

**T.C.
ISTANBUL GEDİK UNIVERSITY
INSTITUTE OF SOCIAL SCIENCE**



**THE IMPACTS OF INNOVATION MANAGEMENT ON THE
PERFORMANCE OF BUSINESS**

MASTER'S THESIS

Aiman Gomaa Binkhalil

**Department Of Engineering Management
Engineering Management Program**

Thesis Advisor: Prof. Dr. Gzde Ulutagay

DECEMBER 2021

**T.C.
ISTANBUL GEDİK UNIVERSITY
INSTITUTE OF SOCIAL SCIENCE**



**THE IMPACTS OF INNOVATION MANAGEMENT ON THE
PERFORMANCE OF BUSINESS**

MASTER'S THESIS

Aiman Gomaa Binkhalil

**Department Of Engineering Management
Engineering Management Program**

Thesis Advisor: Prof. Dr. Gzde Ulutagay

DECEMBER 2021



**T.C.
ISTANBUL GEDİK UNIVERSITY
GRADUATE EDUCATION INSTITUTE
DIRECTORATE**

THESIS APPROVAL

The thesis work of Aiman Gomaa Binkhalil, student of our Institute's Social Science Thesis Master's Program with number 191281011, was accepted as a Master's thesis by the majority of the votes of the following jury in the thesis defense exam held on 29/12/2021.

Faculty Member Name Surname

Signature

- | | | |
|---------------------------|--------------------------------------------|-------|
| 1) Thesis advisor: | Prof. Dr. Güzde ULUTAGAY | |
| 2) Jury Member: | Asst. Prof. Dr. Tuğbay Burçin GÜMÜŞ | |
| 3) Jury Member: | Asst. Prof. Dr. Alper VAHAPLAR | |

FOREWORD

I would like to thank my advisor, Prof. Dr. Gözde Ulutagay, for her help and support. It was very valuable for me to work under her auspices and to progress through the writing stages of this thesis with her passion, knowledge and uninterrupted support.

December 2021

Aiman Gomaa BINKHALIL

DEDICATION

I would like to express my gratitude to my family and friends in Turkey and Libya for their patience, compassion and constant inspiration throughout the training.

December 2021

Aiman Gomaa BINKHALIL



TABLE OF CONTENTS

	<u>Page</u>
THESIS APPROVAL	ii
FOREWORD	iii
DEDICATION	iv
TABLE OF CONTENTS	v
LIST OF TABLES	vi
LIST OF FIGURES	viii
ABSTRACT	ix
ÖZET	x
1. INTRODUCTION	1
2. LITERATURE REVIEW	3
2.1. Innovation Conceptual Framework.....	3
2.1.1. Definition of Innovation.....	3
2.1.2. Importance of Innovation.....	4
2.1.3. Source of Innovation and Spread	7
2.1.4. Factors Affecting Innovation	12
2.1.5. Types of Innovation	14
2.2. Effects of Innovation Management on Business Performance	21
2.2.1. Innovation Management	21
2.2.2. Innovation Management Process	23
2.2.3. The Relationship Between Innovation and Strategy.....	25
2.2.4. Contribution of Innovation Management to Business	26
2.2.5. Impeding Factors in Innovation Management	31
2.2.6. Business Performance	34
3. RESEARCH METHODOLOGY	36
3.1. Purpose of the research	36
3.2. Research Method.....	36
3.3. Limitations of the Research	36
3.4. Universe and Sample.....	37
3.5. Research Hypotheses	37
3.6. Data Collection Method	39
3.7. Preliminary Evaluations of the Data	40
4. RESEARCH FINDINGS AND DISCUSSION	41
4.1. Research Findings	41
4.2. General Results of Analyzes	65
4.3. Discussion	70
5. CONCLUSION AND RECOMMENDATIONS	73
REFERENCES	77
RESUME	Hata! Yer işareti tanımlanmamış.

LIST OF TABLES

	<u>Page</u>
Table 2.1. Seven Sources of Innovation According to Drucker (2002)	9
Table 2.2. Innovation Management Measurement Areas	22
Table 4.1. Frequency Analysis Results of Gender Distributions.	41
Table 4.2. Frequency Analysis Results Regarding Age Distributions	41
Table 4.3. Frequency Analysis Results of Educational Status Distributions	42
Table 4.4. Frequency Analysis Results of Working Year Distributions on Manufacturing	42
Table 4.5. Frequency Analysis Results of the Firm's Export Status Distributions	43
Table 4.6. Frequency Analysis Results of Firm Employee Distribution	43
Table 4.7. Frequency Analysis Results of Working Position Distributions.....	44
Table 4.8. Descriptive Statistics on the Innovation Management Scale	45
Table 4.9. Descriptive Statistics on the Business Performance Scale.....	46
Table 4.10. Frequency Analysis Results on Innovative Product and Service Situation.....	47
Table 4.11. Descriptive Statistics on the Innovation Business Performance Relationship Scale	48
Table 4.12. Independent Sample T-Test Results on the Variation of Innovation Management by Gender.....	49
Table 4.13. Independent Sample T-Test Results on the Difference of Business Performance by Gender	49
Table 4.14. Independent Sample T-Test Results on the Variation of Innovation and Business Performance by Gender	50
Table 4.15. One-Way Analysis of Variance Results on the Difference of Innovation Management by Age	50
Table 4.16. One-Way Analysis of Variance Results on the Variation of Business Performance by Age	51
Table 4.17. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Age.....	52
Table 4.18. One-Way Analysis of Variance Results on the Differentiation of Innovation Management by Educational Status	52
Table 4.19. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Educational Status.....	53
Table 4.20. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Educational Status.....	54
Table 4.21. One-Way Analysis of Variance Results on the Variation of Innovation Management by Business Year	55
Table 4.22. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Business Year.....	55

Table 4.23. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Business Year	56
Table 4.24. Independent Sample T-Test Results on the Differentiation of Innovation Management According to the Firm's Export Status	57
Table 4.25. Independent Sample T-Test Results on the Differentiation of Business Performance According to the Firm's Export Status	57
Table 4.26. One-Way Analysis of Variance Results on Differences by Number of Employees of Innovation Management.....	58
Table 4.27. One-Way Analysis of Variance Results on the Variation of Business Performance by Number of Employees.....	59
Table 4.28. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by the Number of Employees	59
Table 4.29. One-Way Analysis of Variance Results on Differences by Working Status of Innovation Management	60
Table 4.30. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Working Status.....	61
Table 4.31. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Working Status	62
Table 4.32. Independent Sample T Test Results Regarding the Differentiation of Innovation Management According to the Innovative Product or Service in the Business	62
Table 4.33. Independent Sample T Test Results Regarding the Variation of Business Performance According to the Innovative Product or Service in the Business	63
Table 4.34. Independent Sample T-Test Results Regarding the Variation of the Innovation Business Performance Relationship According to the Innovative Product or Service in the Business	64
Table 4.35. Regression Analysis Results on the Impact of Innovation Management on Business Performance.....	64
Table 4.36. States of Hypotheses	69

LIST OF FIGURES

	<u>Page</u>
Figure 2.1. Factors Affecting Innovation.....	13



THE IMPACTS OF INNOVATION MANAGEMENT ON THE PERFORMANCE OF BUSINESS

ABSTRACT

Long-term planning in businesses has made it necessary to have some strategic and organizational skills in innovation management. In order to talk about a strategic capability, it is necessary to analyze market trends, the ability to predict, access and evaluate technological information. The most important factor of the innovative manager is to be aware of how to activate the creativity potential. Modern innovations consist of completely closed and one-sided communication. The center of the business is based on knowledge. Its values and beliefs from the past to the present form the structure of the business.

Keywords: Innovation, Management, Performance, Business.

İNOVASYON YÖNETİMİNİN İŞ PERFORMANSI ÜZERİNDEKİ ETKİLERİ

ÖZET

İşletmelerde uzun vadeli planlama, inovasyon yönetiminde bazı stratejik ve organizasyonel becerilere sahip olmayı gerekli kılmıştır. Stratejik bir yetenekten bahsetmek için pazar trendlerini, teknolojik bilgiyi tahmin etme, erişme ve değerlendirme yeteneğini analiz etmek gerekir. Yenilikçi yöneticinin en önemli unsuru yaratıcılık potansiyelini nasıl harekete geçireceğinin farkında olmaktır. Modern yenilikler tamamen kapalı ve tek taraflı iletişimden oluşmaktadır. İşin merkezi bilgi üzerine kuruludur. Geçmişten günümüze değerleri ve inançları işletmenin yapısını oluşturmaktadır.

Anahtar Kelimeler: İnovasyon, Yönetim, Performans, İşletme.

1. INTRODUCTION

With globalization, the need for innovation is increasing rapidly. Businesses have to respond very quickly to the volatility of the market in order to survive. In this context, it is necessary to give importance to innovation in order for the service to develop, companies to maintain their market shares and to enter new markets. The ability of an enterprise to gain competitive power among its competitors depends on the differences and innovations it creates by using information and developing technology in products, services and processes. Organizations that acknowledge that innovation is the main link between technology and competitive advantage, invest in innovation and follow both technology and innovations and remain competitive with competing businesses. Because the most important factor in the survival of businesses is the ability to innovate. The more innovation a business is capable of, the more it increases its competitiveness and permanence capacity. The main reason for businesses to be dominant in the market is again as innovation.

Long-term planning in businesses has made it necessary to have some strategic and organizational skills in innovation management. In order to talk about a strategic capability, it is necessary to analyze market trends, the ability to predict, access and evaluate technological information. The most important factor of the innovative manager is to be aware of how to activate the creativity potential. Modern innovations are completely closed to the outside environment and consist of one-sided communication. The center of the business is based on knowledge. Its values and beliefs from the past to the present form the structure of the business.

Big competition in businesses is generally over customers. This situation brings customer relations to the fore. This happens by improving technological capability and lowering costs. Such goals direct businesses to new organizational structures and ways of doing business. Technological innovations can cause the product to change in the market. In order to create competitive power, it is necessary to have the necessary strategies, to invest in qualified human resources, to continue

innovations, and to quickly launch products that meet the demands and needs of customers.

The aim of this research is determined as research on the effects of innovation management on business performance of manufacturing companies. The research consists of four parts. In the first part, the conceptual framework that examines the definition of innovation, the importance of innovation, the source and diffusion of innovation, the factors affecting innovation and the types of innovation are discussed. In the second part, innovation management, the relationship between innovation and strategy, the contributions of innovation management to the business and the obstructive factors in innovation management are discussed. In the third part, there is a study for manufacturing enterprises. The fourth and last section includes the results and recommendations of the research.

2. LITERATURE REVIEW

2.1. Innovation Conceptual Framework

2.1.1. Definition of Innovation

Today, consumer needs are changing rapidly as a natural consequence of the rapid change and development of technology and environmental conditions. On the other hand, the presence of similar products in the market and the continuous increase in the understanding of the most ideal, fastest delivery and highest quality service in customer preferences constantly increases the need for difference. The difference is due to innovation, which has an important effect on consumer preferences.

The word innovation is a concept derived from the Latin root *innovare*, which means to do something new and different. In this respect, Webster defines innovation as a new and different result (Dill, 2010).

Innovation is defined as the introduction of new methods in the social, cultural and administrative environment. Innovation is the realization of its commercial presentation by adding value to the newly invented object. Therefore, accepting innovation as a technical word should be embedded in this way, it is innovations that turn into benefits by using new ideas and implementing existing knowledge in many different ways.

Innovation shows a result that occurs at the end of renewal and that renewal. In Dictionary of Business, being advantageous among competitors is defined as developing new approaches in design, production and product marketing in order to be innovative. It is the research of new products, production processes, services and organizations by improving the old. It was first described by Joseph Schumpeter as the driving force of development (Betz, 2011).

Internationally recognized sources include innovation in the OECD Oslo Manual (2005); It defines the application of the new marketing method of a new or significantly improved product in internal applications, in the organization of the workplace or in external relations.

Innovation is the process that covers the information and uses of different and useful products to be released and put on the market. With a simple definition, innovation is the stage where a different idea is brought from invention to implementation. This stage generally includes research, development and production stages.

The concept of innovation, which has been used since the 20th century, is the main purpose for developed and developing countries, and is in harmony with time and therefore social and technological changes. One of the most important reasons for the loss of power of empires and states established throughout the ages is due to the problems of not being able to adapt to these changing parameters or their being late (Baregheh, 2009).

2.1.2. Importance of Innovation

The wealth of science is a wealth based on the foundation of innovation. One of the words that enable the development of the economy is innovation, which enables works, methods, time, the market and people to constantly innovate. When we look at countries such as Japan, the Netherlands, Sweden and Singapore, it is observed that although the competitive advantage is very high, it is observed that competition depends on creativity and brainpower rather than obtaining it without effort. Companies that have new, different, interesting, durable, useful products with better features than those produced by competitors gain financial power, and companies that cannot develop themselves in this field are failing.

Scientists, researchers and practitioners emphasize the necessity and importance of innovation to improve the sustainability of the competitive environment. One of the current issues of the science and technology world in recent years is innovation. The reason for this is to ensure the development of the business by working on new or improved products, time, techniques or procedures by showing companies an advantage in competition. The nation can achieve economic growth and development, the quality of life will improve, and the competitive advantage between enterprises is developing depending on innovation (Walker, 1991).

The main reason why the need for innovation has increased so much today is the globalization process. While only a few products and very few competitive businesses existed in the sector in the past years, as a result of globalization, the sectors have expanded and all profit-oriented businesses have found themselves in an intense competitive environment. In this environment where the number and quality of rival businesses are increasing, the selection range of consumers has expanded. Therefore, businesses have to make a difference compared to their competitors in the products and services they offer in order to be the choice of consumers. However, another effect of globalization has been that rival firms can imitate the new ideas created very quickly. Under all these conditions, businesses that can innovate can be more successful than others.

Innovation emerges as the most important competitive strategy applied by companies to enter new markets, increase their current market share and achieve sustainability in the market. Today, price reductions alone are not sufficient as a means of competition (Cormican, 2003).

Another important effect of innovation for businesses is that it increases customer loyalty and ensures customer satisfaction.

Innovation is an indispensable element for both today's national economies and organizations. Innovation has become an important requirement for growth for local and national economies, for the welfare and social development of society, and for growth for businesses and large economies.

