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**THE ROLE OF THE INNOVATION PROCESS IN
ENSURING THE COMPETITIVE ADVANTAGE OF
BUSINESS**

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Master's Thesis

Supervisor

Asst. Prof. Dr Özlem ÖZARSLAN SAYDAR

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ABSTRACT

THE ROLE OF THE INNOVATION PROCESS IN ENSURING THE COMPETITIVE ADVANTAGE OF BUSINESS

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With the role it plays today, innovation has developed into a crucial competitive advantage. Businesses now face a more intensely competitive environment as a result of the globalization phenomenon. It is proposed that innovation is a prerequisite for organizations to be able to obtain competitive advantage or, at the very least, maintain their current position in an environment that is characterized by frequent and difficult changes.

Businesses' ability to operate in accordance with customer requests and wants determines their competitiveness, adaptability to change, and ability to direct the change. With innovation, it may now be possible to more effectively meet customer wants, capitalize on market possibilities, and dominate the competition. One of the most crucial elements in increasing profitability and growth is the development of the innovative capabilities that enable organizations to make a difference.

This study intends to investigate how innovation affects and contributes to corporate competitiveness in an effort to help businesses that struggle to be competitive. The notions of innovation and competition, as well as their interactions, are thoroughly addressed in this paper.

Keywords: Innovation, Competition, Corporate

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1. INTRODUCTION

Changes in customer demands with the developing technology is observed. Businesses that want to thrive in a highly competitive climate on a global scale cannot neglect the needs of their customers. Additionally, it is not enough to provide goods and services in accordance with customer wants alone; competitive strategies of today must take into account knowledge that educates the client and directs the production of goods and services. Businesses must now offer novel goods and services in light of this circumstance.

1.1. PROBLEM STATEMENT

The determinant of today's competitiveness is no longer just low costs. Many factors such as the flexibility and speed of responding to the needs of the market, the design, the development of new products and services, the quality of products and services, the production of products and services according to customer demands, the life span of the product in the market are now much more important than costs. Especially for companies, increasing the existing market share, entering new markets and increasing the competitive power are only possible in this way. Therefore, these factors require innovation.

Innovation for a business, with increased sales and market share, improved and improved distribution performance, increased earnings in line with the growth of new products in its portfolio; This means shortening the time-to-market for new products, increased productivity or production, reduced time in distribution, and reduced costs through better use of resources and time. For this reason, it is appropriate to approach innovation as an activity that constitutes the most important part of corporate strategy and has continuity (Can, 2009: 58).

Today, where there is a very fast competition, most of the successful businesses attach great importance to innovation development. Innovation means turning an idea into a new or improved product, good or service that can be sold. In a simpler definition, innovation is the process of taking an idea from the invention stage to implementation (Drucker, 2001: 27-29). According to the sources of the Organization for Economic Cooperation and Development (OECD), innovation refers to the process of transforming an idea into a marketable product or service, a new or improved manufacturing or distribution method, or a new social service method (Goker, 2000).

Competition, on the other hand, can be defined in the broadest sense as a game or a race played between more than one player in an environment where fundamental freedoms and human rights are guaranteed within the framework of certain rules and restrictions, in order to share something scarce or to obtain a prize, in an environment where there is no privilege or discrimination.

1.2. PURPOSE AND OBJECTIVES

For the effective development of the economy, it is important to ensure the transition from the traditional model of development to the innovative model. Only an innovative development model can ensure the transition from a specialized economy in the export of raw materials to a post-industrial economy, the development of science-intensive industries, and the country can take a more worthy place in a globalizing world. The purpose of the dissertation is to determine the economic efficiency of innovation projects in the business sphere, the current state of growth and research and application of development trends and ways. The following issues are investigated in the dissertation:

- a) place and role of innovation process in ensuring competitive advantages of business;
- b) preparation and evaluation of innovation projects as the main criterion for the formation of business innovation strategy;
- c) theoretical and methodological aspects of innovation project risk research;
- d) organization of increasing the economic efficiency of innovation projects in the modern business system-economic factors;
- e) strategic management mechanisms for the implementation of competitive innovation projects;
- f) ways to increase the economic efficiency of projects implemented in the innovation business;
- g) systematic approach to the mechanism of stimulating the implementation of effective projects in the innovation market;

- h) the importance of increasing the economic efficiency of innovation projects in the strategic management of business;
- i) organization of financing of innovation projects in the entrepreneurial system-economic problems;
- j) ways of forming a business innovation strategy in the preparation and evaluation of innovation projects.



2. COMPETITION MANAGEMENT

2.1. CONCEPT OF COMPETITION

Competition is a Latin word (concurere) meaning "collision". The emergence of competition historically coincides with the emergence of commodity production, which is conditioned by property discrimination and the division of labor, and with the development of commodity production becomes the most active element of economic development. Private ownership of the means of production determines the existence of competition. Although producers and consumers have equal opportunities as a result of competition, the desire to win by making better use of these opportunities always motivates them to improve production results. Competition is a state of struggle between different producers and sellers. In general, it is a struggle any entities to capture the market, where the sale and purchase of goods and services in the market on more favorable terms is carried out in order to obtain more income, profits and other benefits.

Table 2. 1: Types of Competition.

	Characteristic features	Market models			
		Free competition	Net monopoly	Manufacturer competition	Oligopoly
1	Number of companies	Too much	One	Many	Some
	Product type	Standardized	Unique	Differential	Standard or differential
	Price control	Exceptions	Important	Extremely narrow frame	On the basis of limited or significantly confidential agreements
	Scope Access Conditions	Very easy	With limited opportunities	Relatively easy	It has a special typical character in the conditions of product differentiation
	Non-price competition	No	Almost no	Special attention is paid to quality, advertising, brands	has a special typical character in the conditions of product differentiation

Competition is aimed at creating favorable opportunities for the sale of their products, ensuring consumer demand and generating more income, such as interaction and the economic process of struggle between enterprises operating in the market.

Modern competition, as an integral part of the world market and a manifestation of the processes taking place in that market, is characterized by unprecedented scale, dynamics and intensity. The large-scale competition is due to the constant increase in the number of participants in foreign trade operations involved in international exchange under the influence of the international division of labor, international specialization and cooperation in various fields. The industrialization of economic life expands the mass base of competition. Along with large monopolies, medium, small and even very small firms join the market struggle.

The formation of a market system of the economy requires the solution of issues related to the formation of the necessary market regulators. The most important of these is competition.

Competition is one of the most effective and efficient means of business activity, the use of the achievements of scientific and technological progress, improving the quality of goods and services, meeting the ever-changing needs of consumers.

The study of the activities of competing firms consists of three stages of systematic research:

- a. Identification of existing and potential competitors;
- b. Analysis of competitors' activities, goals and strategy indicators;
- c. Identify the strengths and weaknesses of competitors.

The identification of competing firms is based on a dual approach: the first approach involves assessing the needs met by the main competing firms operating in the market; the second approach is to classify competitors based on the types of market strategies applied by competitors.

The following main groups of competitors can be noted:

- a. Firms offering similar goods in the same market;
- b. Firms serving other markets for similar goods;
- c. Firms that produce substitute goods that are able to push existing goods out of the market:

Analysis of indicators of the goals and strategies of competitors is based on indicators that characterize the economic potential of the competing firm; assets, sales, net and gross profit,

fixed and working capital, capital investments, private and debt capital, production capacity, research base, etc.

At the stage of identifying the strengths and weaknesses of competitors, the results of the analysis of all production, sales assets and strategies of competitors are given, and conclusions about the methods of counteracting them are formed. The strengths and weaknesses of firms are assessed on key areas such as management, technical innovation, production, finance, sales, and consumers.

To be successful, a firm must have a clear understanding of its competitors, know certain rules of competition, as well as rules of conduct in competition.

Although each market has its own characteristics, there are similarities in the implementation of competition in different markets. This suggests that the essence of competition can be expressed in a clear analytical concept that allows to determine the nature, evaluation and intensity of competition.

2.2. COMPETITIVE STRATEGIES

After examining the five forces that affect competition, it is necessary to answer the question of what kind of defense should be applied against these forces, which is the main point for businesses. While businesses determine their strengths and weaknesses, opportunities and threats with SWOT analysis, the information obtained about their strengths and weaknesses has a great role in determining the competitive strategy to be applied. Because according to it the location of the business will be determined and the appropriate strategy will be implemented. What will be the strategy for the business to deal with when compared to substitutes, faced with barriers to entry, or pressures from buyers or suppliers? Businesses that take advantage of the opportunities that will arise by identifying and focusing on the weaknesses of their market-leading competitor and aiming to attract customers to their side are deploying offensive actions. On the other hand, market-leading businesses or businesses that want to maintain their current position, take defensive actions that reduce the risk and severity of attacks, strengthen weak points, and stay alert. While businesses are implementing defensive or offensive actions, they can achieve success in combating their competitors by applying one or more of Porter's general competitive strategies.

2.2.1. Cost Leadership Strategy

This strategy is based on the provision of products and services with standardized features at the lowest cost compared to the competitors, with a quality acceptable to the buyers and at a competitive level, without aiming to reduce the price to be applied to the buyer. In addition, controlling the cost in all activities of the enterprise is important for the total cost leadership in terms of achieving high profit rates. Porter (2015: 42) states that it is necessary to establish active facilities on an efficient scale, to achieve strong cost reductions with experience, to tightly control costs and general expenses, and to minimize costs in areas such as R&D, sales, service and marketing activities. For example, it is stated that the main basis of the international competitiveness of the enterprises in the Turkish furniture sector is the labor costs (Gürpınar, Barca, 2007: 49), but intervening in the cost in only one area is not sufficient to achieve total cost leadership. Businesses need to reduce not only production costs, but also administrative costs. Ensuring advantages in interest rates on loans from the bank, discounts on large-scale purchases and the cost advantage of large-scale production, minimization of costs in campaign activities and general administrative expenses, etc. also contributes to cost reduction.

To maintain financial leadership, enterprises need to analyze cost factors classified as scale economy, learning economy, production technology, production design, input costs, capacity utilization, and residual income. Thus, according to the competitors of the operation, the cost position is analyzed, the sources of inefficiency are identified and guidelines are obtained for the development of cost efficiency (Grant, Jordan, 2014: 186).

Reducing costs with internal efficiency studies in value-creating activities, and eliminating cost elements that do not create value (Ulgen, Mirza, 2004: 260), which are two important ways for the enterprise to gain cost leadership, help businesses to show which activities can reduce their costs and by which methods. Thus, it will be determined which activities create value in the process from production to delivery to the buyer and after-sales process. Evaluation of idle capacity, reducing costs by taking advantage of technological developments in production can be given as examples. If value-creating activities cannot be lowered than the costs of competitors, it will be healthier to outsource this activity. Using outsourcing services such as food and beverage service, laundry and cleaning according to the occupancy of a hotel helps it to save on the payments it will make.

