IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF AIR TRANSPORT MANAGEMENT

MASTER THESIS

THE EFFECTS OF MOTIVATION AND INNOVATION IN LIBYAN CIVIL AVIATION SECTOR ON OPERATING PERFORMANCE

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THESIS SUPERVISOR
ASST. PROF. OMAR KACHKAR

İSTANBUL, 2023

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by
BASEM OMAR MEFTAH MASAOUD

A project submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Air Transport Management

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Air Transport Management

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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of ibn Haldun University.

Date of Submission Seal/Signature

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

LİBYA SİVİL HAVACILIK SEKTÖRÜNDE MOTİVASYON VE İNOVASYONUN OPERASYON PERFORMANSINA ETKİLERİ

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Küresel rekabet ortamı, değişim ihtiyacının bir sonucu olarak depolanan bilgi ve teknolojiye dayalı inovasyon, işletmelerinin uzun vadede hayatta kalabilmesinde kilit rol oynamaktadır. Değişen koşullara ayak uydurabilmek, hem işletme içinde hem de işletme dışında yapılacak yeniliklere bağlıdır. Çalışan motivasyonunun çalışanın inovasyon performansını ne ölçüde etkilediği son zamanlarda işletme yöneticilerinin merak ettiği konulardan biri haline gelmiştir. Bağımsız değişkenlerden inovasyon ve çalışan motivasyonunun, bağımlı değişken işletme performansı üzerindeki etkilerini belirlemek amacıyla sivil havacılık sektörü üzerine yapılan bu çalışmada, inovasyon ve çalışan motivasyonunun sivil havacılık sektörü üzerindeki etkileri incelenmiştir. Çalışma sonucunda ilgililerinin yararına olacak bilgilerin elde edilmesi ve sunulması amaçlanmaktadır. Bu çalışma yalnızca araştırma yapılmadan önce belirlenen, Libya'nın sivil havacılık sektöründe faaliyet gösteren Mitiga Uluslararası Havalimanı ve Misrata Uluslararası Havalimanı'ndaki Libyan Airlines çalışanları üzerine gerçekleştirilmiştir. Araştırmada anket tekniği kullanılmış olup katılımcılardan elde edilen veriler SPSS paket programı ile analiz edilmiştir. Yapılan analizlerden elde edilen bilgiler doğrultusunda Libya Havayolları işletmelerinde, artan çalışan motivasyonu ve inovasyon faaliyetlerinin doğal bir sonucu olarak işletme performansının arttığı tespit edilmiştir. Bu açıdan bakıldığında sivil havacılık sektörü işletmelerinin çalışan motivasyonunu arttırırken aynı zamanda inovasyon faaliyetlerine de önem vermesi gerekliliği ortaya çıkmaktadır.

Anahtar Kelimeler: İnovasyon, İşletme Performansı, İşletmeler, Libya, Motivasyon, Sivil Havacılık.

ABSTRACT

THE EFFECTS OF MOTIVATION AND INNOVATION IN LIBYAN CIVIL AVIATION SECTOR ON OPERATING PERFORMANCE

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In the global competitive environment, innovation based on stored information and technology due to the need for change plays a crucial role in the long-term survival of businesses. Keeping up with the changing conditions depends on the innovations to be made inside and outside the company. The extent to which employee motivation affects the innovation performance of the employee has become one of the issues that business managers have been wondering about recently. This study will be conducted in the civil aviation sector to determine the effects of the independent variables innovation and employee motivation on the dependent variable operating performance. In this direction, the impact of innovation and employee motivation on the civil aviation sector was examined. As a result of the study it is aimed to obtain and present information that will benefit the interested parties. This study was carried out only on the employees of Libyan Airlines in Mitiga International Airport and Misrata International Airport operating in the civil aviation sector of Libya, which was determined before the research was conducted. The study used a questionnaire technique, and the data obtained from the participants were analyzed with the SPSS package program. In line with the information obtained from the analyses, it has been determined that the operating performance has increased as a natural result of improving employee motivation and innovation activities in Libyan Airlines enterprises. From this point of view, civil aviation sector enterprises need to increase employee motivation and attach importance to innovation activities simultaneously.

Keywords: Civil Aviation, Enterprises, Innovation, Libya, Motivation, Operating Performance.

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Basem Omar Meftah MASAOUD

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LIST OF SYMBOLS AND ABBREVIATIONS

CDs	Compact Discs
HR	Human Resource
HRM	Human Resource Management
ICAO	International Civil Aviation Organization
ISO	International Organization for Standardization
KMO	Kaiser-Meyer-Olkin Test
LCAA	Libyan Civil Aviation Authority
QMS	Quality Management System
R&D	Research and Development
SDT	Self-Determination Theory
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Sciences

CHAPTER I

INTRODUCTION

In our age, businesses aware of the requirements of the increasingly intense competitive environment with the globalization process become open to innovation and change by using their human resources, which are very important for them. The importance of knowledge and sharing, the ability to respond quickly to the need for change and innovation, and the effectiveness of the human factor enable the enterprise to reach its final goals (Hirani et al., 2010).

According to Paulussen (2016), innovations in the production process that will take place in the enterprise with the help of technology reduce costs and prevent the loss of money, time, and human resources by enabling the development of new ways of doing business (Edquist, 2010). Likewise, innovations to be realized in internal organizational practices increase the motivation and commitment of employees, which are called internal customers (Serdyukov, 2017). On the other hand, product and service innovations and presentational innovations to be realized to influence the external customers of the business include new and creative products and services developed for customers' needs and advertisements and promotions that will make them attractive (Blind, 2016). Where information and technology are used highly effectively, and competition has reached the highest level, it is inevitable for businesses that see innovation and change movements as a necessity and act in this direction to be profitable in the competitive environment (Kline & Rosenberg, 2010).

In addition to the fact that our age is managed with resources such as information, technology, and money, it has been accepted by all businesses that human resources are taken as the number one production factor (Herzberg, 2017). Since it is known that human resources are the only factor that will evaluate material resources and make them useful, emphasis is placed on practices that will attract human resources to the business, keep them satisfied, and increase their productivity. Human resources

practices, which have an increasing weight in companies, are the leading indicators of the value, understanding, and tolerance given to people (Lichtenberg, 2013). It has been understood that businesses cannot operate without human beings and that human beings are psychological and social entities rather than economic entities. In this context, the traditional management approach has been abandoned, and a modern management approach based on flexibility and autonomy practices, away from hierarchy, has been adopted (Reeve, 2018). Employees' commitment to the business, their desire, enthusiasm, desire, and satisfaction, in short, the motivations that enable them to take action for business success, would allow companies to gain profit, achieve sustainable competitive advantage, and have a reputation. For this reason, practices aimed at increasing employee motivation and job satisfaction are emphasized (Dörnyei & Ushioda, 2013).

The development of knowledge and technology and making them practical, transforming them into innovations necessary for the enterprise's survival, will basically be realized through human resources. It should be remembered that the innovation process starts with catching and evaluating opportunities (Joly et al., 2010). Individuals must see the options and generate ideas for the problem or need. For this reason, it is ensured that the creativity potential of each individual is revealed, and the business and the individual gain as a result of creative thinking and behavior. In this context, all kinds of practices that will motivate employees to innovate and reveal the existing creative potential are included in the enterprises (Edquist, 2013). An innovative and changeable business culture in the enterprise will lead the employees to be creative and imaginative. Thus, the necessary change and innovation movements for the health of the enterprise will begin (Röling, 2012).

Innovation and employee motivation are the data that exist in businesses to gain competitive advantage in the global competitive environment. Companies that can effectively lead these two critical data together reach sustainable development criteria and make a name for themselves in competition. Because the task undertaken by the individual in the innovation process is much more important than the source of finance and technology (Eitam et al., 2013), in short, curious, highly motivated individuals, researchers willing to learn and innovate, who realize the market need in advance, and who can put forward creative and original ideas by utilizing their knowledge, are

resources that should not be missed and retained for businesses (Weiner, 2013). In this context, keeping the motivation of the employees at a high level, avoiding the factors that will hinder their creativity, providing flexible applications that will give them freedom and autonomy, and providing transparency with applications for information sharing are among the essential duties of the enterprises. In addition, the innovative business culture created in the enterprise will increase the employee's motivation to contribute to the innovation process internally. As can be seen, innovation and motivation interact (Peters, 2015).

1.1. Research Problem

In the civil aviation sector's dynamic and highly competitive environment, understanding the intricate relationship between motivation and innovation and their combined influence on operating performance is imperative for sustainable growth and competitiveness. While previous research has separately examined the impact of inspiration and innovation on organizational outcomes, there needs to be more literature regarding their interplay within the specific context of the civil aviation sector.

Although the concept of innovation is the result that has been put forward, it is of great importance in innovation. Motivation is defined as all activities done to continuously motivate one or more people towards a particular purpose or goal (Béraud et al., 2021). Performance, on the other hand, is defined as the countable or uncountable results of the efforts or activities of the group or individuals during a specified process (Wang & Wang, 2012). In this context, it is aimed to reveal the effects of increasing employee motivation through innovation studies on the performance of the civil aviation sector, which was determined at the beginning of the study.

1.2. Research Question

By integrating innovation and employee motivation into the practices, businesses in the civil aviation sector can drive performance improvements, fuel growth, and maintain a competitive edge in the industry.

In this context, the central question of the research is, “What is the level of the effects of innovation and employee motivation on the performance of businesses serving in the Libyan civil aviation sector?

1.3. Research Objective

This study will be conducted on the Libyan civil aviation sector to determine the effects of the independent variables innovation and employee motivation on the dependent variable operating performance. In this direction, the effects of innovation and employee motivation on the Libyan civil aviation sector were examined. As a result of the study it is aimed to obtain and present information that will benefit the interested parties.

1.4. Research Hypothesis

Hypothesis 1: Increasing employee motivation has a positive and significant effect on the innovation activities of Libyan Airlines serving in the civil aviation sector.

Hypothesis 2: Increasing innovation performance has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.

Hypothesis 3: Increasing employee motivation has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.

Hypothesis 4: Increasing employee motivation and innovation performance has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.

1.5. Research Model

The following figure shows the model of the research.

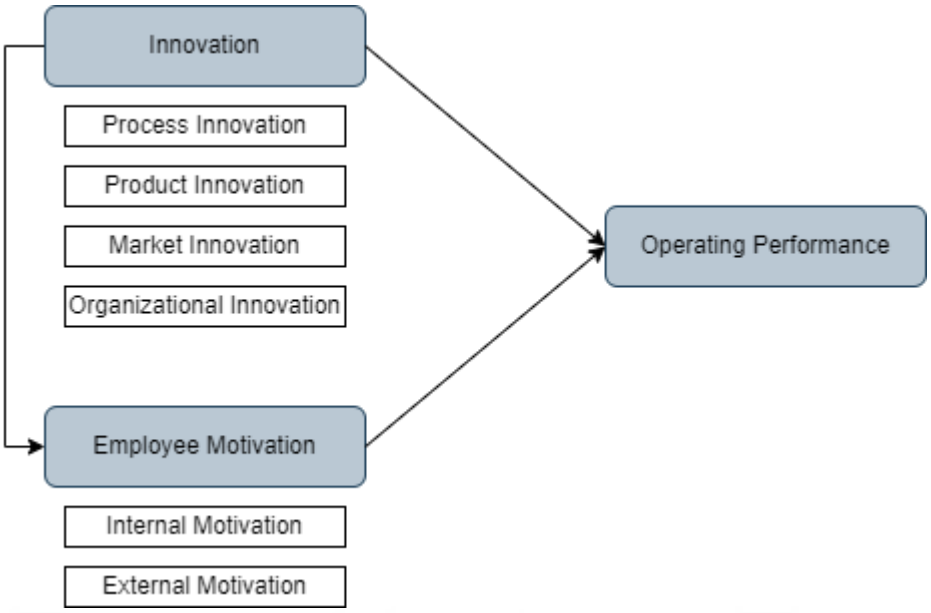

Figure 1.1. Model of the Research

CHAPTER II

LITERATURE REVIEW

2.1. Innovation

Innovation is not a new phenomenon. Probably as old as humanity. It is human nature to find ways to do new and better things and to do it in practice. Examples of this in the past have been seen with airplanes, automobiles, telecommunications, or, in the more distant past, innovations arising from the nature of the human species, such as fire, the wheel, the alphabet, and agriculture (Kline & Rosenberg, 2010).

The word "innovation" is used broadly and inconsistently in the media and business life. When we look at the Latin origin of the word, "IN-NOVA-TION" literally means "IN A NEW WAY," that is, a new way. *Innovation* can also be defined as successfully transforming new concepts and knowledge into new products, services, and processes that lead to new customers (Röling, 2012).

Innovation can be defined as producing another version of a product that has never been produced, even if it does not have an exact corresponding definition. It is derived from the Latin word "innovare," which means "renewal". Likewise, "innovation" also means the emergence of something new that differs from the traditional one (Edquist, 2010).

According to another definition of innovation, it is seen that new and improved products and processes are defined as new organizational structures, the use of existing technology in new areas, and the discovery of new markets. The concretization of a new idea or invention with a commercial activity is defined as innovation (Edquist, 2010).

Innovation within the business, business organizations, external relations, or the realization of a product/service or process significantly improved is a new marketing or organizational method (Joly et al., 2010).

Innovation is called the conversion of an idea into a marketable product or service, an improved method of production or distribution, or a social service method due to the transformation process in innovation—a marketable, new, or improved product, method, or service (Boudreau & Lakhani, 2011).

Innovation also means changing, renewing, and producing more creative and better products and services and trying something that has not been tried before. It is also defined as a process in which social and economic value is derived from knowledge by developing, implementing, and producing ideas that produce improved or new products, strategies, processes, or services (Blind, 2016).

Innovation is not seen as a separate activity on its own. There are processes of science and technology activity in innovation. What is expected from these processes is the transformation of an idea into a benefit in terms of theory, action, and result within the activity of science and technology, and it is of great importance that this benefit is combined with a marketable and concrete output. It would be wrong to define innovation simply as a renewal. Innovation: It is called a process that includes innovative products and the quality of being marketed. The countries' priority is seen as revealing and determining their innovation strategies. It is considered difficult and compulsory for nations to reveal their innovation strategies. The parts involved in the innovation process are as follows—: brain power, university, power, planning, industry, technology, industry, and market. For innovation to be accepted in a country, it is necessary to ensure that it is adopted and supported by everyone living there (Paulussen, 2016).