In the policy document published by the European Commission (European Commission) in 1995, the vital importance of innovation is explained as follows: Innovation ensures that social and individual needs are better met. Every new enterprise is born at the end of the innovation process. Businesses need constant innovation in order to maintain their competitive power. In order to maintain competitiveness, economic growth and employment opportunities, countries need to turn their new ideas into technical and commercial success (Maier, 1998).

Increasing competitiveness in a country results in an increase in the standard of living in that country; The increase in competitive power is directly proportional

to the increase in productivity. By transforming a country's equity into a product or service, the gaining of economic value from these products and services, on the other hand, is achieved through innovation. In this context, it appears that innovation is not only an economic but a social system. In the studies conducted by the researchers, the development of innovation and the increase in performance play a major role in the development of trade between countries and the long-term development of this development.

2.1.2.1. The Importance of Innovation for the Country's Economy

New technologies, new inventions, while affecting human life on the one hand, have also caused the social and economic balance in the world to change. One of the main reasons for the emergence of these changes is globalization, that is, the world has become a single market (Dill, 2010).

In order to get rid of this sameness as a result of globalization, companies have resorted to innovation, one of the most effective ways to increase competitiveness. Innovation not only affects the income and profit rates of enterprises, but also affects the economies of the country as a development tool. In the study of Michael Porter, which investigated the relationship between the innovation capability of countries in America and the gross national product, it was revealed that there is a directly proportional graph between the innovation ability of countries and their welfare levels.

Another importance of innovation for the country's economy is the increase in job opportunities.

Innovation plays a critical role in realizing economic growth and raising the standard of living. Their contribution to economic growth with technological developments and innovations is enormous. The United States owes half of their economic growth over fifty years to technological innovation.

2.1.2.2. The Importance of Innovation for Business

The ability of an enterprise to gain competitive power among its competitors depends on the differences and innovations it creates by using information and

developing technology in products, services and processes. Businesses that accept that innovation is the main link between technology and competitive advantage, invest in innovation and follow both technology and innovations and remain competitive with rival businesses.

Because the most important factor in the survival of businesses is the ability to innovate. The more innovation a business has, the more it increases its competitiveness and its permanent capacity. The main reason for businesses to be dominant in the market is again as innovation. In this respect, innovation is named as the most important source of businesses and new economy (Van de Ven, 2008).

Innovation is an important factor affecting the productivity of businesses. Giving importance to innovation activities enables businesses to produce at a lower cost compared to competitors. Businesses increase efficiency by developing new production methods and reducing costs, thus providing an undeniable advantage to their competitors.

In addition to the fact that innovation is a sustainable growth tool for businesses, increased customer reputation, increased media support, increased employee loyalty to the business, and the natural result of all these, rising revenue and profit margins are also very important benefits.

2.1.2.3. The Importance of Innovation for Society

Increasing job opportunities emerge as the most important social impact of innovation. In addition, it is possible for businesses to respond more effectively to the needs, demands and expectations of customers with the importance they attach to innovation. This will result in customer satisfaction and loyalty.

In terms of business employees, innovation provides a more energetic, creative and enthusiastic working environment, thus increasing satisfaction with working conditions.

2.1.3. Source of Innovation and Spread

Competitive advantage among enterprises, technological change, and developments, social motives, economic trends and the role of multinational firms

have pushed businesses to innovations. In this respect, today's innovation has an important effect on the formation of the competitive environment in economies, the emergence of new markets, rapid technological advances and the improvement of living standards.

2.1.3.1. Innovation Source

In today's conditions, many factors such as increasing supply and demand figures, increasing awareness of consumer rights with the development of consumer awareness, increasing customer expectations, easy access to markets with globalization and instant communication facilities that provide high-level communication affect competition, current conditions, supply and demand. This situation forces businesses to adapt to an era where continuous information comes.

One of the most important sources of innovation is consumers. So much so that customers voluntarily provide feedback to fully meet their needs and thus become one of the sources of innovation. The biggest advantage of this situation for businesses is that it is a kind of sales guarantee (Ortt, 2008).

The sources of innovation are seven. Four of these are called internal resources. These resources can be easily noticed by individuals within the business. Therefore, it is easy to determine, but it is difficult to develop an appropriate application. The remaining three sources of innovation are; It is external to the business and is called an external source of innovation.

According to Drucker (2002), the sources of innovation are arranged from top to bottom according to their reliability and predictability. These sources are listed as follows:

Table 2.1. Seven Sources of Innovation According to Drucker (2002)

INTERNAL INNOVATION RESOURCES	EXTERNAL INNOVATION RESOURCES
<p>Unexpected Developments: An unexpected failure can be turned into initiation of innovation efforts or into opportunities for businesses, and as a result, very important innovation work can occur. For this reason, entrepreneurial enterprises prepare periodic reports for the results below expectations and the problems that arise in order to turn these types of situations into opportunities.</p>	<p>Demographic Changes: Changes in population, age distribution, occupation distribution, education and geographical settlements can show a rapid change in the 21st century. Changes in demographic structure may be necessary to design innovations in production and service processes to meet consumer needs.</p>
<p>Incompatibility Situations: The difference between the concrete result and the expected result, a mismatch in the logic or rhythm of a process, is a possibility that opportunities for innovation may arise. This difference can be a mistake or an opportunity for innovation. At the right time, you can take advantage of the incompatible situation with the business strategy and reveal innovations.</p>	<p>Perceptual Changes: Changes in lifestyles, attitudes, value judgments and cultural values can be an innovation opportunity for businesses. When the general views, attitudes and beliefs of a particular society change, an opportunity for innovation may arise. Businesses may need to make innovations with changing living conditions. Rapid communication and information transfer affects societies.</p>
<p>Process Requirements: Needs arising during the process encourage innovation. What is done in the process is focused on the task, not the situation, that is, design. New information can be designed to replace old information. If a weak link is visible in a process that has not been corrected by those around them, it creates an opportunity for a person or business to correct the weak link.</p>	<p>New Knowledge: New knowledge is the starting point for businesses to innovate. New information is considered an important variable for the innovation capacity of businesses, as it can offer unique opportunities. Advances in scientific or non-scientific knowledge can create new products and new markets.</p>
<p>Changes in Market Structure and Industry: If the base of an industry or market is changing, an innovation opportunity arises for product, service and business approach. Opportunities; There may be changes in customer needs, suppliers, competitors and other events.</p>	

Source: Drucker, P.F., (2002). *The Discipline of Innovation*,

Thibodeau et al. (2002), in another grouping, lists the resources within the business as knowledge, skills, learning ability, entrepreneurial characteristics,

information technologies, human resources, data storage systems and sales, while Calantone and Stanko (2007) added their work and experience to internal resources. External resources, on the other hand, are determined as the relationships between enterprises, scientific institutions, governments, public institutions and universities in the field of innovation.

The variables stated above and stated as the source of innovation are more meaningful in terms of management. Von Hippel (2007), on the other hand, gathered innovation sources in three groups as users (consumers), producers and suppliers. Also; Grabher et al. (2008) added competitors to these sources. For marketers, this latest innovation source classification has been deemed more important and analyzed.

Consumers: Consumers are one of the most important resources influencing and guiding the innovation decision process of organizations. Continuous change in consumer demands, increasing service expectation and demand increase the competition in the markets. Especially the desire to meet the needs of consumers in the market and to produce products and services that are suitable for the changes in their lives encourages businesses for innovation activities. Considering the consumers not only as the user but also as the party benefiting from their thoughts about the product or the quality of the service provided, ensures a tight and dynamic cooperation between the business and the consumer in terms of innovation.

Manufacturers: Another source of ideas that are important in the innovation process are manufacturers. Although the R&D department of the enterprises often plays an important role in the generation of new ideas and innovation development process, new ideas are not always sourced from this department. Ideas that can be the source of new products and services can be generated by the departments of the company such as marketing, production, finance, public relations and customer relations. Even though new product ideas have been put forward by a part of the business, the support and contribution of other departments is inevitable in transforming this into new products, services and processes. In the innovation development process, radical product innovation,

which is sometimes produced by any part of the business, can be developed by other units from various angles and transformed into incremental product innovation. In this process, it is important to ensure interaction and functional cooperation between departments and to develop new products and services. This makes it inevitable to establish a dynamic organizational structure within the company (Bessant, 2014).

Suppliers: Ensuring supplier participation in the innovation process is becoming more and more important day by day. Suppliers generally participate in the innovation development process with the aim of reducing product design, product life cycle and production costs, and increasing product quality. In addition, cooperating with suppliers in the creation of the production system with concept development, supply chain and product design makes a significant contribution to the use of existing knowledge in the innovation process.

Competitors: It is not always the right approach to constantly seek new ideas to assist the innovation process in the internal dynamics of the business. It is also possible to obtain the new ideas and technological information needed from research enterprises or competitors. This information transfer between enterprises can be provided within the framework of a number of agreements. New ideas and information obtained from competitors can create a source of innovation with the company's own marketing strategy. For example, market leaders Microsoft and Coca Cola have taken the ideas of many products from their competitors. This formal exchange of ideas prevents the stealing of ideas and information of the business owners of ideas and secures their property and patent rights (Rogers, 1995).

2.1.3.2. Degree of Innovation and Spread

There are three concepts in the novelty of innovations. New for businesses; Entry levels for innovation are that this innovation is new to the business. If a product is new for the company, it is an innovation for those companies.

New to the world and new to the market; It is about whether innovation is done for different businesses or whether the business is the first to make innovation in

the market, industry or worldwide. The economic impact of innovation is related to the adoption of innovations in terms of different businesses. Information on innovation criteria; It can be used to select the developers and adopters of innovation, to examine the dissemination models and finally to reveal the leaders and followers in the market conditions (Windrum, 2008).

After the innovation meets the consumer for the first time, it can spread to customers, regions, countries, markets and companies through channels other than market or market. Without the diffusion of innovation, the economic impact of innovation will not be realized or will be very limited.

2.1.4. Factors Affecting Innovation

Smith et al. (2008), as a result of a study conducted on 102 articles, nine main factors affecting innovation management were determined. These; organizational culture, management style and leadership, resources, organizational structure, corporate strategy, technology, information management, employees and the innovation process. As a result of the examination, the organizational culture has been determined as the main factor that emerges and develops with changes in other factors in innovation management and affects all factors. When the relationships of nine factors are examined, it has been determined that technology, organizational structure, resources, management style and leadership factors are external factors that play an important role in innovation management.

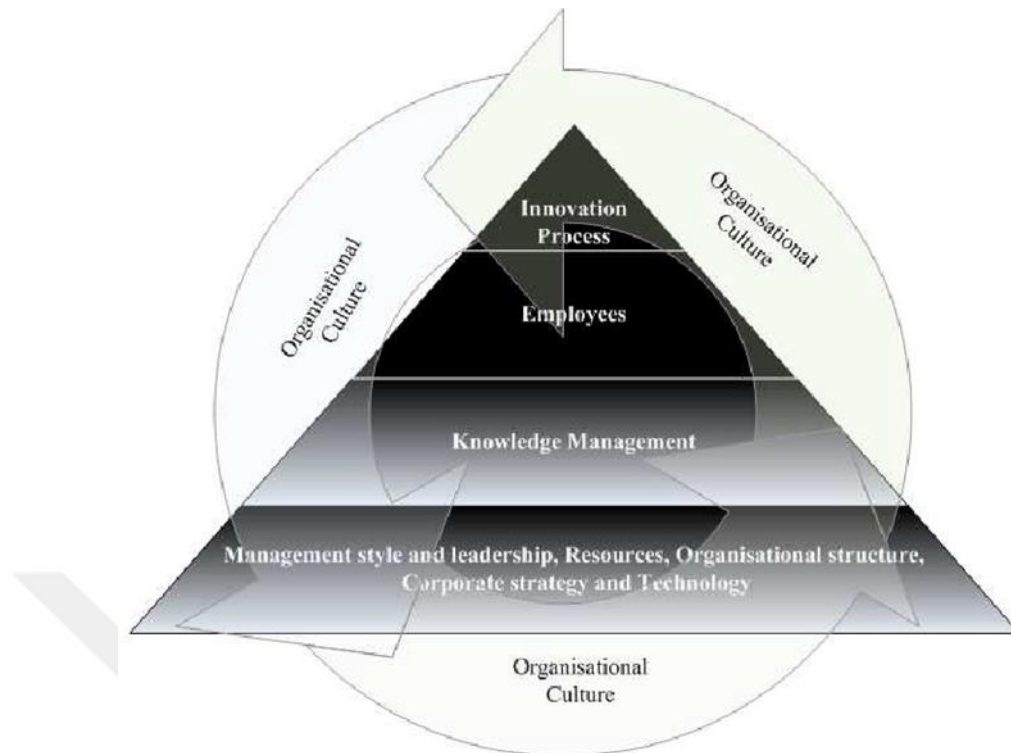


Figure 2.1. Factors Affecting Innovation

2.1.4.1. Vision

After the mission and vision definitions in the enterprises, innovation strategy applications should be started. A clear vision and mission statement that emphasizes innovation and quality, and the willingness to implement it, demonstrate the contribution it makes to the innovation of businesses (Afuah, 2003).

Vision development, which is defined as the vision development activities of the company, to see the future, to make predictions about the future and to determine the main goals and strategies according to these predictions, is an important step in this sense (Baregheh, 2009).

Defining the mission from the beginning, the company is able to see and redesign the basic duties and responsibilities and the function under a brand new perspective, as stated in the restructuring definitions.

2.1.4.2. Leadership

Leadership are components of organizational culture. It is the person who conveys the practices realized to achieve the goals and objectives of the building to the staff. They are the people who associate the meanings that the personnel attribute to the corporate policies and procedures of the enterprise. For this reason, leaders are also referred to as climate engineers.

2.1.4.3. Organizational Structure and Communication

One of the key factors affecting innovation is the way the organization is structured. The steeper the organizational structure and the sharper the hierarchy, the less likely the number of proposed innovations is. On the contrary, the adoption of the horizontal structure is expected to pave the way for intra-organizational communication and contribute to the more comfortable self-expression of all individuals. In this way, individuals' sense of belonging to the organization and individual self-confidence can be strengthened, and this can encourage individuals to innovate. Since communication will be visibly more comfortable in horizontal structuring, it is likely that the organization will become easier to learn and become routine after a while (Cropley, 2011).

