Department of Management

Organizing Innovation

The effect of innovation on organizational performance: Study in The Jordanian Technology companies.

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CHAPTER ONE: GENERAL FRAMEWORK

1 Purpose of the Research

This study aims to understand the effects of innovation on organizations in the technology sector of Jordan-Amman. In addition, it will offer the application of innovation and organizational performance in technology companies and show how the technology sector will achieve innovation. This study will help the managers and employees to understand the importance of innovation in companies, which will improve organizational performance among customer relations which indicates increased customer satisfaction. It will also create a long-term connection with consumers, and manage customer problems. Although, employee performance seeks to increase employee engagement by making a decision, creating methods that focus on achieving objectives, and establishing rewards both collectively and individually. Through competitive advantages, a case of protection against competing companies is developed and includes an advantage that allows companies to distinguish themselves from their competitors and indicates their success more than other companies in a competitive environment.

1.1 Problem Statement

In a rapidly changing world and fierce competition, companies struggle to survive and achieve their goals by searching for best practices and ideas that lead to better performance. The business environment is becoming more dynamic, complex, and unpredictable (Farhang et al., 2018). Many technology companies and other sectors suffer from weak performance. The pandemic of COVID-19 was one of the reasons that led to this weakness, which led to a large-scale shift to hybrid work and some of the difficulties that technology companies have faced, including high worker turnover, high competition between employees, and a constant shortage of skills, including weak teamwork (Watson et al., 2022). The role of innovation comes in the face of these difficulties; without

innovation, there is nothing new, and there will be no progress. From this point, managers and employees must use the power of creativity and innovation to adapt to and keep pace with rapid changes in a business environment characterized by increasing complexity and turmoil to modify to such changes and developments and address the needs of the nation if they want to survive (Farhang et al., 2018). Accordingly, the main problem statement in this research seeks to measure the effect of innovation on organizational performance in the technology sector in Jordan-Amman.

Therefore, this study is going to discuss the effect of innovation on organizational performance in the Jordanian technology sector in Amman/Jordan by answering the following main and sub-questions:

What is the impact of applying innovation on organizational performance in the Jordanian technology sector?

What is the impact of organizational eco-innovation on organizational performance in the Jordanian technology sector?

What is the impact of green product innovation on organizational performance in the Jordanian technology sector?

What is the impact of service innovation on organizational performance in the Jordanian technology sector?

1.2 Significance of the Research

Theoretical Contribution: This study might be considered one of the few studies that investigates the effect of innovation on organizational performance in the technology sector in Jordan-Amman. Moreover, the study aims to draw valuable understanding guidelines about the effect of innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance in the technology sector in Jordan- Amman. It can inform future academic studies on writing reports and making judgments on innovation.

Practical and Applied contribution: the result of this research can be used to provide a recommendation to the Jordanian technology sector about the impact of innovation on improving organizational performance on customer relations, employee performance, and competitive advantage.

1.3 Research Objective

The research purpose is to explore the impact of innovation (organizational eco-innovation, green product innovation, service innovation) on the organizational performance in the Jordanian technology sector. Therefore, this study aims to achieve the following objectives:

- Main objectives:
  To explore the impact of using innovation on organizational performance in the technology sector performance.
- Sub objectives:
  1. To investigate the impact of organizational eco-innovation on the organizational performance in the technology sector performance.
  2. To investigate the impact of green product innovation on the organizational performance in the technology sector performance.
  3. To investigate the impact of service innovation on organizational performance in the technology sector performance.

1.4 Methodological Framework

This research investigates the effect of innovation (independent variable) on organizational performance (dependent variable) in the Jordanian technology sector.

The researcher chose these three dimensions because they have great importance in technology companies. Eco-innovation is one of the most important types of marketing innovation; it is a strong indicator of implementing eco-innovation, which helps companies in R&D. It has been proven that companies that use R&D are eco-innovation and have a higher absorption capacity, therefore improving their productivity (Granero

and Gomez, 2018). Regarding green product innovation in technology companies, previous research indicated that companies have the absorptive capacity to implement a knowledge acquisition strategy or through external sources; this absorptive capacity helps companies innovate. External sources of knowledge are determinants of absorptive capacity. Therefore, companies need external knowledge and combine it to develop innovative green products (Awan et al., 2021). The importance of service innovation in technology companies; the idea here is not only the process of providing excellent service to the customer but instead providing an innovative service to customers, for instance, a new communication channel to interact with customers or an innovative distribution system (Arshad et al., 2016).

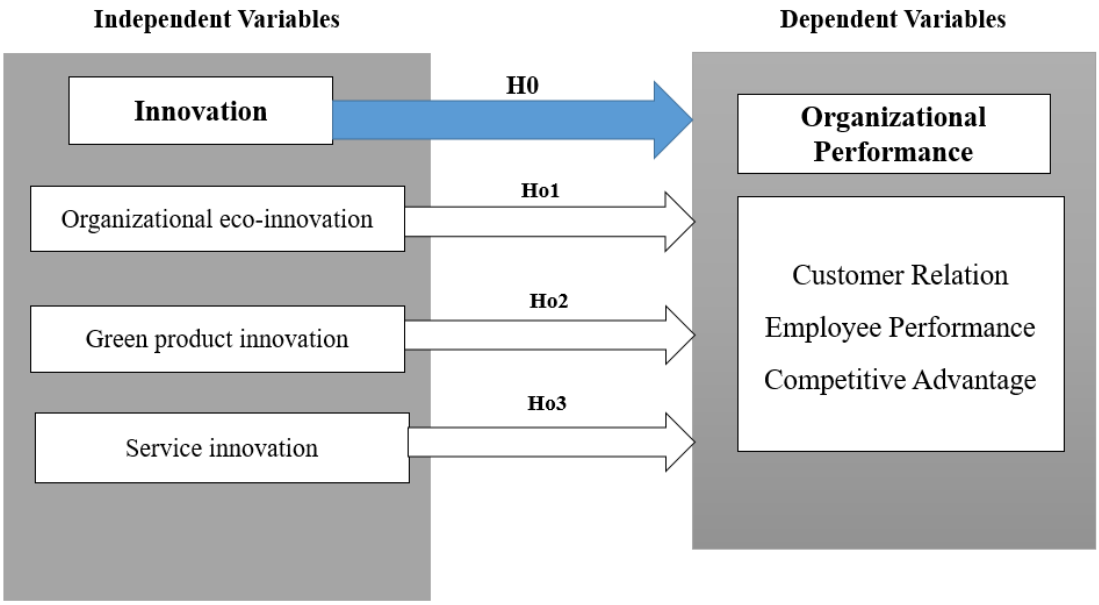

Figure 1 study model

Sources: this model has been developed based on previous studies: Dependent variables (Ibnu Hajar, 2015). Independent variables (lei Lin, 2013; Payne & Ipek et al., 2021), (Ilker Murat AR, 2012)

CHAPTER TWO: THEORETICAL AND CONCEPTUAL FRAMEWORK (LITERATURE REVIEW)

2 Introduction

Innovation is one of the main challenges of business management because it is the main factor that sustains the company and its long-term growth process. Furthermore, innovation indicates modernity, success, change, and the emergence of new ideas and behaviors in an organization. It is considered a response to changes in the external environment or a preventive measure that affects the environment. Despite the successful implementation of innovation, only a few companies understand the conditions for successful innovation. How companies respond to these challenges depends on the nature of the business they operate, the dynamic forces of the market in which they operate, and the resources and skills available to ensure that their business objectives are achieved (Fartash et al., 2018).

