4.4 Study Area

The governorate of Baghdad was chosen as the area for research due to the existence of the network of the main departments that make up the agricultural system largely at its national level (scientific research centers, propagation companies, agricultural supplies departments, agricultural extension, and training department, prevailing institutions).

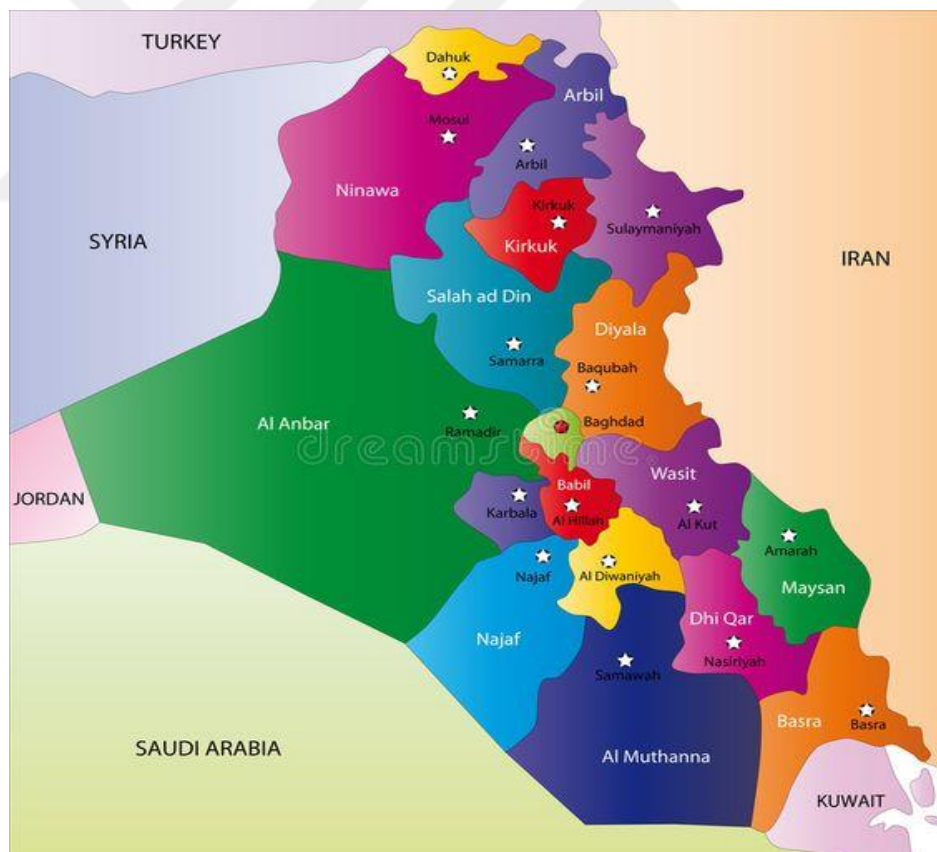


Figure 4.1: The Governorate of Baghdad

Source: (pinterest, 2020)

4.5 Research Community

The study population was divided into three sections: The first level is the upper management layer, which consists of the general manager, his deputies and his assistants, directors of agricultural institutions affiliated and directors of main departments, and in this

The planar sampling method also gives the research greater accuracy and credibility

Because of the nature of the research topic, which is concentrated at the senior management level and the small number of senior management level personnel, a random sample of 50% of the vocabulary of this level was taken in the second level. It is relatively little but much larger than the upper management layer. This level also contributes to the strategic management process. In the third level, a random sample of 10% of the operational management personnel was taken. This arrangement was followed in all institutions of the agricultural system

The research community included all the institutions and departments that make up the system of agriculture in the field of crops, namely:

- Scientific Research Centers
- The Agricultural Research Department at the Ministry of Agriculture.
- Agricultural Research Department at the Ministry of Science and Technology
- College of Agriculture, University of Baghdad
- Propagation companies
- The Mesopotamia company for seed production and the Iraqi company for seed production
- Seed Technology Center of the Agricultural Research Department, Ministry of Science and Technology
- Seed Inspection and Certification Department
- The General Company for Agricultural Supplies at the Ministry of Agriculture
- Department of Agricultural Extension, Department of Plant Protection
- Directorates of agriculture in Baghdad, Karkh, and Rusafa governorate

The research community was Include all the administrative units concerned with field and strategic crops. The research categories included (senior management

managers, middle administration managers, researchers, experts, and workers in the departments of the agricultural innovation system network in hair crop development. The number of administrative units contains 12 units (19 general directors and assistants) for higher departments, and the entire community was approved. The middle administration's community consisted of the departments related to field crops and strategy (planning, field crops, plant production section), and the directors of the departments had 20, and the entire community was taken.

4.6 Developing an Outline of Research Areas and Axes

Preparing the research questionnaire in its initial form

In light of the research objectives and fields, and based on studying and analyzing research and literature in this research field and reviewing the plans of the Ministries of Agriculture, Science, and Technology, and after conducting interviews with specialists in this field from workers in the agricultural system from the departments of scientific research and the College of Agriculture through interviews and correspondence, the research scheme was developed in its form The priority is as follows,