2.1.4.4. Organization culture

The abilities and openness to learning of individuals in the organization also seriously affect innovation. Talented and hardworking individuals produce innovations at different levels as long as the necessary resources are provided. Whether these innovations will be used or not is related to the knowledge infrastructure and culture of decision makers. For this reason, it is essential for the innovation process that each individual within the organization is united around the same goal or set of goals. This is possible with activities in activities that will provide organizational learning.

2.1.5. Types of Innovation

Some authors in the literature have made various classifications for the types of innovation. These classifications are as follows;

While examining the creative side of "creative destruction", Schumpeter mentioned that there are five types of innovation. These; new products or services, new means of production, new markets, new resources, and the opening of sectors that were previously closed.

Innovation is divided into 8 types by Geoffrey Moore. These are disruptive strategic innovation, application innovation, new product innovation, process innovation, experience innovation, marketing innovation, business model innovation, structural innovation (Basadur, 2006).

In the Oslo Manual published by the OECD and the European Commission, it is divided into four types according to innovation areas: product, process, marketing and organizational (Oslo Manual, 2005). As the Oslo Manual is internationally recognized, types of innovation will be analyzed under these four main headings.

Innovations in the product cause significant changes in the capacity of goods and services. Changes made to existing products in goods and services include the novelty of the product. Sample; The scope of a new product is mobile phone product innovation. Another example is the internet feature added to mobile phones is an innovation product. Considering the service sectors, having ATMs and purchasing flight tickets over the internet are examples of process innovations. New organizational methods represent organizational innovation.

2.1.5.1. Product Innovation

Product innovation is called "developing a new product or making changes on the product and introducing these products to the market". It includes the introduction and improvement of an improved good or service in addition to its existing features.

Product innovation associated with the changes can differ in the form of improved product innovation. New product innovations are transformative innovations. It is to produce a new product with a new function and to apply new principles for functionality. We can give the transition from Windows 95 to Vista as an example. These innovations are also called product diversification. If the business

supplies a new product to an old market, this innovation is in the form of product differentiation.

Types of product innovations can be listed as follows (Cormican, 2003);

New Product for the World: These types of products, which are obtained as a result of studies in innovation development processes and offer completely new solutions to customers, create a completely new market segment.

New Product for Business: Includes products available in markets that are completely new to the business. This type of product innovation causes the business to enter the new market.

New Product in the Existing Product Line: These are products that are new for the business but fit the existing product line.

Development and Improvement of Existing Products: It is the product innovation obtained as a result of small changes and improvements made in existing products. This type of innovation offers customers improved performance or more perceived value than before.

Repositioning the Existing Product: The existing product is introduced to new markets.

Reducing the Cost of the Existing Product: It indicates new products where the same performance is offered at a lower cost. Although there is a significant decrease in the costs of the products, the product does not change.

The new products introduced by businesses must be distinctly different from previous ones. The best example of this is seen in data storage systems. The limited information that was once carried on floppy disks is much larger today, but can be packed into small removable drives.

The main reason why businesses give importance to product innovation; The competition in the market is intense and difficult, the number of market segments is high, and the technology changes very rapidly. In addition to this, the change

and equalization of customer needs, the shortening of the life span of the products, and the need for new products in order to meet customer expectations and requests. In other words, this type of innovation is directly related to customer expectations and demands, and emerges as a result of the changes companies make in the products they offer to the market.

2.1.5.2. Process Innovation

Process innovation is a new method applied in production, development of distribution technique or improvement of previously applied methods and making them more active and dynamic. In process innovation, businesses are able to make products that others cannot do with much better methods, and this provides companies with a competitive advantage. Processes reduce unit production or delivery costs. It can be envisaged to improve quality or produce or deliver new or significantly improved products (Oslo Manual, 2005).

In other words, it is the changes seen in the methods followed in the production of the product or in the provision of the service. In this type of innovation, methods are developed to ensure that existing goods or services are presented to the economy more efficiently, and thus costs are reduced.

Technological process innovation, developed by Toyota in 1950, is a just-in-time method of production. Thanks to this method, only the products and parts needed are produced when and in the amount they are needed. Thus, while keeping stock amounts at a minimum level, productivity is increased and it provides flexibility to respond quickly to changes (Bessant, 2014).

2.1.5.3. Marketing Innovation

Marketing innovation aims to direct consumer needs to newly opened markets or shift to a new position in order to increase the profits of the business. Marketing innovation, which is outside of technology, has an extremely important share in terms of competition. Concepts such as image and reputation come to the fore in achieving commercial success. This type of innovation deals with the ability to quickly respond to the needs of customers, open new markets, or reposition an existing product in the market, while increasing the sales of businesses.

Marketing innovation,

- In the packaging of the product,
- In the marketing strategies of the product or service,
- In product or service promotion,
- It is the implementation of a new marketing strategy that includes important changes in pricing.

The usage characteristics of the product are not changed in marketing innovation. Changes are made regarding the design and appearance of the product. The best examples are seen in the furniture and car industry.

Marketing innovation consists of three stages. These are exploration, development and distribution. In the first stage, it is important to present the problems of the target audience correctly. In this way, it is investigated what kind of things can be presented to the target audience. During the development phase, useful and useful solutions are produced against problems. In the distribution phase, distribution activity is a process and is a continuity, therefore activities are carried out to ensure this continuity (Calantone, & Stanko, 2007).

Innovation in Product Design: Significant changes in the taste, appearance or form of products to introduce new flavors in food products with the aim of targeting new customers. For example, in relation to a body lotion, it is the bottle product design made to give the product a differentiating appearance for a new market segment.

In 2002, ketchup manufacturer Heinz introduced an upside-down plastic bottle packaging that was easily squeezed and made the sauce flow easier. As a result, this design became the product standard and competitors had to follow it.

Innovation in Product Positioning: They are new sales channels. Sales channels refer to systems used to sell goods and services to customers, not logistics methods that mainly deal with efficiency.

Innovation in Product Promotion: It is the use of new concepts for the promotion of the company's products and services. The first time use of significantly different media and technique, such as the use of advice from famous people, is a marketing innovation (Betz, 2011).

Innovation in Pricing: It is the use of new pricing strategies for the business to market its products and services. For example, it is the first time to use a new method of changing products according to demand, or it is an application that allows customers to select the desired product features on the website of the company and then see the price for the specified product. New pricing strategies are not considered as innovation.

2.1.5.4. Organizational Innovation

Companies do not only engage in innovation activities by improving, developing or differentiating their product, service, process or marketing structures. The company needs to develop, differentiate and renew its business, methods and methods in order to gain and maintain an advantage over its competitors in the market. The development of new working and business methods or the adaptation and use of existing methods to the company conditions is called organizational innovation. In the Oslo Manual, organizational innovation is defined as “the application of a new organizational method in the firm's business practices, workplace organization or external relations”. Thanks to organizational innovations, it can be achieved to increase business performance by reducing general management expenses, ensuring internal customer satisfaction, providing access to outsourced information or reducing hardware costs. Creating an organizational method is a result of strategic decisions taken by senior management that have not previously been implemented within the business, which will differentiate businesses from their competitors (Oslo Manual, 2005).

The kaizen method, which has been applied by Japanese enterprises such as Toyota and Komatsu since the 90's, and has become widespread all over the world, can be given as an example of corporate innovations. Kaizen is a "continuous improvement" approach. For more than 50 years, Toyota has been recognized as the lowest cost, highest quality automobile manufacturer, thanks to

the way in which all workers and all personnel have improved processes within the organization.

Types of innovation other than product, marketing, process innovation and organizational innovation can be listed as business model innovation and social innovation.

Business model innovation is defined as changing how work is done or business management with the aim of adding value. An example of business model innovation is the production and sales of systems that are configured according to the customer's request without keeping stock. Thanks to this innovation, Dell increased its revenue by eight times in 1998 and the stock market value increased 170 times after eight years. Following this success of Dell, companies such as IBM, Sony and HP have also switched to the production-to-order model (Windrum, 2008).

Social innovation is to provide a sustainable living space for the world, society and people, to produce and implement innovative solutions to existing social, economic and cultural problems. Social innovation is not only non-profit organizations, but also applications that can be implemented by profit-making businesses. Social innovation that supports sustainable life is an investment that targets financial and social return. Investors in this field are human rights and sustainability, consumer rights.

Another innovation diversification is made as follows (Cropley, 2011):

- **Incremental Innovations:** Incremental innovations are innovations that show a limited increase in the service or process of products, and are a group of innovations that have been and are being made to date.
- **Radical Innovations:** We can cite mobile phones and the internet as examples of radical innovations. Radical innovations are the realization of differences that were not considered and applied before in order to increase the added value and gain profit accordingly.

- Systematic innovations: Innovations in which each part interacts with each other. Each depends on the other. Sample; The success of electric cars can only be achieved with charging stations, suitable batteries and service points.
- Shocking innovations: Innovations that have a serious impact on the financial activities of the market and the businesses in the market. The feature that is at least as important as the innovation feature of shocking innovations is its effect. Because these effects can change the structure and characteristics of the market, cause existing markets to lose their function and open new markets. Chronologically, the most shocking examples of innovations are; Telegraph in 1837, telephone in 1876, commercial television in 1936, calculator in 1961, computer in 1965, portable phone in 1973, internet in 1989, Google in 1997. Among these examples, the invention of the telephone overshadowed the invention of the telegraph, and the invention and widespread use of the computer made the existence of first calculators, then encyclopedias almost unnecessary thanks to the internet and Google (Dorenbosch, 2005).

2.2. Effects of Innovation Management on Business Performance

2.2.1. Innovation Management

Being able to manage innovation is to contribute to the creation of something. Some leaders are forced to change in the face of a strong opposition. Innovations with few complaints make themselves accepted in a short time. Great leaders with good self-motivation can also motivate others.

A literature review on innovation is also available from Smith et al. (2008), by. The characteristics that affect innovation management were determined by the researchers in this study. As a result of the studies, nine important characteristics emerged: management style, leadership, resources, organizational structure, cooperation strategy, technology, knowledge management, employees and the innovation process (Smith et al., 2008).

In innovation management, it is necessary to focus on many effects in a systematic way, not just one effect. In addition, according to the researchers, the

key element in innovation is organizational culture. Organizational culture is formed and developed by changes that occur in different situations, because the key element is affected by the changes of other factors (Smith et al., 2008).

Measuring the innovation process is of great importance for both practitioners and academics. However, literature reviews are contradictory and may have confusing approaches. As a result of such situations, it is seen that there is no framework that includes the activities necessary to create marketable and functional products from ideas. Innovation management is carried out by researchers in the form of innovation management measurement and literature review and divided into seven titles: Input management, knowledge management, organizational culture and structure, innovation strategies, project management, portfolio management and commercialization (Enkel, 2009).

In this context, the researchers showed the innovation management measurement areas in Table 3.1 (Rogers, 1995).

Table 2.2. Innovation Management Measurement Areas

No	Frame category	Measurement areas
1	Input management	People, physical and financial resources, vehicles
2	Knowledge management	Idea generation, information storage, information flow
3	Innovation strategy	Strategic orientation, Strategic leadership
4	Organizational culture and structure	Culture and structure
5	Portfolio management	Risk and return balance, Optimization tool usage
6	Project management	Project efficiency, tools, communication, collaboration
7	Commercialization	Market research, market test, Marketing and sales

Innovation management provides businesses with a sustainable competitive environment. This management style should be maintained continuously, not when needed. Internal and external resources are required for the initiation and maintenance of the innovation management system. R&D studies are needed for this. The knowledge acquired about the customers' requests, needs and the market in which the business operates through R&D studies is the biggest factor in determining the innovation process goal.

Innovation, invention and managing change is based on making them assimilated and understandable. It can be very difficult to predict the success of an innovation. Many innovations are not implemented with the idea that they will fail because the success of innovations cannot be predicted or their future effects are not seen. Although it is a troublesome situation for businesses, they should not give up innovation. Because the future of businesses depends on using their innovation skills and capacities well (Faems, 2005).

In fact, adaptation to a new model is important in innovation management. As a result, since one of the most important goals of businesses is to continue the lives of businesses, they should gain competitive advantages and manage the innovation process well within this.

2.2.2. Innovation Management Process

In this section; The emergence of the need and the processes of generating, developing, producing and commercializing new ideas will be examined.

2.2.2.1. Arising the Need and Generating New Ideas

Organizations can only meet consumer needs with innovation, evaluate strategic marketing opportunities and get ahead of other businesses in competition. Innovative ideas, products and processes should be emphasized to ensure that the competitiveness of enterprises is sustainable.

Businesses spend a significant amount of resources to meet customer demands, to produce high quality products and to improve their products and processes. Both

situations, product and process development, besides being complex and intense, develop with innovation (Hidalgo, 2008).

The need for innovation arises when a business cares about customer needs and therefore needs to innovate. Customers may not always see the products and services of the business in line with its standards. In this case, businesses have to innovate. Also; This may be caused by the internal dynamics of the businesses. For example, the business may need these changes to get ahead in market competition. As a result, when the services and products of the business get ahead of their competitors, that business can be in a position to manage the market. The business may face innovations in line with managerial and individual requests from within its own organizational structure. These innovations may not be just about services and products. At the same time, the structure of the organization, processes, techniques and methods are also effective. The important thing here is to enable all business employees to freely present their innovation proposals.

The innovation process occurs with the emergence of new possibilities. Innovation can arise from inventions as well as from important research. Innovation has a place that cannot be ignored in the determination of customer values, expectations, needs and desires (Killen, 2008).

The communication network created in the innovation stages is important for the formation of thoughts. Firms can also obtain their innovative ideas and thoughts from internal and external sources. Idea generation can sometimes be a source of technical point of view, foresight, evaluation of a problem or opportunity rather than being commercial. Usually, the opportunity may have been seized by someone coming out of the business and coming up with any idea. When the opportunity in the market is recognized, the resulting innovation ideas are subject to the evaluation of many decision makers involved in business management. Ideas that find institutional support as a result of the evaluation proceed to the stages of development and commercialization. In this process, some thoughts may go to the end of the project, while some may not achieve the same success.

2.2.2.2. Development

At this stage, the possible future development of a possible innovation is examined. At the stage of the development of the idea of innovation, since the idea of innovation ceases to be an idea and turns into reality, the planned innovation becomes a physical product or a process. Since these are now in physical form, it is also possible to prepare a sample. In this case, the tasks can be fulfilled, the enterprise can be in the innovation process and continue R&D activities. The next step is to test the resulting sample and make the necessary corrections and improvements.