There are some advantages that cost leadership will provide to the business. It not only protects businesses against the price-cutting forces of strong buyers, but also strengthens their defenses against suppliers in terms of providing flexibility in dealing with increases in input costs (Porter, 2015: 43). It also provides an advantage to the business in competing with new entries and substitute goods by lowering prices when needed.

Changes in the cost structures of enterprises due to automation may cause higher fixed costs in the short term. On the other hand, large capital investment may cause it to lose its advantages in the long term against technological innovations (Bayri, 2005: 186). Because technological innovations invalidate past investments and experiences and this may result in a loss of ability to reduce costs. The risky side of the strategy is that the competitors find ways to produce the products cheaper than the leading company. In addition, a change in customer expectations (the need for a differentiated product can change and increase the customer's wishes and expectations, thus reducing its sensitivity to price), and the ability of rival businesses to take this advantage by imitating the activities of the company that holds the cost leadership can be expressed as the risks of this strategy.

2.2.2. Differentiation Strategy

Businesses tend to differentiate in terms of meeting the needs and expectations of customers, especially in environments where price sensitivity is low. Thus, it becomes possible to gain loyal customers and differentiate from the competitors with the products and services created by correctly identifying the wishes and expectations of the customers. Differentiation should not be considered only as product differentiation. It is also necessary to differentiate in terms of personnel, brand, image, service, warranty and customer service.

For example, with curved televisions, it is possible to see all the points of the image, and by using similar technology LG produces phones that match our head structure and face exactly and allow the microphone to be closer to our mouth when we hold it to our ear. Apple creates an emotional bond by offering special differences to its customers in computers, phones and tablets. "Flower basket" website is not only content with sending real flowers, but also offers bouquets made of fruit and cakes to its customers. It is possible to give an example of product differentiation from the personal care sector. The fact that lipsticks are permanent for 24 hours and Nivea's product called body cream in the shower are some of these examples.

Apart from product differentiation, there are businesses that go the way of differentiation. Domino's pizza guarantees 30-minute delivery on orders and otherwise offers the product free of charge, businesses that sell durable products emphasize that the warranty period of their products is longer than competing products. Businesses that choose to differentiate through personnel make their customers feel special with their qualified and courteous personnel.

Porter (2015: 45) states that with the realization of differentiation, an above-average return can be achieved in an industry, and the need for a low-cost location will also disappear as differentiation margins will increase. Burj Al Arab, a 7-star luxury hotel in Dubai, treats its customers like the "King" from meeting customers at the airport to the hotel entrance and throughout their stay at the hotel (Mirzayeva, Türkay, 2016: 77). This differentiation is why it offers high returns at a higher price than competing hotels.

Differences that provide advantages compared to competitors with the differentiation strategy ensure customer loyalty, increase the possibility of preventing new entries and provide a better positioning opportunity among substitute products (Tayşir, 2010: 165). However, differentiation also brings some risks. When the difference between the costs of the firm performing the differentiation and the low costs of the competitors increases, differentiation may reach the point where it cannot maintain brand loyalty. This will lead buyers to save some differentiated features. As the sectors mature, imitation of the differentiated firm also becomes widespread, thus posing a risk as it narrows the perceived differentiation (Porter, 2015: 55).

2.2.3. Focus Strategy

Unlike differentiation and spending leadership strategies, the focus strategy is not aimed at the entire sector, but at a certain mass in a narrow segment of the market, that is, it concentrates its strength in certain areas. With the focus strategy, businesses can achieve differentiation by better meeting the needs of the targeted mass, reduce costs by serving this mass, or implement both strategies (Porter, 2015: 46).

Porter (2015: 56) also mentions the risk that competitors may leave the focused business out of focus by finding sub-markets within the strategic target, as the cost difference between

competing businesses with a wide product range and a focused business eliminates the cost advantage of operating in a narrow market.

When deciding which of the three competitive strategies explained above, businesses should determine their strengths and determine the most appropriate strategy, and pay attention that the determined strategy cannot be easily imitated by competitive businesses. In order for the strategies that differ according to the nature of the sector to be successful, there are also requirements such as adopting the corporate culture and the innovative system, and effective management and organization. Different approaches and skills will guide the success of the strategies, and it is also important to know the environment and act in accordance with the environment while determining the strategies.

Table 2. 2: Requirements of General Competitive Strategies.

General Strategy	Generally Required Skills and Resources	General Organizational Requirements
COST LEADERSHIP	Continuous capital investment and access to capital	Incentives linked to the achievement of precise numerical targets
	Process engineering skills	Frequent, detailed inspection reports
	Intensive surveillance of the workforce	Structured organization and responsibilities
	Products designed for ease of manufacture	Strict cost control
	Low cost distribution system	
DIFFERENTIATION	Corporate reputation for quality or technological leadership	established corporate reputation Strong coordination between R&D product development and marketing functions
	Product engineering	Subjective measures rather than numerical measures
	Strong basic research capabilities	A comfortable and pleasant environment that will attract highly skilled workers, scientists or creatives
	Strong marketing skills	
	Strong collaboration with channels	
	A long history in the industry or a unique combination of skills gained from other jobs	
FOCUS	Combination of the above policies directed towards a specific strategic goal	Combination of the above policies directed towards a specific strategic goal

Source: Porter, M. (2015) Competitive Strategy: Sector and Competitor Analysis Techniques, Istanbul, Agora Library p: 49.

Table 2.2 shows the skills, resources and organizational requirements required by these strategies. Businesses have to continue their activities by fulfilling the requirements of the strategy they will choose. Porter (2015) emphasized the necessity of being constantly committed to one of the strategies as the primary goal, stated that it is imperative to make a clear choice between strategies, and that following more than one strategy prevents being in an advantageous position against competitors as it will prevent complete success in strategies.



3. INNOVATION CONCEPT

3.1 INNOVATION AND ITS IMPORTANCE

In innovation projects, risk analysis is carried out in the following two main directions:

i. Risk assessment. It includes identifying and analyzing the sources of risk, determining the level of risks in different conditions of the implementation of the innovation project. Risk assessment is carried out in the following stages:

- a) Finding possible options for solving the problem;
- b) Possible political that may arise as a result of solving the problem; determination of economic, moral and other negative consequences;
- c) Integral assessment of risk both quantitatively and qualitatively.

The integral assessment of risk in terms of quality and quantity has a more important role. Qualitative analysis involves identifying the sources and causes of risk, distinguishing the stages at which the risk appears and the work done, i.e. the possible areas of risk.

identification; identification of all possible risks; involves identifying the practical benefits and possible negative consequences that may arise when a risky decision is implemented.

On the basis of qualitative analysis, it is important not only to identify all types of risks that threaten the project, but also to detect stock losses that accompany the occurrence of risky events. The results of the qualitative analysis are the necessary preliminary information for conducting the quantitative analysis.

Quantitative analysis means determining the numerical value of individual risks and the risk of the innovation project as a whole. At this stage, the numerical value of the probability of occurrence of risky events and their consequences is determined, the degree of risk is quantitatively assessed, and the acceptable level of risk in a specific situation is determined. (Kotler & Keller, 2008)

ii. Risk management. This includes analyzing situations, developing recommendations or measures aimed at reducing the risks related to the innovation project to an acceptable level. Risk management includes accounting for the presence of risk both in the process of making

a fundamental decision about the need to implement the project, and in the formation of the strategy and tactics of its implementation. Risk management should be both a line function of companies and a function of the management apparatus. The main direction of action here is prevention of losses or their minimization. Because companies need to understand that the causes of losses are not just causes, it is expressed in a certain amount of loss and increases production costs. Therefore, both current and long-term economic decisions are important here. Risk management technology and algorithm are also important here.

The criteria of innovation project risk management efficiency are considered to be:

- a) Lowering the level of fluctuation of the enterprise's financial indicators, taking into account the support costs of the innovation project risk management system;
- b) The system of key indicators adjusted taking into account the risk of innovation activity;
- c) Optimization of conditions and costs for property and liability insurance;
- d) Not allowing the amount of expected loss to cover the cost of risk management.

Thus, the analysis of innovation project risks has a complex nature, and its importance is not only in the need to study risks, but also in the development and evaluation of measures related to the reduction of the level of revealed project risks, or rather, in the creation of a risk management system.

A comprehensive study of systematic approaches and methods applied at the initial stage of design is not conducted simply for the purpose of risk analysis. The results obtained during the analysis help the manager to implement the project. The goal here is not to find risks and reflect them in the business plan. Also, they need to be managed during the project. The goal here is not only to find risks and reflect them in the business plan, but also to manage them during the project's operation. The business plan, being an information-analytical model of the project, acts as an active tool for managing it. Because the business plan includes a plan of specific actions related to risk management. Risk management consists of the development and implementation of reasonable recommendations and measures in order to reduce them to a favorable level. (Ozyilmaz, A & Berg, D, 2009)

3.2 INNOVATION MANAGEMENT AND ITS OPERATION

As a result of the rapid process of globalization in the world, the rapid expansion of technology, human labor and information is forcing companies to engage in innovative activities. By joining the innovation process, companies gain a sustainable competitive advantage in the market, increase profits and market share, and create new market opportunities.

There are two main problems with innovation in terms of enterprises. The first is the problem of innovation management, which covers the process of innovation. The other is the marketing challenge needed to effectively evaluate innovation. No matter how perfect a new innovative product, service or business model is, if it is not marketed with the right strategy, it will not gain the sympathy of customers in the market and therefore will not yield any positive results. From this point of view, the main condition for solving these two main problems facing enterprises and setting the right innovation strategies is to achieve a full innovative result (Palmer, J. C., Wright, R. E., & Powers, J. B, 2015).

One of the main factors that make it difficult for enterprises to manage innovation is the uncertainties encountered in the innovation process. These are financial, technological, organizational and market uncertainties. When companies go into the innovation process, they cannot predict how much financial resources they will spend in addition to resources such as raw materials and personnel. This can lead to undesirable consequences for companies with weak financial strength. on the other hand, the rapid change of technological factors increases the rate of technological renewal of the company, which inevitably has a direct negative impact on the company's budget. (Schramm, L. 2017)

Until enterprises become accustomed to the innovative processes they implement, they also face a number of organizational problems, the most obvious example of which is the resistance of employees. Finally, the most risky uncertainty that businesses may face is the market factor. Thus, it is always unclear how customers and competitors will react to a new product on the market.

In addition to the uncertainties mentioned above, Clayton M. Christensen (2012, May 7). points to the imitation policy of large firms as one of the most serious problems that can be considered large enough for small and medium-sized companies. Thus, while small firms

take all the risks and try to launch a new product with great difficulty, large firms, which have a significant place in the market among competitors and customers, begin to imitate the production of that product. Therefore, while the firm that produces the innovation, taking into account all the risks, does not benefit from the benefits that the innovation will bring, the large firms benefit greatly from this innovation without any effort. In such cases, Christensen (2012, May 7) recommends that innovative firms first enter markets where large corporations operate after they have accumulated a certain amount of potential by entering areas that large firms do not care about. Innovation management is considered to be one of the strategic areas of management at the top management level. Its purpose is to identify the main areas of scientific, technical and production activities of enterprises, which are listed below (Veryzer, 2005).