2.1 Innovation

Innovation is anywhere; it is not the handiest within the world of products (technology); however, within the global of words, innovation is discussed not just within scientific and technical literature but also in social science and arts. Innovation has become the logo of modern society for resolve to many troubles. Innovation is a phrase used to explicit our idea of change or as a substitute for a specific form of change. Innovation is trade. This is human-made and planned (Godin, 2015).

Before getting into the concept of innovation, we must distinguish between creativity and innovation:

Creativity is the generation of valuable, unique, and one-of-a-kind ideas by a single person or group of people working together. However, integration inside the company is what **innovation** is all about (Amabile and Pratt, 2016).

The literature on innovation shows that every business needs innovation to survive and achieve a sustainable competitive advantage successfully. The fact is that there are many definitions of innovation in the literature. Still, the exact definitions of the term have been described globally. In the broadest sense, the term comes from the Latin-innovare, which means to create something new. The UK Department of Trade and Industry (2007) believes that innovation is a process of turning opportunities into new ideas and translating them into mainstream practice (Tuan et al., 2016). Innovation is the key to ensuring the future growth and survival of companies. In addition to innovation allowing institutions to coordinate with any change in the market and the environment, innovation is usually described as a critical factor in the organization's performance and its survival in a competitive environment. Besides, innovation doesn't only affect firm performance but also job satisfaction, as it is the key to success for organizations (Tohidi and Jabbari, 2012). Many authors state that innovation consists of generating a new and unique idea and implementing it in a new product, service, or process, which leads to an increase in job opportunities. Furthermore, high profit and pure innovation business projects. For a large number of corporate decision–making processes, innovation is a cumulative and long-term process, not a one-time event, beginning to generate fresh ideas, to the implementation phase in addition to the ongoing challenge in the vision entrepreneurship (Kogabayev and Maziliauskas, 2017).

Innovation doesn't end only with the discovery of an idea but ends with the realization of this idea. Inspiration and imagination are important factors for the emergence of new ideas, and effort and occupation have the strongest impact on creating opportunities for innovation. Besides that, innovation provides new opportunities for companies to work with their new and current capabilities to meet customers' needs. The invention or idea must be of value to be able to fall into the scope of innovation (Kogabayev and Maziliauskas, 2017). Innovation is one of the most important elements that have the

greatest impact on the performance of organizations and countries; besides that, it has become one of the strategies that organizations use to achieve a competitive advantage, therefore, increasing their performance. It is a tool that enables companies to obtain the highest ability to respond and adapt to changes that occur in their environment and to discover new opportunities in the market and the know-how to use it at the right time (Jimenez and Fuentes, 2013).

This research, will show this effect between innovation and organizational performance because innovation is important in this sector. Therefore, it can be a key to creating a competitive advantage. As mentioned, innovation has many related definitions, but in this study, innovation is the response to change, creative processes, and new ideas that lead to another wave of technology that helps companies, especially in this sector how to pay attention to this variable because innovation doesn't end with the discovery of an idea but ends with the realization of this idea (Jimenez and Fuentes, 2013). The positive impact of innovation on organizational performance is because companies innovate to get the advantages derived from being the first and from achieving better performance. However, the success of a new service or product through innovation is reflected in the process of customer retention; when customers are satisfied with a particular product, they will pay more to get the product again, therefore, achieving the fulfillment of market requirements (Jimenez and Fuentes, 2013).

2.2 Organizational Eco-Innovation

Many different definitions have been proposed for eco-innovation, but one of the earliest definitions was mentioned by fussler (2011) "is the process of developing new products, processes, or services that provide customer and business value but significantly reduce their environmental impact" (Pansera, 2011). The EU Commission seems to provide an even more refined definition and said that eco-innovation "is a process of creating new goods, systems, and procedures, usually at competitive prices, to meet the most important human needs and work to provide a better life for all, in addition to using the minimum

number of natural resources and the minimum amount of releasing substances". This concept is a step in the right direction because it is the idea that eco-innovation is a type of innovation that seeks not only to create new markets but also to satisfy human needs (Pansera, 2011). According to (OECD, 2009) eco-innovation "is the growth or integration of unique or improved greatly, goods, procedures, marketing method, organization structure, and institutional structure, an obvious mention to the organization and organizational factors as a single category of eco-innovation can be included in a framework". All of the writers listed regard eco-innovation as a method of invention generation it should contribute to some better and more effective and responsible knowledge use as well as limiting the risk of development on the environment. However, most eco-innovation occurs only within the context of the innovation theory. The purpose of innovation is often a technique, product, service, or strategy. Most of the authors think that eco-innovation should be business. It should be a win-win situation that protects the environment while increasing corporate competitiveness (Pansera, 2011). Eco-innovation in companies is often seen as a potential environmental innovator rather than a polluter. Because it reduces environmental damage with its value generation process. Besides, companies here seek to enhance competitiveness in two ways, through the process of obtaining an excellent price for their reputation and also by reducing production costs to achieve greater efficiency. Eco-innovation can be organizational, technical, or marketing innovations that can improve the company's competitiveness because it is important to have a competitive factor in the process of predicting the new concept of eco-innovation and its dimensions in companies (Ahmed and Kamruzzaman, 2010).

Therefore, the following are some key features of eco-innovation:

1) cleaner technologies change: the final solution to a cleaner technology approach because delivering environmental benefits through it is more effective and significant.

2) Eco-efficiency: refers to having a lower impact on the environment for every component of a product or service Besides, reducing the material intensity, energy

performance, toxic chemicals, enhancing recyclability, and use of renewability, redesigning packaging, and achieving a zero-waste or 100 percent production target (Ahmed and Kamruzzaman, 2010).

3) Realizing the economic benefits of eco-innovation: provides both direct and indirect benefits to companies. Companies profit because it expands business opportunities. For instance, operational benefits include cost savings, a better image, compliance with laws, health and safety benefits, and increased satisfaction (Ahmed and Kamruzzaman, 2010).

In this research, the focus will be on the organizational eco-innovation concept. Furthermore, in terms of environmental applications, organizational eco-innovation mostly represents new or considerably enhanced procedures, business practices, and activities that transform an organization's behaviors, interactions, and decisions. To put it another way, organizational eco-innovation is concerned with the incorporation of environmental aspects into management operations (Payne et al., 2021). Although both process eco-innovation and organizational eco-innovation share the goal of lowering overall costs through effective and practical processing and marketing structures, organizational eco-innovation focuses on individuals and the organization compared to process eco-innovation, which is primarily concerned with the use of new technologies. In this context, organizational eco-innovations denote modifications in organizational knowledge aimed at reducing environmental effects, with a specific emphasis on green humans and green structures. Building on this, organizational eco-innovation techniques can help to stop modified forms and minimize environmental burdens across the whole value chain. These green organizational activities may significantly enhance performance (Payne et al., 2021).

2.3 Green Product Innovation

Before going deeply with the definition of green product innovation, companies need to understand what it means to present a green image, displaying a green-looking or green

image as a group of customer satisfaction about a brand's sustainability awareness and concerns. A green image helps companies to attract more customers by expanding brand loyalty and affecting customer choice. Many customers want to buy products from green companies, but, of course, some do not pay a premium price for green products. To encourage more customers who can pay for the newer green products, the green image is much more essential than ever (Xuemei et al., 2019). Therefore, the green image contains the viewpoint of the group of interests in the company's environment or the positive characteristics of green. The "green image" is considered a key component of consumer satisfaction, and companies investing in improving the green image not only avoid the potential problems of environmental protests and legal sanctions but also help the environment. Raising consumer expectations for consideration and sustainability also helps companies create a more positive image, which can lead to higher sales and higher stock prices (Xuemei et al., 2019).