The impact of the ideas conceptualized during the development phase on customers, markets and employees is evaluated. In addition, technical, environmental and legal boundaries should be established. This stage may vary according to the development of the enterprise, the ability to use technology and its financial resources (Von Hippel, 2007).

2.2.2.3. Production and Commercialization

It is the output of a marketable service or product innovation process. Products and services for which market researches are created are produced and offered to the market. At this stage, the enterprise can realize its own production or enable other businesses to do it by agreement and leasing method. Market hold is provided by advertisements and sales enhancement. Considering the competitors' situations and customer needs, R&D studies should be given importance. Continuous flow of information to the business should be realized with the experience feedbacks of the customers about new products and services offered to the market and the continuity of innovation should be ensured for a sustainable success with the information obtained

2.2.3. The Relationship Between Innovation and Strategy

Strategy concepts have been defined with various expressions until today. These (Trott, 2008);

- Strategy according to Chandler (1990); To determine long-term goals and objectives in the business and to prepare appropriate activity programs by allocating the resources needed to achieve these goals.

- Strategy according to Andrews et al. (1965); It is an example of both goals and objectives and plans and policies to achieve those goals. The strategy defines what the job is and what should be.

- Strategy according to Hofer and Schendel (1978); These are activities that will harmonize the internal resources and capabilities of the enterprise with the opportunities and threats of the external environment, and strategy is a tool for senior management to adapt to internal and external changes.

Strategic innovation is a type of innovation that is not related to the product or service itself, but involves the management levels of the business and involves making strategic decisions. Strategic innovation is creating knowledge and taking innovative actions, expanding the market instead of reacting to customer demand, creating new markets, directing resources as it is linked to resources beyond product innovation, and generally creating a business strategy.

The most important factor in business performance is innovation. Blending processes and products with scientific developments and putting them on the market is a difficult process and it is not certain that there will be a commercial return. Therefore, organizational performance and innovation performance are interrelated, and resources and strategies must be consulted before innovation allocation (Utterback, 1994).

It is a strategy in the field of management that the company provides resources and has good relations with its environment in order to be ahead of its competitors. It is important to think multi-faceted in strategy, to analyze relationships, to determine goals and opportunities, and to obtain resources. As a result, strategy ensures reaching the goal in any impossibility. In strategy, it can be opportunistic in line with the business purpose.

2.2.4. Contribution of Innovation Management to Business

Innovation contributes to businesses in various ways. In general, it will be possible to direct the enterprises to R&D by increasing productivity, achieving competitive advantage, eliminating imbalances in payments, gaining loyal

customer masses, developing social responsibility awareness, institutionalization and branding (Salomo, 2007).

2.2.4.1. Increasing Efficiency

The purpose of measuring the productivity carried out within the companies is to determine to what extent the factors in production are included in the body of the products. With the measurement of efficiency, companies will achieve the objectives of urgently correcting deviations in production planning, tracking production activities on a daily basis, preventing waste of raw materials and materials, increasing the efficiency of equipment and machines, saving time and in addition to reducing costs. The first step in increasing productivity is to determine the problematic areas among the factors in question. The second process is to distinguish the factors that can be controlled. External factors of an enterprise that are not subject to internal auditing may sometimes be internal factors in a different enterprise. For example, factors outside of control in a business can become internal factors for regional or national institutions, governments, pressure groups and unions. Governments can develop good labor law, improve tax policy, improve social infrastructure, and make better use of natural resources. It is not possible for an enterprise to do these (Garcia, 2002).

2.2.4.2. Creating Competitive Advantage

Competitiveness can enable a business to survive or move forward with firm steps, and it can also trigger the business to hit the bottom. In this direction, increasing competitiveness is achieved not only by reducing costs but also by increasing productivity. The factors that provide competitive advantage are as follows (Maier, 1998);

- Speed to respond to the needs of the market
- Shortening of product life
- Product and service quality
- Design
- Development of new products and services

- Production of products and services according to customer requests
- New management and organization models

According to Ahmed (1998), the factors that provide competitive advantage are as follows;

- Original equipment design
- Durable products
- Production technology
- R&D and engineering
- Past customer experiences
- Flexibility of production and flexible production approach
- Strong partnership with joint ventures
- Strong marketing
- Strong import
- Cost leadership
- Product strength

Competition always occurs around customers. As a result, businesses can be customer focused. Advancing in technology and reducing expenses are two important facts for businesses. Advances in technology can also cause changes in the markets. Providing customers with fast products, having a qualified workforce, not disrupting innovation movements makes it easier to gain competitive power. In this context, while such a rapid and radical change is happening all over the world and the conditions of competition are rapidly re-determined, it is time to improve everyone's innovation abilities and transform this into corporate skill. In today's world of information abundant and widespread, opportunities are immense for businesses that have strong innovation capabilities

and are able to continuously transform these capabilities into innovations (Schiederig, 2012).

2.2.4.3. Social Responsibility Awareness

The concept of social responsibility includes the obligations of an enterprise to protect and improve the environment in which it operates. It includes the works carried out in order to increase the customer satisfaction and product or service quality by regulating the productivity of the enterprises in the product or service sector, the flow of information in a sustainable competitive environment, and the studies carried out to be sensitive to the environment and consumer health in product innovations with the understanding of Eco-innovation. The business is obliged to protect and improve the environment in which it operates (Mohr, 2010).

These obligations include meeting customer needs, increasing the welfare level and increasing employment.

2.2.4.4. Institutionalization and Branding

Institutionalization is perhaps the most necessary contribution of businesses as a result of innovation. Enterprises have included institutionalization in their development process in order to maintain their existence in a competitive environment. Institutionalization is actually about the acceptability of the business by its environment. Businesses are changing and being renewed with the pressures from the environment. Therefore, it is an accepting force in the institutionalization of environmental enterprises (Schiederig, 2012).

Branding is inevitable for innovative organizations. Businesses move towards branding after gaining a corporate identity. Branding is not an effort to place the product of the business in the market. As a result of branding, the company aims to be quality and synthesizes it with brand culture.

2.2.4.5. Elimination of Payment Imbalances

The table showing all economic relations of a country with other countries in a certain period is the balance of payments. Economic performances and innovation

performances are interrelated. Businesses can be suppliers or demanders. In the supplier position, while contributing to growth, the balance of payments model is challenged in the demand position. Those who demand can close their deficits by increasing their sales. Supplier businesses are businesses that have succeeded in innovation (Trott, 2008).

2.2.4.6. Loyal Customer Awareness

Fast production, increasing market share, high profit share, low inventory cost, safe and satisfactory workforce and more employment in businesses are provided with loyal customer awareness. In most of the researches conducted by marketing experts, it has been concluded that service quality can affect the formation of loyal customers positively or negatively. Loyalty can be expressed as the frequency of being a customer for a service or product and the continuation of positive thinking.

2.2.4.7. Orientation to R&D

The main purpose of the Research and Development function is to enable businesses operating in a constantly changing environment to keep up with these changes, to help them develop and grow, and as a result, to ensure the continuity of their vitality. Depending on this basic purpose, some other purposes of the R&D function can be listed as follows (O'Connor, 1998):

- To reduce production costs,
- To develop new products and processes,
- To improve employer-employee relations,
- Maintaining competitive power by keeping up with the developments of competitors,
- Finding new usage areas for existing products and materials,
- To find new production techniques or to improve existing production techniques,
- Increasing productivity in the business,

- To ensure the establishment of a management information system that will ensure correct and timely delivery of necessary information to the management.

2.2.5. Impeding Factors in Innovation Management

In some cases, there are reasons that hinder the idea of innovation in businesses. Factors hindering innovation and innovation management are presented below (Van de Ven, 2008).

Implementing innovation and the organizational and managerial changes that it brings into practice have become important elements in the life and development of businesses. In order for businesses to be successful according to market conditions, it is imperative to make innovations by evaluating their environmental opportunities and possibilities. However, positive or negative attitudes towards innovations always occur as a natural phenomenon.

Problems may also occur in the innovation management process. In this case, it is necessary to first identify the problems and then make decisions to prevent them. Barriers should be identified and classified.

High amounts of loans are also an obstacle to innovation. In general, short-term debt is required for the commercialization of products in the innovation process, and long-term debt is required for the entire innovation process.

In addition, employees leaving the business because their opinions are ignored and hierarchical violence can lead to the waste of innovative ideas. In this case, the application is prevented from being active. The important thing is that top management is open to innovative ideas. If management does not evaluate innovative ideas, employees with these ideas will not have much to do.

Since innovation requires continuous research and development, research and development are of great importance in the innovation activities of enterprises. For this reason, it can be said that research and development is an important element in the formation of a new product or innovation process. Deficiencies in

research and development activities can be shown among the factors that create barriers to innovation.

Research and development are very important in innovation because innovation requires R&D on an ongoing basis. If there is a lack of R&D in a business, it seems unlikely that innovation will occur (Porter, 1998).

Employees resist the social changes that come with these changes, rather than technical changes. The main reason employees resist change is that the innovation that emerges with change threatens the existence and continuity of the group.

Businesses need financial resources due to their organizations. Every innovation brings costs with it. Enterprises that are not strong in terms of equity may experience difficulties due to lack of resources while attempting innovation.

The market in the industry is a situation shared by one or several businesses. Businesses may be exposed to pressures if large companies in their sector form a cartel. Due to their structure and limited financial assets, businesses may not be able to show the necessary interest in innovation efforts if a cartel has been formed in the sector they operate in, and they may have no competitive advantages.

Outsourcing products / services / processes that allow the business to focus on its main activities, reduce costs, increase profitability, help efficiently utilize its resources, and successfully implement the downsizing strategy from companies that specialize in that field outside the organization. is provided. It refers to the scarcity of outsourcing that may be required for innovation. Business with outsourcing; It reduces costs, uses its resources more effectively, gains speed and increases operational performance.

According to the Oslo Manual, innovation activities can be blocked for a variety of reasons. There may be situations that do not start innovation studies at all, or that slow down innovation efforts or have a negative impact on predicted results. Businesses are likely to encounter some hurdles in the innovation process. The factors hindering innovation are listed below (Oslo-Manual, 2005);

a. Cost Factors

- Excessive risk perception
- Very high cost
- Insufficient funds within the enterprise
- Lack of financing from external sources

b. Information Factors

- Lack of innovation potential
- The shortage of qualified personnel within the enterprise
- The shortage of qualified personnel in the labor market
- Lack of market information
- Flaws in the availability of external services
- Difficulties in finding partners to cooperate in product and process development
- Difficulties in finding marketing partners - Staff behavior towards change
- Managers' behavior towards change
- Managerial structure of the entrepreneur
- Impossibility to direct staff to innovation activities due to production conditions.

c. Market Factors

- Uncertain demand for innovative goods and services
- Potential market controlled by existing entrepreneurs

d. Institutional Factors

- lack of infrastructure
- Weak property rights

- Legislation, regulations, standards and taxation

e. Other Reasons for Not Innovating

- No need to innovate due to previous innovation activities
- No need for innovation due to lack of demand for innovations

2.2.6. Business Performance

Performance; to do, to do, to practice means the power to accomplish a task. Business performance, on the other hand; It can be defined as the evaluation of all efforts of employees to fulfill the qualifications and requirements of the job in the realization of strategic, tactical and operational goals.

Although every business differs in terms of product or service, they are established to achieve their intended goals. In order for businesses to compete in global markets, they must produce their products with increased variety, high quality, low cost and in a short time (Morgan, 2012).

The most obvious goal of businesses, apart from social purpose organizations, is to increase their profits and continue their lives. For this reason, one of the main duties of business managers is; to achieve the strategic goals and objectives of the businesses in the best way

To be able to determine how far businesses can achieve their goals; it is generally associated with the determination of business performance. However, the contribution of business units or employees to the goals of the business in which they are located can also be revealed by directly determining the performance of the unit or employees. It is important to measure the performance of businesses in order to determine the position of the businesses in their fields of activity, to find possible differences with other businesses by benchmarking, and to improve the quality of internal and external activities (Neely, 2002).

The performance understanding of managers is to show a process that is constantly changing and renewed from the past to the present. During this process,

perceptions of performance that lost their value, were reconstructed and gained more importance, emerged. Generally; traditional methods represent old and outdated, contemporary methods represent new and modern performance evaluation practices.

Performance evaluation is important for decision makers in the business to make the right decisions and as a result, to increase the success rate of the business and to achieve its establishment goals. It is also important in terms of evaluating past studies and seeing the shortcomings of the company and eliminating them, determining and controlling the factors that affect performance and arranging the resources accordingly, establishing its future targets on more realistic bases and reaching the targets in a timely and more efficient way (Gonzalez-Benito, 2007).

3. RESEARCH METHODOLOGY

3.1. Purpose of the research

With this research, it is aimed to determine the effects of innovation management on business performance and to make an evaluation. For this purpose, a survey was conducted on innovation management and business performance in enterprises in Libya.

3.2. Research Method

During the research, related articles, books, theses and researches were scanned in detail.

The individuals participating in the research were informed about the scope of the study before the questionnaire forms were applied. The findings obtained and interpreted in this study were obtained by questionnaire application.

The research is a descriptive type of “general survey” (survey) model. Surveys are appropriate for research questions about self-reported beliefs or behavior. In scanning models, the event, individual or object that is the subject of the research is tried to be defined as it is in its own conditions. The important thing is to be able to observe the existing one without attempting to change and influence it. General screening model was used in this study.

3.3. Limitations of the Research

- The results obtained in the research are limited to the data obtained in this study.
- The results obtained in the research are limited to 120 manufacturing companies in Libya.
- The results obtained in the research are limited to the year 2021 when the study was implemented.
- The results obtained in the research are limited to the country of Libya, where the study was applied.

3.4. Universe and Sample

In the research, the universe of the study consists of 135 manufacturing enterprises in Libya. However; The survey forms of the surveyors who could not be found at the address and who did not fully answer the survey questions were not taken into consideration. In this context, the sample of the research was formed with 120 companies.

3.5. Research Hypotheses

The null hypotheses tested with the data obtained in the research are as follows:

H1: There is no gender difference between views on innovation management.

H2: There is no difference between the views on business performance by gender.

H3: There is no difference between the views on the Innovation Business Performance Relationship according to gender.

H4: There is no difference between the views on innovation management according to age.

H5: There is no difference between the views on business performance according to age.

H6: There is no difference between the views on the relationship between innovation and business performance according to age.