I. Research of new product market, market capacity of these products, organization and forecasting of activity on production of new product, organization of new forms of product sales, selection of materials, resources and other factors for production, complex analysis of new product costs, production as well as sales prices approach.

The following should be considered when implementing an innovation policy for an enterprise:

- a) Development of a plan-program of innovation activities
- b) Control over the development of new products and their application
- c) Consideration of projects for the creation of new products
- d) Providing the innovation activity program with material and financial resource
- e) Provision of innovative activities with qualified staff, etc.

Innovation management is related to the following types of activities.

- a. Study and systematization of new ideas on a global scale and within the country. New technology in production and market areas, collection of information on innovations, establishment of marketing services, etc.
- b. Selection of new ideas (opportunities and implementation of those ideas)

- c. Study of potential market demand for a new product (study of production and sales opportunities, identification of long-term buyers and sellers)
- d. Creation of a new product (preparation of product samples, determination of production and sales volume)
- e. Market monitoring
- f. Improving organizational forms of innovation management
- g. Making a decision on the application of a new product in production on the basis of a product marketing program

From the point of view of scientific and technical progress and development of production, there are 5 types of innovation activity:

- I. Great innovation. As a result, revolutionary innovations are taking place that radically change the structure of production, management and the pace of economic development.
- II. Radical innovation. It results in scientific ideas and inventions, on the basis of which it is possible to radically change the quality of technological systems and create new production areas.
- III. Fundamental innovation. It results in great inventions and scientific and technical proposals, on the basis of which a new technology is created, provided that the old technology is replaced by a new one.
- IV. Improved innovation. It is an innovation aimed at improving existing technology, facilities, products and equipment.
- V. Simple innovation. Through this, the technical and economic parameters of the equipment and technology used in production are maintained for some time.

The distinctive feature of this form of management is that it is based on the widespread use of science and technology, the comprehensive application of new technology, the versatility of new technology, product quality, creative pursuits and innovations, the application of new advanced forms of management to meet consumer demand and achieve economic growth. (S. & R., 2017).

3.3 THE ROLE OF SCIENTIFIC AND TECHNICAL INNOVATIONS IN THE NEW ECONOMY

A characteristic feature of the new stage of world development is the transition of human civilization from an industrial society to a post-industrial society. This is, first of all, due to the global nature of the growing influence of technology and science on all aspects of public life, scientific and technological advances leading to large-scale socio-economic and historical changes. From the end of the twentieth century to the present, human society has undergone rapid changes. The basis of all these changes is innovation. (Na, n.d. 2019)

A number of technological and fundamental inventions and discoveries in the fields of electronics, radiophysics, optoelectronics, laser technology, modern materials science, chemistry and catalysis, modern aviation and aerospace, use of modern information technologies, results in micro and macro electronics, as well as nanotechnology led to the emergence of products. (Morten et al., 2009) The technology that enables the purchase of such products has been called science-based technology.

As a result, the use of science-based technologies has led to the emergence of a new direction of economic development - innovation technology-oriented economic development. The innovative technology-oriented economic development model has proven its high efficiency in the example of developed countries. (Durst et al., 2015)

Since the end of the twentieth century, the terms "knowledge economy" or "knowledge-based economy" have become widespread in science. What distinguishes the new type of economy from the previous agrarian and industrial economies is that its main factor is knowledge and human capital. Today, in developed countries, knowledge production is the main source of economic growth. (*Competing for the Future*, 2014).

Thanks to the interaction of science and production, a new form of competition began to emerge. At present, enterprises that do not master new science-based technologies in production cannot compete in world markets. So, the most important condition to be taken into account in the development of the development strategy of enterprises should be the application of scientific innovations and science-based technologies in production.

To understand the role of the innovative technology economy in the development of any country, it is enough to recall a saying of (Drucker, P, 2001)

In the future, there will be no concept of rich or poor countries in the world. There will be countries that prefer innovative technologies and countries that do not pay attention to them. To get acquainted with the development of innovative technologies in the economy: innovation technologies, scientific parks (technical parks, small business incubators, technopolices) that play a special role in its acceleration, fundamental scientific-applied, modern forms of organization of scientific-industrial relations and other such concepts and it may be important to become acquainted with the concepts.

At present, most of the GDP growth in the developed countries of the world is due to science-based goods and technologies. In recent years, the United States, Western Europe, Japan, India, China, as well as South Korea, Singapore and others. (Wang et al., 2008) The economic growth of newly industrialized countries such as Azerbaijan is mainly due to the development of innovation infrastructure.

We hear a lot lately about the new economy. The new economy has been driven by the development and proliferation of the Internet and high-speed computers, mainly as a result of high-tech development since the 1990s. The new economic era is the era of information and technology.

The New Economy is a term that describes the impact of new technologies on the ongoing economy. The textile-heavy industry describes a period that began in the late 1800s, when manufacturing was widespread, with the advent of new inventions such as automobiles, electricity, and later radio, telephone, and television. (Saaty, & Vargas,, 2010)

It is connected with such concepts as modern economy, information society, information production, creativity, information. The new economy is really a product of information and knowledge, uses new technologies, and these new technologies increase efficiency in every sector of the economy.

In addition, it is thought that the new economy does not contribute as much to developing countries as it makes it easier for developed countries to further develop their leverage.

The new economy is the information and technology economy. In the new economy, information becomes more important in terms of both quality and quantity than the revenues used in the previous period. Information seems to be the only factor of production that is more important than labor and capital. For this reason, one of the most important features of the new economy is the integration of information and technology into all economic activities, in other words, a relatively significant increase in the intensity of information in economic activities. (A., 1999)

As information trade in goods and services have increased significantly, today information has become much more important as a product. Innovation technology allows an economy to be information-based. The creation of knowledge in the information economy belongs to both information workers and information consumers, that is, people. The most important sources of organizations in the innovation technology economy are not the classical factors of production, but knowledge and human investment. The production and use of innovation technology as a commodity, innovative technologies and inventions play a key role in the creation of wealth and prosperity in the new economy. Innovation is the key to increasing production efficiency, the efficiency of the production and distribution process, and the quality and quantity of products and the ability for producers and consumers to choose between goods and services. The success of firms and industries depends on their innovation and invention, the development of new products, the introduction of new services and the increase in the density of information in their products and goods. (R. J., et al., 1995)

The new economy is the digital economy. In the new economy, all kinds of information, sound, writing, images, moving objects, etc. delivers by computer networks. Large amounts of information are transmitted to their recipients extremely quickly, cheaply and reliably.

In countries that play an important role in the world economy, the economy of innovative technologies is becoming increasingly important. Knowledge is the most important factor in determining the standard of living, and economies that are currently at the highest level of technology are knowledge-based economies. Countries with strong knowledge-based economies also have a competitive advantage because international competitiveness is ultimately known as the ability to provide their citizens with the highest standard of living within a sustainable framework. The growing importance of information, creativity and skills is changing the way firms compete and the sources of comparative advantage between

countries. The growing importance of information-based economies, on the one hand, has a significant impact on growth factors, production organization, employment and the need for high-level personnel, on the other hand, makes it necessary to introduce new policies in competition and industry. (Eshlaghy, A.T., Maatofi, A. 2011).

The importance and value of science is growing, and innovation and differentiation are becoming one of the most important elements of competition. In the coming period, with advances in science and technology, science-based production will continue to be a key determinant of growth. For this reason, some technological investments and research and development activities are being developed not only by the free market mechanism, but also by the guiding, regulatory and supportive approaches of society. However, much of the research and development work is international in nature and is mostly carried out by large global companies.

While developed economies maintain their leadership in many high value-added sectors as centers of research, development and innovation, they are losing their competitive advantage relative to labor-sensitive sectors.

New ideas and projects cannot become innovation without entrepreneurship, and therefore a competitive advantage. When innovation is combined with entrepreneurship, it creates economic value. Already, employment and added value in the world are created by young and dynamic small and medium - sized entrepreneurs, established by entrepreneurs who have chosen innovation technologies as their main goal, rather than large firms. Twenty-five percent of the difference between the world's fastest and slowest economies stems from entrepreneurship (Muita, J, 2013).

In countries that have focused on the use of innovative technologies, great importance is attached to the issue of entrepreneurship based on innovative technologies. Open to creativity, change, innovation from elementary school; Entrepreneurship classes in engineering and science should be an integral part of teaching. For example, at Stanford University in the United States, 3,000 students study entrepreneurship each year, which accelerates the transfer of technology to the private sector. (Adner, R., Levinthal, D., 2001)

In a rapidly changing world, preference will be given to countries that are able to develop their education systems and effectively use their innovative potential, mainly young people.

- i. Developing countries face the goals that advanced countries have already achieved:
- ii. Realization of a strong government capable of carrying out reforms and developing the market economy;
- iii. Political and social stability;
- iv. Maintaining high GDP growth rates (above 6-7%);
- v. Increase in the level of human capital (first of all - the quality and intensity of labor);
- vi. Creating an attractive investment climate;
- vii. High investment relative to GDP (up to 40% of GDP);
- viii. Access to new technologies;
- ix. Growth of economic freedom;
- x. Stable growth of living standards and quality of life.

With the globalization of markets, consumer demand is diversifying and growing. Thus, businesses have to think more globally when planning their activities. In addition, when choosing a place and staff, it is necessary to take into account the qualities required by the information age. Because the new economy is both dynamic and competitive. In the new economy, thousands of buyers and sellers can meet at any time. Firms have become geographically very mobile, no longer national in terms of competition; It has gained a global character. In such a situation, the emphasis on innovation and quality is expected to increase and costs to fall. (Francis, D., & Bessant, J., 2005)

Technological developments also affect business life. Examples of new effects are the emergence of new jobs, the loss of existing jobs, changes in employment contract forms and labor organizations. Depending on the use of technology, digital retail between countries creates a common image. Thus, the use of the Internet is higher among young people than older people, more men than women, better educated with less training, more urban than rural and more high-income than low - income. (Flikkema et al., 2007)

The main differences between the old and the new economy can be attributed to the diversity of state structures in the old and new economies. In the new economy, the state is characterized as an e-state. E-state works more transparently and faster; Citizen-state relations are based more on participation. However, in the ancient economy, the state was more closed and inefficient.

3.4. BUSINESS INNOVATION STRATEGY AS THE MAIN CRITERION OF ITS DEVELOPMENT

In order to implement the process of innovation in enterprises, it is necessary to define a strategy for the use of innovative technologies, strategic planning, development and implementation of innovative projects.