- 1- Scheme of paragraphs of knowledge of managers of agricultural system units in the field of strategic management for managing administrative units and managing their agricultural programs and activities, and it may consist of (12) paragraphs distributed into fields such as (agricultural innovation system, scientific research, proliferation (supply or mass production), processing, Dissemination, Support Services (Plant Protection and Marketing), (Enabling Environment Policies)
- 2- The outline of the paragraphs of the proposed treatments for the problems facing the system and may consist of (16 paragraphs distributed in the fields of (agricultural innovation system, scientific research, multiplication (supply or mass production)), processing, publishing, support services (protection of crops and marketing), environmental policies Enabling).
- 3- Research outline, problems, and suggested treatments
 - a. After presenting the outline of the proposed problems and treatments to (5) arbitrators in the field of field crops and agricultural system to state their

approval for each paragraph of the scheme and the scale through a questionnaire that included all areas and paragraphs of problems and the proposed treatments using a three-level approval scale (Agree, Agree with the modification being made, disagree) and the weights were determined for the levels (0, 1, 2) respectively, a field was added for the proposed amendment. The arbitrator was asked to indicate whether the proposed adding the paragraph field and writing that. The research scheme was presented to the experts to examine the apparent validity (experts of crops, economics, and agricultural extension) and the validity of the content. The validity check of the tool is necessary to ensure the objectivity of the tool and its suitability for studying the phenomenon

- b. A cut-off threshold of (80%) was set to verify the questionnaire's validity and its validity for collecting the research data.
- c. Experts 'approval averages were calculated for the fields and paragraphs for each of the proposed problems and treatments, and all of them obtained percentages ranging between (80-100%), and thus the questionnaire is reliable.

Some modifications were made to the scheme in the areas and paragraphs in light of the experts 'suggestions when conducting the truthfulness. Three paragraphs were added in the areas of solutions. The plans were prepared in their final form as shown in the tables below:

The outline of the paragraphs of knowing the managers of the units of the agricultural system in the field of strategic management for managing administrative units and managing their agricultural programs and activities in its final form

4.7 Questionnaire Judging Process

The researcher carefully studied the questionnaires and presented them to the professor supervising the thesis, and some modifications were made. Then the questionnaires were distributed on social media

It was also sent and attached with them a research plan for arbitration and evaluation

Business administration professors in Iraqi universities have also been presented with an expert in statistics and statistical analysis, a list of arbitrators. After a period ranging between two weeks, the two questionnaires and the plan were composed by the adjudicators. Most of the arbitrators' views confirmed the validity, quality, comprehensiveness of the questionnaires and their effectiveness in accomplishing the research purposes. The supervising professor's amendments and directives. After assembly all the amendments to the questionnaires and reviewing them carefully in all respects, he submitted them to the supervising professor, who agreed to approve them in their final form.

4.8 Distributing and Collecting Questionnaires

After identifying the study population and accurately identifying the research sample, the researcher proceeded to prepare and arrange for the process of distributing and collecting the questionnaires. The first steps were to contact all agricultural institutions of the agricultural system by e-mail and these institutions' presence. Some of them showed good cooperation with the researcher, and others were otherwise. The researcher also faced some difficulties due to the Coronavirus pandemic, which led to a lack of movement and access to other places in the Iraqi governorates. Some institutions also refused to answer the questionnaire without approvals from Iraqi universities or the Ministry of Agriculture.

4.9 Data Collection

The final search and data collection were carried out through field visits to the system departments and interviews with general managers and specialists in the field of pure science, and the questionnaires were filled a Hundred higher departments, middle departments, researcher, experts) and Nine apologies for the full questionnaire. The upper and middle departments, and after completing data collection from the job categories, a group of farmers was selected to survey their opinions from some villages in the governorates of Baghdad regarding problems and solutions and confirm the results of the research. The data were collected during February of 2021.

4.10 Methods and Means of Data Collection

4.10.1 Personal interviews

The interview method was used in conducting the current research, and the interview is one of the tools for collecting data in the inspired studies. It means a situation interspersed with an exchange of opinion on the issues related to the agricultural system to find the problems facing the agricultural system in the field of developing field crops cultivation with the decision-makers in the departments of the agricultural system, being a source of information and knowledge of the activities in their departments and the problems facing the department's work within the agricultural system. Interviews were also conducted with specialized in the field of the agricultural system and the heads of specialized departments and experts.

4.10.2 The questionnaire

The questionnaire used as a main instrument in collecting data, diagnosing problems facing the agricultural system, and proposing solutions to address them using a five-point scale of importance (Strongly Agree, Agree, Neutral Disagree, Strongly Disagree) to measure the importance of both problems and treatments and this scale was used in a project Food and Agriculture Organization to identify problems facing the agricultural system and capacity development in Central Asian countries and Turkey.

4.10.3 Collect secondary data

The review included the statistics, records, and documents of the Ministry of Agriculture, seed production companies, the Seed Inspection and Certification Department, the Agricultural Department system, the Plant Protection Department, and the Agriculture Directorates of Baghdad al-Karkh and al-Rusafa), and these data contributed to supporting the search.

4.11 Statistical Tools Used in Data Analysis

4.11.1 Weighted arithmetic mean (weighted average)

The weighted arithmetic mean is a measure of the central tendency of a set of quantitative observations when not all the observations have the same importance. ...

The weighted arithmetic mean equals the sum of observations multiplied by their weights divided by the sum of their weights.

4.11.2 ANOVA analysis

Analysis of variance is a statistical way that splits observed variance data into different components to use for extra tests. A One-Way ANOVA is used for three or additional data groups to increase information about the association between the dependent and independent variables.

4.11.3 Least significant difference test (LSD)

Smaller significant difference: This test is used with a test - way ANOVA in the SPSS statistical analysis program to test the significance of the differences between the averages of each of the two categories after finding the calculated F value.

The F-test of overall significance shows whether your linear regression model provides a better data fit than a model without independent variables. ... F tests can evaluate multiple model terms simultaneously, allowing them to compare the fits of different linear models.