H7: There is no difference between the views on innovation management according to education level.

H8: There is no difference between the views on business performance according to education level.

H9: There is no difference between the views on the relationship between innovation and business performance according to education level.

H10: There is no difference between the views on innovation management according to the manufacturing time.

H11: There is no difference between the views on the operating performance according to the manufacturing time.

H12: There is no difference between the views on the relationship between innovation and business performance according to the manufacturing time.

H13: There is no difference between the views on innovation management according to the export status of the firm.

H14: There is no difference between the views on business performance according to the export status of the firm.

H15: There is no difference between the views on the relationship between innovation and business performance according to the export status of the firm.

H16: There is no difference between the views on innovation management according to the number of employees of the firm.

H17: There is no difference between the views on business performance according to the number of employees of the company.

H18: There is no difference between the views on the relationship between innovation and business performance according to the number of employees of the firm.

H19: There is no difference between the views on innovation management according to the employment status.

H20: There is no difference between opinions on business performance according to employment status.

H21: There is no difference between the views on the relationship between innovation and business performance according to the employment status.

H22: There is no difference between the views on innovation management, depending on whether there is an innovative product or service in the business.

H23: There is no difference between the views on business performance, depending on whether there is an innovative product or service in the business.

H24: There is no difference between the views on the relationship between innovation and business performance, depending on whether there is an innovative product or service in the business.

H25: Innovation management has no significant effect on business performance.

3.6. Data Collection Method

Within the scope of the research, three scales were used to be applied to the owners or employees of the manufacturing companies. The survey included innovation management, business performance, and the relationships between innovation management and business performance.

As a data collection tool; “Innovation Management Scale in the Context of Management Functions” by Damanpour et al. (2009) and “Scale for Determining the Effects of Innovation Management on Business Performance in Apparel Businesses” by Mir et al. (2016).

There are 13 items in the scale titled Innovation Management and are 5-point Likert-type statements between Strongly Agree and Strongly Disagree.

For the hypothesis tests tested in the findings and comment section of the research, the average total scores of the scale items, which are 1 point Strongly Disagree and 5 points Strongly Agree, were used.

There are 14 items in the scale titled Business Performance and are 5-point Likert-type statements between Very Bad and Very Good. For the hypothesis tests tested in the findings and interpretation section of the research, the average total scores of the scale items as Very Bad 1 point and Very Good 5 points were used.

There are 12 items in the scale titled Innovation Management and Business Performance Relationship and are 5-point Likert-type statements between Strongly Agree and Strongly Disagree. For the hypothesis tests tested in the findings and comment section of the research, the average total scores of the scale items, which are 1 point Strongly Disagree and 5 points Strongly Agree, were used.

The reliability coefficient was examined based on the Cronbach Alpha coefficient model in order to determine whether the prepared scales were suitable for the purpose of the research and whether they investigated the research topic. This method investigates whether the question in the scale expresses a whole showing a homogeneous structure. The reliability of the scale is interpreted under the following criteria, depending on the Cronbach Alpha coefficient:

If $0.00 \leq \alpha < 0.40$, the scale is unreliable.

If $0.40 \leq \alpha < 0.60$, the scale is low reliable.

If $0.60 \leq \alpha < 0.80$, the scale is quite reliable.

If $0.80 \leq \alpha < 1.00$, the scale is highly reliable.

As a result of the reliability analysis, the Cronbach Alpha coefficient of the "Innovation Management" scale applied to individuals was $\alpha = 0.87$, the Cronbach Alpha coefficient of the Business Performance scale $\alpha = 0.76$, the Cronbach Alpha coefficient of the Innovation Management Business Performance Relationship scale $\alpha = 0.82$. calculated. It was concluded that the scale used was quite reliable and the research continued.

3.7. Preliminary Evaluations of the Data

The necessary data for the research were obtained through the questionnaire applied to the interviewers. The raw data obtained through the questionnaire were transferred to the computer. In the process of finding an answer to the main problem of the research, SPSS 22.0 (Statistical Package for The Social Science) program was used.

The personal information of the participants was determined with 7 questions in the first part of the applied questionnaire. Frequency Analysis, Descriptive Statistics, Independent Sample T Test, One-Way Analysis of Variance and Regression Analysis were used to evaluate the answers given by the individuals within the scope of the study to the survey questions.

4. RESEARCH FINDINGS AND DISCUSSION

4.1. Research Findings

In this part of the study, the findings and comments on frequency analysis, descriptive statistics and hypothesis tests regarding the questionnaires and scales applied are given.

Table 4.1. Frequency Analysis Results of Gender Distributions.

	Frequency	Percent
Female	32	26.67
Male	88	73.33
Total	120	100

The frequency analysis results regarding the gender distribution of the individuals participating in the research are given in Table 4.1. Accordingly, it was observed that 73.33% of the participants were male and 26.67% were female. When the gender distributions are examined in general, it is seen that the number of men participating in the research is more than women.

Table 4.2. Frequency Analysis Results Regarding Age Distributions

	Frequency	Percent
18-34 years old	38	31.67
35-50 years old	71	59.16
51-70 years old	11	9.16
Total	120	100

The frequency analysis results regarding the age distribution of the individuals participating in the research are given in Table 4.2. Accordingly, it was observed that 59.16% of the participants were between the ages of 35-50, 31.67% were between the ages of 18-34 and 9.16% were between the ages of 51-70. When the age distributions are examined in general, it is seen that the participants between the ages of 35-50 are in the majority.

Table 4.3. Frequency Analysis Results of Educational Status Distributions

	Frequency	Percent
Primary education	29	24.16
High school	37	30.83
Associate's degree	19	15.83
Undergraduate	27	22.5
postgraduate	8	6.57
Total	120	100

The frequency analysis results regarding the educational status of the individuals participating in the research are given in Table 4.3. Accordingly, it was observed that 30.83% of the participants were high school graduates, 24.16% primary school graduates, 22.5% undergraduate, 15.83% associate degree graduates and 6.57% postgraduate degrees. When the distribution of educational status is examined in general, it is seen that the number of high school graduates is higher.

Table 4.4. Frequency Analysis Results of Working Year Distributions on Manufacturing

	Frequency	Percent
1-10 years	56	46.67
11-25 years	45	37.7
26-35 years	17	14.16
36 years and above	2	1.67
Total	120	100

The frequency analysis results regarding the working time of the companies of the individuals participating in the research on the manufacturing are given in Table 4.4. According to this, 46.67% of the participants have their company between 1-

10 years, 37.7% of them between 11-25 years, 14.16% of them between 26-35 years, 1.67% of them between 36 years and years. It has been observed that it has been operating on the production for over a period of time. When the activity periods of the companies of the participants in the manufacturing are examined in general, it is seen that the companies operating between 1-10 years are in the majority.

Table 4.5. Frequency Analysis Results of the Firm's Export Status Distributions

	Frequency	Percent
Yes	93	77.5
No	27	22.5
Total	120	100

The frequency analysis results regarding the exporting status of the companies participating in the research are given in Table 4.5. Accordingly, it was observed that 77.5% of the companies that the participants work with export, while 22.5% do not. When the export status of the companies is examined in general, it is seen that the majority of the companies within the scope of the research export.

Table 4.6. Frequency Analysis Results of Firm Employee Distribution

	Frequency	Percent
1-10 (Micro)	54	45
11-50 (Small)	51	42.5
51-250 (Medium)	9	7.5
251-500 (Large)	5	4.17
501 or more (Macro)	1	0.83
Total	120	100

The frequency analysis results regarding the number of employees of the companies where the individuals participating in the research work are given in Table 4.6. Accordingly, 45% of the companies that the participants work with have between 1-10 employees, 42.5% have 11-50 employees, 7.5% have 51-250 employees, 4.17% have 251-500 employees. It was observed that 0.83% of them had 501 or more employees. When the distribution of the number of employees of the companies is examined in general, it is seen that micro-scale companies are in the majority.

Table 4.7. Frequency Analysis Results of Working Position Distributions

	Frequency	Percent
Company owner	51	42.5
Managers/Assistant Managers	23	19.17
Chef	7	5.83
Department Manager	19	15.83
Employee	20	16.67
Total	120	100.

The frequency analysis results of the working positions of the individuals participating in the research are given in Table 4.7. Accordingly, 42.5% of the participants were company owners, 19.7% were managers/assistant managers, 16.67% were employees, 15.83% were department managers and 5.83% were chiefs. When the distribution of working positions is examined in general, it is seen that the owners of the companies are in the majority.

Table 4.8. Descriptive Statistics on the Innovation Management Scale

	Average	Std Deviation
The functional, usage characteristics, etc. of the products produced by our company. innovations in its features.	3.96	0.997
Our company produces parts, materials and so on. makes innovations in its technical features.	4.06	0.811
Our company includes new products completely different from the existing products it produces into its collection.	3.87	1.052
Our company is engaged in purchasing, production, delivery, etc. makes innovations in key processes.	3.88	1.045
Our company is engaged in manufacturing, assembly, collection and so on. makes innovations in sub-processes.	4.05	0.899
Our company takes customer requests and needs into consideration in the design of new products it produces.	4.19	1.03
Our company follows the national and international market while preparing its product collection.	4.2	1.033
Our company deals with packaging, positioning, promotion, pricing, etc. makes innovations in marketing management activities.	4.23	0.841
Our company is involved in reengineering, supply chain, etc. in management systems. implements new managerial practices.	3.9	0.997
Our company implements new organizational practices to facilitate information sharing between departments.	4.04	0.97
Our company has customers, suppliers, research institutes, etc. uses new organizational methods in its external relations.	3.75	0.905
While our company is preparing its product collection, it is emotional, symbolic, etc. for its users. develops products that make sense by reflecting values.	3.55	1.05
By examining socio-cultural models, our company reveals new product meanings that may be trending in the future.	3.79	1.065

The descriptive statistics regarding the opinions of the individuals participating in the research on the statements about the innovation management of the company they work for are given in Table 4.8. While evaluating the statements in the innovation performance scale, 1 point was given for Strongly Disagree and 5 points for Strongly Agree. Accordingly, the statements about which the

participants expressed the most positive opinion were “Our company is related to packaging, positioning, promotion, pricing, etc. makes innovations in marketing management activities.” with “Our company follows the national and international market while preparing its product collection.” has been observed. In other words, it was seen that the individuals participating in the research made innovations in the marketing activities of the companies they worked with and followed the national-international market.

The expressions about which the participants expressed fewer positive opinions compared to the other expressions were “Emotional, symbolic etc. develops products that make sense by reflecting values.” with “Our company has customers, suppliers, research institutes, etc. uses new organizational methods in its external relations.” have been observed. In other words, it was seen that individuals participating in the research expressed fewer positive opinions about products that make sense for the emotional values of their users and new organizational methods in their external relations when preparing the product collections of the companies they work with.

Table 4.9. Descriptive Statistics on the Business Performance Scale

	Average	Std Deviation
Quality level of the business relative to competitors	4.26	0.594
Competitiveness of the business relative to competitors	4.13	0.719
The situation of reducing the costs of the enterprise compared to the competitors	3.72	0.705
Efficiency of the business relative to competitors	4.1	0.726
Flexibility of the business relative to competitors	3.85	0.759
Time usage status of the company according to the competitors	4.1	0.726
The state of achieving the objectives of the business according to the competitors	4.13	0.658
Market share of the business relative to competitors	4.05	0.685
Business sales relative to competitors	3.99	0.607
Profitability of the business relative to competitors	3.7	0.821
The state of the company in achieving customer satisfaction relative to competitors	4.43	0.569
The product variety of the company according to the competitors	4.04	0.755
Continuous improvement activities of the business relative to competitors	4.28	0.620

Full participation of employees compared to competitors	4.63	0.791
---------------------------------------------------------	------	-------

Descriptive statistics regarding the opinions of the individuals participating in the research on the statements about the business performance of the company they work for are given in Table 4.9.

While evaluating the expressions in the scale of business performance, 1 point was given for Very Bad and 5 points for Very Good. According to this, the expressions about which the participants expressed the most positive opinion were "The state of full participation of the employees compared to the competitors." with "The state of the company in achieving customer satisfaction relative to competitors." has been observed. In other words, it has been seen that the individuals participating in the research show full participation and achieve more customer satisfaction compared to the competitors of the companies they work for.

The expressions about which the participants expressed less positive opinion compared to the other expressions were "The situation of reducing the costs of the enterprise compared to the competitors" and "The profitability of the enterprise compared to the competitors." have been observed. In other words, it was seen that the individuals participating in the research stated fewer positive opinions about reducing operating costs and operating profitability of the companies they work with compared to their competitors.

Table 4.10. Frequency Analysis Results on Innovative Product and Service Situation

	Frequency	Percent
Yes	103	85.83
No	17	14.17
Total	120	100

The frequency analysis results of the innovative product and service status of the individuals participating in the research are given in Table 4.10. Accordingly, it was observed that 85.83% of the participants answered yes, and 14.17% answered no. In other words, it has been seen that the company where the majority of the participants work develops innovative products and services.

Table 4.11. Descriptive Statistics on the Innovation Business Performance Relationship Scale

	Average	Std Deviation
Innovation management has increased the quality.	3.93	0.968
Innovation management has reduced costs.	3.59	0.912
Innovation management has increased the level of flexibility.	3.75	0.889
Innovation management has increased the speed.	3.73	0.894
Innovation management has ensured continuous improvement.	3.84	0.854
Innovation management has increased full participation.	3.61	0.827
Innovation management has enabled us to achieve our goals.	3.98	0.865
Innovation management has increased our market share.	3.93	0.841
Innovation management has increased our sales.	3.98	0.865
Innovation management has increased our profitability.	3.78	0.811
Innovation management has increased customer satisfaction.	4.17	0.825
Innovation management has increased diversity.	4.07	0.805

The descriptive statistics regarding the opinions of the individuals participating in the research on the statements about the relationship between innovation and business performance of the company they work for are given in Table 4.11. While evaluating the statements in the innovation business performance relationship scale, 1 point was given for Strongly Disagree and 5 points for Strongly Agree. According to this, the statements about which the participants expressed the most positive opinion were “Innovation management increased customer satisfaction.” with “Innovation management has increased diversity.” has been observed. In other words, it has been observed that customer satisfaction

and diversity have increased thanks to the innovation management of the individuals participating in the research.