2.1.1. Differences between Innovation, Invention and Development and the Innovation Process

Today, innovation often needs clarification with the concepts of Invention and development. There is a severe difference between innovation and Invention.

Invention is seen as the initial idea of a new product or process. On the other hand, *innovation* is defined as the first commercialization experience of this idea, namely the enterprise. Sometimes, innovation and Invention are closely related, and it may take many years to become innovation (Johnson, 2011).

The concepts of Invention and innovation are similar but completely different. According to Van der Duin and Ortt (2020), Invention is the emergence of an idea for a new product or process, but innovation is an attempt to put it into practice. There is only a significant time delay between the two.

Another critical point for us to better distinguish the difference between innovation and Invention is that Invention presents a product or service that has yet to be discovered to humanity. Conversely, innovation makes an existing product and a service more optimal with significant changes (Freeman, 2013).

While Invention is expressed as introducing an idea or product that has never been discovered before, innovation is differentiating the existing product or service or creating new products and services with new information. In short, the distinctions between innovation and Invention are overwhelming. While they are mostly mentioned together, Invention and innovation are different. There are distinctions between them, which are essential (Serdyukov, 2017).

The difference between Invention and innovation is as follows. If the Invention is evaluated as a pebble thrown into the pool, the innovation is defined as the ripple effect caused by the pebbles. The inventor has to throw gravel. The other is an entrepreneur who realizes these ripples will eventually become waves and make innovations (Manso, 2011).

Entrepreneurs do not stand by the water. Before they mature, they watch the fluctuations and find the next big wave. It is the act of anticipating and driving the next big wave that drives the innovative nature of every entrepreneur. Innovation provides added value and will likely be a successful innovative solution that improves the process or output. However, innovation and improvement are often called our

innovation and improvement program or continuous improvement and innovation team (Mulgan & Leadbeater, 2013).

By examining the literature studies and articles, a combination of the steps considered in a standard way has been made, and a general opinion has been acted upon. The process of realizing this innovation consists of five steps. It is defined as a viable and sustainable process in organizations, businesses, production, and service sectors in every field. These steps are (Parmar et al., 2014):

- Generating and disseminating ideas,
- Defense and screening phase,
- Trials phase,
- Commercialization phase,
- It is the dissemination and implementation phase.

2.1.1.1. Generating and Disseminating Ideas

New ideas are created while trying to generate ideas. The spread of the idea occurs when that idea is transferred from a different physical and logical environment to another environment. Inspiration to create a new idea can arise as an improvement to an existing idea or spontaneously. Music Players waited and saw their move on the market for about three years before Apple released the excellent 1,000-song iPod. Contrary to this, the invention of Scottish Bands is seen as a new brand idea. Richard Drew, who was expelled from college and entered 3M company, told the story of this, saw that there was a need for tape that did not damage the car paint at that time. He had to overcome obstacles to complete his invention (Edquist, 2013).

3M has now begun to give its employees time to think about new ideas, up to fifteen percent of their working time. Other organizations have started to follow this model, and over time, influential organizations have begun to devote time and effort to their employees to bring new ideas. While doing this, again, managers should not go too far, and by making the right moves on the spot, they should not disrupt and slow down the typical workflow of the employees (Mulgan & Leadbeater, 2013).

Not all ideas are worthy of interpretation. Therefore, the advocacy and screening phase can help assess and measure an idea's potential, achievements, and problems. From this point of view, deciding on an idea can lead to the idea of the future (Edquist, 2013).

One of the most significant advantages of the defense and scan collaboration process is remediation. If the idea has potential, discussions and opinions will improve it. At this stage, the methods of the senior management to handle the idea, the talents of the person who came up with the idea, and the capacity to realize this is also important (Serdyukov, 2017).

Firms and organizations are trying to build a strong culture and make a few practical applications for this phase. In order to achieve these, companies must first sacrifice a portion of their income to their employees for any feedback. Second, organizations need to understand the challenges associated with evaluating ideas. Finally, organizations must build a transparent assessment and screening protocol (Parmar et al., 2014).

2.1.1.2. Trials-Experiencing Phase

In the trial phase, an idea is tested as a prototype or pilot. Experience cannot test the objective properties of an idea but can test the relevance of that idea for a particular organization in a specific period. Some ideas may be ahead of time or beyond the available capacity of companies or organizations. This is why such ideas can be shelved unexpectedly (Johnson, 2011).

The data that emerges as a result of experimentation or experimentation can sometimes lead to the formation of a new idea. Time is the most crucial concept in this process. For this, sufficient time should be given to those conducting the experiments.

Judging by the many work experiences associated with a new product or service, such as grocery stores, in 2007, Amazon made a significant breakthrough for the company by attempting to deliver its grocery delivery service to specific locations in the suburbs of Seattle. In this way, they aim to carry this service offered to consumers in places such as Los Angeles, San Diego, and New York City (Blind, 2016).

2.1.1.3. Commercialization Phase

The commercialization phase focuses on the potential impact of an idea. For this reason, establishing Market Value for the idea within the enterprise is emphasized. The things this step provides on business ideas are listed as follows. These (Joly et al., 2010):

• Ensuring the synchronization of an idea with other ideas,
• Explaining how and when the idea can be used,
• To make it attractive to the target audience by using the data and prototypes from the trials for benefit.

The most crucial part of commercializing is placing the features of any idea on the market. The promises and potential of innovation should be set aside at the first stage, and the actual benefits of innovation should be perceptible and communicateable. Commercialization is a process where innovation moves from development to persuasion. Once the idea has been clarified and a business plan created, it will be ready for dissemination and implementation (Röling, 2012).

2.1.1.4. Propagation and Implementation Phase

Diffusion and practice are like two sides of a disorder. Diffusion is the acceptance of an innovative idea by all, and implementation is preparing everything necessary for the innovation's development, use, or production (Manso, 2011).

Diffusion occurs at every stage of an organization. This process is often assisted by knowledge brokers who are instrumental in introducing an innovation, using their awareness of the specific content and application to which an idea, product, or service can be added. As a result, knowledge brokers can assist in rapidly implementing innovation (Kline & Rosenberg, 2010).

The use or application of the innovation should be demonstrated by the end of this phase, together with the innovation acceptance. For innovation to be successful in businesses, some situations are needed. These access to appropriate resources and the

need for an open culture with a marketing plan for customers and strong advocacy (Freeman, 2013).

2.1.2. Elements of Innovation

2.1.2.1. Trust

The quality of relationships plays a vital role in ensuring the individual's adaptation to social life. Establishing relationships based on trust between individuals in social life makes human life more meaningful. It is essential to establish healthy and long relationships based on trust between employees, managers, and other stakeholders in order for the established organizations to achieve a specific purpose in social life. Trust can be defined as trusting the other person's purpose, expectations, and words, the basis of communication and social relations, and the willingness to be limited by believing in people's words and actions. Trust plays a vital role in ensuring trust and effectiveness in institutions. It strengthens the trust of individuals in other employees and managers, communication, solidarity, and team spirit in the organization, and facilitates the achievement of the organization's goals. The environment of trust established in organizations enables employees to express their feelings and ideas freely, increases job satisfaction, and affects their performance positively. In organizations where trust is dominant, there is an internal commitment among employees whose energies are reflected in performance and success. The environment of trust in organizations will contribute positively to the realization of healthy relations, the loyalty of managers and employees to the institution, working in cooperation and solidarity and thus contributing to individual and corporate success (Dahlander & Gann, 2010).

2.1.2.2. Leadership

Leadership is the ability to influence the attitudes, thoughts, and behaviors of others working with and in the environment. The leader is the person who directs, motivates, and realizes the employees' goals to achieve the employees' goals. There are three elements of leadership. The leader's cat is the leader's conditions and followers. The leader is the person who influences the employee group and achieves the success of

the company by providing effective management and balance, control, and coordination of the group. If an effective leader is not elected to a management position, this can lead to many negative aspects for both his organization and its associated institutions. In this regard, leadership is essential for businesses. In another definition, leadership is a visionary who gathers individuals for everyday purposes and achieves goals. Leaders are those who think and act in the interests of the business. The leader is known by everyone for his productive, active, and efficient features. The leader should be solution-oriented. Leadership in the broadest sense: They bring the organization's members together for specific purposes and can direct them according to their goals, have the knowledge, skills, and equipment, and can influence the employees. Often, the concepts of leader and entrepreneur need clarification. A leader is a person who brings employees together and coordinates them for business purposes. On the other hand, an entrepreneur is a person who has an economic, legal, and financial perspective in the face of opportunities and succeeds in realizing the initiative (Paulussen, 2016).

2.1.2.3. Collaboration

It is when people join forces and work together for common goals and interests. Thanks to cooperation, people reach their goals more quickly. Cooperation in innovation is one of the essential elements required for the products and services of companies to stand out in the market. Firms often collaborate to reduce the cost of technological advances or entry into the market. They also want to reduce the risk of technological advancement or market entry, produce in large quantities, and reduce the time it takes to develop and commercialize new products. They feel the need to cooperate (Manso, 2011).

For example, with their collaboration in the development, production, and commercialization of Compact Discs, Philips and Sony are good examples of collaboration of innovation. In 1978, Philips developed the prototype of the CD but concluded that commercialization took work for him. A year later, he formed a strategic partnership with Sony, which he thought had the capacity and equipment to develop, produce, and market CDs. The two partners developed and produced the new product following international standards in a short time. Since 1982, it has started to

sell in world markets. This collaboration has succeeded as Philips and Sony have combined their complementary features. Below, the types of companies to cooperate are grouped under specific headings. These (Parmar et al., 2014):

- **Subcontracting:** Short-term collaborations to reduce costs and risks shorten development or production times. Finding the appropriate subcontractor and determining the quality and performance of the work can be time-consuming and costly (Paulussen, 2016).

- **Technology Licensing:** Licensing is necessary for one company to enjoy the intellectual property rights of another company. At first glance, licensing is advantageous in reducing development costs, minimizing technological and market risks, allowing the product to enter the market quickly, and allowing the product to enter the market. The licensor has significant disadvantages, such as control of operational matters. The search for a licensed company, the negotiation, and the adaptation of the technology obtained through the conclusion of the agreement are also factors that have a negative impact on time and costs (Boudreau & Lakhani, 2011).

  Consortium formation requires several organizations to come together and work on a specific project, especially during the R&D phase. The aim is to share R&D costs and risks, to use limited expertise and equipment for the project, to conduct competitive research, and to set standards. As a result of sharing information, having company-specific information by consortium partners can be seen as a disadvantage in such collaborations (Dahlander & Gann, 2010).

- **Strategic Collaborations:** This type of collaboration consists of formal or informal gatherings of two or more firms to develop a new technology or product. Consortium-style collaboration focuses more on fundamental research, while strategic alliances are formed as efforts to develop market affinity at a later stage. Innovation Networks: Innovation networks are created by companies, universities, government agencies, customers, and other actors and come to life through the connections and interactions between them. Therefore, a company's participation in such networks is strategically essential and reflects its strength and influence.

Innovation networks vary depending on the number of organizations involved, the intensity of interaction between these organizations, and the type of interaction. Companies in these networks also have the opportunity to create different collaborations on innovation. Companies that develop direct or indirect relationships with network members through networks and have different communication channels have a wide range of resources. Networks also create many new opportunities for innovation (Dahlander & Gann, 2010).

- **Clusters Based on Innovation:** Michael Porter has shown that America's competitive advantage comes from innovation through regional and local innovation systems based on clusters. Porter defines a cluster as the geographic concentration of interconnected companies and institutions in a particular region. The cluster includes interconnected industries and other organizations required for competition. For example, it includes suppliers of inputs specialized in specific areas, such as parts, machinery, and services, and infrastructure providers specialized in this area. It often extends from manufacturers, customers, and distribution channels of complementary products to companies operating in related industries regarding skills, technology, and standard input. In addition, most clusters include government agencies providing services such as specialist training, training, information, research, and technical support. It includes universities, standard-setting institutions, think tanks, vocational training providers, and non-governmental organizations (Edquist, 2010).

2.1.2.4. Risk Taking Tendency

Today, the uncertainty that comes with change and the increasing uncertainty suggests that risk-taking comes with it. Innovation, by definition, entails being open to innovations, preferring differences, and naturally taking risks. Uncertainties as well as successes are part of the innovation process. Therefore, the firm must be prepared to take risks and see failure as an opportunity for learning and improvement. However, in doing so, care must be taken not to take unnecessary risks. It is possible to reduce uncertainties in innovation by collecting sufficient information and research. Specifically, risk is the sum of resources entrepreneurial businesses will lose due to their willingness to take advantage of opportunities to achieve sustainable competition.

Innovations are often risky and costly. Top management knows that it is crucial to take risks to innovate. Innovating is uncertain and can bring failure as well as success. Successful innovative management must know the business is ready to take risks and learn from failure. They should see failure as an opportunity to learn and grow. However, this does not require taking unnecessary risks. The most crucial feature of innovation is that it is unpredictable because it brings significant risk. Managers should consider taking risks or producing and selling innovative products, which can take away everything the manager has (Mulgan & Leadbeater, 2013).

Transformational and enterprising managers generally accept the uncertainty of circumstances and risk-taking in a business. In this context, managers have to take advantage of opportunities, make changes when necessary, and even overcome financial constraints. However, managers avoid high levels of risk, considering that the risks taken without considering them can do more harm than good to the company. Managers must first show trust and care to their employees to ensure risk-taking behavior in businesses. In this context, managers who adopt a transformational leadership style should encourage risk-taking behavior to realize profitable ideas and projects. Such incentives strengthen the innovation propensity and performance (Johnson, 2011).

2.1.2.5. Research and Development (R&D)

R&D is a systematic study of the development of knowledge and experience. R&D is the development of new products or production processes; in other words, R&D is an approach that other business processes need. Finding new markets, generating new financing options, etc. The result of R&D. R&D can be defined as creative work carried out systematically to increase knowledge and the use of this knowledge to create new applications (Joly et al., 2010).

Innovation is an essential weapon for businesses in the war of existence created by the global competitive environment. The innovation aims to solve the company's three most fundamental problems: to survive, to be a leader in the market, and to increase its profitability. For innovation, systematically managed R&D studies are needed. Innovation is the result of the development of the company's knowledge and

experience. R&D is essential as it provides the necessary knowledge and experience for innovation (Edquist, 2010).