The value of $F = 1$ means that no matter what significance level we use for the test, we will conclude that the two variances are equal.

Ratio F is the ratio of the two mean square values. If the null hypothesis is correct, you would expect F to have a value close to 1.0 most of the time. A large F ratio means that the variation between group averages is greater than you would expect to see by chance.

4.11.4 Five-pointed Likert scale

A kind of psychometric response measure in which responders specify their level of agreement to a statement typically in five points: (1) Strongly disagree; (2) Disagree; (3) Natural; (4) Agree; (5) Strongly agree.

Table 4.1: Five-Pointed Likert Scale

	Value	Range
Strongly disagree	1	1.00-1.80
Disagree	2	1.81-2.60
Natural	3	2.61-3.40
Agree	4	3.41-4.20
Strongly agree	5	4.21-5.00

Source: (Sözen, 2019)



5. RESULTS AND DISCUSSION

This research is focused on the role of strategy in cultivating the field and various agricultural technology in promoting these issues. To achieve the research goal, a plan was prepared consisting of 5 axes divided into three axes for the strategic management system: General experience of administrative workers at the upper, middle, and executive levels. Among the experts and researchers are the obstacles facing their application and the solutions to be taken to implement the strategic management

Two axes in agricultural technology are the importance of agricultural technology in developing field crops and the obstacles and solutions required in the agricultural system, human and material capacities, programs, the technical field and organization, policies and support, and agriculture. Services, monitoring and evaluation, financial allocations, and measuring the importance of problems and solutions against a scale of five points for each issue and proposed solutions. (strongly disagree, disagree, neutral, agree, strongly agree) numeric values ranged between 1-5.

Research data was collected from a sample of 100 respondents Distributed over the research community represented by all agricultural system departments in cultivating field crops. They are (Agricultural Research Department in the Ministry of Agriculture, Agricultural Research Department in the Ministry of Science and Technology, and its research centers and stations, College of Agriculture, University of Baghdad (Department of Field Crops), Seed Examination and Approval Department, Agricultural Extension and Training Department, Plant Protection Department, General Supplies Company Agricultural, Baghdad Agriculture Directorate, Al-Karkh, and Al-Rusafa). Data were collected using the questionnaire as well as the interviews.

The research results concluded that the problems facing the agricultural system in strategic management, from the respondents' viewpoint, amounted to 20 topics distributed among research fields.

Table 5.1: Reliability Analysis Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
0.83	67

Table 5.2: The Level of Career Work

Mean	2.54
Std. Error of Mean	0.08
Median	3.00
Mode	3.00
Std. Deviation	0.89
Sum	254.00

Table 5.3: Showing the Level of Career Work of the Participants in the Research Sample

Level of career work	Frequency	percent	cumulative percent
Senior management	11	11.0	11.0
Middle management	36	36.0	47.0
Executive Management	45	45.0	92.0
Expert	4	4.0	96.0
Researcher	4	4.0	100.0
Total	100	100.0	

Table 5.4: Academic Achievement

Academic achievement	N	Frequency	Valid Percent
PH D	15	15	15.0
MASTER	23	23	23.0
Higher Diploma	50	50	50.0
Bachelor	8	8	8.0
Diploma	4	4	4.0
Total	100	100	100.0

A Figure showing the level of career work of the participants in the research sample

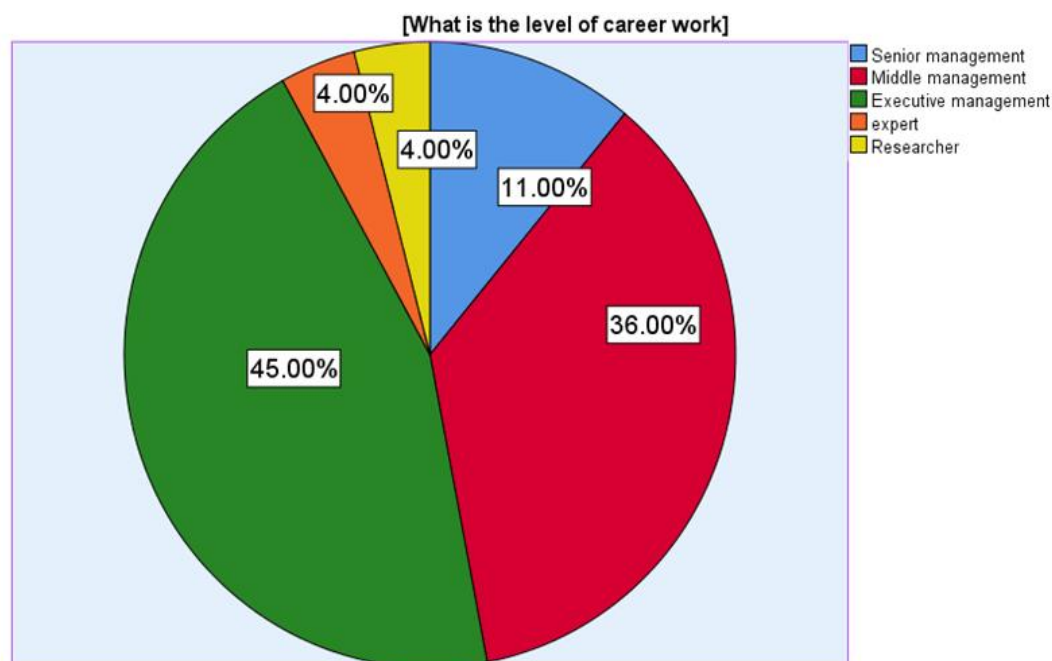


Figure 5.1: The Level of Career Work

Source: (By Google Document)