The statements about which the participants expressed less positive opinion than the other statements were “Innovation management reduced costs.” with “Innovation management increased full participation.” have been observed. In other words, it was seen that the individuals participating in the research expressed fewer positive opinions than other statements about the innovation management of the companies they work with reduces costs and increases full participation.

Table 4.12. Independent Sample T-Test Results on the Variation of Innovation Management by Gender

	N	Average	Std Deviation	T Value	Sig. Value
Female	32	49.984	7.986	-0.439	0.542
Male	88	51.880	9.359		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to their gender status are given in Table 4.12. When the opinions of the individuals participating in the research were examined, it was observed that the average total score for women was 49.984, and the average total score for men was 51.880. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated statistical value of -0.439 t was not found to be statistically significant at the 0.05 significance level ($0.542 > 0.05$). In other words, it was seen that the opinions of the male and female participants participating in the research on the innovation management scale were similar. In this case, the H1 null hypothesis could be accepted.

Table 4.13. Independent Sample T-Test Results on the Difference of Business Performance by Gender

	N	Average	Std Deviation	T Value	Sig. Value
Female	32	58.413	6.820	0.19	0.723
Male	88	57.558	8.295		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the scale of business performance according to their gender status are given in Table 4.13. When the opinions of the individuals participating in the research were examined, it was observed that the average total score for women was 58.413, and the average total score for men was 57.558. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated 0.19 t statistical value was not found to be statistically significant at the 0.05 significance level ($0.723 > 0.05$). In other words, it was seen that the opinions of the male and female participants who participated in the research on the scale of business performance were similar. In this case, the H2 null hypothesis could be accepted.

Table 4.14. Independent Sample T-Test Results on the Variation of Innovation and Business Performance by Gender

	N	Average	Std Deviation	T Value	Sig. Value
Female	32	46.841	6.855	0.046	0.838
Male	88	46.423	9.145		

Table 4.14 shows the independent sample t-test results of the differences in the opinions of the individuals participating in the research on the scale of innovation business performance relationship according to their gender status. When the opinions of the individuals participating in the research were examined, it was observed that the average total score for women was 46.841, and the average total score for men was 46.423. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated 0.046 t statistical value was not found to be statistically significant at the 0.05 significance level ($0.838 > 0.05$). In other words, it was seen that the opinions of the male and female participants participating in the research on the innovation-business performance relationship scale were similar. In this case, the H3 null hypothesis could be accepted.

Table 4.15. One-Way Analysis of Variance Results on the Difference of Innovation Management by Age

	N	Average	Std	T Value	Sig. Value
--	----------	----------------	------------	----------------	-------------------

			Deviation		
18-34 years old	38	54.150	6.800	1.680	0.112
35-50 years old	71	49.727	10.469		
51-70 years old	11	52.770	8.480		
Total	120	51.679	9.185		

The results of one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to age groups are given in Table 4.15. When the opinions of the individuals participating in the research were examined, it was observed that the average of those aged 18-34 was 54.150, those aged 35-50 were 49.727, and those aged 51-70 were 52.77. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 1.680 F was not found to be statistically significant at the 0.05 significance level ($0.112 > 0.05$). In other words, it was seen that the opinions of the participants in different age groups participating in the research on the innovation management scale were similar. In this case, the H4 null hypothesis could be accepted.

Table 4.16. One-Way Analysis of Variance Results on the Variation of Business Performance by Age

	N	Average	Std Deviation	T Value	Sig. Value
18-34 years old	38	59.470	9.851	2.482	0.073
35-50 years old	71	55.641	6.850		
51-70 years old	11	61.770	2.440		
Total	120	57.649	8.108		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of business performance according to age groups are given in Table 4.16. When the opinions of the individuals participating in the research were examined, it was observed that the average of those aged 18-34 was 59.470, those aged 35-50 were 55.641, and those aged 51-70 were 61.770. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 2.482 T statistical value was not found to be statistically significant at

the 0.05 significance level ($0.073 > 0.05$). In other words, it was seen that the opinions of the participants in different age groups participating in the research on the scale of business performance were similar. In this case, the H5 null hypothesis could be accepted.

Table 4.17. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Age

	N	Average	Std Deviation	T Value	Sig. Value
18-34 years old	38	48.110	5.773	0.773	0.365
35-50 years old	71	45.127	10.944		
51-70 years old	11	47.437	5.123		
Total	120	46.467	8.887		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of innovation business performance relationship according to age groups are given in Table 4.17. When the opinions of the individuals participating in the study were examined, it was observed that the average of those aged 18-34 was 48.110, those aged 35-50 were 45.127, and those aged 51-70 were 47.437. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 0.773 T was not found to be statistically significant at the 0.05 significance level ($0.365 > 0.05$). In other words, it has been seen that the opinions of the participants in different age groups participating in the research on the innovation business performance relationship scale are similar. In this case, the H6 null hypothesis could be accepted.

Table 4.18. One-Way Analysis of Variance Results on the Differentiation of Innovation Management by Educational Status

	N	Average	Std Deviation	T Value	Sig. Value
Primary education	29	52.583	10.518	0.317	0.747
High school	37	52.323	6.161		
Associate's degree	19	50.543	9.491		
Undergraduate	27	49.895	11.255		
postgraduate	8	55.270	8.336		

Total	120	51.679	9.185		
-------	-----	--------	-------	--	--

The results of one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to their educational status are given in Table 4.18. When the opinions of the individuals participating in the research were examined, it was observed that the average of primary school graduates was 52.583, high school graduates 52.323, associate degree graduates 50.543, undergraduate graduates 49.895, graduate graduates 55.270. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 0.317 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.747 > 0.05$). In other words, it was seen that the opinions of the participants with different educational backgrounds on the innovation management scale were similar. In this case, the H7 null hypothesis could be accepted.

Table 4.19. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Educational Status

	N	Average	Std Deviation	T Value	Sig. Value
Primary education	29	57.520	5.389	0.04	0.923
High school	37	58.428	6.274		
Associate's degree	19	57.179	8.096		
Undergraduate	27	57.270	12.752		
postgraduate	8	57.270	2.874		
Total	120	57.649	8.108		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of business performance according to their educational status are given in Table 4.19. When the opinions of the individuals participating in the research were examined, it was observed that the average of primary school graduates was 57.520, high school graduates 58.428, associate degree graduates 57.179, undergraduate graduates 57.270, graduate graduates 57.270. The significance of the differences between

the means obtained was tested with one-way analysis of variance, and the calculated 0.04 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.923 > 0.05$). In other words, it was seen that the opinions of the participants with different educational backgrounds on the scale of business performance were similar. In this case, the H8 null hypothesis could be accepted.

Table 4.20. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Educational Status

	N	Average	Std Deviation	T Value	Sig. Value
Primary education	29	45.083	9.951	0.797	0.419
High school	37	49.323	6.135		
Associate's degree	19	43.997	9.280		
Undergraduate	27	45.645	11.035		
postgraduate	8	48.520	1.823		
Total	120	46.467	8.887		

The results of one-way analysis of variance regarding the differences in the opinions of the individuals participating in the research on the scale of innovation-business performance relationship according to their educational status are given in Table 4.20. When the opinions of the individuals participating in the research were examined, it was observed that the average of primary school graduates was 45.083, high school graduates 49.323, associate degree graduates 43.997, undergraduate graduates 45.645, postgraduate graduates 48.520. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 0.797 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.419 > 0.05$). In other words, it was seen that the opinions of the participants with different educational backgrounds participating in the research on the scale of innovation-business performance relationship were similar. In this case, the H9 null hypothesis could be accepted.

Table 4.21. One-Way Analysis of Variance Results on the Variation of Innovation Management by Business Year

	N	Average	Std Deviation	T Value	Sig. Value
1-10 years	56	50.270	9.259	1.512	0.133
11-25 years	45	51.562	9.836		
26-35 years	17	53.770	6.517		
36 years and above	2	63.770	0.637		
Total	120	51.679	9.185		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to the life span of the enterprises they work for are given in Table 4.21. When the opinions of the individuals participating in the research are examined, the average of those who produce for 1-10 years is 50.270, those who produce between 11-25 years 51.562, those who produce between 26-35 years 53.770, those who produce for 36 years and more 63.770 has been observed. The significance of the differences between the means obtained was tested with one-way analysis of variance and the calculated statistical value of 1.512 T was not found to be statistically significant at the 0.05 significance level ($0.133 > 0.05$). In other words, it was seen that the opinions of the business participants with different life spans participating in the research on the innovation management scale were similar. In this case, the H10 null hypothesis could be accepted.

Table 4.22. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Business Year

	N	Average	Std Deviation	T Value	Sig. Value
1-10 years	56	55.537	6.362	1.896	0.088
11-25 years	45	58.062	7.693		
26-35 years	17	62.270	12.322		
36 years and above	2	61.270	1.344		
Total	120	57.649	8.108		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of business

performance according to the life span of the businesses they work for are given in Table 25. When the opinions of the individuals participating in the research are examined, the average of those who produce for 1-10 years is 55.537, those who produce between 11-25 years 58.062, those who produce between 26-35 years 62.270, those who produce for 36 years and more are 61.270. has been observed. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 1.896 T was not found to be statistically significant at the 0.05 significance level ($0.088 > 0.05$). In other words, it has been seen that the opinions of the participants of the companies with different life spans participating in the research on the scale of business performance are similar. In this case, the H11 null hypothesis could be accepted.

Table 4.23. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Business Year

	N	Average	Std Deviation	T Value	Sig. Value
1-10 years	56	44.770	10.198	0.583	0.515
11-25 years	45	47.937	8.206		
26-35 years	17	47.870	6.516		
36 years and above	2	47.270	5.587		
Total	120	46.467	8.887		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of innovation-business-performance relationship according to the life span of the businesses they work for are given in Table 26. When the opinions of the individuals participating in the research are examined, the average of those who produce for 1-10 years is 44.770, those who produce between 11-25 years 47.937, those who produce between 26-35 years 47.870, those who produce for 36 years and more 47.270 has been observed. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 0.583 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.515 > 0.05$). In other words, it has been seen that the opinions of the participants of the companies with different life spans participating in the

research on the innovation-business-performance relationship scale are similar. In this case, the H12 null hypothesis could be accepted.

Table 4.24. Independent Sample T-Test Results on the Differentiation of Innovation Management According to the Firm's Export Status

	N	Average	Std Deviation	T Value	Sig. Value
Yes	93	51.247	10.218	0.211	0.523
No	27	52.543	6.804		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to the export status of the companies they work with are given in Table 27. When the opinions of the individuals participating in the research were examined, it was observed that the average of the employees in the exporting company was 51.247, and the average of the employees in the non-exporting company was 52.543. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated 0.211 t statistical value was not found to be statistically significant at the 0.05 significance level ($0.523 > 0.05$). In other words, it has been observed that the opinions of the participants in the research on the innovation management scale of the companies that do or do not export are similar. In this case, the H13 null hypothesis could be accepted.

Table 4.25. Independent Sample T-Test Results on the Differentiation of Business Performance According to the Firm's Export Status

	N	Average	Std Deviation	T Value	Sig. Value
Yes	93	45.586	9.193	0.019	0.702
No	27	46.040	8.134		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the scale of the innovation-business-performance relationship according to the export status of the companies they work with are given in Table 4.25. When the opinions of the individuals participating in the research were examined, it was observed that the average of

the employees in the exporting company was 45.586, and the average of the employees in the non-exporting company was 46.040. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated 0.019 t statistical value was not found to be statistically significant at the 0.05 significance level ($0.702 > 0.05$). In other words, it has been seen that the opinions of the participants in the firms that do or do not export, regarding the scale of innovation-business performance relationship, are similar. In this case, the H15 null hypothesis could be accepted.

Table 4.26. One-Way Analysis of Variance Results on Differences by Number of Employees of Innovation Management

	N	Average	Std Deviation	T Value	Sig. Value
1-10 (Micro)	54	51.176	8.653	0.092	0.926
11-50 (Small)	51	52.309	10.443		
51-250 (Medium)	9	50.603	8.889		
251-500 (Large)	5	55.270	.		
501 or more (Macro)	1	54.270	.		
Total	120	51.679	9.185		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to the number of employees are given in Table 4.26. When the opinions of the individuals participating in the research are examined, the average of employees in micro enterprises with 1-10 employees is 51.176, the average of employees in small enterprises with 11-50 employees is 52.309, the average of employees in medium enterprises with 51-250 employees is 50.603. It has been observed that the average of employees in large enterprises with 251-500 is 55.270, and the average of employees in macro enterprises with more than 501 employees is 54.270. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 0.092 T was not found to be statistically significant at the 0.05 significance level ($0.926 > 0.05$). In other words, it has been seen that the opinions of the employees in the company with different number of employees about the

innovation management scale are similar. In this case, the H16 null hypothesis could be accepted.

Table 4.27. One-Way Analysis of Variance Results on the Variation of Business Performance by Number of Employees

	N	Average	Std Deviation	T Value	Sig. Value
1-10 (Micro)	54	55.926	7.072	0.794	0.394
11-50 (Small)	51	59.616	9.764		
51-250 (Medium)	9	57.937	4.606		
251-500 (Large)	5	63.270	.		
501 or more (Macro)	1	54.270	.		
Total	120	57.649	8.108		

The results of the one-way analysis of variance regarding the differences in the opinions of the individuals participating in the research on the scale of business performance according to the number of employees are given in Table 4.27. When the opinions of the individuals participating in the research are examined, the average of employees in micro enterprises with 1-10 employees is 55.926, the average of employees in small enterprises with 11-50 employees is 59.616, the average of employees in medium enterprises with 51-250 employees is 57.937. It has been observed that the average of employees in large enterprises with 251-500 is 57.937, and the average of employees in macro enterprises with more than 501 employees is 54.270. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 0.794 F statistical value was not found to be statistically significant at the 0.05 significance level ($0.394 > 0.05$). In other words, it has been seen that the opinions of the employees in the company with different number of employees on the scale of business performance are similar. In this case, the H17 null hypothesis could be accepted.

Table 4.28. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by the Number of Employees

	N	Average	Std Deviation	T Value	Sig. Value
1-10 (Micro)	54	45.364	7.475	0.389	0.666
11-50 (Small)	51	47.078	11.166		
51-250 (Medium)	9	47.270	5.107		
251-500 (Large)	5	53.270	.		