Green innovation is a combination of green product innovation and green process innovation, the impact of which is on reducing social change and recycling waste. Besides, the cultural and environmental values of companies affect their competitive advantage through green products (El-kassar and Singh, 2019). Since the focus here in this study is on one of the variables, which is green product innovation, it is the introduction of new or improved products that aim to decrease the negative effects on the environment, especially during the life cycle of the product, and meet market needs through the creation of new products. Green product innovation is also important in achieving environmental sustainability and corporate growth. In addition, by investing in green product innovation, companies can avoid environmental protests and legal sanctions while opening up new market opportunities. Achieving the success of new green products is essential to the development of green capabilities and strengthens the green image of the company (Xuemei et al., 2019). Green product innovation is a type of technological innovation; green product innovation aims to adjust product designs by means of the usage of trustworthy compounds or biodegradable substances for the duration of the manufacturing system to enhance power efficiency. Green product

innovation calls for a sparkling view of the product life cycle, from the production system to the distribution system and from use to disposal or recycling. Specifically, green product innovations include improving product shelf life and recyclability, reducing raw materials, selecting more environmentally friendly raw materials, and removing pollutants; they preserve energy and resources, which is a critical component for both social and environmental progress. It should be noted that the process of companies investing in their resources increases the strength of developing green products. In this case, it is considered a challenge for many consumers to encourage companies to continuously innovate green products (Xuemei et al., 2019).

Green product innovation has gained attention as a lot of companies see this as a reason to stay successful in the future. It also relates to the ideas implemented in practice for developing new products or modifying existing products to reduce their negative impact on the environment. Therefore, it also concerns the design of resources and innovation or the use of environmentally friendly and recycled materials as input means in the production process. As with traditional innovation, companies introduce new expertise, materials, and techniques to meet changing customer preferences and requirements, as well as organizational expectations. Customers are now beginning to notice the negative impact of the products they opened. As a result, they are looking for and changing to less polluted products with longer lifespans (Khan et al., 2021). Green product innovation is centralized and pays off when it is appropriately promoted. Meeting expectations and putting pressure on the consumer is one of the success factors. Usually, consumers are not able to pay a higher price for the features of green products. Besides, the process of maintaining and improving customer loyalty also becomes a challenge when companies start implementing this type of innovation. To increase the confidence of consumers, the company's image is a very important criterion for the process of judging the quality of an unfamiliar product, and accordingly, consumers have an increased decision to purchase this product. This leads to consumers feeling an important affinity for the company and this product, which certainly increases brand loyalty as well as, increases satisfaction. All

this leads to the fact that this type of innovation significantly impacts organizational performance (Xuemei et al., 2019).

Figure 2 illustrates several examples of green products with a strong emphasis on pollution and the related levels of environmental impact throughout a specific stage. More emphasis should be placed on the third point, which is the product with a positive environmental impact. However, other products can be recognized as "green" because they cause fewer environmental problems. This tries to imply a negative impact on the environment and the reduction in the environmental impact due to other products. In this case, this product that has a positive impact can be referred to as an "environmental helper" (Dangelico and Pontrandolfo, 2010).

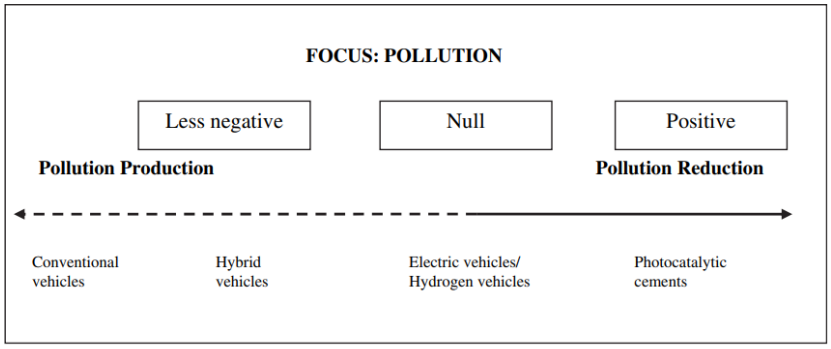

Figure 2: Green products with a focus on pollution and levels of environmental impact

Sources: Dangelico & Pontrandolfo, 2010).

Appendix (D) contains information on green products and offerings established in the technology sector with a strong emphasis on pollution. Most procedures are created at the usage level to reduce carbon emissions because of the production process (less negative impact), with a strong emphasis on seeking to avoid the use of toxic materials as well as using renewable resources (null-impact). Besides that, in this phase, all measures will be taken to make the components and products energy-efficient. We can consider them to have an indirect effect on reducing emissions (a less negative effect). In the last phase, companies here focus on eliminating harmful substances and the process of safe disposal

of products and also recycling products to prevent e-waste from being directed to waste (null effect) (Dangelico and Pontrandolfo, 2010).

2.4 Service Innovation

Barras (1986) invented the phrase "service innovation", and researchers have subsequently accumulated a substantial body of study on the subject. Service innovation is the use of new tools and advanced technologies in the service experience to continuously keep improving current product offerings, as well as improve service efficiency and effectiveness, keep updating the resulting product, add new support items, start creating benefits for its customers, and, after all, boost enterprise's in competitive advantage. It's been determined that it's a procedure to develop new services through which organizations pass on core service goods to consumers through the development of new service activities to achieve customer pleasure (Feng et al., 2020). This concept is a critical component of a company's capacity to differentiate itself from competitors and grow sales. Innovation can increase service distinction. Therefore, managers must put these innovations that are desired by the people into action to generate revenue for the companies. The expansion and development of new services lead to increased sales as well as an increase in the proportion of their entire revenue. Today's business environment is incredibly demanding, and simply providing great services isn't enough. Businesses must also look for new and inventive service options that are beneficial to clients (Arshad et al., 2016). As a result, organizations must pay special attention to their innovation strategy method and, in particular, their services to ensure a more systematic innovation process. Service innovation is a crucial source of competitive advantage for all organizations that use information gathered from customers and competitors to produce more substantial and differentiated services. Services are critical for organizations of all sizes and sectors. Continuous service innovation is required to compete in the market because many services are easily duplicated once they are available on the market. As a result, services need value co-creation and depend on the

coordination of activities within and outside of the organization. In these rapidly changing times, service innovation is critical to survival. The goal of service innovation is to improve existing services and make them more desirable to clients by incorporating new characteristics into the core of already existing services (Arshad et al., 2016).

Service innovation is a powerful tool for improving organizational performance and maintaining long-term viability. As a result, business executives who want to achieve service innovation success and improve their firm's performance have given careful consideration to the strategic orientation of service innovation (Ryu and Lee, 2018). Service innovation refers to the strategic direction in which service innovation activities are generated and how to successfully execute and manage them for the business's continuing superior performance. An attitude toward service innovation is required for successful service innovation (Ryu and Lee, 2018). The impact of technology has been particularly dramatic in service jobs that have historically relied on intimate, human contact between clients and staff. Technology is radically altering how services are planned, created, and provided. It is being integrated into an ever-expanding spectrum of services. As a result, in today's business world, the importance of technology in service innovation is becoming increasingly important (Ryu and Lee, 2018). However, much research on service innovation has concluded that technological advancement is a significant part of service innovation. Technology supports companies in efficiently developing new service offerings, improving and increasing the area of their existing service, improving the service, and creating new market value. As a result, technology is critical to the success of service innovation (Ryu and Lee, 2018).

A framework for service innovation has been proposed by Dean Hertog (2000) (**see figure 3**) which illustrates four dimensions of service innovation (service innovation, service delivery customer interface, and technology). Any service innovation process requires these four elements. The concept of service here means a new value proposition in the longing to cover all the needs of the customer and the services they provide to companies (Ryu and Lee, 2018). Besides, the process of providing a service must have an internal organizational arrangement activity to provide a service that is new to the

customer, the customer interface, or it is called, customer interaction, refers to a design between the service provider and its customers. Finally, technology plays an important role in helping to develop new products, services, and technologies and use them in the innovation process. The important point in this study, is that the innovation of a particular service must be characterized by a dominant characteristic linked to these four elements to achieve successful innovation in companies (Ryu and Lee, 2018).