Table 5.5: Showing the Academic Achievement Statistics of the Participants in the Research Sample

Academic achievement Statistics	Axis1	Axis2	Axis3	Axis4	Axis5
N	100	100	100	100	100
Mean	2.63	3.52	3.63	3.76	3.60
Std. Error of Mean	.09	.04	.05	.05	.04
Std. Deviation	.97	.41	.50	.52	.49

5.1 Research Axes

The research was divided into five Axis based on the objectives of the research (five objectives), and each axis deals with a set of questions or paragraphs related to the content of the research objective that axis while asking the questionnaire to the research sample. (see appendices) The process of collecting questionnaire questions after reviewing a group of previous references such as theses, which had mentioned some issues similar to the problem of the current study in Iraq (Aldulaimi, 2016), (Al-Frayiji, 2010).

5.2 Analyzing Opinions of the Study Members about Study Axes

The opinions of the study members about the first axis of the study. Determine the level of experience of workers in agricultural system units in strategic management for developing field crop cultivation. managing administrative units, and managing their agricultural programs and activities which is from the opinion of view of the study sample. On the first axis, which has 12 paragraphs, the meanings of their significance ranged between 3.00-4.60 degrees and an average of 3.52 degrees. 55% of the problems ranged from 3.00-3.40 with an average score of 3.22 and fell within a neutral to agree to a level according to the five-point significance scale. It follows from this that most of the problems related to workers in the agricultural system in the field of strategic management are the lack of knowledge of the principles of strategic planning at all administrative levels of the agricultural system and the insufficient knowledge and skill to formulate a vision for the organizational unit, as well as the lack of sufficient skill to formulate the message of the organizational unit. Sufficient knowledge to conduct an environmental analysis to determine the strengths, weaknesses, opportunities and threats to the organizational unit and the insufficient knowledge and skill to implement, evaluate and follow up the organizational unit strategy was one of the most important reasons facing workers in the agricultural system in the field of strategic management and its relationship to the development of agricultural production, as well as the weak partnership between departments and agencies The components of the agricultural system, the weakness of the mechanisms of interaction, coordination and teamwork, and that 45% of the problems ranged between 3.50-4.60 degrees with an average of 4.36 degrees falling within the level of agreement to strongly agree, among which is the insufficient ability and skill to implement the organizational unit strategy and the low level of functional qualification For managers in the field of managing organizational units in the agricultural system and not The interest in developing the capabilities of organizational unit managers in the field of strategic management and the lack of training opportunities for managers of organizational units at the (upper, middle and executive levels) to raise their level of knowledge and skills in the field of strategic management and a clear mechanism for developing their expertise, as shown in Table 5.6 and 5.7

Table 5.6: Analyzing the Opinions of the Responses on the Paragraphs of the First Axis

Numeric limits of average importance	Number of paragraphs	%	The level of importance	Average
3.00-3.40	5	55	Neutral towards agree	3.22
3.50-4.60	7	45	Agree to agree strongly	4.36

Table 5.7: Statistical Analysis for Axis 1

Mean	3.52
Median	3.40
Std. Deviation	0.41
Range	1.60
Minimum	3.00
Maximum	4.60

An analysis of the study members' opinions about the second axis of the study. Identifying the obstacles to implementing strategic management in developing field crop cultivation and the general agricultural system's organizational units from the study sample's point of view.

The results showed that the agricultural system's problems implementing strategic management in the agricultural system's administrative units amounted to 14 paragraphs. Its mean significance ranged between 2.55-4.82 with an average score 3.63. And that 26% of the problems ranged in average (Neutral) between 2.55-3.36 degrees and an average of 2.99 degrees. It falls within the disagreement with neutrality, foremost of the lack of strategic management and integrated programs to develop strategic field crops and the lack of interest in developing field crop cultivation in the five-year agricultural plans. The development of strategic field crop cultivation is not among the priorities of the strategic management in the Ministry of Agriculture for the coming years. Price policies discourage the development of strategic field crop cultivation by farmers. And the lack of strategic management to propagate the seeds of higher varieties of strategic and field crops. The absence of strategic management plans to support the cultivation of strategic field crops.

And the obstacles whose implications ranged from (3.45-4.82), and their percentage was 74%, with an average of 3.70, (Table 5.8), foremost of which was the lack of

policies for agricultural needed for strategic field crops and abolishing the previously existing strategic field crops cultivation programs. And the failure to include the field and strategic crops with support similar to the wheat crop with agricultural equipment and the weakness of government support and lending policies for developing strategic field crops cultivation due to their absence from the strategic management plans. The failure to develop strategic management plans to manage the water shortage file and to develop an effective strategy to solve the water problem with neighboring countries

Table 5.8: Analysis of the Study Members' Opinions about the Second Axis

Numeric limits of average importance	Number of paragraphs	%	The level of importance	Average
2.55-3.36	6	26	Neutral	2.99
3.45-4.82	9	74	Agree	3.70

Table 5.9: Statistics and Means of Axis 2

Mean	3.63
Median	3.63
Std. Deviation	0.50
Range	2.27
Minimum	2.55
Maximum	4.82

Table 5.10: Statistics Paragraphs of Axis 2

Mean	Frequency	Cumulative Percent
2.55	3	3.0
2.64	4	7.0
2.91	3	10.0
3.09	7	17.0
3.27	3	20.0
3.36	6	26.0
3.45	8	34.0
3.55	13	47.0
3.64	7	54.0
3.73	17	71.0
3.91	11	82.0
4.00	3	85.0
4.09	2	87.0
4.45	10	97.0
4.82	3	100.0
Total	100	

An analysis of the study members' opinions about the third axis developing the capacities of agricultural system managers in the agricultural system's strategic management in applying strategic management at the administrative levels (middle, executive) in managing administrative units.