501 or more (Macro)	1	54.270	.		
Total	120	46.467	8.887		

The results of the one-way analysis of variance regarding the variation of the opinions of the individuals participating in the research on the scale of innovation business performance relationship according to the number of employees are given in Table 4.28. When the opinions of the individuals participating in the research are examined, the average of employees in micro enterprises with 1-10 employees is 45.364, the average of employees in small enterprises with 11-50 employees is 47.078, the average of employees in medium enterprises with 51-250 employees is 47.270. It has been observed that the average of employees in large enterprises with 251-500 is 53.270, and the average of employees in macro enterprises with more than 500 employees is 54.270. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 0.389 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.667 > 0.05$). In other words, it has been seen that the opinions of the employees in the company with different number of employees about the innovation-business performance relationship scale are similar. In this case, the H18 null hypothesis could be accepted.

Table 4.29. One-Way Analysis of Variance Results on Differences by Working Status of Innovation Management

	N	Average	Std Deviation	T Value	Sig. Value
Company owner	51	49.539	11.734	0.819	0.380
Managers/Assistant Managers	23	52.732	4.301		
Chef	7	51.603	9.222		
Department Manager	19	50.714	11.201		
Employees	20	55.070	4.947		
Total	120	51.679	9.185		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to their working status are given in Table 4.29. When the opinions of the individuals participating in the research were examined,

it was observed that the average of the owners of the company was 49.539, the average of the managers / assistant managers was 52.732, the chiefs were 51.603, the department managers were 50.714, and the average of the employees was 55.070. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 0.819 T was not found to be statistically significant at the 0.05 significance level ($0.380 > 0.05$). In other words, it was seen that the opinions of the participants of different status participating in the research on the innovation management scale were similar. In this case, the H19 null hypothesis could be accepted.

Table 4.30. One-Way Analysis of Variance Results on the Differentiation of Business Performance by Working Status

	N	Average	Std Deviation	T Value	Sig. Value
Company owner	51	54.539	7.004	2.378	0.052
Managers/Assistant Managers	23	62.809	10.588		
Chef	7	58.270	6.487		
Department Manager	19	58.492	5.713		
Employees	20	57.937	7.362		
Total	120	57.649	8.108		

The results of one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of business performance according to their working status are given in Table 4.30. When the opinions of the individuals participating in the research were examined, it was observed that the average of the owners of the company was 54.539, the average of the managers / assistant managers was 62.809, the chiefs were 58.270, the department managers were 58.492, and the average of the employees was 57.937. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated statistical value of 2.378 T was not found to be statistically significant at the 0.05 significance level ($0.052 > 0.05$). In other words, it was seen that the opinions of the participants of different status

participating in the research on the scale of business performance were similar. In this case, the H20 null hypothesis could be accepted.

Table 4.31. One-Way Analysis of Variance Results on the Variation of Innovation and Business Performance by Working Status

	N	Average	Std Deviation	T Value	Sig. Value
Company owner	51	43.9615	10.631	2.310	0.053
Managers/Assistant Managers	23	46.3077	8.150		
Chef	7	44.3333	4.963		
Department Manager	19	51.6667	6.749		
Employees	20	51.4667	4.985		
Total	120	47.1970	8.887		

The results of the one-way analysis of variance regarding the differentiation of the opinions of the individuals participating in the research on the scale of innovation business performance relationship according to their working status are given in Table 4.31. When the opinions of the individuals participating in the research were examined, it was observed that the average of the owners of the company was 43.9615, the average of the managers / assistant managers was 46.3077, the chiefs were 44.3333, the department managers were 51.6667, and the average of the employees was 51.4667. The significance of the differences between the means obtained was tested with one-way analysis of variance, and the calculated 2.310 T statistical value was not found to be statistically significant at the 0.05 significance level ($0.053 > 0.05$). In other words, it has been seen that the opinions of the participants of different status participating in the research on the scale of innovation business performance relationship are similar. In this case, the H21 null hypothesis could be accepted.

Table 4.32. Independent Sample T Test Results Regarding the Differentiation of Innovation Management According to the Innovative Product or Service in the Business

	N	Average	Std Deviation	T Value	Sig. Value
Yes	103	52.350	9.526	0.949	0.218
No	17	49.583	7.944		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the innovation management scale according to whether there is an innovative product or service in their enterprises are given in Table 4.32. When the opinions of the individuals participating in the research were examined, it was observed that the average total score of the employees who had an innovative product or service in their business was 52.350, and the average total score of the employees who did not have an innovative product or service in their business was 49.583. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated t statistical value of 0.949 was not found to be statistically significant at the 0.05 significance level ($0.218 > 0.05$). In other words, it has been seen that the opinions of the employees who have an innovative product or service in their enterprises and those who do not, about the innovation management scale are similar. In this case, the H22 null hypothesis could be accepted.

Table 4.33. Independent Sample T Test Results Regarding the Variation of Business Performance According to the Innovative Product or Service in the Business

	N	Average	Std Deviation	T Value	Sig. Value
Yes	103	52.350	9.526	0.949	0.218
No	17	49.583	7.944		

The independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the scale of business performance according to whether there is an innovative product or service in their business are given in Table 4.33. When the opinions of the individuals participating in the research are examined, it has been observed that the average total score of the employees who have an innovative product or service in their business is 52.350, and the average total score of the employees who do not have an innovative product or service in their business is 49.583. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated statistical value of 0.949 t was not found to be statistically significant at the 0.05 significance level ($0.218 > 0.05$). In other words, it has been observed that the opinions of employees who have an innovative product or service in their

enterprises and those who do not have similar views on the scale of business performance. In this case, the H23 null hypothesis could be accepted.

Table 4.34. Independent Sample T-Test Results Regarding the Variation of the Innovation Business Performance Relationship According to the Innovative Product or Service in the Business

	N	Average	Std Deviation	T Value	Sig. Value
Yes	103	47.370	8.669	1.368	0.066
No	17	43.645	9.253		

Table 4.34 shows the independent sample t-test results of the differentiation of the opinions of the individuals participating in the research on the scale of the innovation-business-performance relationship according to whether there is an innovative product or service in their business. When the opinions of the individuals participating in the research were examined, it was observed that the average total score of the employees who had an innovative product or service in their business was 47.370, and the average total score of the employees who did not have an innovative product or service in their business was 43.645. The significance of the differences between the means obtained was tested with the independent sample t test, and the calculated 1.368 t statistical value was not found to be statistically significant at the 0.05 significance level ($0.066 > 0.05$). In other words, it has been observed that the views of employees who have and do not have an innovative product or service in their businesses on the relationship between innovation and business performance are similar. In this case, the H24 null hypothesis could be accepted.

Table 4.35. Regression Analysis Results on the Impact of Innovation Management on Business Performance

Model Summary				
R	R ²	Adjusted	Estimated	
0.409	0.1672	0.1573	8.389	
ANOVA				
	Total Squares	Mean Squares	F	Sig.
Regression	937.169	959.751	12.946	0.001
Waste	4481.857	69.823		
Total	5419.026			

Coefficients					
	Non-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Standard error			
Constant	23.7350	7.492	-	3.149	0.002
	0.469	0.132	0.395	3.588	0.001

The results of the regression analysis regarding the effect of innovation management on business performance are given in Table 4.35. Accordingly, it has been observed that innovation management, which is an independent sample, explains 15% of business performance, which is the dependent variable. In other words, 15% of the one-unit change in business performance is explained by innovation management. Dependent and independent variables were subjected to a model and whether the dependent variable, business performance, was explained by the independent variable innovation management, was tested with ANOVA. The statistical value of 12.946 F obtained as a result of ANOVA was found to be significant at the 0.05 significance level (Sig. 0.001<0.05). This result showed that the effect of innovation management on business performance is significant. With the established regression model (Business Performance = 23.7350 + 0.469 x Innovation Management), innovation management has a significant 15% effect on business performance.

4.2. General Results of Analyzes

When we look at the opinions of the participants on the innovative product and service situation, it is seen that the company where 85.83% of the participants work develops innovative products and services. In the opinions given by the individuals participating in the research to the statements about the relationship between innovation and business performance of the company they work for, it has been observed that customer satisfaction and diversity have increased thanks to the innovation management they work for.

According to the results of the frequency analysis regarding the gender distribution of the individuals participating in the research; It was observed that 73.33% of the participants were male and 26.67% were female. When the gender distributions are examined in general, the number of men participating in the research is higher than women. According to the results of frequency analysis regarding age distributions; it was determined that 59.16% of the participants were between the ages of 35-50, 31.67% were between the ages of 18-34 and 9.16% were between the ages of 51-71, and it was seen that the participants between the ages of 35-50 were in the majority. According to the results regarding their educational status; 30.83% of the participants were high school graduates, 24.16% primary school graduates, 22.5% undergraduate, 15.83% associate degree graduates and 6.57% postgraduate degrees; It was concluded that the number of high school graduates was higher in number.

According to the results of the frequency analysis regarding the working hours, 46.67% of the participants found their company between 1-10 years, 37.7% of them between 11-25 years, 14.16% between 26-35 years, 1.67% of them. It is understood that the company has been operating on the production for 36 years and more, and it is seen that the companies operating between 1-10 years are in the majority.

According to their export status; It has been observed that 77.5% of the companies that the participants work with export and 22.5% do not. When the export status of the companies is examined in general, it has been determined that the majority of the companies within the scope of the research export.

According to the results regarding the number of employees, 45% of the companies have 1-10 employees, 42.5% have 11-50 employees, 7.5% have 51-250 employees. It has been determined that 4.17% have between 251-500 employees and 0.83% of them have 501 or more employees, and it has been seen that micro-scale companies are in the majority.

According to the results of the frequency analysis of the working positions; It was observed that 42.5% of the participants were company owners, 19.17% were managers/assistant managers, 16.67% were employees, 15.83% were department

managers and 5.83% were chiefs. When the distribution of working positions is examined in general, it is concluded that the owners of the companies are in the majority.

According to the statements in the innovation management scale, among the statements about which the participants expressed the most positive opinion, "Our company is responsible for packaging, positioning, promotion, pricing, etc. makes innovations in marketing management activities." (4.23 ± 0.841) with "Our company follows the national and international markets while preparing its product collection." It was observed that the participation factor for the item (4.2 ± 1.033) was higher than the other items. In this direction, it has been determined that individuals make innovations in the marketing activities of the companies they work with and follow the national-international market.

"While our company is preparing its product collection, it is emotional, symbolic, etc. for its users. develops products that make sense by reflecting values." (3.55 ± 1.05) and "Our company is a member of its customers, suppliers, research institutes, etc. uses new organizational methods in its external relations." (3.75 ± 0.905) items were found to be lower than the others. In other words, it was determined that the individuals participating in the research expressed fewer positive opinions about developing products that make sense for the emotional values of their users and following the national-international market while preparing the product collections of the companies they work with.

According to the descriptive statistics regarding the opinions given by the participants to the statements about the business performance of the company they work for; The expressions in which they expressed the most positive opinion were "The state of full participation of the employees compared to the competitors" (4.63 ± 0.791) and "The state of obtaining customer satisfaction of the company compared to the competitors" (4.43 ± 0.569). It is seen that the least positive opinions are "Profitability of the enterprise compared to the competitors" (3.7 ± 0.821) and "The situation of reducing the costs of the enterprise compared to the competitors" (3.72 ± 0.705). Employees in this direction; It has been concluded

that instead of thinking about increasing profitability by reducing operating costs, they show high participation and sacrifice in order to gain customer satisfaction.

According to the results of the frequency analysis regarding the innovative product and service situation; According to the answers given by the majority of the participants (85.83% yes, 14.17% no), they are of the opinion that the company they work for develops innovative products and services.

When the Descriptive Statistics Table for the Innovation Business Performance Relationship Scale is examined, the most positive opinion is “Innovation management has increased customer satisfaction.” With the article (4.17 ± 0.825), it has been determined that customer satisfaction has increased thanks to the innovation management that individuals work with, and the least positive opinions are “Innovation management has reduced costs.” (3.59 ± 0.912) and “Innovation management increased full participation.” With the items (3.61 ± 0.827), the participants expressed an opinion that the innovation management of the companies they work with reduces costs and increases full participation.

According to their views on the innovation management scale, the average total score for women is 49.984 and the average total score for men is 51.880; According to their views on the scale of business performance, the average total score for women is 58.413 and the average total score for men is 57.558; with the average total score of 46.841 for women and 46.423 for men; It was concluded that the opinions of the male and female participants participating in the research on the innovation business performance relationship scale were similar.

When the opinions on the innovation management scale are examined by age groups, business performance by age group, and the innovation business performance relationship by age group, it has been determined that there is not much difference between the averages obtained, that is, the opinions of the participants in different age groups participating in the research are in the same direction.

Educational status of the individuals participating in the research; When examined according to the innovation management scale, business performance scale and

innovation business performance relationship scale, it was concluded that the opinions were similar according to the result, considering that there were no differences between the averages in the same way.

Table 4.36. States of Hypotheses

Hypothesis	Acceptance/Rejection Status
H1: There is no gender difference between views on innovation management.	Acceptance
H2: There is no difference between the views on business performance by gender.	Acceptance
H3: There is no difference between the views on the Innovation Business Performance Relationship according to gender.	Acceptance
H4: There is no difference between the views on innovation management according to age.	Acceptance
H5: There is no difference between the views on business performance according to age.	Acceptance
H6: There is no difference between the views on the relationship between innovation and business performance according to age.	Acceptance
H7: There is no difference between the views on innovation management according to education level.	Acceptance
Continuation of the Table 4.36	
H8: There is no difference between the views on business performance according to education level.	Acceptance
H9: There is no difference between the views on the relationship between innovation and business performance according to education level.	Acceptance
H10: There is no difference between the views on innovation management according to the manufacturing time.	Acceptance
H11: There is no difference between the views on the operating performance according to the manufacturing time.	Acceptance
H12: There is no difference between the views on the relationship between innovation and business performance according to the manufacturing time.	Acceptance
H13: There is no difference between the views on innovation management according to the export status of the firm.	Acceptance
H14: There is no difference between the views on business performance according to the export status of the firm.	Acceptance

H15: There is no difference between the views on the relationship between innovation and business performance according to the export status of the firm.	Acceptance
H16: There is no difference between the views on innovation management according to the number of employees of the firm.	Acceptance
H17: There is no difference between the views on business performance according to the number of employees of the company.	Acceptance
H18: There is no difference between the views on the relationship between innovation and business performance according to the number of employees of the firm.	Acceptance
H19: There is no difference between the views on innovation management according to the employment status.	Acceptance
H20: There is no difference between opinions on business performance according to employment status.	Acceptance
H21: There is no difference between the views on the relationship between innovation and business performance according to the employment status.	Acceptance
H22: There is no difference between the views on innovation management, depending on whether there is an innovative product or service in the business.	Acceptance
H23: There is no difference between the views on business performance, depending on whether there is an innovative product or service in the business.	Acceptance
Continuation of the Table 4.36	
H24: There is no difference between the views on the relationship between innovation and business performance, depending on whether there is an innovative product or service in the business.	Acceptance
H25: Innovation management has no significant effect on business performance.	Rejection

4.3. Discussion

In order to determine the innovation rates of enterprises and in which areas they innovate, enterprises were asked about their innovation status in product, process, organization and marketing innovations, and it was seen that the majority of enterprises made commercial innovations and realized at least one of the innovation types. These results can be evaluated as almost all of the enterprises have made significant innovations in the innovation areas specified in scale.