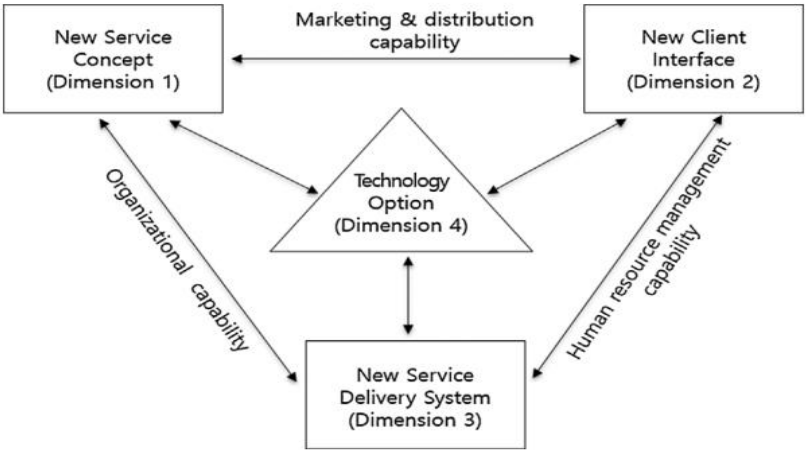

Figure 3: **Service innovation Framework by Den Hertog**

2.5 Organizational Performance

Organizational performance is the most widely used dependent variable in organizational studies today, but it is also one of the most unclear concepts. The real focus on the performance concept in the strategy field has been almost mainly on financial measures of performance (Hawa and Moghrabi, 2012). It has been formulated as the correlation of the value created by a company with the value owners expect to receive from the firm. It has been noted that a narrow definition of performance focuses on the use of simple outcome-based financial indicators that are believed to represent the satisfaction of the firm's economic goals (Hawa and Moghrabi, 2012).

The idea of organizational performance is quite broad, and it may be described as all feedback and outcomes, beginning with marketing, human resources, customer happiness, and so on. These concepts have also been clarified and worked on in other methods. Therefore, it may be described as the attainment of increased and growing organizational productivity, job performance, or implementation efficiency. Alternatively, it can be defined as the workforce, financial results (payoff), employment, company sales, customer satisfaction, and more. its financial goals and market standards. Performance can be measured using both financial and non-financial standards. (Azzeh and Nuaimi, 2015).

Academic researchers and actual managers are both interested in organizational performance. Organizational performance is defined as the organization's overall results as assessed against its intended goals and objectives. Whereas organizational performance includes three distinct categories of organizational outcomes, they are as follows: profitability, share price (market share and sales). Furthermore, organizational performance is linked to the concepts of efficiency and effectiveness. Because each organization needs to generate the correct products with the smallest possible inputs, these organizations ensure strong organizational performance (Azzeh and Nuaimi, 2015). Typically, organizations are trying to achieve in a range of ways. First, they aim to do well financially, which requires achieving the highest return on investment and also adding much or more than potential value to their production line. Second, their efforts outperform their competitors in terms of market performance. That is, they could also obtain the same or more revenue as possible even while providing a favorable product at a higher price, which enables them to better compete (Azzeh and Nuaimi, 2015).

It is logical, to begin with, a definition of organizational performance. The dimension of the concept of organizational performance is then regarded as an important subject to investigate in depth. This number of dimensions is the result according to Li and Nathan, et al (2006) and Hawa & Moghrabi (2012). As a result, these components are described as follows:

2.5.1 Customer Relations

This refers to all of the methods that will be utilized to regulate and manage customer problems, create long-term connections with consumers, and increase customer satisfaction. Relationship management is also recognized as an essential element and method that is employed and provides one of the most consistent advantages (Azzeh and Nuaimi, 2015). Today, the evolution of personalization and customer expectations has resulted in a period in which CRM is critical to the company's existence and helpful connections through partnerships with suppliers and customers that are required to implement successful systems and procedures. Strong relations with customer organizations, on the other hand, facilitate those to make a distinction about their product from their competitors, build loyalty, and preserve such value for the consumers (Azzeh and Nuaimi, 2015).

Customer relationship goals include classifying new possibilities, reducing the number of opportunities lost, lowering defection of users, developing customer loyalty, customer support improvement, improving company image, saving expenses, increasing income, and reducing marketing plans (Azzeh and Nuaimi, 2015). Furthermore, it was suggested that good customer connections are required for effective plan implementation, and strong customer relationships help a firm differentiate its goods from competitors and keep customer loyalty. As a result, the final goal of customer relations is to produce products that satisfy end consumers. Customer relevance thus becomes a fundamental strategic commitment of leading organizations, where strong customer relationships enable companies to be more responsive in satisfying customer demand and improve customer happiness by recognizing customers' wants and requirements. The capacity to develop strong relationships with consumers will provide businesses with a long-term competitive advantage (Azzeh and Nuaimi, 2015).

2.5.2 Employee Performance

Employee performance is defined in terms of achievement and motivation. In other words, it's a functional action within an organization to achieve an employee's goals and therefore recognize the obligations and responsibilities of the job description that convey the job to the employee (Azzeh and Nuaimi, 2015). It shows the importance of responsibility and self-rights. In addition, employee performance describes how employees perform their highest quality of service, perfect implementation, technical experience in their duties, interaction with other employees in the organization, and their obligations. It is considered a set of administrative actions and processes. To the laws and regulations that manage, organize, and prepare its tasks and roles (Azzeh and Nuaimi, 2015).

Employee performance is among the most important concepts because it includes both goals and resources and the means required to achieve or realize them. Because of this importance, recent years have been marked by continuous research and study to remove any problems related to job performance (Azzeh and Nuaimi, 2015). Organizational management, nowadays definitely seeks to increase employee performance in a variety of ways, such as employee engagement taking a decision, improving high-quality sessions, establishing rewards both collectively and individually, and creating methods that focus on achieving objectives. Employee performance may be described as a collection of actions performed by employees to carry out their tasks and activities, in which the greatest discovery is dependent on obtaining the earlier work as intended, which must be done by them according to their employment position (Azzeh and Nuaimi, 2015).

2.5.3 Competitive Advantage

The idea of competitive advantage is closely tied to the customer's desired value. Whereas competitive advantage is a collection of qualities and variables that have consistently demonstrated the firm's superior performance of the firm above competitors. In other words, it refers to aspects of a combined effect of factors that lead to an even

greater company's success than that of other companies in a competitive environment, and competitors cannot easily affect it, as long as, to achieve a competitive advantage, an organization also must pay attention to its external position as well as the optimal use and arrangement of its resources and capabilities (Azzeh and Nuaimi, 2015).

Competitive advantages include the ability to sustain business in innovation training and the ability to create value for customers to mitigate risks that companies may face. Besides, companies can gain a competitive advantage through environmentally friendly products. Therefore, by innovating green products, companies are working to improve the quality and design of products by building a positive image that is in the minds of customers because of the benefit of achieving competitive advantage. Therefore, managers are strongly advised to don't forget to adopt green innovation. Green products have functions that differentiate them from comparable products and add competitiveness, which brings future product achievement in more than one way and achieves their strategic goals (Al-Abdallah and Al-Salim, 2021).

3 The impact of the dimensions of the independent variables (organizational eco-innovation, green product innovation, service innovation) on the dependent variable (organizational performance).