The strategy for the use of innovative technologies is the selection and development of new, promising and innovative options for the long term in the presence of specific sources available, as well as the availability of debt financing. When developing a strategy, the type of product or service that meets modern standards and existing conditions is identified and the expediency of production is taken into account, and then innovative projects are identified and their development and use are determined. (Naranjo-Valencia, J., 2012)

Development and evaluation of projects using innovative technologies. A new growth strategy is being implemented in the Republic of Azerbaijan. The main goal of this strategy is high and orderly economic growth in the country, the achievement of social and economic well-being and economic growth. For this reason, there are some tasks that need to be done to achieve this goal, such as reducing dependence on natural resources, sustaining high growth rates in the non-oil sector, increasing the application of innovation in the economy. (Suleymanov et al., 2014)

The main role and prospects of the field of information and communication technologies (ICT) in the implementation of these tasks are in the forefront. The management has created certain tasks in the field of ICT in the country. The main goal is to achieve rapid economic growth and sustainable progress through a new innovative and science-based economy. The establishment of an innovation-oriented economy and the provision of promising development in Azerbaijan consists, first of all, in the mutual development of education, knowledge and ICT. (Azercell LLC, 2018)

The period of creating a policy on the use of innovative technologies for the main aspects of innovation allows to ensure the tasks and objectives of innovation in the current perspective, as well as their integration with the main implementation mechanisms.

The process of developing an innovation strategy is completed during the assessment of the subordination of the strategy for the use of specialized innovation technologies. Such assessment is carried out in the system of economic and special non-economic criteria. These criteria include:

- i. Adapt the strategy of using innovative technologies to the main strategy. At the same time, the harmonization of the goals, directions and implementation stages of the strategy was examined.
- ii. Internal balance in the strategy of using innovative technologies. At such an assessment stage, it is determined that all aspects of innovation activity and different strategic goals, as well as the sequence of their implementation are determined.
- iii. The use of innovative technologies and the relationship of its strategy with the external environment and self-affirmation. In this case, the extent to which the strategies for the use of adapted innovation technologies are in line with the expected changes in the investment climate and development in the country, as well as the degree of adaptation of the innovation technology market is assessed.
- iv. Opportunity to implement a strategy for the use of innovative technologies, taking into account the current resource potential. At such an assessment stage, first of all, the potential opportunities for the formation of financial sources at their own expense were considered. In addition, opportunities such as the involvement of any financial, technology, raw materials, energy and other sources are considered in the implementation of the strategy for the use of innovative technologies.
- v. Ability to accept the level of risk associated with the implementation of the strategy for the use of innovative technologies. The level of risk of the main appraisal project and the firm's possible financial results are taken into account in this appraisal process.
- vi. Effectiveness of the strategy of using innovative technologies. The assessment of the profitability of projects using innovative technologies is based, first of all, on determining

the economic profitability of these projects. In addition, the economic and non-economic results achieved in the implementation of the strategy for the use of innovative technologies are also assessed. (Russell & Millar, 2014)

The evolution of technique and technology plays an important role in the process of making forward-looking decisions. That is, the implementation of the strategy can result in drastic changes in the activities of the enterprise, for example, the production and development of new products, ensuring market access and the adoption of new technology in the market. And such changes are considered innovation. As a result, innovation and strategies currently determine the future development of companies, and thus the strategic activities and innovation in these companies are fully ensured by the long-term development of the market. (Sambamurthy, V., & Grover, V., 2003)

The activity of enterprises is characterized by an innovative approach, which reflects all the elements of the existing strategy of the enterprise (from entrepreneur to digital marketing). The reason is that all these elements of the strategy are based on the emergence, adoption and quantification of new products and services, economic methods and forms. From this point of view, the activity of innovative technologies plays a key role not only as a phenomenon of market survival and development, but also for the implementation of other listed elements of the company's activities.

The strategic direction of the use of innovative technologies is also reflected in the fact that it also allows the company to keep pace with the market, to offer its options to other areas and new markets. This is primarily due to the increase in profitability and financial sustainability in the strategic period. The process of defining a strategy for the use of productive innovation technologies for an enterprise is an assessment of each form of activity of innovative technologies that have proven themselves in a different type of innovation. (Day & Reibstein, 1997)

It should be added that the majority of companies operating in the country do not use strategic management, which in such cases does not allow to determine their development opportunities and design future investments. The country's economic entities do not have a coordinated business program to achieve the desired end result without having their own development strategy for innovation. In order to succeed in business, it is necessary to have

a sound strategy of innovation based on it and a useful mechanism for the successful implementation of this strategy. (Francis & Bessant, 2005)

The strategy of using innovative technologies in business and its development should take into account that the revival of production, followed by its rapid growth, the replacement of excess parts of production in a random sequence, which are in the depressive phase, is a characteristic feature of capital economy and machinery economy. began to be adopted. In turn, the state monopoly on the development of industry, which was strictly planned and distributed, gave some hope that the pace of industrialization would be sustainable. For this purpose, huge multi-productive enterprises have been created, in which the shortcomings inherent in the activities of large capital are repeated in many ways. The monopoly of such enterprises is ensured by the centralized distribution of uncompetitive products, which has a negative impact on the pace of scientific and technological progress, leading to the extensive development of industrial production. (*Sarantakos, S. (1998). Social Research (2nd Ed.). London MacMillan Press Limited., n.d.*)

4. EVALUATION OF ECONOMIC EFFICIENCY OF INNOVATION PROJECTS IN THE BUSINESS SPHERE

4.1 THE PLACE AND ROLE OF THE INNOVATION PROCESS IN ENSURING THE COMPETITIVE ADVANTAGES OF BUSINESS.

Innovative development is one of the main conditions for the country's activity as a subject of international relations in order to continue fierce competition in foreign markets. Increasing the number of innovations is not the key, but to make it an integral part of all economic processes and innovate, finance, social and so on. can be used for purposes. Innovation should be applied not only in technological processes, but also in organizational, management, financial, educational, environmental and other fields. The development of innovation stimulates the acceleration of scientific research. The main purpose of developing and implementing innovation is to dominate the competitive strategy (Caldwell, C., & Anderson, V., 2017). As a result of innovation activity, innovation potential is created. The innovation potential consists of:

- a. Creation of a new product, its production or improvement. For this, there must be financial and technological opportunities, scientific and technical innovations, updating of technological processes and specialists who can work with this technology.
- b. Must be able to organize the development, production and sale of products that are superior in quality to the products of new competitors and meet the changing needs of consumers. (Vogt, W. P., 1993)

Control over the profitability of the work of each link of the enterprise means innovation, improving the balance of various spheres of its activity. All innovations are based on a systematic, comprehensive analysis of various aspects of the firm's work. The most important thing here is not to compare the results with those already achieved, but with the potential of the market at that time. According to the results of scientific research or discovery, it differs qualitatively from its predecessor. The set of scientific, technical, technological and organizational changes that take place in the process of innovation is called the innovation process. The period of creation, dissemination and use of innovations can be called the cycle of innovation. The establishment and development of the innovation process management system was established in 1990. This system is separated from the

traditional system of production management. This new system has become a system of continuous management of the development and implementation of innovations. During this process, innovative ideas include promising production plans and programs that encourage the inclusion of new business areas. (Ionescu & Nicoleta Dumitru, 2015)

The task of these systems is to accelerate decision - making, develop and implement new products, improve planning and incentive systems, and so on. consists of sections. Innovation development can be defined as the economic growth of an economic entity based on the development and implementation of new and better technologies. The level of innovation development is determined by both the resource composition of the innovation process and the effectiveness of the transfer of innovative technologies. In this case, it is expedient to divide the innovation process into two parts:

- i. Availability of resources and infrastructure at each stage of the innovation cycle.
- ii. The speed of innovation from one stage to another.

As can be seen above, the main focus of most work on innovation development is the assessment of the resource potential of the economic system for the implementation of innovation activities. However, if not only the resource composition, but also the efficiency of the resource flow process within the framework of innovation activities will be finally resolved. Innovation processes are quite specific, large-scale management. Its effective development requires the use of special forms and methods of management influence. In the context of radical reforms of the country's economy, while innovation is an integral element of all government structures, from medium to large enterprises, the use of scientific methods of innovation management is an important factor in economic development, establishment and commercial success of any enterprise. In the context of modern globalization, technological innovations are becoming increasingly important, especially for firms and small businesses. (Pardi et al., 2014) The effectiveness of innovation depends on the professionalism of those working in this field, including firms, research institutions, universities, and their connections at the local, national and international levels. On the other hand, the factors that affect the effectiveness of the innovation system include the conditions that stimulate the study of individuals and enterprises, the reliability of the financial system, the effectiveness of government regulation, and so on. belong to.

The characteristics of the innovation process are as follows according to (Welman & Kruger, 2001)

- a. The existence of a large number of uncertain ways and high risk to achieve the set goal;
- b. Impossibility to make an accurate forecast assessment;
- c. Elimination of tensions in the sphere of economic relations;
- d. The need to protect the interests of direct participants in the innovation process.

The innovation process involves the development of new types of products and the modernization of products, the introduction of new machines, equipment and materials into production, the use of new technologies and methods of production, the organization of production and the application of advanced management methods, tools and rules.

Increasing innovation activity is the main issue of the modern economy. This direction ensures the competitiveness of any field and regional problem. Innovation activity is a common development tool of the country's manufacturing sector. The development of the production sector must be based on the sustainable and purposeful organization of innovation activities. (*Haddad, S. and H. Algadeer, 2004*)

The tendency to remain competitive in business and to strive for development by overcoming current difficulties forces the enterprise to seek and actively use new management tools that help it to solve its problems quickly and productively. In today's conditions, reengineering is proving to be one of the new effective tools. According to the concept of reengineering, the organization must respond to changes in the environment in a timely manner. This means that the company has a clear vision of the future and the reengineering manager is directly involved in the work of the group at all stages. In this approach, the strategy of meeting customer needs and taking into account the performance of competitors is strictly aligned with the strategy of internal change.

4.2. DEVELOPMENT AND EVALUATION OF INNOVATION PROJECTS AS THE MAIN CRITERION FOR THE FORMATION OF BUSINESS INNOVATION STRATEGY

Evaluating the effectiveness of innovation structures is the basis for long-term development and management decisions. The complexity of assessing the effectiveness of structures lies in the development of a large number of different projects. The concept of "innovation project" is considered as a form of targeted management of innovation activities, the process of implementing innovations, a set of documents. The set of project documents is a system of mutually adapted goals and is organized, compiled and expressed in different quantitative indicators to achieve them. The program of experimental-constructive, production, organizational-financial, trade and other such complex measures providing concrete effective solution of scientific and technical issues of innovations is called innovation project. (Saunders, M., et al., 2016)

The following issues should be ensured the activity of management in the implementation of innovation projects: (Emenike et al., 2018)

- I. Selection and implementation of more effective innovation projects;
- II. Correct selection of project financing sources;
- III. To implement the project with minimal risk;
- IV. Take into account the time factor and the inflation rate;
- V. Ensuring the financial sustainability of the enterprise by obtaining maximum profit from the project.