R&D is a prerequisite for innovation. When innovative approaches originating from R&D are considered from the entrepreneurial point of view, innovation emerges due to the commercialization of these innovations. Otherwise, the proliferation of new ideas and projects that need to be implemented or commercialized through R&D outputs wastes resources for businesses and countries and creates institutional inertia (Kline & Rosenberg, 2010).

2.1.2.6. Information and Knowledge Management

The first intensive studies on knowledge appear in the field of philosophy. Although various definitions are made in epistemology, a *branch* of sociology, knowledge is generally defined as the relationship between knowing and knowing. *Knowledge* is the phenomenon that individuals acquire through effort through learning, research, or observation. In other words, the truth the human mind can take is the name given to all the facts and principles (Boudreau & Lakhani, 2011).

Information is a constantly needed resource for individuals and businesses at every stage of business activity. Businesses with the necessary knowledge will be more successful in the field of activity of these enterprises than those who do not have this knowledge. In intense competition and uncertainty, the survival of businesses and the ability to gain competitive advantage in national and international markets largely depend on the ability to gather information, interpret, and act urgently. The fact that the decision-making bodies of the enterprises have the necessary information will accelerate the achievement of the goals determined by the enterprise. On the other hand, in markets where global competition intensifies daily, businesses are trying to develop products with less knowledge, buy materials and supplies from the cheapest places, and produce and distribute low-cost products. Cost of labor and selling products in the international market. This increases the importance of information needs in organizations (Freeman, 2013).

Innovation is transforming knowledge into products, processes, systems, and services. The key elements that play a role in this transformation are knowledge, a skilled workforce, and infrastructure (Dahlander & Gann, 2010).

Today, the success of businesses and national economies largely depends on how successful they are in creating, using, and using knowledge. *Knowledge management* is a process in which businesses and organizations use collective intelligence to adapt to changing environments and conditions, survive, and maintain their current capabilities in an environment where fierce competition is experienced and conditions constantly change. Knowledge management is an organizational process that combines information and communication technologies' data and information processing capacity with the innovative and creative capacity of human capital and seeks to maximize the creative power of human capital (Parmar et al., 2014).

2.2. Motivation

Motivation is an important concept and process for individuals and organizations and plays a critical and strategic role in success or failure. If we define this concept briefly, it is the effort, action, and energy shown to reach a specific goal (Miele & Scholer, 2018).

Considering people with high motivation and success, they do their work with enthusiasm and enthusiasm and act with the awareness that the work done is valuable and meaningful for them. In addition, it is understood that highly motivated individuals work with the feeling that the results related to the job meet or exceed their expectations, that the job is suitable for their characteristics and abilities, and that they are given a satisfactory response in terms of value, appreciation, and reward as well as being cared for. In order to motivate people, it is necessary to achieve organizational success and be happy, productive, and successful (Dörnyei & Ushioda, 2013).

Knowing the motivation techniques and ways, putting them into action on time, and managing them well is necessary for sustainable motivation. From another point of view, if morale is a force that keeps the ship afloat, motivational factors are also an

effect and force that takes the ship to the destination and the port. Whether well-motivated or not, people and organizations will be evident in the competition (Peters, 2015).

In this study, the conceptual dimension of motivation, which we are intertwined within every aspect of our lives, and the sub-dimensions of motivation It has been tried to explain the concepts of internal and external motivation, the classification of theories on motivation, and the effects and causes of these theories on the behavior of individuals. It aims to increase individuals' motivation or determine the concepts that affect them in this direction by considering the existence of some motivational tools and methods of increasing motivation. Motivation results will be discussed and evaluated at the point of increasing individual creativity and productivity (Alderman, 2013).

2.2.1. Motivation Concept

The fact that the concept of motivation is viewed from a psychological perspective and different perspectives reveals more than one definition. Some definitions of motivation are (Herzberg, 2017):

They are situations that push people to pre-determined behaviors in ordinary situations and are also defined as motives. When we look at the local sources, motivation is located between motive, impulse, and synonymous concepts. Motivation is an effect that motivates individuals toward the desired goal and directs them to achieve the desired behavior (Eitam et al., 2013).

Motivation is a process in which employees want and implement individual goals in all areas of life with their internal motivation sources. Motivation is expressed as the process of influencing the employee to get the performance expected from the employees in quality and quantity. Motivation is used in the sense of impressive, stimulating, motivating motivation, impulse, and motivation for the performance expected from the employees. *Motivation* is an active process that affects the behavior of employees and enables the employee to take action with the effect of an internal or external impulse (Heckhausen, 2013).

Many concepts, such as individuals' wishes, goals, needs, preferences, achievements, and attitudes, are closely related to motivation. When we look at the effect of motivation on the individual, motivation is narrower and includes the individual's motives. *Motivation* is a process that directs the behaviors of individuals and has the effect of some internal and external stimuli while ensuring the continuity of these behaviors (Cook & Artino Jr., 2016).

In the field of management science, it is tried to draw attention to the concept of motivation with the phrase put your heart in the work. Because motivation in working life is a factor not only for people's physical strength but also for encouraging themselves to work by taking internal motivation as a factor. *Motivation* is the power, desire, and perseverance that motivates the individual to overcome a task. *Motivation* is a process that drives the individual to certain behaviors and goals with an internal driving force (Braver et al., 2014).

The common feature in motivation concepts is that it affects the person's mindset and directs it towards the goals it sets. In the definitions, it is included as an inner power that motivates the person. Standard features of the concept of motivation (Lichtenberg, 2013):

• Motivational,
• Maintaining the desired behavior,
• It has three main elements as having a positive effect on the desired behavior.

2.2.2. The Meaning and Importance of Motivation

When we look at the meaning of the word motivation, it should be understood that it has a meaning that leads the person to be better than the situation he is in. This is sometimes passion, emotion, and feeling. As a result, it forces the individual to act in a particular line (Elliot & Dweck, 2013).

Employee motivation is essential. A peaceful working environment allows employees to do their jobs happily. The role of managers in the success of individuals is very high. It is an essential issue for a manager, leader, or supervisor to be able to direct

their employees to reach the goals and objectives of the organization. Another critical point here is how managers can direct their employees to act in line with the goals and objectives of the organization. This situation is closely related to the issue of motivation (Weiner, 2013).

Many factors play a role in organizations' success, efficiency, and effectiveness. The most important of these factors is the human factor. Conversely, managers should find the factors that motivate employees and ensure that they come to work willingly every day. The physical strength and time of the employees can be purchased for a fee, but the employee's brain power, entrepreneurship, and commitment cannot always be purchased. In this case, the concept of motivation comes up again. A compelling motivation in institutions, organizations, and businesses will increase individuals' commitment, productivity, and effectiveness to their businesses and institutions. These points can be realized more efficiently using an effective motivation structure in institutions, organizations, and businesses. In other words, motivation depends on managers' motivating employees to act enthusiastically and willingly in line with goals and objectives (Reeve, 2018).

In the research and findings on the motivation of the employees, it is known that there is a significant increase in the productivity and sense of belonging of the employees in enterprises where motivation is applied effectively. In enterprises where the motivation could be higher, the productivity and success levels are low regardless of the employee's knowledge, skills, and abilities. In short, motivation is a critical issue for businesses to reach their goals and increase their performance. The Importance of Motivation for Employees (Brunstein & Heckhausen, 2018):

• It will prepare opportunities to meet the needs and goals of individuals.
• Social needs of individuals: time, security, family, and culture.
• It will be effective in satisfying the personalities of individuals.
• It will contribute to enterprises' efficiency and effectiveness and social welfare development.
• It will ensure that the management and leadership aspects of the employees are understood.

• It will also contribute to developing positive competition between individuals by enabling individuals to benefit from business and motivational opportunities.
• It will apply flexible motivation forms to the agenda in the globalizing world. Motivation includes all methods and methods to align individuals' goals and objectives with the organization's goals and objectives. On the one hand, it aims to increase the productivity of the enterprises and, on the other hand, to increase the satisfaction and satisfaction that the enterprises expect from the individuals (Brunstein & Heckhausen, 2018).

In working life and daily life, people need to be motivated. *Motivation* is an issue and problem that every person needs to find a solution to. Motivation is an essential and powerful tool for achieving desired goals and objectives. In this way, individuals will have the opportunity to realize themselves, and at the same time, they will meet their needs as a result of their efforts (Elliot & Dweck, 2013).

2.2.3. Features of Motivation

We can list the characteristics of motivation, which is an essential issue for employees, as follows (Heckhausen, 2013):

• Motivation arises from impulses, needs, and desires and directs the person to act.
• The needs and desires that form the basis of this concept are closely related to the cultural structure of the society in which the individual lives and the emotional and spiritual structure of the individual.
• The individual's education and training status, skills and abilities, the full use of personal working potential, and the activating of these two in terms of managers closely affect the motivation of individuals.
• Motivation is for a specific purpose and reward. Goals influence and stimulate thought and behavior, not control behavior. As a result of satisfying a need to a certain extent, another purpose and behavior emerges. A satisfied need is no longer motivating.
• Motivations in the same direction cause different behavior patterns.

2.2.4. Motivation Factors

The motivation of employees in organizations is explained based on two main factors. These are internal and external motivating factors.

2.2.4.1. Inner Motivation

In internal motivation, employees motivate themselves. In this form of motivation, external control factors do not affect the person's behavior. Individuals can demonstrate their abilities without external factors. People with internal motivation do their jobs willingly because they can motivate themselves. They enjoy what they do. The work done with pleasure will satisfy the employee (Alderman, 2013).

Achievement satisfaction is an internal motivation. The needs of the employee arising from himself are related to motivation. Internal motivation derives from the individual's curiosity, development, and sense of competition. There is no need for external factors in internal motivation. Since the work done is seen as a reward, the external factor, there is no need for incentives and penalties (Reeve, 2018).

Internal motivation elements are related to the job itself and its content. Attractive and challenging jobs include initiative, importance of work, participation in decisions, responsible business ownership, diversity, innovation and creativity, and feedback. In a study of internal motivators, at least four essential characteristics were mentioned (Miele & Scholer, 2018):

- It is demanding,
- Control or autonomy,
- Curiosity and innovation,
- Aesthetic understanding and sense.

As a result of the information obtained from different theories on this subject, internal motivation is the state of feeling competent and independent if the person succeeds by making the necessary effort to reach his goal, and as a result, he meets his needs at the higher level (Weiner, 2013).

Factors Supporting Internal Motivation (Peters, 2015):

• Encouraging duties and responsibilities as social support elements,
• The individual's desire and desire to rise above the given skills,
• Supporting the working environment and providing appropriate conditions,
• The person's desire and willingness to work, as well as being satisfied and satisfied with his life,
• Focusing on success, goals, and opportunities instead of despair, believing in their abilities and strength,
• Encouraging employees to take risks in their jobs,
• It enables individuals to perceive themselves as valuable in their work, highlighting the desire for knowledge, identification, and internalization.

Internal motivation is more effective and motivating than external motivation in success and failure. In internal motivation, the person takes his power and belief from himself. A football team knows how to win the match despite the field's negativities, the audience's outbursts, the referee's, and the weather conditions. An example of internal motivation is when a visually impaired student finishes first in law school, and a person without arms gets a degree in swimming. The reason for learning is related to the person's tastes and needs. In this process, the person's curiosity, interests, and needs move the person (Eitam et al., 2013).

2.2.4.2. External Motivation

According to the studies on external motivation, there are two dimensions: social motivation tools and organizational tools. In social motivation, while factors such as friendship, helpfulness, and support of other employees are in question, they are the opportunities and opportunities offered by the organization as external motivation tools. The tools in this direction, which are tangible, arise from working conditions and environments such as fair wages, promotion opportunities, job security, suitable workplace conditions, and additional benefits (Braver et al., 2014).

People who are motivated by external factors and influences, rather than the job itself, act with external factors such as reward, punishment, pressure, physical conditions of

the individual, and social and environmental factors. External motivation is not about the activity itself but about what will be gained. People who are motivated by internal factors, on the other hand, are motivated by internal factors such as the individual's characteristics and needs, interests, and feelings of curiosity (Lichtenberg, 2013).

Factors and Factors Supporting External Motivation (Weiner, 2013):

• The effect of the environment on behavior,
• Appreciation, thanks, awards, medals, certificates, cups, club membership, performance points, etc.,
• Competitiveness, approval, adoption, and peer and peer pressure,
• The expectations of the family and society from the person, reward and punishment, education-training methods, friend orientation, and tendencies.

In some cases, external motivating factors affect and contribute to internal motivation. In this respect, it is not correct to consider these two motivations as entirely independent of each other. We can categorize the motivation, which gives importance to the source of the effects that move people, as internal and external. In this lies the thought and understanding that the person can motivate himself according to his motives or turn to action with external influences, incentives, and rewards (Brunstein & Heckhausen, 2018).

In external motivation, learning can be in order to avoid a punishment and turn towards a reward. For the individual to be motivated, external stimulus and influence are needed. External factors and stimuli are the motives and causes, that is, environmental factors, that move the person. The role of external influences in learning is essential, and personalization and internalization of external factors can effectively increase motivation (Braver et al., 2014).

Although internal and external motivation tools and methods differ, it is accepted that both groups of motivation tools have a positive and positive effect on increasing motivation. External factors alone often do not provide the necessary motivation. Employees' motivation, values, goals, and desires are closely related to internal motivation. This is what motivates employees. The values, interests, and goals of other

people who influence you are related to external motivation and come from outside (Heckhausen, 2013).

We learn and do to avoid punishment to get rewards. That is, the external motivation that we make internal is more beneficial for us. In this case, external motivation factors affect and increase the person's internal motivation to do business. Some people are more motivated by internal motivation and others by external motivation, as the employees' personalities, abilities, goals, and objectives are different. In this respect, we cannot consider the two types of motivation utterly independent (Cook & Artino Jr, 2016).

2.2.5. Motivation Tools

The fact that people have different structures and personalities brings about the fact that the factors that motivate them are different. Needs are different and gradual, and as a result of a need reaching a certain satisfaction and satisfaction, a need at another level becomes motivating. This situation brings continuity and diversity in motivating employees (Miele & Scholer, 2018).

The main idea and purpose of motivation is to enable employees to do their jobs willingly, efficiently, and effectively. The way to do this is to get to know the employees closely and well. Human behavior is complex and needs to be more easily understood. So how can Employees be motivated? What methods can be used to increase employee job satisfaction and satisfaction levels? Where and in what ways can the power that enables people to achieve their individual and organizational goals come from?