Because of resource shortages, environmental crises, and environmental degradation, all countries in the world have paid attention to sustainability. Eco-innovation has become an important option and a way to gain a competitive advantage and pursue sustainability. As a result of the new technology and the construction and development of new equipment, companies are under pressure to improve their ability to innovate (Wugan and Guangpei, 2018). Technology companies are more innovative in competitive markets if they adopt new administrative processes, giving them a competitive advantage in the future. Improving product quality and environmental performance play an important role in increasing the demand for eco-innovation (Wugan and Guangpei, 2018). Many studies have found that innovation in green products is positively related to the competitive

advantage of companies. Therefore, reducing pollution and toxic hazardous waste leads to improving the external environment and ensuring a green image. Companies must integrate green innovation into business strategies to build and maintain a competitive advantage (Ribeiro and Steiner, 2021). Service innovation means new products and services that are innovative to meet rapidly changing customer needs. All companies, regardless of the type of their sector, need to innovate their services to increase profitability and improve sales growth, therefore working to increase their competitive advantage in the future. Today, in the world of technology, companies are constantly exploring tools and services that help them improve their competitive advantage (Noorani, 2014). Customer relations and employee performance help enhance customer loyalty and satisfaction. It is a goal-oriented process. The goal here is for companies to build long-term relationships with their employees. Service innovation, green product innovation, and eco-innovation all work to increase employee relationships in the future by being the service that they will provide innovatively, new products and processes that benefit the company's future (Waldemar, 2021).

3.1 Previous Studies

previous studies will be described in this section, beginning with the most recent and ending with the oldest.

Zhang, Minhao, et al. (2021) study titled: **"Examining the antecedents and consequences of green product innovation"** This study aims to research the mechanism of control between organizations to investigate the description of the interaction between formal and social control that is related to the green supply chain. In this study, the authors recruited a market research firm to collect data by a questionnaire from just a created list of contact to contact details for (1630) companies. The study was subjected to several limitations that provide a direction for coming research. Firstly, the method starts from the defect in the research data. Second, the sample size is relatively limited. As

well, this study shows why control systems help increase performance Green product innovation is based on institutional theory. Therefore, future research suggests that institutional theory needs to be empirically supported, the lasting one this study focuses only on the Chinese manufacturing industry, so it can only be generalized to a limited extent. As the effectiveness of the legal system varies from country to country, the interaction between internal and external regulations also differs. The contributions of this study included that new knowledge was created about B2B in terms of how to improve the performance of the company. Furthermore, the study suggests that despite the higher cost of the process of expanding green product innovation, the investment process responds to organizational pressure, which helps improve performance. the results of this study showed that green product innovation is affected by the financial performance of both environmental and social performance. As well, regarding the environmental influence of product innovation companies realized that green product innovation can play an important role in the company's performance.

Kanapathipillaii, Kumaran (2021). The study titled**: "The impact of training and innovation on organizational performance in the Hospitality Industry in Malaysia**" Aimed to explore the relationship between training and innovation on organizational performance. as well, this study looks at how job satisfaction partially affects the impact of training and innovation on organizational performance. In this study, SPSS statistical analysis was used to collect data.to achieve the survey goals, the survey process creates a depth profile using a single-stage cluster sampling process. It is collected from 653 of 800 officially standardized, surveys of 400 western hotel managers or supervisor-level employees in Malaysia, only two questionnaires were distributed to each hotel manager.in this study, the authors used a quantitative method to create empirical results and evidence to meet the questions. This research was limited to the hotel industry in west Malaysia and peninsular Malaysia. Therefore, to get a better image of the effect of job satisfaction on training and innovation. The authors have found that training and innovation impact job satisfaction and organizational performance, this proves that the process of training employees based on their knowledge-providing needs increases job

satisfaction and increases organizational performance. The research recommended that employees should be constantly uncovered to innovations that encourage them to innovate to have the ability to achieve satisfaction in their jobs, and therefore, enhance organizational performance.

Payne, Ipek, Gumus's (2021) study titled:" **How environmental innovation influences firm performance A meta-analytic review ".** The main objective of this research is to investigate a quantitatively collect experimental research on the impact of organizing eco-innovation on firm performance, and this goal was done through 70 studies and this analysis found that in developing countries the link is stronger compared to developed countries. This study indicates that by achieving high customers imitating degradation of the environment and developing new items companies can improve their performance by relying on environmental innovation methods, particularly in the organizational environment, according to the report. In addition, to improve the environment, innovation, and firm performance, managers should encourage environmental innovation initiatives throughout the organization. The contributions identified in this study provide an integrative perspective on the relationship between different patterns of organizational eco-innovation and organizational performance. However, this study proved that eco-innovation practices can enhance the performance of companies, and the study emphasized the significance of trying to implement environmental to enhance the performance of companies in developing countries in particular. This study showed that organizational eco-innovation has the greatest impact on firm performance as a result, a positive relationship was found between them.

Feng, Changli, RuiRuiz, and Lin Jiang's (2020) study titled **"The impact of service innovation on firm performance A meta-analysis".** The goal of this research is to acquire a competitive edge through service innovation. Samples were taken from 46 articles studies. The finding of this analysis shows the impact of the service on the company's success as a result of increased consumer participation of customers through the fact that clients have special or rare visual knowledge that is difficult for companies to obtain easily, at a lower cost, getting new customers to participate, and you will attract

more of them. The contributions of this study included, first that the impact of service innovation performance is positive and significant, secondly, the connection between service innovation and company performance has a significant impact on the economic region. This research has some limitations to make sure the quality of the study, research with limited consistency and reliability excise used from the literature list of this study. this can lead to an incomplete sample obtained from meta-analysis, which can improve the result of the conclusions of this study. To keep this research going in the right direction, sample capacity will need to be increased in the future. Second, the findings indicate the possibility of the existence of additional moderators. Group analysis reveals that the diversity among groups is significant, but diversity within each group persists. This that only some alteration is not as well performance needs need to be analyzed much further. Besides that, found a positive relationship between service innovation and firm performance.

Zhang, Dayong, Zha Ro, ng and Qiang Ji. (2019). The study titled**:" Green innovation and firm performance: Evidence from listed companies in china"** This study investigates how green patents affect the company's subsequent performance by exploring the manufacturers listed in china between 2000 and 2010. The study sample included 764 companies. And the contribution has clear advantages over R&D in this research because the quality of innovation can be considered. Many policy implications can be derived from our empirical results. Individual companies' investment in clean technology is not only in line with strategic development at the state level but even has economic opportunities. It is a strong motivation for more companies to participate in environmentally sustainable technology. Since the results of this study were based on a sample of Chinese manufacturing companies, other research could be done in those other emerging countries. Finally, this study confirmed the results that the green innovation behaviors of manufacturing companies in china can achieve long-term achieve for sustainable economic performance.

Ma, Yuan, et al (2018) study titled **"Green product innovation and firm performance".** This article describes business model design theory that focused on the

relationship between green product innovation and organizational performance. The contribution of this study was that it theoretically analyzed if green innovation might improve the economic performance of companies. The benefit channel of green product innovation is discussed in this paper, and it also suggested that the novelty-centered design concept is better for increasing firm performance. In this research, the sample companies were selected from foodstuffs, household appliances, and the paper industry, and the participants in this survey were middle-level managers and senior management. This study indicates the profit channel for the innovation of green products and that the topic of modernity is more beneficial for improving the performance of the company also this study clarifies that interest in the participation of activities of all parts of the company and the exploration of a new business model that creates a suitable environment for the innovation of green products. As a result, experimental results showed that new and efficient design topics play a moderate role and that the influence of innovative design themes was stronger.