From the point of view of enterprises, there are two main problems related to innovation. The first of these is the problem of innovation management, which involves the process of innovation discovery. Another is the marketing challenge needed to effectively evaluate innovation. No matter how perfect the newly introduced innovative product, service or business model is, if it is not marketed with the right strategy, it will not be appreciated by the customers in the market and therefore will not give any positive results. From this point of view, the establishment of correct innovation strategies is the main condition to solve

these two main problems facing enterprises and to reach a full innovative result (*Afande, F. O. 2015*).

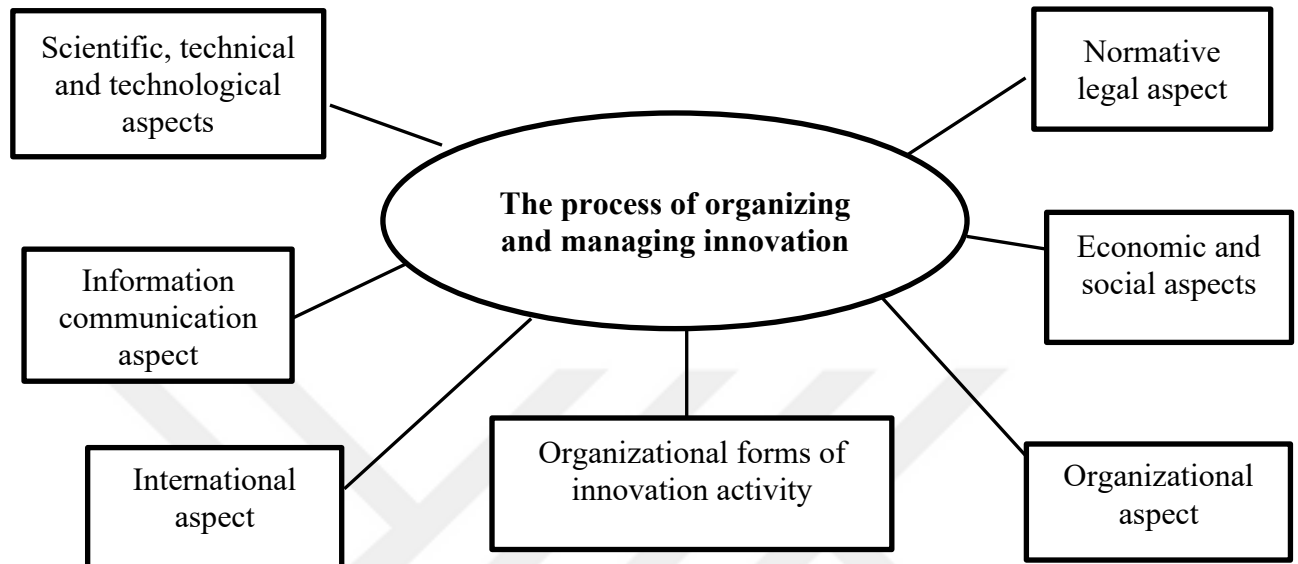


Figure 4. 1: Schematic Diagram of The Process of Organization and Management of Innovation.

The formation of innovation projects is ensured by (*Wilford, D. 2000*)

- i. Complex, systematic approach to solving specific issues (goals) of scientific and technical development;
- ii. Quantitative specification of scientific and technical development goals and serious reflection of the project's final goals and results in innovation management;
- iii. Continuous mobile management of innovation creation, development, production and consumption processes;
- iv. Substantiated selection of the most effective ways to achieve project objectives;
- v. Balance of resources for the implementation of an innovation project;
- vi. Inter-institutional coordination and effective management of complex project work:

The following are the most common indicators for evaluating the effectiveness of innovation projects: (*Mentari & Daryanto, 2018*)

- i. Amount of investment costs for the project (EX);
- ii. Profit (income) from the implementation of innovation (G);
- iii. Profitability or simple profit margin (R);
- iv. PayBack Period (PP);
- v. Costs incurred (X);
- vi. Net Present Value (NPV);
- vii. Final or future value (Future Value - FV);
- viii. Profitability Index (PI);
- ix. Discount Pay Back Period (DPP);
- x. Internal Rate of Return (IRR);
- xi. Modified Internal Rate of Return (MIRR);
- xii. Weighted Average Cost of Capital (WACC).

Presentation of innovative ideas, evaluation of their effectiveness, formation of innovative development strategy is the central link in the form of innovation projects.

The assessment of the enterprise's innovation potential is carried out in order to determine not only the strategic innovation, but also the sufficient financial and economic resources of the enterprise to effectively ensure the current production activities. This allows to determine the dynamic correspondence between current production and strategic innovation activities, to make the final choice in the implementation of new or improved technologies.

At some points in the innovative development of the enterprise, the economic situation for the enterprise may be unfavorable and lead to losses. A new development strategy is being implemented in Azerbaijan to develop and evaluate innovation projects. The main directions of this strategy are to achieve sustainable and high economic growth, social welfare and economic diversification in the country. Therefore, the main tasks at this stage are to reduce the natural resources factor, ensure a high growth rate of the non-oil sector, and expand the application of innovations in the economy. The role and potential of the ICT (information

and communication technologies) sector in the implementation of these tasks has come to the fore. The country's leadership has set new tasks in the field of ICT in the country. This is to achieve sustainable economic growth and progress through the establishment of an innovation-oriented and knowledge-based economy. The creation of an innovative economy is based primarily on the mutual development of science, education and ICT to ensure the long-term development.

The process of selecting an effective innovation strategy of the enterprise involves the evaluation of all forms of innovation activity, which manifests itself in various types of innovations. The main thing is that the innovation process covers all aspects of economic activity and should be an integral part of any functional or production subsystem. Release of high quality products of a certain type and volume at the appointed time; increasing the efficiency of using scientific and technical potential; mastering new markets and strengthening positions in already acquired markets; ensuring ecological safety of production and elimination of negative consequences of economic activity for the society; ensuring profitability and financial stability is one of the main objectives of the enterprise: (M. Janssen et al., 2015)

Table 4. 1: Strategies for Innovation Reengineering.

Scientific and technical development strategy	Active element replacement policy	Politics despite the old elements
Demand prevention strategy	Release into production and start sending the product to the consumer enterprise shortly after the experimental work	Stopping production and supply at the same time as investing in the production of a new item
Product and demand liquidity strategy	Having a project portfolio of new elements: launching production in anticipation of changes in demand in the two-management phase (according to demand forecast)	on the basis of confirming Weak Demand Signal Forecast suspension of production; Support preparations to resume production before demand weakens
Demand and opportunity equivalence strategy	Carry out continuous experimental development of perspective elements; one is to support a high level of preparation for the establishment of production, ahead of the management phase	Cessation of production when demand weakens
"Reach" strategy	In the same way: release for production due to weakening demand	Continuation of production and supply in optimal proportions with the new element as much as possible

Strategic planning and management of the organization's activities is the main direction of innovation reengineering. In innovation reengineering, each type of customer satisfaction strategy focuses on improving the active elements and eliminating the old ones. The characteristics of the innovation reengineering strategy are given in the table below.

4.3. THEORETICAL AND METHODOLOGICAL ASPECTS OF INNOVATION PROJECT RISK RESEARCH

In innovation activity, it is always necessary to see the positive and negative sides of the risk, measure it, and try to reduce its level. For this, it is necessary to predict the risk situation in advance, and for this purpose, on the one hand, to study the nature and content of each risk, and on the other hand, to take into account the factors that can affect it. Risk may arise as a result of the influence of numerous factors, i.e. internal and external factors, during the implementation of innovation activities. The following reasons for the formation of risks in innovation activity can be indicated: criminalization of society; high rates of inflation; political instability; irresponsibility of business entities; lack of development of normative-legal acts regulating entrepreneurial activity; non-existence of real entrepreneurial right; low individual responsibility for the results of their activities in most entrepreneurs; dependence of the entrepreneur on the criminal world, inability or unwillingness of law enforcement agencies to protect him; illegal intervention of politicians in the economy; a sharp increase in the management apparatus at different levels; changes in tax legislation; high taxes and compulsory payments; ruthless competition; market problems and low level of knowledge of entrepreneurs, etc. (Boso et al., 2013)

One of the most important problems is determining the level of risk. For this, it is necessary to refer to objective criteria and methods. Because, without determining the level of risk, it is impossible to make any objective management decision about it.

Risks are closely related to innovation processes, and complete rejection of risks can result in the impossibility of innovation process implementation. The existence of risk is related to the impossibility of accurately predicting the parameters of innovation projects. Risk exists only in relation to the future and is inextricably linked to predicting and planning outcomes and to innovation decision-making in general. The general risk associated with the object of

innovation can arise from various sources. Since these sources are interconnected, it is often impossible to identify the risks arising from each of them. (Grosz, J., 2014)

The objective lack of reliable information about the potential volume of demand for the manufactured product leads to the emergence of many risks for the participants of the innovation project. The risk associated with an innovation project is the probability of the end results planned in advance by its participants in accordance with the adoption of the project decision. We consider it appropriate to carry out measures aimed at revealing and reducing innovation project risks in the following order:

- a. Determination of the goal of reducing innovation project risks;
- b. Qualitative and quantitative analysis of innovation project risks;
- c. Selection of risk reduction methods;
- d. Analysis of obtained results. (Von Hippel, E., 2001)

Risk requires that the farm manager be constantly on the lookout for creativity, initiative, and the ability to make non-standard management decisions that are likely to generate more profits in the future. The existence of different and numerous views on the nature of risk, especially the versatility of this phenomenon, is explained by the fact that the existing economic legislation is practically ignored and is not used enough in economic practice and management activities. In addition, risk is a very complex phenomenon, often consisting of situations that do not correspond to the real basis, and sometimes the opposite.

Innovation projects have different risks. The level of complexity and importance of risk management methodologies in innovation projects, especially, their size is much higher than in industrial enterprises. (Abernathy, 1982)

Risks in entrepreneurial activities engaged in the production of goods and services are important in terms of taking into account the costs of production and calculation of profits from their sale. In this case, the risks can be viewed from two perspectives:

I. Production costs. In this case, it is important to identify the risks when taking into account the risk of rising costs, the price of raw materials, the costs associated with the wages of employees.

II. Buyers, from the point of view of customers. In this case, it is necessary in terms of calculating the income to be obtained from the sale of the product or service and the implementation of preventive measures to launch a new product before the end of the product life cycle. (Senguo & Kilango, 2015)

In innovation, risk assessment is carried out as a feature and opportunity, as well as market prospects, identification of key events in general and the construction of a scenario of possible development of events. Of course, we can talk about "strategic risks in corporate business" and their management, but it is unlikely that accurate numerical methods of analysis and planning will give the company's managers any new and effective management tools. Sometimes with their help you can get useful information that we can easily use when making management decisions, which is another matter: For example, to adjust the traditional SWOT-analysis based on the probability of the development scenario in the market or to create priorities against external threats in business according to their probabilities, or to try to predict the development of events in relevant segments of the Azerbaijani market based on the analysis of international capital markets. The methodology of risk management in terms of job creation and cultural analysis in corporate business can be useful in itself. (Wheelwright & Clark, 1992)

The risk management methodology is so universal and attractive to managers that research is needed to re-evaluate their possible role in the business. It is also necessary to collect risks in the application of the methodology. Thus, the accumulated risks should be considered on the basis of a daily overall innovation project. The risk that arises during the decision-making phase of a business project should be distinguished from the risk that arises during the implementation phase. The most important difference between these risks is that it is possible to make certain changes and improve the situation at the decision-making stage. It is impossible to make significant changes during the implementation of an entrepreneurship project.