In many accepted studies on the subject as material and moral motivation tools. It is seen that the subject is examined and scrutinized as economic tools, psycho-social tools, and organizational-administrative tools. These tools can be described as follows:

2.2.5.1. Economic Tools

Economic factors form the basis of the establishment's purpose and mission and the employees' purpose and mission. The primary purpose and goal of the entrepreneur and employer is to generate income and profit and to raise their interests to the maximum level. This is how entrepreneurs evaluate motivation (Dörnyei & Ushioda, 2013).

In underdeveloped or developing countries other than developed countries, socio-economic factors are among the incentive tools for the motivation of employees. Because the number of unemployed or unskilled workers is high in such countries, employees will also try to do what is expected of them in the best possible way to avoid losing their jobs (Eitam et al., 2013).

As economic instruments accepted in the literature, there are elements such as fuller wages, participation in decisions, rewards, premiums, social rights and benefits, good working conditions, job security, service, lunch, tea and coffee, clothing aid, and private health insurance, etc. (Herzberg, 2017).

2.2.5.2. Psycho-Social Tools

In a competitive world, psycho-social factors are also crucial in motivating human resources. An essential need of the human being, who is social and complex, is psycho-social needs. Material elements are insufficient for human motivation, and it is essential to consider psycho-social tools for motivation (Herzberg, 2017).

In addition to financial and economic means to encourage and engage employees, psycho-social tools and elements significantly impact employees' motivation. Workplace managers and administrators should benefit from these tools by analyzing their employees psycho-socially as necessary within the framework of management understanding and policies (Peters, 2015).

These are the initiative and independence of the employees in the working environment, the status of the employees, their appreciation, benefiting from the

opportunities and opportunities, the consideration and participation of the suggestions, increasing the communication and meeting opportunities with the managers, psychological assurance, delegation of authority, consultancy services and social activities (Cook & Artino Jr, 2016).

2.2.5.3. Organizational and Managerial Tools

Employees in an organization and the organization have mutual expectations from each other. If we liken this to the example of a construction belt, one foot of this is the employees and their expectations, and the other foot is the workplace and the employer and their expectations. It is essential that both parties' expectations are met for the arch to stand firm. Managers can motivate their employees by using the methods described below.

These include unity of purpose, balance of authority and responsibility, educational opportunities, participation in decisions, job security, communication, job attractiveness, job enrichment, job enlargement, working conditions, job rotation, teamwork, soft relaxing music in the workplace, promotion and career opportunities, open door and open management policy, fair management and discipline, etc.

Various studies in this direction do not say that the models and tools that have been applied have been successful. In this respect, managers should closely familiarize themselves with the motivational tools that convince and encourage employees with complex and separate personality traits, needs, and requirements. In this respect, the incentive and motivation tools give different effects and results everywhere and at all times (Lichtenberg, 2013).

The effectiveness of the incentive and incentive tools used in motivation is closely tied to the social structure. In this context, economic tools can emerge for people who grow and grow in the consumer society. However, the driving force that motivates employees in traditional, closed, and mystical societies may be sacred beliefs and psychological factors rather than economic tools. In addition, the effectiveness of incentive and incentive tools varies depending on managers' approach, understanding, and behavior toward employees. Even if it is accepted that there are some incentive

tools in the universal sense regarding motivation, it is only sometimes possible to develop a motivation model suitable for the individual, society, and business (Reeve, 2018).

2.3. Operating Performance

In competitive conditions, businesses must first evaluate their performance and analyze the factors affecting it to understand their current situation, improve their deficiencies, and make the right strategic decisions. Because in the competitive conditions, the performance of the enterprises and the criteria used to measure this performance are of great importance. Globalization and intense competition, especially in service-oriented sectors such as civil aviation, make operating performance more critical. Therefore, it becomes even more important to focus on differentiation instead of standard products and price competition in the civil aviation sector (Wong et al., 2011).

2.3.1. Operating Performance Concept

Performance is a comprehensive concept that cannot be defined objectively. *Performance* is a statement that covers the future and capabilities of the enterprise and is a way of achieving the determined target on time by establishing cause-and-effect relationships—the qualitative or quantitative evaluation of all planned efforts and their results to achieve the objectives. The success and continuity of an enterprise are evaluated by performance measurement. Porter defines *operating performance* as the strategies implemented by the business and the outputs obtained as a result of these practices. In other words, according to Porter, operating performance expresses the business's success level, and the business's success is possible by obtaining a sustainable competitive advantage. Operating performance can be expressed as the achievements achieved due to the application of competitive strategies and resources created by the business to achieve specific goals. Within the scope of the definitions, performance is a multidimensional concept that roughly defines the enterprise's success and the achievement of its goals. Since operating performance is related to the success level of the determined and implemented

strategies, determining the performance criteria in the evaluation of the success of the enterprises turns into a critical decision mechanism (Crook et al., 2011).

In businesses, performance understandings show a constantly developing and changing process until today. As a result of factors such as rapid changes in customer demands and needs and increased competition, this process, which aims at the lowest cost, the highest production, and the highest profit, has changed and has become a process that focuses on performance criteria such as customer and employee satisfaction, quality, and innovation. Due to the dynamic and variable nature of the factors affecting the activities and success of businesses, constantly changing and renewed performance measures emerge. Intense competition conditions with globalization make it necessary to handle operating performances in detail and a multifaceted manner (Fethi & Pasiouras, 2010).

In light of the information obtained with the performance measurement, which expresses the level of achievement of the principles such as economy and efficiency in the activities and resource use of the enterprise, it can be ensured that the problems are detected, and the necessary measures are taken for improvement. Data obtained from performance measurements are important indicators in strategic decision-making processes, as they provide information about the level of success of business strategies. However, a performance measurement system that can fully meet the expectations and requirements of enterprises has not been developed (Béraud et al., 2021).

As a result of the literature review, it has been determined that two types of criteria, subjective and objective, are used to measure operating performance. The most frequently used objective performance criterion is financial performance. In order to analyze the economic situation of an enterprise, it is necessary to analyze the characteristics of the competitive environment in which it is located, its situation compared to its competitors operating in this environment, and to consider the qualitative and quantitative situation of the enterprise's assets. In other words, businesses have to consider and analyze financial and non-financial environmental factors related to the global business world and fields of activity, as well as internal data, to make a profit and maintain their existence. Because there are several factors in business policies that affect operating performance; one of these factors is the

economic situation, which emphasizes the importance of foreign market factors. The other is behavioral and social paradigms, and the harmony of the enterprise with its environment is seen as the main factor affecting the organization's success. Therefore, in an environment where competition is fiercer, more is needed to consider operating performance only with its financial dimension. In order to measure operating performance more realistically, besides financial performance, non-financial dimensions that impact the business's success should also be measured (Poglitsch et al., 2010).

Since the financial performance measures used traditionally are based on the past, they need to be more comprehensive to provide information about the future performance of the enterprise. In addition, traditional measures fail to reflect the business's intangible assets. On the other hand, non-financial measures assist managers more in detecting and evaluating changes in the business environment. Non-financial dimension: It includes factors such as product quality, customer satisfaction, employee satisfaction, and market share. Traditional performance measures measure only a part of organizational performance. Non-financial measures generally reflect the enterprise's future state better than financial data and emphasize the long-term objectives of the enterprise (Gunny, 2010).

For all these reasons, businesses use objective and subjective measures in the economy, considering that only financial performance measures are insufficient for decision-making purposes. When the literature is examined, it is seen that there are studies that use objective and subjective data in the measurement of operating performance and that there is a high correlation between objective data and subjective data. In addition, operating performance is one of the most challenging variables to measure, as it is widely used as a dependent variable in research. Similarly, the return on investment and sales growth indicators, which are used to measure economic performance, can also pose a problem in terms of measurement. In this respect, the principle of data privacy in multi-industry enterprises and the attitude of business partners and the business environment should be considered. San Miguel stated that accessing databases where some economic data are processed is necessary to measure performance correctly (Wang & Wang, 2012).

Objective data, especially regarding accommodation businesses, consists of occupancy rate, annual income per room, personnel turnover rate, and managers operating in accommodation businesses who want to keep this information private. For this reason, subjective measurement is preferred for performance measurement in studies. In addition, the accuracy of objective data obtained from businesses is also a controversial issue. Subjective performance appraisals are strongly associated with objective performance appraisals, and the subjective performance approach is seen as a more reliable performance measurement method. The measurement of subjective data is based on business managers' perceptual thoughts about performance compared to their competitors. Therefore, in this study, operating performance was measured both objectively and subjectively, that is, based on the perceptions of the managers (Prajogo & Olhager, 2012).

To summarize, objective values are measured by absolute financial performance values, that is, through quantitative data, and subjective values are measured by asking perceptual thoughts about performance against competitors or company expectations. In addition, as stated above, non-financial data better reflect the future state of the business. Therefore, measuring the perception of performance gives healthier results to measure the enterprise's long-term performance success (Flynn et al., 2010).

Considering the reasons stated above, it is essential to measure operating performance in the form of performance perception and to support this with objective data to obtain more accurate results.

2.3.2. Operating Performance Dimensions

When the literature is examined, studies dealing with different dimensions in measuring operating performance draw attention. Essential operating performance in Ravelomanantsoa et al. (2019) study: five dimensions: innovation dimension, financial dimension, customer dimension, employee dimension, and social dimension.

Operating performance deals with five dimensions: a financial dimension, a customer-related dimension, an employee-related dimension, a social dimension, and an innovation dimension (Makareviciene et al., 2013).

Ali et al. (2020), operating performance in his work; employee motivation, market performance, productivity performance, and social impact dimensions. Operating performance has two dimensions: objective and subjective. The subjective performance dimension consists of the employee-related dimension, the consumer-related dimension, the financial dimension, the organizational dimension, and the social dimension. The objective dimension is that because the study is carried out in accommodation establishments, it consists of occupancy rate, annual income per room, and personnel turnover rate (Hirani et al., 2010).

Therefore, due to the literature review, the dimensions are generally used to measure operating performance. Financial, employee, cutomer, social, innovation, and financial dimensions exist. In addition, studies measuring internal performance, such as internal processes, motivation, productivity, and learning and development, attract attention. From this point of view, in the present study, the concept of operating performance is discussed in five dimensions (Gimenez et al., 2012).

2.3.2.1. Dimension Related to Employees

Employees are essential for the business as they indirectly affect the performance of the business. Managers define the behavior of employees in a formal and informal structure; planning, rewarding, control, information system, abilities, and personality traits of employees can affect their relations with their environment. The employee dimension includes business employees at all levels and in all business units. This dimension refers to the measurement of employees' thoughts with different dimensions. Essential criteria such as employee satisfaction, productivity, and continuity enable the measurement of the results of the investments made by the enterprise for employees, systems, and corporate compliance. The success of businesses depends on the success of their employees. Increase the performance of the employees by motivating them. Therefore, measuring employee performance by taking into account the internal marketing strategy of the enterprises will affect the operating performance positively. Employee motivation is a factor that affects the performance of the business (MacMillan et al., 2022).

The dimension related to the employees consists of elements such as the motivation of the personnel, the ability of the enterprise to attract qualified employees, employee productivity, absenteeism, workforce turnover rate, employee loyalty, good working atmosphere, and employee reward (Dalenogare et al., 2018).

2.3.2.2. The Consumer-Related Dimension

The consumer-related dimension emphasizes that the business should include specific measures related to the added value it will offer customers in its target market. At the consumer dimension, the organization needs to define its customers and identify the market segments in which it competes. Consumers are an essential dimension for businesses that adopt market orientation. This dimension is the performance dimension that includes the satisfaction of consumers and aims to make the business's reputation positive in their eyes. In particular, the reputation and image of the business is an essential factor affecting the performance of the business, as it affects the perceptions and preferences of consumers (MacMillan et al., 2022).

Businesses plan all their production strategies according to the demands of consumers and try to differentiate according to the services offered by their competitors. The reason for this is that consumers directly affect the performance of the business, and basically, the goal of the business is consumer satisfaction (Dalenogare et al., 2018).

- **Consumer-Related Dimension:** It consists of variables such as customer satisfaction, the quality of the service provided to the customer, and the business's reputation in the consumer's eyes. In addition, the consumer dimension is a dimension that aims to ensure customer loyalty and minimize guest complaints and has positive effects on operating performance (Gimenez et al., 2012).

2.3.2.3. Social Dimension

Business processes cannot be isolated from the world, customers, managers, the environment, and society. Therefore, the social dimension is a factor that businesses cannot ignore. The societal dimension means an understanding of how the company's processes have an impact on society in general. Social dimension:

- Employment creation
- The diversity of the addressed market
- The quality and diversity of the service provided
- The rights provided to the consumer
- The environmental sensitivity of the enterprise

This dimension, which expresses the sensitivity of the enterprise towards the environment and society and the level of social responsibility, means that the enterprise changes its strategy and functions accordingly. In short, this dimension includes businesses' perceptions, attitudes toward society and the environment, and the company's sensitivity to the environment (Hirani et al., 2010).

The social dimension is an important performance evaluation criterion for both the employee and the customer, which protects the rights of consumers and employees. In addition, such businesses are essential for environmentally sensitive consumers, especially in the service sector. Businesses that provide suitable employment opportunities also indirectly contribute to their motivation. From the point of view of the civil aviation sector, indicators such as the level of employment creation and market diversity, among the social dimension indicators, are also important points that contribute to the measurement of operating performance. Respect for consumer rights, protecting the environment, environmental sensitivity of the enterprise, product employee rights, and employment creation level (Wong et al., 2011).

2.3.2.4. Organizational Dimension

Innovation performance is essential for businesses that want to meet consumers' rapidly changing needs and expectations. Innovation performance can be measured by considering various criteria, including the number of new products introduced to the market and the number of new services and products (Makareviciene et al., 2013).

For the business to eliminate the customer's inertia, it is necessary to find a new product or production method, a new product or production process different from its competitors, to increase or at least protect its market share and to discover new markets. Market share is essential since the service sector's success depends on

employee and customer relationships. Innovation, seen as a sustainable growth tool that enables better meeting demands and increasing market share, is crucial in increasing customer loyalty and satisfaction. The success of competing in all sectors and achieving organizational success depends on creativity and innovation studies, and the situation is the same in the civil aviation sector (Fethi & Pasiouras, 2010).