Karim Suhag, Abdul, et al. (2017) study titled:**" The relationship of innovation with organizational performance".** This study looks at examining the connection between innovation and organizational overall performance in the telecommunications sector. Process innovation, product innovation, and organizational innovation are independent variables, with organizational culture serving as a moderator variable. The sample included 200 questionnaires from employees interested in innovation in the telecom industry, and Pakistani telecom companies were selected. SPSS was used in this study. This study indicates some limitations and a gap for future studies, including that they should conduct more research studies on innovation, environmental performance, and business performance as well as, organizational culture was not tested in this research and subsequent study will need to be investigated, and subsequent research should be done in many other systems which including aircraft and hospitality. This research provides an essential guideline for demonstrating several ways of innovation, including product innovation, process innovation, and organizational innovation all affect organizational performance. This is useful for decision-makers in Pakistan's telecommunications

industry. The results help decision-makers practice innovation in the enterprise. Use this white paper to get basic information on how innovation impacts business performance in the telecommunications sector and has a positive impact on your organization

Huang, Kuo-En, et al. (2016) study titled**" Innovation and technology creation effects on organizational performance".** Aimed to investigate the relations between innovation, technology creation, quality management, information management capabilities, And organizational performance. The study methodology depends on questionnaires that were distributed to 32 businesses. This study had a contribution to clarifying the relationship between the four factors and organizational performance, and this investigation was conducted in Taiwanese business companies. Besides, it showed that (the fsQCA) method performs better than traditional analysis. This study includes certain limitations, including that it may create opportunities for future research. His study contains a specific topic about the type of company management within Taiwan, so researchers can compare different management and specific geographic areas. The results showed that the four factors have a positive impact on organizational performance and that the high degree of consistency is only strong evidence for achieving organizational performance.

Alhadid, ANAS Y., and H. Abu-Rumman as 'ad (2014) study titled" **The impact of green innovation on organizational performance, environmental management behavior as a moderator variable. An analytical study on Nuqul group in Jordan"** The purpose of this study is to investigate the impact of green innovation such as green product innovation and green process innovation on organizational performance. This research was done on the Jordanian industry, especially the Nuqul group in Jordan. The methodology adopted by 143 questionnaires was distributed and allocated to middle employees and senior management, to assess the impact of green innovation on organizational performance, regression, was used, as well as a mean variable and systematic analysis of environmental management behavior. The sample population is shown by the Nuqul group of companies, which consists of 31 companies inside and outside Jordan. The result, based on the results of the specialist analysis, this study

showed that the innovation of green products and the innovation of green processes positively affect organizational performance that is consistent with previous international studies, greater effect on organizational performance compared to the green process innovation. The study found that it was easier to develop a new green product than to change the manufacturing process itself as well as the behavior of environmental management, the study also showed that it has a significant impact on the relationship between green innovation and performance. The recommendations of this study were to add the results of the study to the findings to the tin area of encouraging technology companies in Jordan and implement recycled products because the Jordanian government encourages this investment in addition to that, to look at industries in Jordan and also the developing nations to compare the results.

Lin Lei's (2013) study titled **"The impact of service innovation on firm performance"** Aimed to investigate the impact of service innovation on performance in china, especially in developing countries. In this study, they build a model that links in a more integrated way between service innovation, service quality, and performance. The limitations of this study include, that is study chose one service sector (the tourism sector). because of the scarcity of data, it has been assumed that there is a simple relationship between service innovation, quality, and performance. The authors used a questionnaire on 277 samples in the Chinese tourism sector, most of them were S&M companies and based on travel agency region and company size. The first results of this study are that service innovation has a positive and important impact on service quality and performance, especially in the Chinese tourism sector, and there is also a positive relationship between service innovation directly with performance and indirectly with service quality.

Doran, J &, G (2012). Study titled: **"Regulation and firm perception, eco-innovation and firm performance"** Aimed to investigate the drivers of eco-innovation and to evaluate the effect of eco-innovation and non-eco-innovation on firm performance. the paper offers insights into the position authorities law can play in directing and stimulating eco-innovation. The approach used by this research is empirical. The data used is a survey of the Irish Society for innovation and was directed at 10 people working in

different sectors. because of the restricted availability of accounting data, the authors used the turnover rate for each factor as a measure of the firm performance. In the end, this study found that the demand and supply side and regulation movements have an important role in the process of simulating eco-innovation in Ireland, this result supports the idea that the more innovative a company becomes, the more knowledge it has, and the greater its ability to apply these factors to eco-innovation.

Ar, like Murat (2012). The study titled: **"The impact of green product innovation on firm performance and competitive capability: the moderating role of managerial environmental concern".** This research aims to provide actual findings to motivate business establishments to enforce green product innovation in terms of improving firm performance and competitiveness. In addition, this study considers the role of organizational environmental issues as a mediating role in this relationship. The sample of this study included Turkish export and manufacturing companies that have been working for at least 5 years and have at least 10 employees. Data were collected from cities in Turkey. Approximately 410 questionnaires were distributed and 140 were received. This study has limitations and indicates more research opportunities. The research depends on an appropriate sample in turkey with the manufacturing sector. As well, future studies must expand to obtain a much more perspective on the evolvement of innovative activity. In addition, other research may include additional variables, for instance, policy environment, and environmental regulation. The study's contribution is to investigate the interaction between all of these earlier unconsidered factors by Turkish business. This study, in particular, addresses the central question of whether is a significant direct link between green innovation, performance, and competitiveness. In addition, it aims to determine the mitigating role of management for environmental issues. Green product innovation has generally been shown to have a positive impact on a company's performance and competitiveness. The results show that innovation in green products has a strong and significant impact on firm performance and competitiveness, supporting the innovation literature. However, the study argues that green product innovation has a greater effect on competitiveness than performance.

Lin, Lei (2011). The study titled: **"The impact of service innovation on business performance: Evidence from firm-level data in Chinese tourism"** Aimed to investigate the impact of service innovation on business performance and its focus on service firms in china. To collect data, a company-wide questionnaire was used in the Chinese tourism sector and distributed to executives 797 questionnaires were sent, and 294 answers were collected. The travel agencies were chosen as the unit of analysis for this paper, and they played an important part in the tourism sector to link certain roles such as hotels and transportation to travel, making it the most innovative part of the tourism sector. The limitation of this study begins, just the cross-section was utilized to evaluate the study's hypotheses, which led to a reduction in the process of exploring the causal relationship between them. Second, the analysis of this paper depends on the data collected through the internal and external administrative governance methods for companies. It was suggested for future research to investigate the nature of this relation in more depth, finally, only the process of selecting the tourism sector, one service sector has been done. Some of the contributions of this study are that innovation efforts can significantly improve company performance without the need for an intermediary variable such as quality of service, as well as, this paper discovered that service quality has a far lesser influence on firm success than service innovation. According to the findings, service innovation has a favorable and considerable influence on both service quality and business performance in the Chinese tourist industry, as well as, clearly shows that service innovation has an impact on business performance via a direct path of innovation- business performance and an indirect path of innovation service quality-business performance service, quality. Finally, this study analysis shows that innovation has a direct impact on business performance is greater than an indirect impact.

Thornhill, Stewart. (2006) study titled: **"Knowledge, innovation and firm performance in high-and low-technology regimes"** Aimed to study the connection between innovation and performance, this paper presents two dependent variables innovation and firm performance. By integrating industry competition with enterprise-level knowledge structures. Data for this research was collected by surveying employees and the

workplace. For the objective of this study, the sample is limited to manufacturers with 500 or fewer employees. This survey provides overall information on the business areas of Canadian companies. The process of dividing the sample into three sections according to the size of the company, the geographical area, and the industry. One of the limitations mentioned in this paper is related to the low explanatory power of the regression model, although none of the models have R2 values greater than 0.10 therefore, the nature of the dependent variable must be taken into account. To study innovation, this study used age and six as typical control variables because companies that have a large capacity of small companies can be described as newly established. In the conclusion this study exhibition a direct relation between industry dynamin at the enterprise level and a direct relationship between innovation and firm performance.