An entrepreneur is exposed to risk at different stages and at different times of his activity, and the reasons for the emergence of a risky situation may be different. Sometimes the cause of the risk is any factor that leads to the uncertainty of the situation. The entrepreneur decides whether to implement a high-risk project or engage in a low-risk business. It should be noted that if the entrepreneur is cautious about the risk, it is difficult to assess the success of a high-

risk project, or vice versa. Only an entrepreneur who simultaneously calculates and intuitively determines the level of risk and takes the risk despite the probability of failure will be the most successful. In the course of doing business, risks can arise as a result of a number of factors: internal and external factors. (Carbonell et al., 2009)

The following are the reasons for business risks:

- i. Criminalization of society and high rates of inflation;
- ii. Irresponsibility of economic entities;
- iii. Imperfection of normative-legal acts regulating entrepreneurial activity
- iv. Lack of real entrepreneurial right. hinders the reduction of the overall level of risk;
- v. Low level of individual responsibility for the results of their activities in the majority of entrepreneurs. It also increases the "moral" risk of any deal;
- vi. Dependence of the entrepreneur on the criminal world, as well as the inability or unwillingness of law enforcement agencies to protect him;
- vii. Illegal interference of politicians in the economy; sharp increase in management at various levels;
- viii. Changes in tax legislation; high taxes and mandatory payments; ruthless competition; market problems and low level of knowledge of entrepreneurs;
- ix. Sharp increase in management at various levels; The level of complexity and importance of risk management methodologies in innovation projects, in particular, their size is much higher than in industrial enterprises. (*Global Risk Community 2022*)

A distinctive form between net risk business and internal risk projects is the creation of new types of joint ventures. These enterprises are a combination of small and large companies. As part of this merger, a small company develops a new product, while a large company provides financial support, research equipment, sales channels, service, and after-sales service. The internal risk project should serve the search for new markets. If the project is successful, the unit can be rebuilt, sold or transferred to other units for mass production within the company. The main result expected from the risky project is the study of

innovations, the role, importance and impact of knowledge in economic development, the study of the characteristics of the innovative economy, the identification of indicators characterizing the state of the economy, and so on. The main significance of the project is explained by the presentation of supportive recommendations to decision-making bodies by defining the scientific and theoretical foundations of the new economy and the study of the characteristics of the new economy. (Bouwman et al., 2010)



5. A RESEARCH ON INNOVATION STRATEGIES AND COMPETITIVE SUPERIORITY IN PERSONAL CARE INDUSTRY

5.1. PERSONAL CARE SECTOR IN TURKEY

In this section, the relationship between innovation strategies and competitive advantage, which has been put forward theoretically and on the basis of literature in the previous sections, has been tried to be examined with field research.

Table 5. 1: Personal Care Industry SWOT Analysis.

STRENGTHS	WEAKNESSES
Flexible production quantity term price basis	Professional organizational weakness
High quality understanding (in the sense of not falling below a certain quality, manufacturing etc.)	There is no effective registration system for relevant associations (there should be no unregistered companies)
Coping with economic crises	Foreign dependency in raw materials and energy
Customer-oriented production, follower creative production and R&D structure	Lack of qualified personnel (product development specialist, technical staff)
Cost-effective production	Lack of education (lack of adequate education in the field of cosmetology at universities)
Ease of supply in raw material packaging materials	Lack of university-industry public cooperation
Cheap labor cost (compared to markets in developed countries)	The country's lack of vision for cosmetics
Price advantage, cheap sale	Lack of branding
Domestic production of the machines needed by the sector	Not having a well-known brand in the world
Our entrepreneurial nature	Weak capital structure
Capacity high	Insufficient R&D innovation
Young workforce	Informal economy (Unfair competition)
Keeping up with technological production	
OPPORTUNITIES	THREATS
The cost of imported products	Uncommon market surveillance
Increasing e-commerce	Counterfeit brands and products (from China)
Dense young population	Inadequacy of our packaging industry for the cosmetics industry

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Table 5.1: Personal Care Industry SWOT Analysis. ‘Tables Continued’.

Compliance with legislation (global, regional, sectorial)	EU regulations
The current economic stability of the country	Absence of STAs
Increasing demand for organic and herbal products	High excise duty
Increasing consumption of cosmetics in the world and in our country	Negative political developments in the surrounding countries (insurance, transportation, etc.)
Private label production	Shrinking demand due to the economic crisis in the world
Compliance with legislation (global, regional etc.)	Increase in the number of chain stores in domestic and foreign markets
Expandable market share	Far eastern countries (cheap finished products they put on the market)
Opening new markets with STA	Increasing the protectionist policies of countries (such as anti-dumping, regulations, standards, China's support of the manufacturer, incentive system, protectionist factors of the states)
Turkey's endemic structure (rich in plant diversity)	Under the counter production and uncontrolled import of poor quality product
REACH regulation	destructive competition
Increasing well-being	High transportation costs

The strengths and weaknesses, opportunities and threats of the sector with SWOT analysis are shown in Table 5.1. When we look at the weaknesses of the sector, the inadequacy of R&D and Innovation, and when we look at the threats, the fact that there is destructive competition makes us think that the enterprises that attach importance to R&D studies and therefore innovation will be lucky in this destructive competition in the sector.

5.2. PURPOSE OF THE RESEARCH

Innovation is a concept emphasized by the business world as an investment and by researchers in terms of contributing to the literature. In order to become a more innovative business, while businesses turn to innovation, researchers are working on the contributions of innovation. In the study, the contribution of innovation to businesses in terms of competitive advantage was investigated.

This study has been prepared in order to determine whether the businesses in Istanbul and operating in the personal care sector apply innovation as a means of providing strategic competitive advantage, to determine the innovation activities and innovation strategies applied, and to determine whether the competitive advantage differs according to the innovation strategy of the business.

5.3. IMPORTANCE OF RESEARCH

Long-term growth is among the specific objectives of businesses. The longevity of businesses depends on their competitiveness in the market. Businesses that cannot compete with their competitors are unable to continue their activities and have to leave the market.

Innovation provides an important competitive advantage in the personal care sector, where its share in the economy is high, product variety and the number of brands is intense. It is important to determine the competitiveness levels of the enterprises in the personal care sector, their competitive strategies, innovation levels, innovation perspectives, the innovation types and strategies they are oriented towards, and the determination of innovation strategies as a means of providing strategic competitive advantage in the sector, in terms of improving the position of the sector at the Innovation point and directing the sector enterprises.

5.4. METHOD, SCOPE AND LIMITATIONS OF THE STUDY

Questionnaire was used as the data collection method of the research. While preparing the questionnaire, a literature review was made and the scale related to competitive advantage used in previous studies was used. In the survey study, a 5-point scale was used to measure competitive advantage. In the scale, it was graded as (1) not at all sufficient, (2) slightly sufficient, (3) moderately sufficient, (4) sufficient, and (5) very sufficient. For the competitive advantage scale, Karbassi Yazdi et al. (2021) research article titled "Critical success factors for competitive advantage in Iranian pharmaceutical companies: a comprehensive MCDM approach " was used.

The research was applied to businesses operating in the personal care sector in Istanbul. Istanbul is an important city in terms of being an industrial city. In order to determine the population of the study and the number of participants, a list of businesses registered in the

personal care sector was obtained from the Istanbul Chamber of Commerce. 276 businesses registered to the Istanbul Chamber of Commerce have been identified. Registered businesses were telephoned and 175 of them were reached. In the first interview, information was asked about the number of departments in the enterprises and their approval to the survey, and as a result of the interviews, it was determined that there were 5 departments on average. While determining the number of participants, the table of Krejcie and Morgan (Krejcie, Morgan, 1970: 608), which indicates the number of participants to be reached depending on the specific population size determined as a result of their calculations, was used. Accordingly, by accepting that there are an average of 5 managers in 162 businesses, the population of which was approved was determined as 810.

Although the number of participants corresponding to the mass is 265, 293 questionnaires were applied to the personnel in the managerial position because they were at a level to evaluate the whole of the enterprise, and 248 questionnaires were accepted as valid. Analysis of the research hypothesis was made using the IBM SPSS Statistics 23 package program.

5.5. FINDINGS OF THE RESEARCH AND ANALYSIS

5.5.1. Descriptive Statistics on Participant Group and Business Characteristics

Descriptive statistics regarding the gender, age, educational background and duties of the participants in the study are given in Table 5.2 below. When Table 5.2 is examined in detail, it is seen that 131 participants (52.8%) are women, 58 participants (23.4%) are between the ages of 30-34, 118 participants (47.6%) are undergraduate graduates, and 54 participants (21.8 % were determined to be marketing managers.

Table 5. 2: Descriptive Statistics on Participants' Gender, Age, Educational Status and Position.

Variable	Category	N	%
Gender	female	131	52.8
	male	117	47.2
	Total	248	100
Educational Status	high school	10	4
	College	58	23.4
	License	118	47.6
	Master Degree	49	19.8
	Doctorate	13	5.2
	Total	248	100
Age	20-24	13	5,2
	25-29	37	14,9
	30-34	58	23,4
	35-39	50	20,2
	40-44	31	12,5
	45-49	26	10,5
	50 and above	33	13,3
	Total	248	100
Mission	Business owner	32	12.9
	m	23	9.3
	deputy general manager	23	9.3
	Production manager	41	16.5
	marketing manager	54	21.8
	R&D Manager	31	12.5
	Accounting Manager	19	7.7
	Other (accounting, purchasing, human resources)	25	10.1
	Total	248	100

In Table 5.3, there are descriptive statistics regarding the legal structure of the enterprise and the target market. It has been determined that the legal structure of the business in which 133 (58.1%) of the participants work is a limited liability company. Looking at the year in which

the target market of the enterprise where 134 participants (54%) work is domestic, it is determined that the enterprises in which 146 participants (58.9%) work have been operating for 5-24 years.

Table 5. 3: Descriptive Statistics on Legal Structure and Target Market of the Business.

