

## **The role of innovation management and enhancing the competitive advantage of industrial enterprises**

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### **Introduction**

The success of industrial enterprises in the light of recent technological developments brought by the Fourth Industrial Revolution (artificial intelligence, Internet of things, 3D printers, etc.), corporate challenges, rapid change in market pattern and consumer requirements, and emergency crises such as the COVID-19 crisis demonstrate the importance of enterprises' preparedness to face major and unexpected challenges. Therefore, the success of enterprises is mainly linked to the enterprise's competitiveness in domestic and global markets, thus maintaining market share and increasing profits. All these factors led to a trend that most countries achieve innovation and knowledge-based economic growth as a result of increasing awareness of the importance and role of innovation in the continuous progress of countries and institutions and the need to establish an innovation department that allows enterprises to respond to internal and external opportunities, meet environmental and societal challenges, and the ability to create new and innovative products in a better manner than competing products, support enterprises, generate emerging ideas and adapt to new crises and variables, and access productive processes that reduce costs.

### **Research Problem**

The lack of innovation management by industrial enterprises has led to technological developments, industrial revolutions and increased marketing competitiveness to the need for innovation management to keep abreast of the ongoing developments of industrial enterprises in all respects and increase the enterprise's marketing competition.

### **Research Objective**

The research aims to reach the establishment of an innovation department and demonstrate the importance of the existence of an innovation department for industrial enterprises and demonstrate the importance of an innovation department's effective role in supporting the enterprise to achieve competitive advantage

**Research axes**

The 3-axis search plan includes:

First Axis: Competitive Advantage: The first theme includes the concept of competitive advantage, competitive advantage characteristics, competitive advantage factors, types of competitive advantage, sources of competitive advantage and competitive advantage indicators.

Second Axis: Innovation Management: The second theme includes the concept of innovation management and the importance of innovation management and the key aspects of innovation management, innovation management tools and innovation management sources.

The third theme: The role of innovation management in achieving the competitive advantage of enterprises: The third theme involves the impact of innovation management on competitive advantage.

**Keywords**

Innovation management - Innovation management tools - Competitive advantage - Market share

**Research topic**

Innovation is an important tool for dealing with new developments as a fundamental basis for industrial enterprise performance to achieve competitive advantage and great achievements in the context of intense competition, the achievement of competitive advantage depends not only on material and financial resources, but also on human resources that possess high efficiency. They are at the core of the innovation process and are characterized by the ability for creativity, innovation and encourage individual employees of the enterprise to generate innovative new ideas that contribute to increasing profits, survival and economic growth. Continuous innovation that meets the requirements and desires of customers and consumers enables the organization to maintain its market position and reduce the impact of threats and the ability to exploit external opportunities, the competitive advantage is derived from the enterprise's ability to manage innovation from the exploitation of available material and human resources and technology, work to reduce the cost, production processes, marketing efficiency and find solutions to the internal and external problems of the enterprise, so that innovation becomes a compulsory requirement for enterprises seeking excellence and achieving competitive advantage.

**First Axis: Competitive Advantage:**

Industrial enterprises strive to maintain and continue their activity and progress. This will only be if the enterprise possesses competitive advantages that distinguish it from other industrial enterprises and acquires control over local and international markets and increase profits and customer satisfaction.

**1- Competitive Advantage Concept:**

There are two types of competition: direct and indirect competition: Direct competition is the competition that occurs between enterprises operating in the same field, this type of competition is where enterprises rely on the quality and excellency of the product. Indirect competition is

the competition that occurs between enterprises and other enterprises that provide similar products or services, there are several concepts of competitiveness, including:

Competitiveness concepts include:

Competitiveness is the efforts, procedures, innovations and all administrative, marketing, productive, innovative and developmental activities of enterprises in order to obtain a larger and broader segment of the markets they care about. It is also competition between enterprises in markets, offer the needs and requirements for consumers in order to preserve enterprises' productivity and ensure their survival in markets. It is also the main component of the marketing system and the market economy. The concept of competitive advantage should be as follows: It is the means by which an enterprise can achieve superiority in competition with other enterprises.

## **2- Competitive Advantage Characteristics**

The competitive advantage has several characteristics:

- Competitive advantage is based on difference, not similarity.
- Self-regulation of business mechanisms between marketing plans and research development, design, engineering and production.
- Cooperation between the institution and the competent authorities in R&D activity.