The organizational dimension consists of variables such as developing new products, increase in market share, and increase in sales. From the point of view of the civil aviation sector, indicators such as the increase in market share and increase in sales, which are among the organizational dimension indicators, are also important points that contribute to the measurement of operating performance (Flynn et al., 2010).

2.3.2.5. Financial Dimension

It is the most frequently used dimension in measuring operating performance, and the measurement variables frequently used to evaluate financial performance are sales volume, market share, profitability level, return on turnover, return on total assets, return on investments, return on equity, income before tax, net income, cash—flow, balance sheet, economic added value, etc. (Prajogo & Olhager, 2012).

The answer to questions such as how to measure the business's financial performance or its ultimate goal has yet to be found definitively, although it has been discussed for a long time. Business strategies are generally evaluated together with financial performance, as they provide information about how businesses can realize their economic goals. *Financial performance* is a dimension at the center of the business, which is more concerned with accounting indicators such as profitability and cash flow, expanding the cash increase, which is the primary purpose of the business. Regarding financial performance, organizational success is generally determined and measured by cash flows and profitability, investor value, and financial market indicators. Financial performance measures reveal whether a company's strategy and its execution and implementation contribute to improving the business. *Financial performance* can be defined as results-based financial indicators that reflect the level of achievement of the economic objectives of the business, and processes are the driving forces of an organization (Poglitsch et al., 2010).

This dimension consists of variables such as net profitability, return on capital, per capita income, increase in sales, market share, and overall operating performance (Poglitsch et al., 2010).

As stated above, different criteria and dimensions measure operating performance. The measurement levels used to measure operating performance are summarized as objective and subjective dimensions. According to the basic idea derived from the literature, measuring operating performance based on a single measurement level could give better results. Therefore, operating performance should be measured according to objective and subjective criteria (Wang & Wang, 2012).

In addition, when measuring operating performance, it should be considered that each sector has its differences. The performance measurement of enterprises operating in the civil aviation sector differs from those operating in other sectors due to the sector's characteristics and the division and fragmentation of the civil aviation and hospitality industry. Performance measurement to be used by the civil aviation sector should reflect the complex structure of the sector due to its characteristic features, such as being unable to store the product, being consumed where it is produced, and being heterogeneous. Civil aviation businesses should develop a performance measurement in an increasingly competitive environment by considering the possibilities, such as high fixed costs. In addition, the importance of the human factor in the civil aviation sector is understood daily. Therefore, customer satisfaction and employee morale affect the performance of the business. It is important to include factors such as market orientation, practical and effective innovation, and ethical codes to be followed in personnel behavior in the performance measurement of the civil aviation sector. Non-financial factors such as service quality and customer satisfaction have an essential place in performance measurement, and these are the main factors due to the structure of the service sector. In addition, departments and units need to know how to differentiate and simultaneously realize strategic missions together (Flynn et al., 2010).

To summarize, many variables affect operating performance in the civil aviation sector. Due to the increasing competition, financial criteria, and objective performance dimensions consisting of factors such as profitability, total sales, return on investment,

and economic added value, more than the balance sheet is needed to evaluate the performance of a business. In addition, as it is impossible to measure performance in the civil aviation sector with a single variable, subjective indicators such as product quality, customer and employee satisfaction, and new product/service development are needed in addition to objective indicators. When the literature is examined, it is seen that different factors are used in the civil aviation sector as an objective performance measurement (Makareviciene et al., 2013).

As stated above, because the civil aviation sector has a variable and uncertain structure, it is of great importance for their success that they adapt to the environment and adapt themselves to current conditions. Until now, the civil aviation sector has focused on financial criteria such as profitability and productivity. According to the study conducted by Taouab and Issor (2019) in England, inaccurate results were obtained in this way. Because non-financial measurement levels, such as changing environmental and competitive conditions, should also be considered. Therefore, using a balanced measurement level for performance measurement in the civil aviation sector gives relatively more accurate results. Financial and non-financial measurement levels should be used together. Multidimensional performance measurement systems consider many dimensions with a balanced perspective, compared to traditional methods that attach importance to financial figures and rely on a one-sided perspective. In addition, it is discussed that non-financial performance measures are more functional in measuring operating performance in situations where environmental uncertainty is intense, such as civil aviation. Although some empirical studies claim that financial and non-financial measures are not substitutes for each other, it has been revealed that performance is better measured using these two measures (Wang & Wang, 2012).

As a result of the literature review, studies examining the relationship between the civil aviation sector and operating performance need to be revised. It is noteworthy that in the studies conducted to measure civil aviation enterprises' performance, the enterprises' size, characteristics, and resulting differences are ignored. In studies conducted in the field of operating performance, it is emphasized that performance measurements should be made by distinguishing different sizes of enterprises to have healthier results (Gimenez et al., 2012).

2.3.3. Measurement of Operating Performance

When the literature is examined, it is seen that various measurement models have been developed to measure operating performance. In addition, as stated before, there are also studies in which objective and subjective dimensions related to performance measurement are used together. One of the most critical measurement models for operating performance measurement is the Performance Pyramid developed by Hegazy et al. (2022). The purpose of the performance pyramid is to transform objectives from the top down and metrics from the bottom up between the organization's strategies and operations. When the performance pyramid is examined, it is seen that the top level of the pyramid is vision, the second level is market financial, the third level is customer satisfaction, flexibility, and efficiency, and the fourth level is quality, distribution, business cycle time and waste factors (Gunny, 2010).

Another measurement is the Balanced Scorecard method developed by Kaplan and Norton (2001), which evaluates performance with more general criteria. Operating performance according to the Balanced Scorecard model developed by Kaplan and Norton (2001); financial dimension, customer dimension, internal processes dimension, learning and innovation dimensions. In this respect, Kaplan and Norton (2001) consider operating performance as financial and operational, while the operational dimension consists of customer satisfaction, internal process, and organizational innovation sub-dimensions. According to the Balanced Scorecard model, answers are sought to four basic questions (Poglitsch et al., 2010):

- How do customers see us?
- What should we surpass, and how should we excel?
- Can we continue to create and develop value?
- How do we pay attention to shareholders?

Another measurement model is the Stakeholder Based Performance Evaluation System developed by Taouab and Issor (2019). The Stakeholder-Based Performance Evaluation System was created with the thought that financial-based performance measurements are insufficient to measure current performance and that these measurement methods should be changed. Stakeholder Based Performance Evaluation

System identifies parties, target group, beneficiaries of the activity, and potential opponents. The Stakeholder Performance Evaluation System tries to measure how the organization meets the needs and expectations of the organization and its stakeholders based on business stakeholders in the best way possible. It consists of the stages of identifying and classifying stakeholders, detailed analysis of selected stakeholders, and determining priorities.

On the other hand, Neely, Adams, and Crowe (2001) developed the Performance Prism, arguing that the Balanced Scorecard is insufficient to respond to the changing world, economy, and priorities. Performance Prism: It consists of the dimensions of stakeholder satisfaction, strategies, processes, competencies, and stakeholder contribution. Stakeholder satisfaction forms the basis of stakeholder satisfaction, and this method seeks answers to the following fundamental questions:

• Who are our stakeholders? What do they want? What do they need?
• What strategies should we implement to meet the needs and wants of our stakeholders?
• What critical processes are needed to implement these strategies?
• What capabilities are needed to manage and improve these processes?
• What do stakeholders need to do to retain and develop these capabilities?

The Sustainable Performance Measurement Model, developed by Parida and Kumar (2006), aims to measure efficiency and effectiveness and provide businesses with a dynamic process. Sustainable performance indicators are needed for this method to be effective. Key indicators of this model:

• Understanding organizational strategy and analysis of stakeholders,
• Focus on knowledge management,
• Cost indicators,
• Health, safety and environmental indicators,
• Employee satisfaction indicators,
• Sustainable business indicators,
• Customer satisfaction indicators,
• Learning and growth indicators,

• Equipment indicators.

When the measurement models developed for operating performance are examined, the typical aspects are generally composed of employees, customers, and financial indicators. Apart from this, when the measurement levels with no common aspects are examined, it can be stated that customers, employees, and financial indicators are essential for organizations in terms of research dealing with operating performance (Béraud et al., 2021).

2.4. The Relationship between Research Variables

2.4.1. Motivation and Innovation

According to Gupta (2020), the study examines the connections between leadership, work motivation (internal motivation, integrated external motivation, and external motivation), and employee-level innovation (innovative work behavior and innovation outcomes) in an organizational context by integrating the behavioral theory of leadership, the componential theory of creativity, and the self-determination theory (SDT). Information was gathered from 493 researchers at India's largest civilian R&D organization through an online poll. Hypothesized associations between the study variables were verified using structural equation modeling (SEM). Leadership, employee autonomy (internal and integrated external motivation), and staff innovation were all found to have favorable correlations in the study. Only when the value of incentives is internalized into one's sense of self does the relationship between external motivation and creativity strengthen, as shown in the study (integrated external motivation). Without anything internal to drive you, external motivation has nothing to do with creativity.

The research conducted by Fidan and Oztürk (2015) seeks to understand how teachers' levels of creativity are connected to factors like internal motivation and educational environments that foster innovation. Information was gathered from educators in Ankara Province's public and private elementary, secondary, and higher education institutions during the 2014-2015 academic year. The survey found that private school educators rated themselves as more creative and motivated from within than their

public school counterparts. It was hypothesized that teachers' internal motivation would positively correlate with their inventiveness, but two aspects of the environment for invention would not.

In order to keep up with the exponential growth and evolution of information, Zhang and Chen (2021) argue that education and work are inextricably intertwined, with the former requiring the latter. Five hundred copies of a standard questionnaire were issued to employees in the high-tech sector in Shanxi Province; 384 legitimate copies were retrieved for a retrieval rate of 77%. The findings show that (1) innovation capability is positively impacted by (3) learning motivation, and (2) learning effectiveness is positively impacted by (1) learning motivation. The findings suggest that this information might be used to organize better and develop educational programs for the high-tech sector.

In this article, Zhang et al. (2020) investigate the factors that encourage and discourage firms from adopting innovation during construction projects and the relationships between different organizations that play a role in the innovation process. Seven hypotheses are outlined, all based on organizational motivation and inter-organizational linkages. These hypotheses were investigated using a structured questionnaire, and information was gathered through a mail-in survey. Based on the findings, new proposals have a good chance of being included in the project provided sufficient effort is made to see them through and if ambitious targets, favorable outcomes, and widespread support are in place. The firms must be encouraged to adopt the invention, to have faith in its success, and to put in extra effort. Substantial incentives are required for the interested stakeholders to get behind the idea. The innovation should also be crafted to benefit the upstream and the downstream participants.

2.4.2. Motivation and Operating Performance

Rajhans's (2012) research aims to do just that by investigating how improved communication and inspiration might boost productivity in the workplace. This paper explores the different ways in which workplace communication can influence and sustain morale. Workers are more likely to be committed to their jobs, loyal to their

companies, and confident in their leaders if management effectively communicates with them. The research was carried out by reviewing and critically analyzing the relevant research and literature in light of the paper's aims.

Based on semi-structured interviews and follow-up surveys with 47 quality managers, Cai and Jun (2018) identified four key stages in internalizing ISO 9001: Documentation, process improvement, education, and auditing. Based on the results of our FsQCA research, implementing ISO 9000 is likely to significantly improve the operational performance of businesses that do not already have a QMS in place but are under pressure from outside sources to do so. Findings further suggest that the suggested link between "internal motivations," "ISO 9000 internalization processes," and "performance" may not always hold, even when controlling for other factors. In particular, our results imply that an organization's better operations performance is only sometimes ascribed to the ISO 9000 implementation when the organization already has a QMS before adopting and implementing ISO 9000 along with other quality improvement initiatives.

The study by Gillet et al. (2013) aimed to verify a unified theory concerning the function of happy and negative emotions mediating the connection between situational motivation and performance. In particular, the proposed model suggests that autonomous motivation predicts favorable effects, while controlled motivation and motivation contribute to unfavorable emotions. Additionally, a lack of drive is associated with increased negative emotions. When predicting success, happy and negative emotions have opposite effects. In three research, correlational and experimental designs were used to confirm the concept while utilizing a mental exercise. Furthermore, individual characteristics and contextual factors were found to play a role in setting off the "Motivation-Affect-Performance" cascade. Implications for theory and future research are presented.

The study conducted by Sokro (2012) aimed to learn more about the connection between company culture, morale, and productivity. Employee motivation and productivity and their connections to organizational culture (including organizational ideals, individual beliefs, the working environment, and employee relationships) were studied. The connection between culture and motivation has been investigated using a

multi-pronged, data-driven strategy. A positive correlation was discovered between the two variables utilizing Pearson's and Spearman's Correlation tests. Our research shows that an organization's culture affects employee motivation and, by extension, its performance. Worker morale is directly proportional to the quality of the company's culture. Companies with a strong culture of recognizing and appreciating employees' efforts were found to have much higher levels of motivation and performance.

2.4.3. Innovation and Operating Performance

In order to determine whether and, more importantly, under what conditions smaller, resource-constrained enterprises gain from innovation, Rosenbusch et al. (2011) conducted a meta-analysis to integrate empirical findings. The setting plays a role in the relationship between creativity and performance. The impact of innovation on operating performance is heavily influenced by factors such as the firm's age, the nature of the invention, and the cultural setting. Innovation's effects on SME success have received much attention from researchers and business owners alike. There are mixed findings from empirical studies examining the link between innovation and performance in small and medium-sized enterprises.

The research study by Anning-Dorson (2017) aims to analyze the impact of market demand on the innovation-performance link in service businesses. In addition, the article investigates how a particular cultural orientation central to strategic management might be used to mitigate the impact of product innovation on a company's bottom line. A rising economy with a dynamic services sector was the source of the data we gathered. The impact of the environment as a mediator and moderator of the link between innovation and the performance of service firms is investigated using causal modeling techniques based on a series of model comparisons. Despite the favorable impact of product innovation on a company's bottom line, the research shows that a saturated market has the opposite effect. However, even in the face of external coercion, the positive association between product innovation and firm performance can be restored if a service firm can cultivate an inventive culture that promotes strategy implementation.

The sensitivity of the anticipated connection between innovation and company success is investigated by Idris and Durmuşoğlu (2021). We use a knowledge production function technique and various comparisons to achieve this. The sensitivity analysis compares the results obtained from running the same basic econometric model with different error structures, running the same model with different data sources, running the same model with different firm performance and innovation classifications, and running the same model with different subpopulations of the business sector. Both a level and a growth rate dimension are used in the studies. New information is reported, and existing data are confirmed. The analysis provides clues as to the origins of, and trends in, the estimated effects of interest.