Legal Structure	Limited company	133	58.1
	Incorporated company	58	23.4
	Sole Proprietorship	46	18.5
	Total	248	100
Target Market	Domestic	134	54
	Both Domestic and International	109	44
	International	5	2
	Total	248	100
Year of Activity	0-4	12	4.8
	5-24	146	48.9
	25-49	77	31
	50-74	12	4.8
	75 and above	1	0.4
	Total	248	100
Is there any innovation idea that has been implemented in the last 3 years?	Yes	189	76.2
	No	59	23.8
If the idea of innovation was raised, was it discussed?	Yes	169	68.1
	No	20	8.1b
Has this idea of innovation been considered to be put into practice?	Yes	111	44.8
	No	58	23.4
What was the result of this idea put into practice?	Reduced costs	65	26.2
	Improved processes	24	9.7
	Product with economic value was obtained	15	6
	Other (no idea)	7	2.8

189 participants answered yes to the question of whether there was an innovation idea that was put forward/discussed/implemented in the last 3 years. However, 169 participants answered yes to the question of whether this innovation idea was discussed, while 111 participants answered yes to the question about putting this innovation idea into practice. At

the end of this idea, which was put into practice in businesses that put the innovation idea into practice, 65 participants stated that costs were reduced.

5.5.2. Reliability and Validity Analysis

In order to test the validity of the scale for competitive advantage in the applied questionnaire study, factor analysis and Cronbach's Alpha reliability test were used to test its reliability. In the factor analysis applied using the Varimax rotation method, the factor loads of the expressions and the Cronbach's Alpha coefficient for the reliability test are given in Table 5.4.

In factor analysis, it is preferred that the factor load values showing the relationship between the expressions in the scale and the factors are 0.40 and higher (Büyüköztürk, 2004).

A single dimension consisting of 11 expressions was determined. In the factor analysis performed to measure the validity of the competitive advantage scale, the Kaiser-Meyer Olkin (KMO) sampling adequacy statistic was found to be 0,585. It has been revealed that this value is sufficient to perform factor analysis of the sample and since the significance is .000 according to the Bartlett Sphericity test, there is a sufficient level of relationship between the variables for factor analysis. Table 5.4 shows the reliability and validity results of the analysis.

Table 5. 4: Competitive Advantage Scale Validity and Reliability Analysis.

Component	Factor Load	Factor Explanation (%)	Cronbach's Alpha (Confidence Value)
Costs and economic risks	,704	81,971	,938
quality	,648		
customer satisfaction and support	,745		
management capability	,775		
production specification	,575		
supplier relations	,723		
production capability	,782		
adaptation to new technology	,805		
infrastructure of production facility	,767		
marketing capability	,490		
R&D activities	,794		
Total		81.971	
Kaiser-Meyer-Olkin (KMO) Sample Adequacy			,585

In the Cronbach's Alpha reliability test applied to test the reliability of the scale, reliability increases as the reliability coefficient approaches +1. The following intervals were taken as reference for the reliability of the scale and its sub-dimensions (Kalaycı, 2006: 405).

$0.00 \leq \alpha 0.40$ scale/dimension is unreliable,

$0.40 \leq \alpha 0.60$ scale/dimension has low reliability

$0.60 \leq \alpha 0.80$ scale/dimension is highly reliable,

$0.80 \leq \alpha 1.00$ scale/dimension is highly reliable.

Accordingly, in our study, the reliability for the competitive advantage scale was calculated as .938, so it is seen that the scale is highly reliable.

5.5.3. Descriptive Statistics of Competitive Advantage Scale Dimensions

Descriptive statistics for the answers of the participants in the study regarding the statements in the "Competitive Advantage" dimension are given in Table 5.5

Table 5. 5: Descriptive Statistics on Respondents' Responses to Statements Regarding Competitive Advantage.

Descriptive Statistics				
	Mean	Std. Deviation	Analysis N	Participation Level
Costs and economic risks	3.95	1.12	248	Sufficient
quality	3.15	0.8	248	Moderately Sufficient
customer satisfaction and support	4.28	0.45	248	Very sufficient
management capability	2.53	1.41	248	Slightly adequate
production specification	2.75	0.98	248	Moderately Sufficient
supplier relations	3.4	0.64	248	Moderately Sufficient
production capability	3.25	0.72	248	Moderately Sufficient
adaptation to new technology	3.82	0.44	248	Sufficient
infrastructure of production facility	2.12	1.18	248	Slightly adequate
marketing capability	3.59	0.76	248	Sufficient
R&D activities	3.93	1.41	248	Sufficient

Interval Coefficient: 0.80; 1-1.80: Not at all sufficient, 1.81-2.60: Slightly adequate, 2.61-3.40: Moderately Sufficient, 3.41-4.20: Sufficient, 4.21, 5: Very sufficient

Table 5.5. When examined in detail, the participants showed the highest level of agreement with the expression of their competence in terms of customer satisfaction and support with an average of 4.28, and the lowest level of agreement with the expression of competence in terms of infrastructure of production facility with an average of 2,12. On the other hand, the "Competitive Advantage" dimension, which constitutes the whole sub-dimension, was stated at the level of "Adequate" with an average of 3.86.

5.5.4. Factor Analysis

After checking the assumptions as above, factor analysis is performed. Components with an eigenvalue greater than 1 were included in the analysis according to the factors obtained from the application of Principal Components Method to the correlation matrix. According to Table 5.6, competitive advantage is explained by 4 factors instead of 11 variables. When we look at the cumulative variance explanation rate, we see that approximately 67% of the information is explained by 4 factors.

Table 5. 6: Principal Component Analysis.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,897	24,140	24,140	2,897	24,140	24,140	2,672	22,265	22,265
2	2,254	18,787	42,927	2,254	18,787	42,927	2,165	18,042	40,307
3	1,700	14,171	57,097	1,700	14,171	57,097	1,779	14,822	55,129
4	1,175	9,793	66,890	1,175	9,793	66,890	1,411	11,761	66,890
5	,930	7,747	74,637						
6	,766	6,386	81,023						
7	,618	5,148	86,171						
8	,494	4,118	90,289						
9	,420	3,503	93,792						
10	,330	2,751	96,543						
11	,261	2,174	98,717						

Extraction Method: Principal Component Analysis.

The components matrix shows (Table 5.7) the correlation between the relevant factors and variables. The related variables according to the highest correlation are gathered under the related factors. Since this matrix is not rotated, it would be more accurate to interpret it on the rotated matrix.

Table 5. 7: Component Matrix.

Component Matrix ^a				
	Component			
	1	2	3	4
adaptation to new technology	,862			
customer satisfaction and support	,818			
quality	-,764			
management capability	-,566	,403		
supplier relations		-,792		
production capability		-,664		
infrastructure of production facility		,784		
production specification		,620		
marketing capability			,813	
R&D activities		,518	,723	
Costs and economic risks				,703
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

Varimax rotation, one of the vertical rotation methods, ensures that the factors are independent from each other and makes it easier to name the factors. Accordingly, adaptation to new technology, customer satisfaction and support, quality and management capability value are under the 1st factor, supplier relations, production capability, infrastructure of production facility and production specification are under the 2nd factor; marketing capability and R&D activities were collected under the 3rd factor, and costs and economic risks were collected under the 4th factor. A negative sign indicates that it has a negative relationship with the relevant factor. For these factors, factor scores were calculated using the regression method, respectively, and are included in the data set. Factor scores can then be used when an analysis such as Regression is needed. Our factor names are top management support; supply change management capabilities; connectiveness innovation activities and costumer needs; and cost respectively in Table 5.8.

Table 5. 8: Rotated Component Matrix.

	Component			
	1	2	3	4
customer satisfaction and support	,892			
adaptation to new technology	,821			
quality	-,784			
supplier relations		,824		
management capability		,741		
production capability	,401	-,628		
production specification	-,497	-,538		
marketing capability			,875	
R&D activities			,871	
infrastructure of production facility			,468	
Cost and economic risks				,806
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				

5.5.5. Research Hypothesis and Findings

There are four hypotheses in this study that search for the interaction between competitive advantage and innovation strategy of enterprises in the personal care sector. The first hypothesis searches whether top management support affects to have a competitive advantage via the innovation strategy of the enterprise in the personal care sector. The second hypothesis is that supply chain capabilities affect the competitive advantage via the innovation strategy of the enterprise. The third hypothesis is that connectedness to innovation and R&D activities and customer needs affect to have the competitive advantage via the innovation strategy of the enterprise in the personal care sector. The last hypothesis is that costs and economic environment's risks affect to have the competitive advantage via the innovation strategy of the enterprise in the personal care sector.

H₁: Top management support effects to have a competitive advantage via the innovation strategy of the enterprise in the personal care sector.

According to the results of Factor Analysis, the management capabilities about adaptation to new technology, management insights into customer satisfaction and customer support, and management efforts to ensure quality in products and services constitutes the 1st factor. These capabilities are about the top management support; hence to have a competitive advantage via innovation activities; it is crucial to take top management support. Definitions of intellectual capital and innovation are provided by the researchers. We list the characteristics of intellectual capital (i.e. structural, human, and relational capital). The research also identifies the many forms of innovation (incremental and radical innovation). It was discovered that intellectual capital has a substantial impact on competitive advantage achievement. The relationship between intellectual capital and the attainment of competitive advantage is found to be supported by innovation. The researchers conclude that firms should foster innovation within their workforce. In order to reach competitive advantage, we also think that management in organizations needs to look for hiring highly qualified and distinguished skilled individuals.

H₂: Supply chain capabilities affect the competitive advantage via the innovation strategy of the enterprise in the personal care sector.

According to the results of Factor Analysis, the supplier relations, production capability, infrastructure of the production facility and production specification constitutes the 2nd factor. These capabilities are about the supply chain capabilities; hence to have a competitive advantage via innovation activities; it is crucial to increase supply chain capabilities. In order to maintain a sustainable competitive advantage, it is important that innovations and changes in products, services, and processes are made in a way that competitors cannot easily implement (Tidd etc., 2005: 8). The aggressive innovation strategy is the strategy applied to seize the technological and market leadership by taking risks and developing a new product or production process before its competitors (Guan, 2009: 804). According to the innovation strategy implemented by the enterprises, the highest average in the average of competitive advantage is determined as the aggressive-innovation strategy. Considering the threats to the cosmetics industry, the fact that there is destructive competition (ikmib.org.tr) makes us think that businesses that attach importance to R&D studies and therefore innovation will be lucky in this destructive competition in the industry. In Özkan's (2009) study, a significant and direct relationship was found between the severity of competition and innovation. In the study of Coşkun, Mesci, and Kılıç (2013) applied to hotel businesses, it was seen that "aggressive innovation strategy provides competitive advantage in hotel businesses". In this context, the findings obtained as a result of the analysis of the study also overlap with the literature.

H₃: Connectedness to innovation and R&D capabilities and customer needs has a significant effect on competitive advantage in personal care sector.