It can be said that businesses are trying to build an innovative organizational structure that can reveal these innovations with a product, process or marketing innovation, as they can develop new organizations and lead to the emergence of other innovations.

According to the statement of Damanpour (2009), they stated that examining the effect of innovation type on performance is insufficient to explain these relationships. Therefore, in his research, he considered the types of innovation in an integrated manner and examined the performance effect as a longitudinal case study rather than a single period. As a result of the researches, they benefited from the importance of longitudinal studies in understanding the change in organizational structures and innovation management.

In this respect, the participation of highly creative and competent human resources in terms of technical knowledge and skills should be ensured. However, reorganization, or in other words, reorganization is a long process and the loss of time experienced in this process is one of the factors that adversely affect the integrated performance of the enterprises. In this process, elements such as hiring new personnel, getting used to the job, personnel training are mentioned.

According to the results obtained in Kanber's (2010) "Innovation in Manufacturing Industry: Examining the Effects of Innovation Activities on Innovation Performance in Industrial Organizations", innovation activities and factors revealing innovation performance are the 110 manufacturing industries that are among the top 500 industrial companies in Turkey. It was determined by the survey study applied to the institution. As a result of the analysis; It has been seen that innovation types and collaborations have a positive effect on innovation performance, while innovation barriers are not effective on innovation performance, contrary to expectations.

All types of innovation positively affect innovation performance. It has been determined that the most independent variable affecting innovation performance is organizational innovation, followed by marketing innovation, product innovation and process innovation, respectively. Collaborating with organizations related to innovation activities positively affects innovation performance as expected.

Because the learning and knowledge dissemination that emerges through cooperation and close relations with organizations constitute the most fundamental source of innovation performance. Contrary to expectations, the factors that hinder innovation activities or projects do not affect innovation performance in any way. This may be due to the fact that the companies participating in the survey are well-established and generally large companies.

In the study conducted by Mir et al. (2016) to determine the effects of innovation management on business performance in ready-made clothing businesses; In medium and large-scale apparel enterprises, it is seen that the innovative visions they determined most in the increase of their performance are that the enterprises that innovate in the medium and large-scale apparel enterprises are more capable of carrying out innovation activities and providing innovation management compared to those that do not, and that their customer satisfaction is higher than their competitors, and that innovative organizational structures are tried to be achieved through innovative leaders. It is seen that this situation has an effect on the efficiency of the enterprises in general. When the effects of innovation managements realized in enterprises according to their types on their performance are determined; It is seen that product innovation management increases customer satisfaction, process innovation management reduces costs, organizational innovation increases speed and enables marketing innovation management to achieve its goals. In order to ensure sustainable innovation and performance increases in businesses, reward systems need to be implemented effectively.

5. CONCLUSION AND RECOMMENDATIONS

Factors such as the spread of companies to the world with globalization, developments in trade and technology, activities in the fields of production-service and consumers becoming more conscious are changing the structure of the market. Businesses develop various methods in the direction of product or service in order to increase their market shares and gain superiority in the developing competitive environment.

Businesses need to find more innovative methods as well as traditional practices for competitive advantage. Due to many factors such as responding quickly to market demands, the quality of products and services, the development of growth activities, and the production of products and services according to the wishes of customers, businesses need to give importance to innovation practices. At the same time, companies have to keep their organizational and capital structures strong in order to survive in an increasingly competitive environment.

The successes created by the competitive strategies developed in the enterprises do not last long because they are easily copied by the rival companies.

Those who do not want to lose their superiority to rival businesses have started to apply different methods. Innovation is an ongoing activity. For this reason, competitive advantage cannot be sustained with a single innovation. In addition, the innovation in the product or service should be integrated with all the activities of the enterprise. The success of companies by competing with their competitors in the market depends on their incorporation of strategic methods.

Businesses need to give importance to systems such as production, management, marketing, finance, accounting, information processing and R&D in order to realize their goals and objectives and increase their profitability. Depending on these systems, strategic management tools such as activity-based management and activity-based costing are two important methods. These two complement each other. These methods, developed for strategic purposes, provide the necessary support to businesses in the satisfaction of customers, the evaluation of

competitors and the creation of organizational structures. The costing method contributes to the reduction of costs by managing the activities.

In innovation management, businesses have to adapt to technological changes in order to ensure the continuity of their competitive attitudes. For this reason, it should be adopted that raising the quality of working individuals is the starting point of the idea that it will reflect on the quality of the enterprise. From the top management in the enterprises, the understanding that the personnel working at the lowest level is the next process and that customer satisfaction is paramount should be adopted. In order for the business to be successful, it is important to increase the level of talent, knowledge, skill and experience in human resources and to ensure that the tools and equipment needed in the processes are provided without delay. Those who achieve quality should be appreciated and supported with appropriate resources and assistance.

The aim of the research is to examine the production, market and financial performance relations of enterprises in human-oriented innovators and to examine the interactions between them. It is limited to studies examining the performance effects as a result of innovations in organizational changes with the case analysis method. The universe of the study is the production enterprises operating in Libya. One of the most important reasons for this choice is the higher possibility of accessing primary data and the serious and high research and development investments, which constitute a condition for innovation studies.

Innovativeness, production, marketing and financial performance variables were used in performance measurements in the enterprise. Product, process, marketing, innovation variables were used for innovation.

In data collection, "Innovation Management Scale" by Damanpour (2009), and "Scale for Determining the Effects of Innovation Management on Business Performance" (Annex-1) by Mir et al. (2016). Also; "Information Form" was used to determine the demographic characteristics of the participants. The scale used has five factors and consists of 47 items in total.

Within the scope of the research, the effect of innovation management on business performance has been tried to be determined. In this context; Questionnaire forms were applied to a total of 120 companies operating in the field of manufacturing registered in Libya Chamber of Commerce. The data obtained were transferred to the computer environment and the problems that were the subject of the research were tested with hypothesis tests. Differences in demographic characteristics were tested with independent samples t-test and one-way analysis of variance. As a result of the analyzes made, the results of the research as a whole are as follows:

The differentiation of opinions on the innovation management scale according to gender, age, education level, number of employees in the company, manufacturing year, export status, working status and whether there is an innovative product or service in the enterprise were examined. It was determined that the opinions on the innovation management scale were similar according to all demographic variables tested. The differentiation of the views on the scale of business performance according to gender, age, education level, number of employees in the company, manufacturing year, export status, working status and whether there is an innovative product or service in the enterprise were examined. It was determined that the opinions on the innovation management scale were similar according to all demographic variables tested. The differentiation of opinions on the scale of innovation management business performance relationship according to gender, age, education level, number of employees in the company, manufacturing year, export status, working status and whether there is an innovative product or service in the enterprise were examined. It was determined that the opinions on the innovation management scale were similar according to all demographic variables tested. As a result of the regression analysis on the effect of innovation management on business performance, a 15% effect of innovation management on business performance was determined.

In another possible study; The extent to which the managers and employees in the enterprise are open to innovations, the problems experienced in the adaptation process, their attitudes in innovation management, as well as whether the innovation management in manufacturing companies differs according to gender, age, education level, year of manufacture of the enterprise, export status and

working status. Research can be conducted on how innovation management improves business performance, possible problems and how to solve them.



REFERENCES

- Afuah, A.** (2003). Innovation management: strategies, implementation and profits.
- Ahmed, P. K.** (1998). Culture and climate for innovation. *European journal of innovation management*.
- Andrews, K. R., Learned, E. P., Christensen, C. R., & Guth, W. D.** (1965). *Business policy: Text and cases Homewood. Ill.* Irwin.
- Baregheh, A. R.** (2009). Towards a multidisciplinary definition of innovation. *Management decision*.
- Basadur, M.** (2006). The role of knowledge management in the innovation process. *Creativity and Innovation Management*, 15(1), 45-62.
- Bessant, J.** (2014). Strategic innovation management. *John Wiley & Sons*.
- Betz, F.** (2011). Managing technological innovation. *Hoboken, New Jersey: John Wiley & Sons*.
- Calantone, R. J., & Stanko, M. A.** (2007). Drivers of outsourced innovation: an exploratory study. *Journal of Product Innovation Management*, 24(3), 230-241.
- Chandler, A. D.** (1990). *Strategy and structure: Chapters in the history of the industrial enterprise (Vol. 120)*. MIT press.
- Cormican, K.** (2003). A collaborative knowledge management tool for product innovation management. *International Journal of Technology Management*.
- Cropley, D. H.** (2011). Measuring creativity for innovation management. *Journal of technology management & innovation*.

- Damanpour, F.** (2009). Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of management studies*, 46((4)), 650-675.
- Dill, D. D.** (2010). National Innovation and the Academic Research Enterprise: Public Policy in Global Perspective. *Johns Hopkins University Press*.
- Dorenbosch, L.** (2005). On- the- job innovation: the impact of job design and human resource management through production ownership. . *Creativity and innovation management*, 14(2), 129-141.
- Drucker, P. F.** (2002). The discipline of innovation. *Harvard business review*, 80(8), 95-102.
- Enkel, E. G.** (2009). Open R&D and open innovation: exploring the phenomenon. *R&d Management*.
- Faems, D. V.** (2005). Interorganizational collaboration and innovation: Toward a portfolio approach. *Journal of product innovation management*.
- Garcia, R.** (2002). A critical look at technological innovation typology and innovativeness terminology: a literature review. *Journal of product innovation management*.
- Gonzalez-Benito, J.** (2007). A theory of purchasing's contribution to business performance. *Journal of Operations Management*, 25((4)), 901-917.
- Grabher, G., Ibert, O., & Flohr, S.** (2008). The neglected king: The customer in the new knowledge ecology of innovation. *Economic geography*, 84(3), , 253-280.
- Hidalgo, A.** (2008). Innovation management techniques and tools: a review from theory and practice. *R&d Management*, 38(2), 113-127.
- Hofer, C. W.** (1978). *Strategy Formulation: Analytical Concepts*. St. Paul. MN. West.
- Kanber, S.** (2010). İmalat sanayinde inovasyon: Sanayi kuruluşlarında inovasyon aktivitelerinin inovasyon performansı üzerindeki etkilerinin incelenmesi.

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü, (Yayımlanmamış Yüksek Lisans Tezi), Adana.

- Killen, C. P.** (2008). Project portfolio management for product innovation. *International Journal of Quality & Reliability Management*, 25(1), 24-38.
- Maier, F. H.** (1998). New product diffusion models in innovation management— A system dynamics perspective. *System Dynamics Review: The Journal of the System Dynamics Society*, 14(4).
- Mir, M., Casadesús, M., & Petnji, L. H.** (2016). The impact of standardized innovation management systems on innovation capability and business performance: An empirical study. *Journal of Engineering and Technology Management*, 41, 26-44.
- Mohr, J.** (2010). Marketing of high-technology products and innovations. *New Jersey: Pearson Education*.
- Morgan, N. A.** (2012). Marketing and business performance. *Journal of the academy of marketing science*, 40((1)), 102-119.
- Neely, A.** (2002). Business performance measurement. *Cambridge university press*, 40, 42.
- O'Connor, G. C.** (1998). Market learning and radical innovation: A cross case comparison of eight radical innovation projects. *Journal of product innovation management*, 15(2), 151-166.
- Ortt, J. R.** (2008). The evolution of innovation management towards contextual innovation. *European journal of innovation management*, 11(4), 522-538.
- Oslo-Manual.** (2005). The measurement of scientific and technological activities. *Proposed Guidelines for Collecting an Interpreting Technological Innovation Data*, 30.
- Porter, M. E.** (1998). The role of geography in the process of innovation and the sustainable competitive advantage of firms. *Oxford University Press*.
- Rogers, E.** (1995). Diffusion of innovation. 4th ed. *New York: The Free Press*.

- Salomo, S.** (2007). NPD planning activities and innovation performance: the mediating role of process management and the moderating effect of product innovativeness. *Journal of product innovation management*, 24(4), 285-302.
- Schiederig, T.** (2012). Green innovation in technology and innovation management—an exploratory literature review. *R&d Management*, 42(2), 180-192.
- Smith, M., Busi, M., Ball, P., & Van der Meer, R.** (2008). Factors influencing an organisation's ability to manage innovation: a structured literature review and conceptual model. *International Journal of innovation management*, 12(04), 655-676.
- Thibodeau, J. C., Usoff, C. A., & Burnaby, P.** (2002). The importance of intellectual capital and its effect on performance measurement systems. *Managerial Auditing Journal*, 25.
- Trott, P.** (2008). Innovation management and new product development. *Pearson education*.
- Utterback, J.** (1994). Mastering the dynamics of innovation: how companies can seize opportunities in the face of technological change.
- Van de Ven, A. H.** (2008). The innovation journey. *Oxford University Press, USA*.
- Von Hippel, E.** (2007). The sources of innovation. . *Das Summa Summarum des Management*, 111-120.
- Walker, D.** (1991). Managing innovation. . *London: Sage*.
- Windrum, P.** (2008). Innovation in public sector services: entrepreneurship, creativity and management. *Edward Elgar Publishing*.

EDUCATION:

- A secondary school certificate from a school (alhayi aljamieii) for the academic year 1999/2000
- Bachelor: 2009, Tripoli University, Faculty of Chemical Engineering.

PUBLICATIONS:

Binkhalil, A. G. & Ulutagay, G., (2022). Effects of the Management of Strategic Innovation on The Performance of Company Innovation. *IJPSAT, International Journal of Progressive Sciences and Technologies*.