The purpose of the research presented in the Sardi et al. (2021) paper was to examine the impact of HRM's primary characteristics on technical innovation and organizational performance through empirical study. A total of 194 high-tech businesses throughout eight regions in China were questioned for this study. According to the findings of this study, technological innovation benefits from staff training, immaterial incentives, and process control, while it suffers from the effects of material motivation and result control. Additionally, it is discovered that technical advancement is linked favorably to accomplishment.

2.4.4. Gap in Literature

Within the existing body of research, there is a notable gap about the combined influence of motivation and innovation within the context of the civil aviation sector. Much prior research on motivation and innovation has been conducted in general organizational settings, with limited attention to the nuances of the civil aviation sector. Consequently, more literature is needed to delve into the unique dynamics of motivation and innovation within aviation organizations.

Existing studies often analyze motivation and innovation as separate constructs. A literature gap exists in comprehensively exploring how motivation influences innovative behaviors and how these innovations impact organizations' operational performance in the civil aviation sector. Stringent safety standards, regulatory frameworks, and evolving technologies mark the civil aviation sector. There needs to

be more literature concerning identifying motivational drivers and specific forms of innovation most relevant to enhancing operating performance in this sector.

While prior research has predominantly focused on financial or employee-related outcomes, a limited body of work assesses the influence of motivation and innovation on critical operational performance metrics within the civil aviation sector, such as on-time performance, safety records, and passenger experience.

This research is uniquely tailored to the civil aviation sector, recognizing its distinct operational environment, safety imperatives, and customer-centric nature. It seeks to provide relevant insights to airlines, airports, and aviation service providers. Unlike previous studies that often isolate motivation or innovation, the study takes a comprehensive approach by examining how motivation influences innovation and how these innovations subsequently impact various facets of operating performance within the aviation sector. The study emphasizes measuring operational performance indicators, offering valuable insights into how motivation and innovation can affect critical aviation operations, including safety records, punctuality, and passenger satisfaction. By focusing on the civil aviation sector and its operational dynamics, the study aims to provide actionable insights for industry stakeholders. It can inform strategies for airlines and airports to enhance operational efficiency, maintain safety standards, and enhance the overall passenger experience.

The study addresses a critical gap in the existing literature by investigating the interplay between motivation and innovation and their collective impact on operational performance within aviation organizations. This sector-specific and comprehensive approach sets this research apart from previous studies in the broader field of organizational performance.

2.4.5. Libyan Civil Aviation Sector

The Libyan Civil Aviation Sector is pivotal in the nation's infrastructure and is critical for domestic and international connectivity. This sector has a rich history but has recently been marked by significant challenges. This thesis aims to comprehensively

analyze the Libyan Civil Aviation Sector, examining its historical development, existing infrastructure, challenges, and potential for future growth and recovery.

The roots of the Libyan Civil Aviation Sector date back to the mid-20th century when the country began building its aviation infrastructure. Over the decades, Libya has established a network of airports, both domestic and international, to support its air travel needs. The sector has witnessed periods of growth and development driven by economic prosperity and increased international connectivity.

The Libyan Civil Aviation Sector comprises a network of airports with prominent international gateways, including Mitiga International Airport in Tripoli and Benina International Airport in Benghazi. These airports serve as critical hubs for domestic and international flights. The Libyan Civil Aviation Authority (LCAA) oversees air traffic control and safety regulations, ensuring compliance with international aviation standards. Libyan Airlines maintains a diverse fleet of aircraft to cater to a range of routes and passenger capacities.

Despite its historical significance, the Libyan Civil Aviation Sector faces formidable challenges:

- **Political Instability:** The sector has been severely affected by prolonged political instability in the country, resulting in security concerns and disruptions to airport operations.

- **Safety Concerns:** Safety standards and security measures at some Libyan airports have been questioned, leading to occasional flight restrictions and warnings from international aviation organizations.

- **Economic Constraints:** Economic challenges have hampered the sector's ability to invest in modernizing infrastructure and maintaining aircraft fleets.

Libya is a member of the International Civil Aviation Organization (ICAO), actively participating in international efforts to establish and uphold aviation regulations and

safety standards. The nation has also negotiated bilateral agreements with various countries, facilitating international air travel and fostering diplomatic relations.

Libyan airlines, including Libyan Airlines and Afriqiyah Airways, are pivotal in connecting Libya to the world. Despite the challenges posed by political instability and security concerns, these carriers continue to provide domestic and international services, striving to rebuild their networks and regain market share.

The Libyan Civil Aviation Sector supports the nation's tourism industry by granting access to historical sites, the Mediterranean coastline, and the vast desert landscapes. Additionally, it serves as a conduit for trade, connecting Libyan businesses to global markets and facilitating the import and export of goods.

While the Libyan Civil Aviation Sector confronts significant challenges, it retains substantial potential for growth and recovery. As Libya progresses toward political and economic stability, strategic investments in modernizing airport infrastructure, enhancing safety standards, and expanding airline services can contribute significantly to the sector's revitalization.

In conclusion, the Libyan Civil Aviation Sector remains a vital component of the nation's transportation and economic infrastructure, holding promise for recovery and development in the years to come. This thesis aims to comprehensively understand the sector's history, existing challenges, and potential avenues for progress.

CHAPTER III

METHODOLOGY AND APPLICATION

In this section, the method and application are explained, and after the scales used in the research are mentioned, the data collection method, analysis, and findings are presented.

3.1. Research Method and Application

The study carried out is explanatory research. The explanatory research method examines the relationship between demographic variables and the data obtained from the participants working in Libyan Airlines serving in the civil aviation sector at Mitiga International Airport and Misrata International Airport.

A questionnaire technique was used in the research, and the data obtained from the participants were analyzed with the SPSS package program. The evaluation of the data obtained from the participants working in the civil aviation sector aimed to express the distribution of the participants according to the demographic characteristics by first performing frequency analysis. It was decided to perform an explanatory factor analysis to evaluate whether the innovation, employee motivation and operating performance scales are valid and to determine the relationship between the items and the factors.

The main problem of the research is, “What is the level of the effects of innovation and employee motivation on the operating performance of businesses serving in the civil aviation sector?”.

In this study, the contributions of innovation to businesses, the essential results of employee motivation in terms of business efficiency, and how innovation and employee motivation will affect operating performance are investigated in detail in the civil aviation sector. In order to test the research problems, the employees of Libyan

Airlines at Mitiga International Airport and Misrata International Airport were considered the study's main population.

3.2. Scales Used in the Research

The research model was created following the information obtained from the literature. In order to explain the hypotheses determined in line with the research model, innovation, employee motivation, and operating performance scales obtained from the literature were used within the scope of the research.

There are 59 statements in total in the scales used to explain the hypotheses determined in line with the research model. Apart from the scales, there are six demographic expressions in the questionnaire. There are 65 statements in total in the questionnaire form, including demographic statements. The expressions of the participants in the innovation and employee motivation scales; "1" strongly disagree; "2" disagree; "3" I am undecided; "4" agree. They were expected to answer as "5" strongly agree. The expressions of the participants in the scale of operating performance are much worse than my competitors with "1"; "2" is worse than my competitors; Same as "3" competitors; "4" is better than my competitors; "5" was asked to answer much better than my competitors. The scales used in the research are listed below.

3.2.1. Innovation Strategies Scale

The innovation strategies scale used in the study by Alegre, Lapiedra, and Chiva (2006) was adapted to this study and used in the research. The innovation scale used in the study carried out by Alegre et al. (2006) has 14 items and four dimensions: Process Innovation dimension with four items, Product Innovation dimension with four items, Market Innovation dimension with two items, and Organizational Innovation dimension with four items.

3.2.2. Employee Motivation Scale

The motivation scale used in the study conducted by Broeck et al. (2021) was adapted and used in the research. The employee motivation scale has 18 items and a dimension

scale: Internal Motivation dimension with 10 items and External Motivation dimension with eight items.

3.2.3. Operating Performance Scale

The scale of operating performance used in the study was adapted from Hilal and Salih (2012) and used in the research. The operating performance scale has 27 items and one diminution scale.

3.3. Sampling Process

In this study, the research population is employees of Libyan Airlines at Mitiga International Airport and Misrata International Airport who continue their activities in the civil aviation sector.

A simple random sampling method was used to select the sample in this study. The reason for this is that there are a higher number of employees than the sample in Libyan Airlines in the civil aviation sector where the research was conducted. Questionnaire forms will be given to 150 people face to face to ensure that forms can be answered correctly. A total of 150 responses were collected. For this reason, the study analyzed over 150 employees in total.

3.4. Data Collection Method

In this study, the questionnaire technique, one of the primary data collection tools and the most important one, was used. The survey questions prepared following the model and hypotheses of the research were transferred to the personnel working in Libyan Airlines at Mitiga International Airport and Misrata International Airport, and they were asked to answer them. There are 65 statements in total in the questionnaire form. Six of these statements consist of questions describing the demographic characteristics of the participants. The remaining 59 statements constitute innovation, employee motivation, and operating performance scales. Participants were expected to respond to the statements in the questionnaire using a 5-point Likert scale.

3.5. The Pilot Study

Within the scope of the research, it was decided to conduct a pilot study with 50 questionnaires before receiving the answers to the statements in the questionnaire form directed to the participants. As a result of the pilot study, the clarity and reliability of the statements in the questionnaire were tested. The statements in the questionnaire that could not be understood or adequately explain the research were rearranged, and the questionnaire form was finalized. However, the pilot study was not included in the study. The study was carried out directly on the statements in the questionnaire created after the data was obtained from the pilot study.

3.6. Data Analysis and Findings

A questionnaire technique was used in the research, and the data obtained from the participants were analyzed with the SPSS package program. The evaluation of the data obtained from the participants working in the civil aviation sector aims to express the participants' distribution according to the demographic characteristics by first performing frequency analysis. It was decided to perform an Explanatory Factor Analysis to evaluate whether the innovation, employee motivation and operating performance scales are valid and to determine the relationship between the items and the factors.

3.6.1. Demographic Features

When the answers to the questions directed to the participants working in Libyan Airlines in the Mitiga International Airport and Misrata International Airport operating in the civil aviation sector were evaluated within the scope of the research, it was determined that 37.33% of the total participants were female and the remaining 62.67% were male. Of the total participants, 18.67% were between the ages of 19-25, 32.67% were between the ages of 26-35, 37.33% were between the ages of 36-45, and the remaining 11.33% were 46 years old and over. 6% of the participants graduated from primary education, 24.67% graduated from high school, 15.33% graduated from the undergraduate level, 37.33% graduated from the master's level, and the remaining

16.67% graduated from the doctorate level. It was determined that 68.67% of the participants were married, and the remaining 31.33% were single.

Of the total participants, 19.33% were managers, 25.33% were assistant managers, 16.67% were office clerks, 18.00% were advisors, and lastly, the remaining 20.67% were identified as security workers. Of the total participants, 33.33% worked in the airline business for 0-5 years, 17.4% worked in the airline business between 5-10 years, 16.67% worked in the airline business between 10-15 years, 12.67% have been working in the airline business for 15-20 years, and the remaining 29.33% have been working in the airline business for 20 years or more.

Table 3.1. Demographic Features

		Frequency	**%**
Gender	Female	56	37.33
	Male	94	62.67
Marital status	Married	103	68.67
	Single	47	31.33
Age	Ages 19-25	28	18.67
	Ages 26-35	49	32.67
	Ages 36-45	56	37.33
	Age 46 and above	17	11.33
Job	Manager	29	19.33
	assistant director	38	25.33
	Office Clerk	25	16.67
	Advisory Officer	27	18.00
	Security	31	20.67

Table 3.1. (cont.)

Educational Status	Primary education	9	6.00
	High school	37	24.67
	Licence	23	15.33
	Master's Degree	56	37.33
	Doctorate	25	16.67
Year of Employment	0-5 Years	50	33.33
	Between 5-10 Years	25	16.67
Year of Employment	Between 10-15 Years	12	8.00
	Between 15-20 Years	19	12.67
	20 Years and Over	44	29.33
TOTAL		**150**	**100**

3.6.2. Explanatory Factor Analysis

Explanatory factor analysis was performed to determine whether the scales adapted following the model of the study were suitable for the analysis. The primary purpose of explanatory factor analysis is to determine the validity of the statements addressed to the participants and whether they are suitable for the analysis.

Before performing the exploratory factor analysis, KMO and Barlett tests should be performed to determine whether the scales are suitable for factor analysis. From the analysis, the KMO value is expected to give a result higher than 0.60. In addition, the Barlett value is expected to be lower than the p=0.05 value determined at the beginning of the study.

As a result of the analyzed KMO and Barlett test, it was determined that the KMO value of the innovation scale was 0.87, and Barlett's probability value was p=0.000. As a result of the KMO and Barlett tests, it was determined that the KMO value of the employee motivation scale was 0.84, and the probability value of the Barlett value was p=0.000. As a result of the KMO and Barlett test, it was determined that the KMO value of the operating performance scale was 0.81, and the probability value of the

Barlett value was p=0.000. Based on the values reached as a result of the analysis, it was concluded that the assumptions were met and the data were suitable for factor analysis.

In factor analysis, it was decided to apply the varimax technique, widely used in this study, to determine the relationship of the items with the factors and provide convenience in interpretation. When various literatures are examined, the load values of the expressions in the factor analysis are expected to be higher than 0.50.

After the factor analysis examined in the research, when the factor distributions of the expressions were examined, it was determined that the innovation scale was gathered under four dimensions, the employee motivation scale was collected under two dimensions, and the operating performance scale was collected under a single dimension.

When the factor distributions of the scales examined within the scope of the research were examined, it was seen that each statement was gathered under the scale related to it. Since no expression was below the determined value in any scale, factor analysis did not need to be removed and repeated.

Based on the values reached as a result of the analysis, it was concluded that the assumptions were met and the data were suitable for factor analysis. Details regarding the load values of the expressions collected in the factors obtained from the analysis are given in Table 3.2 below.

When Table 3.2, which contains the results of the explanatory factor analysis stated below, is examined, it is seen that 59 items are gathered under seven factors. It is observed that the factor load values of each statement are above the acceptance level determined at the beginning of the research. Clustering the items in a way that they have a load value above the acceptance level in the factor they belong to indicates that the statements in the cluster together measure the existing structure well. These seven factors together explain 88.56% of the total assumption.