According to the results of Factor Analysis, marketing capability, R&D and innovation activities and understanding the customer needs constitutes the 3rd factor. These capabilities are about the innovation and R&D activities; hence to have a competitive advantage via innovation activities; it is crucial to sustain customer relationships and accordingly continue to R&D and innovation activities. Customers desire new items that fulfill their needs. Every company must constantly reinvent products due to the fast-moving technical landscape and intense competition, which eventually boosts the firm's competitive advantage. Every firm needs to be innovative with the items they constantly market if they want to have a competitive advantage. Innovation is a modern concept, method, or product developed by an individual (Fruhling & Siau, 2007). The use of technology to new systems, policies,

programmes, products, processes, and services for the organization is known as innovation capability (Liao et al., 2009). It can also mean having the capacity to take in and apply outside knowledge in order to create new knowledge (Cohen and Levinthal, 1990). A broad range of organizational traits known as "innovation capability" support and motivate innovation efforts (Wu & Sivalogathan, 2013). Innovation, according to Weerawardena (2003), is the alteration of goods, procedures, services, organizational structures, and marketing strategies for the purpose of generating value for customers. Technical innovation and administrative innovation make up innovation capacity (Damanpour, 1991).

Innovation is defined by Hult et al. (2004) as a brand-new organizational concept, process, or product. According to the definition of innovation, it is a process that starts with ideas, discoveries, and the introduction of new goods, procedures, and services to the market (Thornhill, 2006). Recent study has evaluated the effect of innovation on performance extensively, and the findings indicate a significant impact. Lee and Hsich's (2010) study revealed a direct correlation between innovation capability and a company's competitive advantage. According to Dorson's research from 2018, innovation significantly affected the competitive advantage. Higon (2011) discovered that the benefits of innovation on competitive advantage were significantly influenced by the company's age.

H₄: Costs and economic risks have a negative effect on innovation.

Innovation is a tactic that can be used to boost organisational performance. Due to the previously mentioned rapid advancement of technology, businesses must find numerous strategies to maintain their competitive advantage in order to stay competitive and avoid falling behind their rivals. Product innovation, process innovation, marketing innovation, service innovation, and administrative innovation are all parts of an organization's ability to innovate. Wu & Sivalogathan's (2013) study found that a company's performance will increase if it has strong internal innovation capabilities. Because the success of new goods is a growth engine and affects growing sales, profits, and competitive power for many firms, innovation is a crucial organizational competence (Pauwels et al., 2000). According to certain study, there is a strong connection between innovation and greater performance (Hult et al. 2004; Panayides, 2006; Thornhill, 2006).

However, it is hard to invest in expensive R&D and innovation activities, especially by SMEs. To advance SMEs' knowledge and assist them with the development of production processes and marketing, among other things, some government sector agents fund and support product research and development, new production methods, and technology transfer (Nurul & Abd, 2016). Others enforce various laws and ordinances that are crucial in pressuring companies to create innovations; these actions have been taken by governments in many different nations (Zhang & Zhu, 2015). In particular, the government's announcement of numerous programmes encourages innovation. According to a study by Patanakul and Pinto (2014), government policies that support corporate growth lead to organisational reforms and higher levels of innovation. The government can also encourage innovation by passing laws that support it or advance global commerce.

6. FINDINGS AND DISCUSSIONS

In this study, which examines the effects of innovation in providing strategic competitive advantage, the following results were obtained.

I. Findings about the characteristics of the participants and businesses:

According to the results of the survey, the majority of the participants are between the ages of 30-34, working in the business for 5-9 years, marketing managers, undergraduate graduates and women. The companies participating in the research are limited liability companies operating between 5-24 years, mostly target market is domestic. In this direction, 189 participants answered yes to the question of whether there was an innovation idea that was put forward/discussed/implemented in the last 3 years. However, 169 participants answered yes to the question of whether this innovation idea was discussed, while 111 participants answered yes to the question about putting this innovation idea into practice. At the end of this idea, which was put into practice in businesses that put the innovation idea into practice, 65 participants stated that costs were reduced.

II. Evaluation Results Regarding Competitive Advantage:

As a result of the evaluations regarding the competitive advantage, the arithmetic averages of the proficiency levels of the companies operating in the personal care sector in terms of the expressions that determine the competitive advantage compared to their competitors (1: not at all sufficient, 2: slightly sufficient, 3: moderately sufficient, 4: sufficient, 5: very sufficient) It has been seen that it varies between 3.59 and 3.95 and is at the "adequate" level. The first five variables with the highest average are customer satisfaction and support (4.28), cost and economic risks (3.95), R&D activities (3.93), adaptation to new technology (3.82), marketing capability (3.59). The expression with the lowest average is the infrastructure of production facility (2.12). This statement is important for the development of innovation.

In order to measure the effect of innovation strategies, which is the main hypothesis of the study, on competitive advantage, the Factor Analysis is applied. As a result of the analysis, it has been determined that the competitive advantage differs according to the innovation strategy applied by the enterprise. It has been concluded that businesses that follow offensive and defensive innovation strategies are more successful in competitive advantage.

When the progress of competition is examined over time, the 2000s; There have been years where companies that have differentiated themselves, developed according to customer requests, innovative products have come to the fore, and businesses with innovative thinking structure have been superior in competition (Kavrakoğlu et al., 2002: 73-74). Innovation in products, services and processes and making changes that rival companies cannot easily implement are important to maintain sustainable competitive advantage (Tidd etc., 2005: 8). The aggressive innovation strategy is the strategy applied to seize the technological and market leadership by taking risks and developing a new product or production process before its competitors (Guan, 2009: 804). In our study, according to the innovation strategy implemented by the enterprises, the highest average in the average of competitive advantage was determined in the aggressive strategy. Considering the threats of the sector, the fact that there is destructive competition (ikmib.org.tr) makes us think that enterprises that attach importance to R&D studies and therefore innovation will be lucky in this destructive competition in the sector. In Özkan's (2009) study, a significant and direct relationship was found between the severity of competition and innovation. In the study of Coşkun, Mesci, and Kılıç (2012) applied to hotel businesses, it was seen that an "aggressive innovation strategy provides competitive advantage in hotel businesses".

7. CONCLUSION

Innovation is one of the tools that contribute to businesses in today's conditions where competition increases, and customer expectations change and develop. In our study, the effect of innovation strategies on providing competitive advantage is examined and it was concluded that it has a significant positive effect. When the global competitiveness and global innovation indices are examined, it is seen that the innovation indices of the countries that are successful in competitiveness are also high. For this reason, businesses that want to gain competitive advantage should benefit from innovation, which is one of the important dynamics of sustainable competition, as a tool. In the innovation perspective of enterprises, it is necessary to ignore the fact that small changes other than a big invention can be considered as innovation or that only the potential of large enterprises will be sufficient. However, small and medium-sized enterprises can also take innovative initiatives without incurring large costs. In order to achieve this, collaborations such as joint R&D, joint product development, sharing of knowledge and experience with large enterprises should be made, and the experiences, laboratories and knowledge of industry chambers and universities should be utilized. In order to ensure success in innovation, the organizational structure should be arranged accordingly, and an organizational structure that resists innovation should be avoided. World experience shows that technological zones can play a role in economic development. Small innovative enterprises achieve more effective results when operating in a single space, and in this form of activity can make a greater contribution to economic development. This form is a techno-park, and the principle of a comprehensive approach to its formation is one of the main principles of development. Discussions on the project to create a regional innovation zone at the government level, first of all, envisage the creation of techno-parks for small and medium innovative enterprises, the creation of a regional base for the production and export of electronic equipment and software. The package of proposals includes the creation of new enterprises for the production of information technology equipment by local and foreign companies, increasing the range of communication services. The main expected outcome of the project will be the study of the role, importance and impact of innovations, ICT, knowledge and information in economic development, the study of the characteristics of the innovative economy, the identification of indicators characterizing the state of the economy. The scientific and practical significance of the project is explained by the presentation of supportive recommendations

to decision-making bodies through the identification of the scientific and theoretical foundations of the new economy and the study of the characteristics of the new economy. The dual-cognitive and reproductive nature of research activity requires not one, but a dual approach in assessing its effectiveness. In the first case (cognitive), the evaluation of results is largely out of the economy, not measurable and qualitative. However, the cost of such research as a whole is a prerequisite for production activities. These costs include health, education, the creation of a public fund of scientific knowledge and similar "social benefits".



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APPENDIX A

QUESTIONNAIRE FORM: INNOVATION STRATEGIES AS A TOOL OF STRATEGIC COMPETITIVENESS RESEARCH SURVEY

Dear Participant,

This survey was prepared in order to determine the use of innovation strategies as a means of ensuring strategic competition by the companies operating in the personal care and cosmetics sector in the province of Istanbul and whether competitive advantage differs according to the innovation strategies applied.

The data related to the survey will be used in a scientific study. Names will not be written on the questionnaire in order to protect confidentiality. It is very important to answer the questions sincerely and carefully in order for the research to reach correct and valid results. Thank you very much for your valuable time and contribution to science.

PERSONAL AND BUSINESS INFORMATION

1. Your gender: () Male () Female

2. Your Marital Status: () Married () Single

3. Your age: ()

4. Your education status?

() Primary Education () High School () Vocational School () Undergraduate () Graduate
() Doctorate

5. Number of employees in your business? Please write ()

6. How many years has your business been operating? Please write ()

7. What is the legal structure of your business?

() Limited company () Joint Stock Company () Sole Proprietorship () Other.....

8. Specify the target market where you market your business's products.

() Domestic () Both domestic and abroad () Abroad

9. Indicate your role in the company.

() Business Owner () General Manager () Assistant General Manager () Production
Manager

() Marketing Manager () R&D Manager () Accounting Manager

Regarding whether there are innovation ideas that have been put forward/discussed/implemented in the last 3 years in your business;

10. Have any innovation ideas been put forward?

☐ Yes

☐ No

11. If the idea of innovation was raised, was it discussed?

☐ Yes

☐ No

12. Has this idea of innovation been considered to be put into practice?

☐ Yes No

13. At the end of this idea put into practice;

☐ Reduced costs

☐ Improved processes

☐ Product with economic value is obtained

14. Indicate the innovation strategy followed by your company according to the explanations about innovation strategies.

☐ It is aimed at being ahead of the competitors and gaining market dominance. (ATTACKER)

☐ We see being the first as risky and look for opportunities to improve on the innovations found after the competitors find the innovations (DEFENDANT)

☐ If there is no demand for innovation in the market, we do not take any stand on innovation, and since our capacity for innovation is limited, we tend to develop design rather than technical innovations. (FOLLOWING TRADITIONAL OPPORTUNITIES)

☐ We get inspired and innovate after the innovations pioneered by other businesses are accepted by the society. (IMPORTANT and DEPENDENT)

ASSESSMENTS ON COMPETITIVE ADVANTAGE

For each variable below, indicate your "Competence" level by comparing your business which affects your competitive advantage when compared with competitors in your sector.

		Never Enough	Less Sufficient	Moderately Sufficient	Sufficient	Very enough
1	costs and economic risks					
2	quality					
3	customer satisfaction and support					
4	management capability					
5	production specification					
6	supplier relations					
7	production capability					
8	adaptation to new technology					
9	infrastructure of production facility					
10	marketing capability					
11	R&D activities					