Rodriguez, S (2002). The study titled: **"What is driving performance? the impact of enabling creativity and innovation within the organization"** This study aims to create a new ground related to determining the organizational performance outputs for the level of possible creativity and the disabled in the organization. The methodology includes a study of the consumer goods market in the united states. The sample of this study to collect data was limited to 75-100 companies, and this data is biased towards larger companies. The contribution of this study is to establish a strong and clear relation between the dynamics of the workforce and the creation or destruction of creativity. The research found that the result leads to the key research tool and this tool estimate workplace conditions that impact creative events in organizations.

Noci, Giuliano, and Roberto Verganti (1999). The study titled: **"Managing green product innovation in small firms"** This white paper explains why green product innovation cannot be seen as a marginal issue for most SMEs even for SMEs that are not directly affected by environmental law. Therefore, this paper is a conditional framework to support SMEs in analyzing the driving forces of green product innovation and selecting appropriate R&D strategies that explicitly consider the eco-efficiencies of product technologies. This study dealt specifically with the green product innovation introduced by medium and small companies in Lombardy, a region in northern Italy. The

sample in this study was small. Only four small and medium companies have identified that work on the process of integrating environmental issues into their products. The sample was not random. This study suggests that in the future, a larger sample should be verified. In the conclusion, this study showed that some small and medium-sized companies are strongly committed to the process of developing environmental innovations.

3.2 Contribution of the study to the knowledge

This study might be considered the first to investigate the effect of innovation on organizational performance in the technology sector. This study will clarify innovation (organizational eco-innovation, green product innovation, and service innovation) in the technology sector. Multiple studies to date have been carried out and conducted in many countries. The current academic work will be completed in Amman, Jordan. It also evaluates the connection between innovation and other variables. In the same framework, they evaluate organizational performance with other variables.

- Objective: Most studies have been conducted to evaluate the impact of innovation, and the extent to which dimensions apply innovation in companies and organizations. A small number of studies were carried on to study the influence of innovation on organizational performance in the technology sector.
- Environment: Most studies have been an instrument in multiple countries outside the Arab world. this study is being conducted in Jordan, as of the countries in the Arab region.
- Industry: Most studies have been carried out in different companies and different sectors. This study is dedicated just to the technology sector.
- Methodology: Most previous research used the experimental method. While the study of this kind will use a use descriptive analytical approach.

- Variables: Most previous studies have reviewed innovation and organizational performance from one or more elements, while this study will use items in innovation and three components in organizational performance.
- Population: Much of past research took samples from the middle-level manager and senior management, whereas this study will take a sample from the first line of employees and senior-level (managers) in the Jordanian technology sector.

3.3 Conclusion

This chapter aimed to help the reader recognize different aspects posed by the research on the importance of having ideas and innovation and the opportunities to think about something new to successfully survive. This is significant because innovation doesn't end only with the discovery of an idea but with the realization of this idea. Although the literature covers a wide variety of dimensions in the methodological framework, such as organizational eco-innovation, green product innovation, and service innovation. Also, this chapter represents the three elements of the dependent variable (organizational performance), which are customer relations, employee performance, and competitive advantage.

CHAPTER THREE: Study Methodology Methods and Procedures

In this chapter the method of having a look at becoming defined using the researcher, and then offered the take a look at the population and sample then observe data collection tool, reliability and validity have been defined, and then the look at variables and statistical equipment were explained.

4 Research Design

The proposed research will be applied as a descriptive analytical approach. It aims to study the effects of innovation (organizational eco-innovation, green product innovation, and service innovation) on organizational performance in the technology sector in Jordan. To achieve the objective of the study and test the hypotheses, the focus of the proposed research will be based on primary sources. This study begins with a literature review to identify the research problem and determine the primary dependent and independent variables and the questionnaire that will be used to gather data to test the research hypothesis. Therefore, the research will follow a descriptive and analytical approach, which falls under the quantitative methods of study. To extract the results from the collected data, SPSS will be used effectively.

4.1 Limitation of the Study

Human Limitation: This research will be carried out in the technology sector for the first line of employees and senior-level (managers).

Place Limitation: This research will carry out in Jordan-(Amman).

Time Limitation: This research will be implemented during the second semester of 2022.

Study Delimitation: This research aims to find out the impact of innovation on organizational performance in the Jordanian technology sector, therefore this research is limited to the Jordanian technology sector. This research attempted to cover the main dimensions of innovation.

4.2 Study Population, Sample, and Unit analysis

Population and sample: the study population consists of seven technology companies registered in the Amman Chamber of industry and commerce. The researcher chose seven technology companies because of the difficulty of distributing the questionnaire to all companies and because COVID-19, which was the biggest obstacle in the distribution process, is number in the Chamber of Industry and Commerce 197 companies. The sample consists of the first line of employees and managers from different companies.

Because of The difficulty of reaching the target sample sometimes because of the department's procedures and the current COVID-19 crisis worldwide, especially in Jordan, made its necessary for the researcher to adopt the purposive sample method. Therefore, the purposive sample is "a form of non-probability sampling in which researchers rely on their own judgment when selecting members of the population to participate in the study" (Tongco, 2007).

4.3 Measurement Instrument

The proposed research will be based on primary sources. The primary source is based on developing a questionnaire that was distributed to the sample chosen. Primary data will be obtained through a questionnaire focusing on the conceptual framework's main variables. Therefore, Appendix B shows the questionnaire. As well, the questionnaire was prepared to match the purpose of the study, then validated through expert interviews and by the referee's committee (panel of judges), as shown in Appendix C.

Questionnaire variables: will include three parts as follows:

Participant Demographics: (gender, qualification, age, years of experience, job position)

Independent variable (Innovation): independent variable includes three sub-variables: environmental eco-innovation, green product innovation, and service innovation. Each sub-variable was measured by four questions.

Dependent variable (organizational performance): Dependent variable organizational performance includes three dimensions: customer relations, employee performance, and competitive advantage, which are measured by four questions. A five-point Likert type scale was used to measure all variable items ranging from Value 1 (strongly disagree) to Value 5 (strongly agree) to rate the perceptions of the respondent on the enforcement of each question.

4.4 Procedure for Data Collection

The proposed sample size met the rule outlined by Roscoe (Cavana, et al., 2001), which states that the characteristics of the sample should be more than 30 but less than 500. Therefore, more than 300 questionnaires were distributed online using a Google form, and the total responses of the questionnaire were 250. The researcher eliminated 23 due to missing data, which led to a result of 227 being valid and read for analysis. The collected data was used through a statistical package for the social sciences (SPSS). The questionnaire was distributed to the companies online by sending it to the human resources department.

4.5 Validity

Two methods were used in this study to confirm the validity of the study tool: first, the validity of the content, and accordingly, multiple sources of data were used (research, theses, the global internet, and technology companies in Jordan). Secondly, a panel of judges used Appendix (C). All observations were taken, and the questionnaire was modified.

4.6 Demographic Analysis

This study analyzes the effect of innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance in the Jordanian technology sector therefore, this research adopted the quantitative approaches to achieve the main objectives and for data collection, a questionnaire was used.

Several groups are presented in this study's sample, including employees and managers in the Jordanian technology sector. The questionnaire was completed and returned by 227 individuals and the demographic information about the age, gender, education, qualification, current position, and relevant work experience are expressed in the following tables with a discussion regarding these characteristics in detail after each table.