The data showed the most important elements that must be provided in the development and development of workers in the agricultural system in implementing strategic management in the administrative units in the agricultural system amounted to 15 paragraphs. Its significance ranged between 3.00-5.00 with an average of 3.76 degree. And 26% of them ranged in average importance between 3.00-3.40 degrees and an average of 3.19 degrees. Within the neutral and at the forefront of these solutions is the participation of managers in seminars and conferences to improve their knowledge capabilities, develop relationships with experts and specialists in the field of strategic management, and join teams that adopt a strategic approach to work and are charged with solving strategic problems in developing field crops cultivation and providing opportunities And the necessary facilities to encourage managers to develop their administrative capabilities, especially in the field of strategic management, and to hold training courses to develop the knowledge and skills of managers in the field of strategic management and to urge the higher management, represented by the Ministry of Agriculture, the Ministry of Science and Technology, and the Agricultural Extension and Training Department, and managers to think about long-term strategic development proposals And to submit development proposals.

The results also showed that 50% of those agreed upon by the sample members and with a degree of agreement, and their rates are between 3.47-4.00, with an average of 3.23 degree One of the most important solutions is to follow the brainstorming method for managers in the agricultural system by posing hypothetical problems by senior management and urging them to research. The administration is built on the principle of strategic planning and the rejection of randomness. The necessity of having higher directive ministerial departments is represented by the Agricultural Training Department and developing strategic management plans to develop field crop cultivation.

The results showed that 24%, with an average ranging between 4.33 –5.00, with average averages of 4.73, that one of the solutions that must be followed to develop

the capabilities of workers in the agricultural system is to support experts and specialists in the field of strategic management at the level of the Ministry of Agriculture and its extension departments in the field of field crop cultivation management. F- Urging the application of the strategic management approach in the organizational unit of the agricultural system and the participation of extension departments at the middle and executive levels in developing the strategic plan and - the need to possess sufficient skills to evaluate and follow up the organizational unit strategy

Table 5.11: Analyzing the Opinions of the Responses on the Paragraphs of the Third Axis

Numeric limits of average importance	Number of paragraphs	%	The level of importance	Average
3.00-3.40	6	26	Neutral	3.19
3.47-4.00	9	50	Agree t	3.23
4.33-5.00	4	24	strongly agree	4.73

Table 5.12: Statistics and Means of Axis 3

Mean	3.76
Median	3.66
Std. Deviation	0.52
Range	2.00
Minimum	3.00
Maximum	5.00

Table 5.13: Statistics and Means Paragraphs of Axis 3

Mean	Frequency	Cumulative Percent
3.00	3	3.0
3.13	10	13.0
3.20	3	16.0
3.27	3	19.0
3.33	3	22.0
3.40	4	26.0
3.47	11	37.0

Table 5.3: Continue

Mean	Frequency	Cumulative Percent
3.53	3	40.0
3.60	6	46.0
3.67	9	55.0
3.73	6	61.0
3.80	3	64.0
3.88	2	66.0
3.93	10	76.0
4.00	7	83.0
4.33	3	86.0
4.47	3	89.0
4.87	7	96.0
5.00	4	100.0

An analysis of the opinions of the study members about the fourth axis of the study, To get acquainted with the opinions of agricultural system managers at the administrative levels (Senior management, Middle management, Executive management, expert, Researcher) in the proposed paragraphs the problems facing the agricultural technology and innovation system in the field of developing field cultivation and strategy which is from the point of view of the subjects of the study.

The fourth axis dealt with the problems facing the agricultural technology and innovation system in developing field cultivation and strategy. The results showed that the problems facing the agricultural system in agricultural technology and their use in developing field crops cultivation from the respondents' viewpoint reached (11 problems). Their average importance ranged between 2.70-4.60 degrees with an average of 3.60 degrees. 42% of the problems ranged from 2.70-3.40 degrees, with an average of 3.10 Among the most important problems is the lack of a national program to use modern technology to develop field crop cultivation, whether at the state level or in some regions. Weak interest in developing field crops cultivation in the five-year agricultural plans and developing strategic field crops cultivation is not among the priorities of the Ministry of Agriculture's strategic policy for the coming years, as well as the lack of a general framework for the technology system and agricultural innovations in the field of developing field crops cultivation as there is

no formal identification of the institutions of the agricultural technology and innovation system or the integrated institutional network for this system in the field of developing field crops cultivation.

The results showed that 58% of the problems ranged from averages of importance between 2.50-4.60, with an average of 3.91, and they fall within a level that is in agreement to agree strongly and among these problems. The lack of an institutional organization that deals with the development of field crop cultivation and the weakness of interaction between the system's institutions in exchanging information about the problems of developing field agriculture and strategic crops and their solutions. And the lack of coordination between agricultural technology institutions, innovation systems, and business integration in developing strategic and field crop cultivation. The weakness of the partnership of some institutions in the agricultural technology and innovation system and the lack of financial allocations necessary to develop the cultivation of these field crops within the national development program.