## **3-Competitive advantage factors:**

The more enterprises control the supply of a particular product, the more competitive they are, and vice versa

- The more difficult or easy it is for some enterprises to enter markets, the easier it is for new enterprises to enter markets, produce and market the more competitive they are and vice versa.
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## **Second Axis: Innovation Management:**

In 2013, ISO announced a set of international standards for enterprises with regard to innovation management. ISO shows that the operationalization of innovation in any institution needs to be managed by innovation and by driving enterprises to innovate and provide innovative products and services.

### **1- Concept of innovation management:**

It is a combination of innovation process management and change management (it is a practical approach with rules, planning and business strategy or is the most prominent engine to meet the developments and try to avoid the shortcomings and take advantage of the strengths and even weaknesses that help positive change within a specific period of time and with known methods to achieve the organization's goal). This department includes a range of tools and technologies that allow employees of the organization to collaborate in a common understanding of processes and objectives and allow the organization to respond to external or internal opportunities and contribute significantly to the development of products and services in an innovative manner and can manage the dissemination of a culture of innovation among individuals and employees for continuous development.

## 2- The importance of innovation management:

Innovation management shows great importance as innovation is the only way to survive an enterprise and thus an enterprise that has an innovation strategy that is unable to meet the difficult challenges and competitors. Innovation has become one of the institutions' priorities in all fields and the establishment of innovation management is of great importance in achieving the following:

- Innovation management helps enterprises with creative and innovative ideas to be used to effectively create and deliver new products and processes. Creativity is the basis of innovation management and the ultimate goal is to change in innovative products or services and ideas.
- Innovation management plays an important role in promoting technological innovation. The goal within innovation management is to create an enabling environment to encourage innovation.

## 3- Stages of the innovation process

Preparation of the innovative process includes several criteria:

Formulation and identification of the problem:

One of the most important stages of innovation is that data and information on the problem are collected and analyzed thoroughly and relationships are established. Attention must be focused on only one problem of non-dispersion.

Generating Ideas:

At this stage work is done to generate innovative new ideas and this is done through the individuals of scientific research, market research, search for new industrial technologies and then choose innovative new ideas that can be implemented:

Convert the idea to a project at this stage, new ideas are transferred to a project. This is through the identification of the technology used in the production processes. The enterprise determines the costs of the project from research and development and the costs of starting the project from an industrial point of view. The enterprise undertakes a study and questionnaires relating to the volume of production and sales and the reaction of competitors and changes that can occur in the markets and keep pace with these changes at any moment. Realistically culminating the project:

This phase consists of a set of steps undertaken by the organization where it produces an experimental product that allows it to ascertain the production structure and raw materials used and the efficiency of the product and the technology used. It also allows the enterprise through the experimental product to know the reaction of consumers, suppliers and distributors. Thus, the enterprise moves to the actual production stage.

## Theme III: The role of innovation management in achieving competitive advantage:

Innovation management influences an organization's competitive advantage and this impact is demonstrated by some indicators of competitive advantage.

Indicator 1: Impact of innovation management on indicators for measuring the organization's competitive advantage.

The Innovation Department influenced the profitability of the enterprise and shows this impact through the following elements:

Increasing the profits of the enterprise by offering new or improved products that meet the needs and requirements of customers and the market in a better way than competing institutions, motivates other institutions to innovate to provide the best.

One of the most important types of competitive advantage is the reduction of costs and thus the reduction of product price through innovation in ways and methods of production and financial resources of enterprise activity and the use of modern technology to increase production.

Indicator II: Impact of innovation management on factors of production:

The Innovation Department helps raise productivity by

The Department of Innovation contributes to the innovation of advanced methods and techniques of production and works to reduce production time and thereby reduce production costs.

Increase productivity effectiveness through organizational innovation that contributes to the regulation of administrative, manufacturing and productive methods.

## Results:

The presence of innovation management for the enterprise achieves the competitive advantage of enterprises and addresses challenges.

Innovation Department is involved in producing new and innovative products and reducing production costs through innovation in production methods and thus increasing profits.

Innovation management contributes to improving the enterprise's overall performance, ensuring market leadership, technological development and optimal utilization of available resources.

## Recommendations:

Mainstream the creation of innovation management in various fields (industrial, commercial, economic, educational, tourism, technological...).

Raising awareness of the culture of innovation and the key role of innovation management and its application in industrial enterprises.

To provide students in industrial design with the importance of innovation management as one of the elements for qualifying graduates for the labor market.

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