Table 3.2. Factor Analysis Result

Item No.	Process Innovation	Product Innovation	Market Innovation	Organizational Innovation	Internal Motivation	External Motivation	Operating performance
8	0.937						
10	0.937						
19	0.696						
20	0.634						
7		0.784					
11		0.753					
13		0.684					
14		0.602					
9			0.897				
12			0.862				
15				0.864			
16				0.743			
17				0.718			
18				0.681			
25					0.927		
26					0.889		
27					0.847		
28					0.781		
29					0.73		
30					0.685		
32					0.669		
33					0.635		
34					0.479		
35					0.476		
21						0.913	
22						0.881	
23						0.827	
24						0.752	

Table 3.2. (cont.)

31						0.748	
36						0.658	
37						0.518	
38						0.477	
39							0.955
41							0.945
42							0.925
50							0.895
51							0.884
52							0.868
60							0.855
61							0.817
59							0.786
40							0.77
53							0.754
62							0.713
65							0.672
54							0.668
55							0.659
48							0.643
63							0.621
56							0.595
64							0.588
43							0.57
47							0.559
57							0.558
44							0.544
45							0.537
49							0.525
58							0.503
46							0.488

3.6.3. Reliability Analysis

It is necessary to test the reliability of each scale after the explanatory factor analysis is carried out to determine the factor loads of the statements in the scales and to investigate whether there is a problem that should be removed from the research. Reliability: It shows whether the relationship between the items in the scale is consistent and how well the items reflect the subject to be examined. In the study, the Cronbach alpha coefficient was used to measure the reliability of the scales. For the scales to be considered reliable, the Cronbach alpha coefficient is expected to be greater than 0.70.

The results of the reliability analysis of the scales determined to explain the model determined within the scope of the study are given in Table 3.3 below. As a result of the reliability analysis, the reliability coefficient of the innovation scale was determined as (0.946), the reliability coefficient of the employee motivation scale (0.91), and the reliability coefficient of the operating performance scale (0.902). From this point of view, the reliability coefficients of all seven factors examined within the scope of the research are high.

Table 3.3. Reliability Analysis Result

Factors	Number of Items	Cronbach's Alpha Coefficient
Innovation	14	0.946
Process Innovation	4	0.956
Product Innovation	4	0.935
Market Innovation	2	0.931
Organizational Innovation	4	0.939
Employee Motivation	18	0.91
Internal Motivation	10	0.918
External Motivation	8	0.901
Operating performance	27	0.902

3.6.4. Correlation Analysis

Correlation analysis should be done in order to test the predetermined hypotheses within the scope of the research. It has been concluded that the factor and reliability analysis that should be applied before the correlation analysis is suitable for testing the relations of the scales in the study with each other. This section used correlation analyses to investigate the effect of innovation and employee motivation of Libyan Airlines serving in the civil aviation sector on operating performance.

It means predicting the behavior of a random variable using a model. It is used to measure the size of the relationship between variables. In multivariate cases, other variables affecting the dependent variable are considered constant, and the calculation is made. How these variables affect the dependent variable is determined by a coefficient. The important thing is that there is a cause-and-effect relationship between the influencer and the affected. To summarize, finding the most suitable function for the data table is called correlation analysis.

Correlation analysis is a technique to determine the severity of the relationship or dependence between two variables measured at the range and ratio level. The relationship that is tried to be measured in the correlation analysis is related to the linear part of the relationship between the variables. The correlation coefficient r is between -1 and +1. The correlation coefficient gets stronger from 0 (zero) to +1 (in the same direction) and -1 (in the opposite direction). The closer the coefficient is to zero, the weaker it is. The following table is used in the interpretation of the correlation coefficient.

Table 3.4. Correlation

Correlation (r)	Comment
Between 0.90 – 1	Very High
Between 0.70 – 0.89	High
Between 0.50 – 0.69	Middle
Between 0.26 – 0.49	Weak
Between 0.0 – 0.25	Too weak

In order to perform the correlation analysis, first of all, the average of the answers given by the participants to the statements in the scales should be calculated. The correlation analysis between the scales was carried out over the determined scale averages. The correlation analysis table, which was conducted on the averages of 59 questions consisting of 7 factors in total, directed to the participants within the scope of the research, is shown in Table 3.5 below and specified in the scope.

Table 3.5. Correlation Analysis Result

	Innovation	Process	Product	Market	organizational	**Motivation**	Internal	External	**Performance**
Innovation	1								
Process	0.807	1							
Product	0.782	0.789	1						
Market	0.814	0.812	0.795	1					
Organizational	0.789	0.798	0.785	0.806	1				
Motivation	0.89	0.849	0.817	0.855	0.809	1			
Internal	0.869	0.83	0.842	0.847	0.828	0.842	1		
External	0.894	0.868	0.872	0.869	0.817	0.833	0.861	1	
Performance	0.932	0.884	0.886	0.905	0.895	0.865	0.887	0.916	1

* Significance level was taken as 0.05.

Correlation analysis was carried out in order to determine the level of the effect of innovation and employee motivation on the operating performance of Libyan Airlines operating in the civil aviation sector specified in the research model.

According to the result of the correlation analysis, it is possible to talk about the existence of a high level of positive relationship between the two factors, according to the value (0.89) between innovation and employee motivation.

According to the value (0.932) reached between innovation and operating performance, it is possible to discuss a highly positive relationship between the two factors.

According to the value (0.865) between employee motivation and operating performance, it is possible to discuss a highly positive relationship between the two factors.

Correlation analysis is performed to determine the size and direction of the relationship between the variables. When the results obtained from the correlation analysis were examined, it was concluded that all the hypotheses determined at the beginning of the research were accepted. From this point of view, Libyan Airlines operating in the civil aviation sector can increase its operating performance equally by increasing its innovation activities and employee motivation.

3.6.5. Research Results on Demographic Variables

In this part of the study, the findings obtained from the survey study were evaluated and evaluated. Civil aviation sector employees participating in the research expressed "process innovation" as moderate (2.736 ±,894); moderate (2.829 ± 862) for "product innovation"; moderate (2.889 ± .901) for "market innovation"; moderate (3.148 ± .757) for "organizational innovation"; "internal motivation" expressions were moderate (3.2 ± .887); "external motivation" expressions were moderate (2.847 ± .866); It is seen that they agree with the expressions "operating performance" at a moderate level (2.907 ± .889).

Table 3.6. Averages of Scales

		Process Innovation	Product Innovation	Market Innovation	Organizational Innovation	Internal Motivation	External Motivation	Operating performance
N	Valid	150	150	150	150	150	150	150
	Empty	0	0	0	0	0	0	0
Average		2.736	2.829	2.889	3.148	3.2	2.847	2.907
Median		2.973	2.889	2.973	3.173	3.473	2.973	2.973
Standard deviation		894	862	901	757	887	866	889
Variance		816	778	856	579	778	819	791

When examining the differences between demographic groups for research variables, an independent groups T-Test was used because there were two groups (male-female and married-single) in gender and marital status. One-way ANOVA analysis was used because it was a group. Average values of innovation, motivation, and operating performance scales are given in Table 3.6 below.

3.6.5.1. Independent Groups T-Test

Within the scope of the study, process innovation, product innovation, market innovation, organizational innovation, internal motivation, external motivation, and operating performance scale averages were compared in terms of gender groups. T-Test results of gender-neutral groups are given in Table 3.7 below.

Table 3.7. Gender Independent Groups T-Test Results

		N	Average	Standard deviation	t value	p value
Process Innovation	Female	56	3.1689	0.7534	-0.549	0.566
	Male	94	3.213	0.79714		
Product Innovation	Female	56	3.1874	0.86593	-1.549	0.081
	Male	94	3.343	0.91751		
Market Innovation	Female	56	2.9195	0.89076	-0.781	0.422
	Male	94	2.9922	0.89103		
Organizational Innovation	Female	56	2.8859	0.88561	0.163	0.835
	Male	94	2.868	0.94746		
Internal Motivation	Female	56	2.922	0.96366	-1.636	0.099
	Male	94	3.0788	0.88373		
External Motivation	Female	56	3.1604	0.66725	-0.55	0.563
	Male	94	3.1917	0.78621		
Operating performance	Female	56	3.2277	0.83621	-1.549	0.083
	Male	94	3.3822	0.88954		

No significant difference was found for any of the variables after the T-Test was performed to compare female and male employees about the variables in the study. From this point of view, it can be said that people working in the civil aviation sector participate in innovation, motivation, and operating performance scales regardless of gender. T-Test results of independent groups regarding marital status are given in Table 3.8 below.

Table 3.8. Groups T-Test Results Independent of Marital Status

		N	Average	Standard deviation	t value	p value
Process Innovation	Married	103	3.1857	0.81848	-0.245	0.804
	Single	47	3.2045	0.73398		

Table 3.8. (cont.)

Product Innovation	Married	103	3.4137	0.7732	3.034	0.048
	Single	47	3.1372	0.96277		
Market Innovation	Married	103	2.819	0.92941	-2.588	0.044
	Single	47	3.0597	0.85389		
Organizational Innovation	Married	103	2.7944	0.96068	-1.516	0.121
	Single	47	2.939	0.87576		
Internal Motivation	Married	103	2.8613	0.95278	-2.552	0.0792
	Single	47	3.1084	0.90248		
External Motivation	Married	103	3.2164	0.80557	-0.24	0.816
	Single	47	3.3602	0.74998		
Operating performance	Married	103	3.3835	0.76848	2.574	0.076
	Single	47	3.2312	0.92868		

No significant difference was found for any variable after the T-Test was performed to compare married and single employees for the variables in the study. From this point of view, people working in the civil aviation sector participate in innovation, motivation, and operating performance scales regardless of marital status.

3.6.6. ANOVA Test

A one-way ANOVA test was performed to compare the means of research variables in age, education level, occupation, and years of service. First, the homogeneity of group variances, one of the assumptions of ANOVA, was tested for each variable. The means of the variables whose variance homogeneity of the groups was provided were

compared with a one-way analysis of variance. The differences in pairwise comparisons were reached using the Scheffe test.

3.6.6.1. Differences by Age Groups

As a result of the Levene test, the equality of the variances of the groups was not accepted in any of the variables. In this case, the prerequisite for the ANOVA test for these variables still needs to be met. ANOVA analysis was not performed to compare the age groups because interpreting the results would not be correct. The results of the Variance Homogeneity test of the groups can be seen in Table 3.9 below.

Table 3.9. Levene Test Result for Age Groups

Variables	Levene Statistics	Df 1	Df 2	Sig.
Process Innovation	13.819	3	150	0.000
Product Innovation	9.354	3	150	0.000
Market Innovation	3.758	3	150	0.005
Internal Motivation	6.501	3	150	0.000
External Motivation	6.489	3	150	0.000
Operating performance	6.181	3	150	0.000

These values are expected to be greater than 0.50. If this is not the case, it is said that the variances of the groups are not homogeneous, that is, not comparable. In this case, it is not appropriate to compare the means of groups. Therefore, ANOVA could not be performed.

3.6.6.2. Differences in Educational Status Groups

As a result of Levene's test, the equality of variances of the groups was accepted only for the external motivation variable. In this case, the necessary prerequisite for the ANOVA test with process innovation, product innovation, market innovation, organizational innovation, internal motivation, and operating performance variables could not be met. Only external motivation was analyzed. However, no significant

difference existed between educational status and external motivation (F=1.701, p>.05).

The results of the Homogeneity of Variance test of the groups are given in Table 3.10 below, and the results of the ANOVA analysis for external motivation are given in Table 3.11.

Table 3.10. Levene Test Result for Educational Status Groups

Variables	Levene Statistics	Df 1	Df 2	Sig.
Process Innovation	6.804	4	150	0.000
Product Innovation	2.878	4	150	0.032
Market Innovation	4.308	4	150	0.005
Internal Motivation	4.848	4	150	0.003
External Motivation	1.701	4	150	0.156
Operating performance	4.231	4	150	0.014

Table 3.11. External Motivation Test Result for Educational Status Groups

		N	Average	Standard deviation	t value	p value
External Motivation	Primary education	9	28.492	80.775	1.768	0.152
	High school	37	29.108	89.92		
	Licence	23	29.016	97.122		
	Master's Degree	56	31.588	92.969		
	Doctorate	25	31.588	92.969		

3.6.6.3. Differences by Occupational Groups

As a result of the Levene test, the equality of the variances of the groups was not accepted in any of the variables. In this case, the prerequisite for the ANOVA test for these variables still needs to be met. ANOVA analysis was not performed to compare

the occupational groups because interpreting the results would not be correct. The results of the Variance Homogeneity test of the groups are given in Table 3.12 below.

Table 3.12. Levene Test Result for Occupational Groups

Variables	Levene Statistics	Df 1	Df 2	Sig.
Process Innovation	6.259	4	150	.000
Product Innovation	5.858	4	150	.000
Market Innovation	6.932	4	150	.000
Internal Motivation	4.633	4	150	.000
External Motivation	9.113	4	150	.000
Operating performance	7.22	4	150	.000

3.6.6.4. Differences in Service Years

As a result of the Levene test, the equality of the variances of the groups was accepted for all variables except the internal motivation variable. In this case, it was decided to perform an ANOVA test with process, product, market, organizational, external motivation, and operating performance variables. Nwo analysis was made with only internal motivation. A significant difference was found between product innovation (F=3.539), (.05>.012) and external motivation (F=1.957), (.05>.045) and years of service. People with low seniority years are more effective in product innovation and external motivation factors, and they look at differences more warmly than people with high seniority.

No significant difference was found between process innovation, market innovation operating performance, and years of service.

The results of the Homogeneity of Variance test of the groups are given in Table 3.13 below, and the results of the ANOVA analysis for variables other than internal motivation are given in Table 3.14.