Table 5.14: Analyzing the Opinions of the Responses on the Paragraphs of the Fourth Axis

Numeric limits of average importance	Number of paragraphs	%	The level of importance	Average
2.70-3.40	5	42	Neutral	3.10
3.50-4.60	6	58	Agree	3.91

Table 5.15: Statistics and Means of Axis 4

Mean	3.60
Median	3.50
Std. Deviation	0.49
Range	1.90
Minimum	2.70
Maximum	4.60

Table 5.16: Statistics and Means Paragraphs of Axis 4

Mean	Frequency	Valid Percent
2.70	6	6.0
3.10	7	7.0
3.20	16	16.0
3.30	3	3.0
3.40	10	10.0
3.50	10	10.0
3.60	10	10.0
3.70	10	10.0
3.90	9	9.0
4.30	11	11.0
4.60	8	8.0
Total	100	100.0

Analyzing the opinions of study individuals about the fifth axis of the study, which was related to the most important solutions to agricultural technology problems and the innovation system in cultivating field crops that must be taken into account from the viewpoint of the sample members. The results of the research showed that the proposed solutions to address the obstacles facing the agricultural system in the use of agricultural technology from the point of view of the number of paragraphs (17 items). Its average importance ranged between 3.11 - 4.80, with an average of 3.76. The results also showed that 20% of the proposed solutions ranged between 3.11-3.39 degrees with an average of 3.10, and the most important of them are:

- 1- Establishing a general framework for the agricultural innovation system at the country level as a guide for policy-makers and decision-makers in the agricultural sector
- 2- Achieving a broad partnership between the agricultural departments in the agricultural system in modern agricultural technology.
- 3- Naming the departments, companies, and individuals that make up the agricultural innovation system in the field of developing field crops cultivation
- 4- Achieving and developing interaction between all actors and stakeholders in developing crop cultivation using modern technology to achieve knowledge

and information exchange and achieve learning. This axis study also showed that 69% of the proposed solutions ranged between 3.44-4.06 with an average 3.78. and the most important of them are:

- a. Achieving and developing coordination between research institutions to achieve optimal use of available resources in the field of agricultural technology.
- b. Achievement and development of teamwork to achieve the multidisciplinary integrated team's work and achieve the integration of various activities and events in this regard.
- c. Development of a mechanism (mechanisms of interaction and coordination of collective action) between all parties in the agricultural system or outside, such as the Ministry of Science and Technology and the Ministry of Planning
- d. Forming a unit or assigning the Agricultural Research Department or others to achieve interaction, coordination, and teamwork processes.
- e. The need to achieve the private sector's participation as an active partner in the system's network and to develop a mechanism for achieving this partnership
- f. The increase in the number of researchers and the diversity of their specializations in the field of field crops
- g. Sustaining the capacity development of researchers through organizing seminars, workshops, and scientific conferences and interacting with specialized research centers and colleges of agriculture
- h. Providing necessary training for researchers from within the country and research programs abroad.

The results also showed that 11% of the proposed solutions ranged from an average of 3.40-3.80, with an average of 4.30, among them:

- 1- Meet the needs of research departments in terms of technical capabilities and develop their capabilities and technical skills
- 2- Using modern means of communication (internet and mobile networks) as well as other extension methods

Table 5.17: Paragraphs for the Problems Facing the Agricultural Technology and Innovation System

Numeric limits of average importance	Number of paragraphs	%	The level of importance	Average
3.11-3.39	4	20	Neutral	3.24
3.44-4.06	10	69	Agree	3.78
4.30-4.80	3	11	strongly agree	4.30

Table 5.18: Statistics and Means of Axis 5

Mean	3.76
Median	3.77
Std. Deviation	0R.40
Range	1.78
Minimum	3.11
Maximum	4.89

Table 5.19: Statistics and Means Paragraphs of Axis 5

Mean	Frequency	Percent
3.11	3	3.0
3.17	7	7.0
3.28	4	4.0
3.39	6	6.0
3.44	6	6.0
3.50	3	3.0
3.56	9	9.0
3.61	3	3.0
3.67	5	5.0
3.78	10	10.0
3.83	5	5.0
3.89	10	10.0
4.00	7	7.0
4.06	11	11.0
4.30	3	3.0
4.50	5	5.0
4.80	3	3.0
Total	100	100.0

The Six Objective: There are no statistically important differences among the view's senior management, middle management, executive management, expert, researcher regarding the problems facing the agricultural system in developing field crops cultivation.

Table: 5.20 shows the results of the ANOVA analysis. From it, we conclude that there are statistically significant differences in the agricultural system's administrative levels (senior management, middle management, executive management, experts, researchers) about the problems facing the agricultural system in development. Cultivation of field crops.), Where the F values 4.62 and the probability value 0.00 Sig (Significance level) were less than 0.05 statistical function.

Accordingly, we reject the research hypothesis that states (there are no statistically significant differences between the higher management of the point of view of administrative levels in the agricultural system, (middle management, executive management, expert, and researchers) regarding the problems facing the agricultural system in the field of developing field crops cultivation).

Table 5.20: Anova Test Results

Level of Career Work	N	Mean	Std. Deviation	F	Sig.
Senior management	11	3.44	0.36	4.46	0.00
Middle management	36	3.48	0.51		
Executive management	45	3.65	0.46		
Expert	4	3.70	0.23		
Researcher	4	4.45	0.17		
Total	100	3.60	0.49		

5.2 Conclusions

The research concluded the following conclusions:

First: The general character of the knowledge level of agricultural system managers at the administrative levels (middle, executive) in the field of strategic management in general and in each of its axes was medium, and this reflects that agricultural

system managers need to develop their knowledge capabilities in the field of strategic management to improve the performance of the units responsible for it.

Second: The existence of a significant weakness in the degree of implementation of strategic management among the managers of the agricultural system at the administrative levels (middle, executive) in the field of managing the units responsible for them, and this could be considered an important reason for the weakness of the efficiency and effectiveness of the units in the field of providing administrative services at the strategic level.

Third: All the studied obstacles are of great importance preventing the agricultural system managers from implementing strategic management in the administrative units responsible for them, the most important of which is the weak interest of the higher management (the Ministry of Agriculture and the Ministry of Science and Technology) to grant material incentives to the organizational units of its institutions to encourage them to apply the strategic management approach.

Fourth: The approval of most managers in the agricultural system on the proposed paragraphs to develop their strategic management capabilities, which indicates agricultural system managers' desire to develop their capabilities in the field above.

5.3 Recommendations

The researcher recommends the following:

1. This study is adopted by the concerned authorities in the Ministry of Agriculture and the institutions of the agricultural system for the importance of the strategic management approach and its role in achieving agricultural development in the long term, and that the concerned authorities shall work to enhance its application in all organizational units.
2. The necessity of rehabilitating agricultural system managers and developing their knowledge and skill capabilities in strategic management at the administrative levels (middle, executive) through specialized training programs in the field mentioned above.
3. The necessity for the Ministry of Agriculture and the Agricultural Extension and Training Department to seek to reduce the obstacles to implementing

strategic management among managers of administrative units at all levels that were reached in the results of the study by providing all appropriate financial and moral allocations to ensure the continuity of its implementation.



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APPENDICES

Appendix A: Questionnaires (Axes)

Axis 1: - The field of below is a group of paragraphs (12) related to the level of knowledge of managers of agricultural system units in the field of strategic management for managing administrative units and managing their agricultural programs and activities. please kindly read the paragraphs of the questionnaire and specify the extent of your agreement with these paragraphs by marking the place that agrees with your view (Aldulaimi, 2016), (Al-Frayiji, 2010).

	Strongly Agree	Agree	neutral	Disagree	Strongly Disagree
1-Knowledge of the principles of strategic planning is not provided at all administrative levels of the agricultural system					
2-Insufficient knowledge and skill to formulate a vision for the organizational unit					
3-Not having sufficient knowledge and skill to formulate a message for the organizational unit					
4-Insufficient knowledge and skill to formulate a strategy for the organizational unit					
5- Not possessing sufficient knowledge to conduct an environmental analysis to identify strengths, weaknesses, opportunities, and threats to the organizational unit					
6-Insufficient knowledge and skill to implement the organizational unit strategy					
7- Insufficient knowledge and skill to evaluate and follow up the strategy of the organizational unit of agricultural system					
8- Insufficient skill to conduct an environmental analysis to identify strengths, weaknesses,					

opportunities, and threats to the organizational unit					
9-Insufficient ability to implement the organizational unit strategy					
10- The Low level of functional qualification for managers in the area of managing organizational units in the agricultural system					
11-Lack of interest in developing the capabilities of managers of organizational units in the field of strategic management					
12Lack of training opportunities for managers of organizational units at various levels (upper, middle, and executive) in order to raise the level of their knowledge and skills in the field of strategic					

Axis 2: -The following is a set of paragraphs (15) of the second axis related to obstacles to implementing strategic management in the organizational units of the agricultural system. Please kindly read the paragraphs of the questionnaire and determine the extent of your agreement with these paragraphs by determining the place that corresponds to your point of view (Aldulaimi, 2016 & Al-Frayiji, 2010).

	Strongly Agree	Agree	neutral	Disagree	Strongly Disagree
1-Absence of strategic management and integrated programs for developing strategic field crops cultivation					
2-Weak interest in developing field crops cultivation in the five-year agricultural plans					
3-The development of strategic field crops cultivation is not a priority within the strategic administration in the Ministry of Agriculture for the coming years					
4-Price policies are discouraging the development of strategic field crop cultivation by farmers.					
5-The absence of strategic management for propagating the seeds of higher-order varieties of field and strategic crops.					
6-Lack of strategic management plans to support the cultivation of strategic field crops					
7-Absence of policies for agricultural equipment necessary for strategic field crops.					
8-Abolishing the programs for developing the cultivation of field and strategic crops that were previously existing.					
9-The lack and weakness of support for strategic field crops with agricultural equipment compared to similar support for many sectors such as animal production and fish farming.					
10-Weak government support and lending policies, development of strategic field crops cultivation, due to their absence in the strategic management plans					

11-Not developing strategic management plans to manage the water shortage file and to develop an effective strategy to solve the water problem with neighboring countries					
12- Most organizational unit managers see that the strategic management approach is not appropriate for the units responsible for their management					
13- Lack of follow-up and evaluation in developing the necessary programs and procedures when implementing the necessary steps in the strategic management of the agricultural system					
14- Not to conduct comparative studies and to constantly identify other similar experiences and practices in the field of developing the level of strategic management and employing them in the service of the department's work					
15-Failure to follow up and evaluate performance and achievement at the level of the various organizational units in the department in cooperation with the managers of those units.					

Axis 3: - The following is a set of paragraphs (19) of the third axis related to developing the capacities of agricultural system managers in the field of strategic management. Please kindly read the paragraphs of the questionnaire and specify the extent of your agreement with these paragraphs by marking the place that agrees with your viewpoint (Aldulaimi, 2016 & Al-Frayiji, 2010).