Table 3.13. Levene Test Result for Years of Service

Variables	Levene Statistics	Df 1	Df 2	Sig.
Process Innovation	7.709	4	150	0.057
Product Innovation	1.257	4	150	0.273
Market Innovation	2.151	4	150	0.088
Internal Motivation	1.981	4	150	0.024
External Motivation	3.021	4	150	0.093
Operating performance	4.22	4	150	0.392

Table 3.14. Internal Motivation Test Result for Service Year Groups

		N	Average	Standard deviation	t value	p value
Process Innovation	0-5 Years	50	2.637	0.80857	2.582	0.282
	5-10 Years	25	2.722	0.87764		
	10-15 Years	12	2.812	0.83978		
	15-20 Years	19	2.6	0.83525		
	20 Years and Over	44	2.738	0.89325		
Product Innovation	0-5 Years	50	2.91	0.84045	3.539	0.012
	5-10 Years	25	2.834	0.89254		
	10-15 Years	12	2.887	0.80543		
	15-20 Years	19	2.711	0.7931		
	20 Years and Over	44	2.753	0.93857		
Market Innovation	0-5 Years	50	2.964	0.84943	1.148	0.544
	5-10 Years	25	2.911	0.87164		
	10-15 Years	12	2.842	0.81947		
	15-20 Years	19	2.851	0.84221		
	20 Years and Over	44	2.709	0.79499		

Table 3.14. (cont.)

External Motivation	0-5 Years	50	2.833	0.83947	1.957	0.045
	5-10 Years	25	2.917	0.82436		
	10-15 Years	12	2.954	0.9385		
	15-20 Years	19	2.709	0.89503		
	20 Years and Over	44	2.697	0.87243		
Operating performance	0-5 Years	50	2.978	0.8564	3.236	0.679
	5-10 Years	25	2.96	0.79536		
	10-15 Years	12	2.854	0.88943		
	15-20 Years	19	2.846	0.87183		
	20 Years and Over	44	2.706	0.84921		

3.7. Hypotheses Summary

As a result of the analyses applied within the scope of the research, the evaluation results regarding the acceptance or rejection of the hypotheses determined at the beginning of the study are given below.

Table 3.15. Hypotheses After Evaluation

Hypotheses	Status
Hypothesis 1: Increasing employee motivation has a positive and significant effect on the innovation activities of Libyan Airlines serving in the civil aviation sector.	Supported
Hypothesis 2: Increasing innovation performance has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.	Supported
Hypothesis 3: Increasing employee motivation has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.	Supported
Hypothesis 4: Increasing employee motivation and innovation performance has a positive and significant effect on the operating performance of businesses serving in the civil aviation sector.	Supported

Within the scope of the study on the people working in Libyan Airlines operating in the civil aviation sector, four different hypotheses were developed at the beginning of the research. These hypotheses are based on employee motivation, business innovation, and operating performance.

Although the concept of innovation is the result that has been put forward, it is of great importance in innovation. *Motivation* is all the activities continuously motivating one or more people towards a particular purpose or goal. Performance, conversely, is defined as the countable or uncountable results of the efforts or activities of the group or individuals during a specified process.

In this context, this study aimed to reveal the effects of increasing employee motivation through innovation studies on the operating performance of the civil aviation sector, which was determined at the beginning of the study, and all the hypotheses determined in line with this purpose were supported.

According to the analysis results, all hypotheses determined at the beginning of the research were accepted. Correlation, T-Test, and ANOVA tests were used to support the hypotheses.

When the studies carried out between innovation and operating performance in the previous periods are examined, it is seen that businesses and individuals that attach great importance to innovation positively affect operating performance. In the same way, it is seen that it is effective in improving innovation in the studies carried out to increase operating performance. In this context, the results of some studies carried out in previous periods are given below.

According to a study on the effect of participation on innovation, it has been determined that employees who participate in the decisions to be made in order to determine the need for change and innovation offer more creative ideas by adopting the need and show higher performance in the success of the innovation process (Wong, 2013). Similarly, this study determined that by increasing the employees' motivation, the business's operating performance would also be increased. From this point of view,

the previous studies on innovation, motivation, and operating performance have been completed and supported.

Amabile and Pillemer (2012) state that money and time, two resources that affect creativity and innovation, should be allocated to employees adequately. The amount of these resources is essential, as they either support or limit creativity. If employees are not allocated enough money and time to experiment or complete the project, their motivation will drop, and they will not be able to succeed in the creative process. The same results were obtained with the results obtained in this study. By allocating enough money and time, it is ensured that the motivation of the employees is increased and the innovation activities are developed. This naturally contributes to the increase in the operating performance of the enterprise.

Starting from here, social activities enable individuals to relieve their mental and physical fatigue, reduce their stress, get to know each other, and do different activities outside the work environment. Social activities make it easier for employees to become group members, increase their commitment to the business, and motivate them. It is recommended to use social activities to increase the operating performance and motivation of people.

The studies on this subject (Sukumar et al., 2020; Aspara et al., 2011; Nadant et al., 2019) show a strong relationship between developing creative ideas and organizing teamwork. Establishing teams that develop creative ideas, thus bringing together different people, different views and thoughts, and ensuring their interaction. Thus, more creative ideas emerge thanks to these interactions. Again, the established team should be willing and enthusiastic about the purpose. Team members should share in everything. In cases of success and failure, they should not spare each other their help and support. Finally, each member should know his or her teammate well regarding knowledge and perspective. Internal motivation and creativity activities are carried out when these factors are provided. From this point of view, considering that operating performance is directly related to motivation and innovation, another suggestion for the sector in which the study is carried out would be to give importance to teamwork.

CHAPTER IV

RESULTS AND DISCUSSION

Today, businesses must be open to continuous learning to be efficient and effective. The nature of the works and the methods of doing it show dynamism according to the rapidly developing technologies. Businesses should ensure employees follow the innovations and changes through training and activities that facilitate organizational adaptation.

When the literature on the effect of increasing innovation performance on operating performance is examined, it is seen that operating performance is primarily an indicator of firm performance and focuses on effects such as profitability rates, growth in sales, and increase in total assets and turnover rates. Since non-financial factors effectively increase the company's performance, activities to increase these factors should be supported.

In his study of internet-based technology firms on the effects of product and process innovations on firm operating performance, Sukumar et al. (2020) found that innovative firms have higher growth rates, but the exact relationship cannot be valid for profitability. It has been shown that product innovation is more effective on firm operating performance than process innovation". In this study, it was determined that there was no significant difference between the innovation sub-factors. However, it has been accepted that motivation is a factor that supports all kinds of innovation.

Aspara et al. (2011) argued that "in addition to business model innovation, firms' ability to replicate successful business models in different regions and markets has an impact on performance. It has been found that among large-scale firms, those that are strategically important but do not attach great importance to duplication of business model innovation have lower financial performance than those that attach high importance to both. This shows that business model innovation alone is insufficient to

affect performance, and the findings of this study support the speculative proposition of Nadant et al. (2019) that “firms can achieve profitable growth by imitating, not just initiating, business model innovation.” Innovation activities can also be carried out by copying successful business models.

Firm performance is affected by innovative activities, but although innovation is necessary to increase competitive performance, it is not a sufficient factor on its own. Innovation has a positive effect on firm performance, but it was emphasized that there are other factors to be considered in the relationship between innovation and performance.

Innovation speed positively affects operational and organizational performance, and innovation quality affects financial performance—the effects of companies’ knowledge-sharing activities on innovation quality and speed.

Innovation has a positive effect on organizational performance. The improvement in financial performance results from increased product and market performance, while the increase in product and market performance is already due to increased innovative capabilities. Based on the analysis, the study concluded that the efficiency levels of companies that increase their sales and research and development activities by investing in intangible assets increase in parallel.

Atalay et al. (2013) tried to determine the effects of innovations in automotive supply industry companies on company performance through surveys. It has been determined that product and process innovations have a positive effect on firm performance while marketing innovation and organizational innovation have no effect. In this study, similarly, it was determined that product and process innovation affect operating performance, and it is determined that market and organizational innovation directly affect operating performance.

CHAPTER V

CONCLUSIONS

This study was carried out only on the employees of Libyan Airlines in Mitiga International Airport and Misrata International Airport operating in the civil aviation sector of Libya, which was determined before the research was conducted. It was assumed that all participants in the study marked the answers as correct.

According to the analysis results, all hypotheses determined at the beginning of the research were accepted. After the hypotheses were accepted, the existence of a significant relationship between demographic variables and the scales was also tested. As a result of the analysis, a significant difference was found between only product innovation (F=3.539), (.05>.012) and external motivation (F=1.957), (.05>.045), and years of service. It has been concluded that those with low seniority years are more effective in product innovation and external motivation factors and are more prone to differences than those with higher years of service.

In line with the information obtained from the analyses, it has been determined that the operating performance has increased as a natural result of increasing employee motivation and innovation activities in Libyan Airlines enterprises. From this point of view, civil aviation sector enterprises need to increase employee motivation and attach importance to innovation activities simultaneously. For this reason, it is inevitable for businesses operating in the civil aviation sector, which is the subject of the research, to increase their operating performance in the short and long term by focusing on employee motivation and innovation activities.

When the factor distributions of the expressions were examined in the research, it was determined that the innovation scale was gathered under four dimensions, the employee motivation scale was under two dimensions, and the operating performance scale was gathered under a single dimension.

When the factor distributions of the scales examined within the scope of the research were examined, it was seen that each statement was gathered under the scale related to it. Since no expression was below the determined value in any scale, factor analysis did not need to be removed and repeated.

In order to explain the model determined within the scope of the study, the results of the reliability analysis of the determined scales were determined. As a result of the reliability analysis, the reliability coefficient of the innovation scale was determined as (0.946), the reliability coefficient of the employee motivation scale (0.91), and the reliability coefficient of the operating performance scale (0.902). From this point of view, the reliability coefficients of all seven factors examined within the scope of the research are pretty high.

According to the result of the correlation analysis, it is possible to talk about the existence of a high level of positive relationship between the two factors, according to the value (0.89) between innovation and employee motivation. In this context, it is expected that with the increase in innovation, employee motivation will increase at the same level.

The value (0.932) reached between innovation and operating performance makes it possible to discuss a highly positive relationship between the two factors. In this context, with the increase in innovation, the business's operating performance is expected to increase.

According to the value (0.865) between employee motivation and operating performance, it is possible to discuss a highly positive relationship between the two factors. In this context, with the increase in motivation, the business's operating performance is expected to increase.

No significant difference was found for any of the variables after the T-Test was performed to compare female and male employees about the variables in the study. From this point of view, it can be said that people working in the civil aviation sector participate in innovation, motivation, and operating performance scales regardless of gender.

No significant difference was found for any variable after the T-Test was performed to compare married and single employees for the variables in the study. From this point of view, people working in the civil aviation sector participate in innovation, motivation, and operating performance scales regardless of marital status.

Within the scope of the study on the people working in Libyan Airlines operating in the civil aviation sector, four different hypotheses were developed at the beginning of the research. These hypotheses are based on employee motivation, business innovation, and operating performance.

Although the concept of innovation is the result that has been put forward, it is of great importance in innovation. *Motivation* is all the activities continuously motivating one or more people towards a particular purpose or goal. Performance, conversely, is defined as the countable or uncountable results of the efforts or activities of the group or individuals during a specified process.

In this context, this study aimed to reveal the effects of increasing employee motivation through innovation studies on the operating performance of the civil aviation sector, which was determined at the beginning of the study, and all the hypotheses determined in line with this purpose were supported. In line with the data obtained from the hypotheses and research developed, some suggestions for increasing the operational performance in the civil aviation sector are presented in the discussion section while specifying the studies done in the previous period.

In addition, if we need to make suggestions for future studies, it is possible to carry out the scales and model we have created by bringing together different studies in different sectors or different businesses operating in the civil aviation sector in the future. However, in future research, the subject can apply to groups that receive or provide services nationwide in the wider aviation sector. It can be evaluated regarding employee motivation and innovation, and the effect of different issues on operating performance can be investigated.

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APPENDIXES

APPENDIX A

- **Innovation Scale**

1. It is important for our company to invent and present brand new products to the market.
2. We develop entirely new and different methods for exploratory innovation.
3. Entering new industry areas is important to us.
4. Discovery innovation is carried out by different units of our company (R&D, Marketing, production units, etc.).
5. We successfully implement many new product ideas.
6. Our new products cause radical changes in the market (in areas such as marketing, sales, production, supply, etc.).
7. While producing a new product, we make radical changes to the existing product.
8. It is important for our company to expand the product range.
9. We reuse our existing technological knowledge to develop products.
10. In order to develop products, we prefer the technological system, which is the combination of the technology we are currently using and the new technology.
11. We attach importance to increasing production flexibility.
12. Increasing efficiency is our main goal.
13. We constantly research to reduce raw material consumption.
14. We reposition existing products when necessary.

- **Employee Motivation Scale**

1. The regular increase in my salary motivates me.
2. Having job security motivates me.
3. Being rewarded for my success (tips, commissions, bonuses, etc.) motivates me.

4. Opportunities such as free service, lunch, tea and coffee offered by the restaurant motivate me.
5. Being independent enough about how I do my job motivates me.
6. Being together with my colleagues outside of work (meal, picnic, etc.) motivates me.
7. The fact that my job gives me the opportunity to improve myself motivates me.
8. Being successful in what I do motivates me.
9. Competition motivates me.
10. If my job is attractive to me and I love my job, it motivates me.
11. Respect for me and my privacy motivates me.
12. Being able to do my job in a fair and just environment motivates me.
13. Being responsible for so many people motivates me.
14. Organizing a well-organized meal organization motivates me.
15. Working in different jobs at work motivates me.
16. Having career opportunities in my job motivates me.
17. My workplace's emphasis on health and work safety motivates me.
18. The physical conditions of the working environment (air conditioning, music, etc.) motivate me.

- **Operating Performance Scale**

1. General relations among the employees themselves
2. Relationships between management and employees
3. employee productivity
4. Employee commitment to the business
5. Employee job satisfaction (satisfaction)
6. Labor turnover rate
7. Absenteeism of the staff
8. Ability to retain qualified employees
9. Ability to attract qualified employees to the business
10. Customer satisfaction level
11. Customer service quality
12. The image and reputation of the business in the eyes of consumers
13. Customer loyalty (repeat customer rate)

14. Guest complaints
15. Your net profit margin (net profit/net sales x 100)
16. Increase in operating income for the last three years
17. Increase in operating profit for the last three years
18. Increase in operating efficiency (net profit/capital x 100) over the last three years
19. Financial performance in general
20. Employment level created in our business (number of employed personnel)
21. Environmental awareness level of our business (environmental awareness)
22. The service offered and the market diversity addressed
23. Rights provided to consumers in our business
24. Increase in table turnover rate over the last three years
25. Increase in sales for the last three years
26. Increase in market share in the last three years
27. Increase in the number of customers in the last three years

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