	Strongly Disagree	Disagree	neutral	Agree	Strongly Agree
1- The participation of managers in seminars, workshops, and conferences to improve their knowledge capabilities in the field of strategic management					
2- Developing the relationship with experts and specialists in the field of strategic management					
3-Join the teams that adopt a strategic approach to work and are charged with solving strategic problems in developing field crops cultivation					
4-The Ministry of Agriculture provides the necessary opportunities and facilities to encourage managers to develop their administrative capabilities, especially in the field of strategic management					
5-Holding training courses to develop the knowledge and skills of managers in the field of strategic management					
6. Urging the higher administrations, represented by the Ministry of Agriculture and the Ministry of Science and Technology, to train managers to think about long-term strategic development proposals and submit development proposals.					
7-Following the method of brainstorming managers in the agricultural system by posing hypothetical problems by higher management and urging					

them to research.					
8- Management operates on the principle of strategic planning and discarding randomness					
9-Participating in preparing and developing the various plans that fall within the scope of strategic planning (such as risk management plans, contingency plans, knowledge management plan, and social responsibility), in coordination with the specialized organizational units in the department.					
10- The need for ministerial guidance and higher departments represented in the Department of Agricultural Training and the development of strategic management plans in the development of the cultivation of field crops					
11-Supporting experts and specialists in the field of strategic management at the level of the Ministry of Agriculture and its extension departments in the field of field crop cultivation management.					
12-Urging the application of the strategic management approach in the organizational unit of the agricultural system to which belong.					
13- Participation of extension departments at the middle and executive levels in developing the strategic plan					
14-The need to possess adequate skills to evaluate and follow up the organizational unit strategy					
15-Work as a central unit to receive all observations and proposals related to the department's strategic plan.					

16- Participation of the team / committee in preparing the initial drafting of the strategic and executive plan and discussing it with the higher management					
17- Preparing the final versions of the strategic and operational plans of the agricultural organization.					
18 Continuously follow-up, periodically implement the strategic plan and operational action plans, and issue relevant reports.					
19-Evaluating performance and achievement at the level of strategic objectives, programs and various organizational units in the department periodically regularly and providing recommendations to address deviations					

Agricultural Technology and Innovation System Axes

Axis 4- The following is a set of paragraphs(11) of the fourth axis related to the problems facing the agricultural technology and innovation system in the field of cultivating the field and strategic crops: Please kindly read the paragraphs of the questionnaire and specify the extent of your agreement with these paragraphs by marking the place that agrees with your viewpoint (Aldulaimi, 2016 & Al-Frayiji, 2010).

	Strongly Agree	Agree	neutral	Disagree	Strongly Disagree
1-The absence of a national program to develop the cultivation of strategic and field crops, whether at the level of the country or some of its regions					
2-Weak interest in developing field crops cultivation in the five-year agricultural plans					
3-The development of strategic field crops cultivation is not a priority within the policy of the Ministry of Agriculture for the coming years					
4-Absence of a general framework for the system of agricultural technologies and innovations in the field of developing field crop cultivation.					
5-There is no official identification of the institutions of the agricultural technology and innovation system or the integrated institutional for this system in the field of developing field crop cultivation.					
6- Lack of workers and lack of training in agricultural research departments and research centers					
7-The weakness of interaction between the system's institutions in the field of exchanging information on the problems of developing field cultivation and strategic crops and their solutions					
8- Poor coordination between the institutions of the agricultural technology and innovation system and business integration in the field of developing strategic and					

field crops cultivation					
9- The weak partnership of some institutions within the agricultural technology and innovation system					
10-Absence of financial allocations for conducting development research on developing field crops cultivation					
11- The absence and non-adoption of the results of monitoring and evaluation in developing programs and procedures in the agricultural innovation system for the development of field crops.					



Axis 5: - The following is a set of paragraphs (17) of the fifth axis related to the obstacles facing the agricultural technology and innovation system in the field of developing field crop cultivation, defined according to the basic components of the technology system and agricultural innovations. Please kindly read the paragraphs of the questionnaire and specify the extent of your agreement with these paragraphs by marking the place that agrees with your viewpoint (Aldulaimi, 2016 & Al-Frayiji, 2010).

	strongly agree	agree	neutral	disagree	strongly disagree
1-The lack of clarity of the general framework of the agricultural innovation system, its principles, and its components among the higher managements and their workers.					
2-The lack of a research center specialized in innovations related to strategic crops despite the deep history of agricultural scientific research in the country.					
3- The deterioration and disappearance of the seed properties of the higher order of the varieties and the loss of the seed bank that developed in the last decade of the last century and which exceeds 20 varieties.					
4-Absence of research centers necessary to conduct research on developing and multiplying strategic field crops according to regions.					
5-Not considering the development of strategic and field crops cultivation as one of the priorities of the agricultural scientific research policy					
6-Absence of researchers specialized in cultivating strategic field crops					
7-Poor coordination between institutions, companies and individuals of the agricultural innovation system in the field of field crops.					
8-A shortage of technical workers with experience in the field of agricultural scientific research,					
9-absence of training and qualification of workers in agricultural scientific research.					

10-Unavailability of the necessary capabilities to conduct more confirmatory experiments to test the research results					
11 Failure to provide the necessary modern technologies for conducting agricultural scientific research					
12-Inadequate machinery and equipment at the research center for research work and scientific experiments					
13-Weakness in managing field crops experiments in an integrated manner in Stations where research is conducted					
14-The absence of a detailed database on the main problems facing farmers in the field of agriculture in each region					
15-The absence of a detailed and up-to-date database data base on the characteristics of the agricultural systems in each region, which is the basis for scientific research, technology development, and dissemination.					
16- Lack of important research results (basic research) in the field of developing strategic field crops cultivation, with no subsequent stages of implementation and application.					
17-Not to update an indicative package of recommendations for crop management and strategic field crops.					

RESUME

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