Table 3.1 Frequency Distribution by Gender of respondents

		Frequency	Percent
Gender	Female	78	34.4 %
	Male	149	65.6 %
	Total	227	100.0 %

To start, the results of the respondent's answers regarding their genders are in table (3.1). indicated that the sample had a higher proportion of males (65.6%, n=149) than females

(34.4%, n= 78), which indicates the overall composition ofemployees of gender in Jordanian Technology Companies.

Table 3.2 Frequency Distribution by Age of Respondents

		Frequency	Percent
Age	Less than 30	68	30.0
	30- 39years	100	44.1
	40- 49years	45	19.8
	50 or above	14	6.2

According to the t (3.2), respondents were mostly between the ages of 30-39 years old (44.1%, n=100); less than 30 years old (30%, n= 68); while the number of people aged 40-49 years old was (19.8%, n=45). This indicates that the majority of employees working in Jordanian technology companies are aged less than 39 (74.1%).

Table 3.3 Frequency Distribution by qualification

		Frequency	Percent
Qualification	Bachelor	176	77.5
	Higher Diploma	7	3.1
	Master	31	13.7
	Other option	13	5.7
	Total	227	100%

Regarding the qualification of the respondents, it is obvious from table (3.3) that the respondents have a comparatively high level of formal education, with 77.5 % having a bachelor's degree. 13.7 % have a master's degree, and just 3.1 % have a higher diploma. This indicates that the employees of Jordanian Technology companies are generally well-educated.

Table 3.4 Frequency Distribution by Job Position

		Frequency	Percent
Job Position	Employee	146	64.3
	Manager	81	35.7
	Total	227	100.0

Table (3.4) indicates that 64.3% of respondents were working as an employee, and 35.7% were managers. This is acceptable provided that managers make up the smallest share of Jordanian technology companies and that they didn't have enough time to complete the questionnaire. The others, on the other hand, were most likely helpful in completing the survey.

Table 3.5 Frequency Distribution year of experience

		Frequency	Percent
Years of Experience	10 or less	109	48.0
	11-15	57	25.1
	16-20	35	15.4
	21 or more	26	11.5
	Total	227	100.0

Finally, as shown in table (3.5), the results indicate that the majority of the respondents were having a good level of experience. More specifically, 48% of respondents were having less than ten years of experience, followed by 25.1% of the respondents whose experience is between 11 and 15 years, then 15.4% of respondents were having between 16 to less than 20 years of experience, and finally, 11.5% for the respondents were having above 21 years.

4.7 Reliability

The degree to which a questionnaire, test, observation, or other measuring process provides the same findings over time is known as reliability (Mohajan, 2017). Reliability is helpful since human observers don't always read replies the same way; evaluators may disagree on how effectively various responses or materials indicate an understanding of the skill being evaluated, Let's take the level of motivation between employees as an example, the assessment of such talent can be achieved using observations by various assessors who usually have different opinions.

Cronbach's alpha (α) is the most used internal consistency measure for social sciences, business, nursing, and others; measured by the mean of all possible split-half coefficients. It is determined by the average inter-correlations of items and the scale's total number of elements. The values of Cronbach's alpha usually rank between one and zero; where one shows absolute internal consistency and zero shows the opposite (Tavakol and Dennick, 2011). Alpha values above 0.7 are generally regarded as excellent and adequate, those 0.8 as pretty good, and those above 0.9 as indicating outstanding internal consistency. Acceptable alpha value estimates in the social sciences vary from 0.7 to 0.8 (Mohajan, 2017).

Using SPSS, Cronbach's alpha test was performed to analyze the internal consistency of all measuring items in the questionnaire as shown in table (3.6). the findings suggest that the research instrument is reliable since all value dimensions' approach 70% and that the results collected by it are acceptable for measuring the variables.

Table 3.6 Reliability Statistics

	Cronbach's Alpha	N of Items
Organizational Eco-innovation	.814	4
Service innovation	.781	4
Green product innovation	.833	4
Organizational performance	.831	4

CHAPTER FOUR: STUDY RESULTS AND HYPOTHESES TEST

5 Introduction

This chapter outlines the research results with discussion and interpretation. Will covers the descriptive statistical analysis for the organizational eco-innovation variable, descriptive analysis the for green product innovation variable, as well as the descriptive analysis of the service innovation variable, and descriptive analysis for organizational performance. Moreover, the relationship between variables as well as the collinearity statistics tests has been covered. The last section covers the findings of the main testing hypotheses using multiple regression analysis.

5.1 Descriptive analysis of study variables

The researcher included a Likert scale as follows:

Strongly not Implemented	Not Implemented	Neutral	Implemented	Strongly Implemented
1	2	3	4	5

Relative importance, assigned due to:

Class Interval = $\frac{Maximum\ Class - Minimum\ Class}{Number\ of\ Level} = \frac{5-1}{3} = \frac{4}{3} = 1.33$

The low degree ranges from (1.00-2.33), the medium degree from (2.34-3.67), and the high degree from (3.68-5).

5.2 Descriptive analysis for organizational Eco-innovation variable

Table (4.2) Organizational Eco-Innovation Item

	Organizational Eco-innovation	Mean	Std. Deviation	Statement Importance	Importance Degree
1	The company provides resources to engage in developing new products.	3.626	.8953	1	High
2	The company's policy is about creating products to reduce the environmental impact.	3.286	1.0313	3	Medium
3	my company provides of kills to apply appropriate process technologies to produce new products.	3.551	.9027	2	High
4	My company is working on a continuous program of inventions.	3.137	1.0105	4	Medium
	Average	3.3998	.77047		High

Table (4.2) presents the descriptive analysis for the four statements of the organizational eco-innovation dimension using mean and standard deviation as well as the importance of ’respondents answers for the organizational eco-innovation variable. The results show that the maximum average value is (3.626) for the statement “the company provides a resource to engage in developing new products” with a standard deviation of (0.8953). this clearly illustrates that the majority of respondents agreed that Jordanian technology companies provide resources to engage in developing new products. On the other hand, the results in table 4.2 show the minimum average of the four statements is (3.137) for the statement “company is working on a continuous program of inventions”. Although this statement has a medium importance implementation agreement from the point of view of the employees working in Jordanian technology companies, it also still shows that the Jordanian technology companies are working on a continuous program of inventions.

Importantly, the average score for the four statements of the organizational eco-innovation dimension is 3.4 with a 0.77 standard deviation. This exposed that the organizational eco-innovation dimension has a high implementation agreement from the point of view of employees working in Jordanian technology companies, indicating the high importance of the organizational eco-innovation dimension. The results of other statements also support this finding, for example, "Jordanian technology companies policy is about creating products to reduce the environmental impact and provides a good skill to apply appropriate process technologies to produce new products.

5.3 Descriptive analysis for Green product innovation variable

Table (4.3) Green product Innovation Item

	Green product innovation	Mean	Std. Deviation	Statement Importance	Importance Degree
1	The company's policy is interested in producing green products that improve environmental performance.	3.291	1.0106	4	Medium
2	My company uses eco-friendly materials to reduce environmental impact.	3.273	1.0748	3	Medium
3	My company encourages recycling and pollution prevention while using products.	3.33	1.0473	2	High
4	Employees are motivated to take the lead in developing new project ideas.	3.449	.9458	1	High
	Green product innovation	3.3348	.83296		High

Table 4.3 presents the descriptive analysis for the four statements of the green product innovation dimension using mean and standard deviation as well as the importance of respondents' answers for the green product innovation dimension. The results demonstrate that the maximum average value is (3.449) for the statement "employees are motivated to take the lead in developing new project ideas" with a standard deviation of (0.9458). This exemplifies that the majority of respondents agreed that Jordanian

technology companies' employees are motivated to take the lead in developing new project ideas.

On the other hand, the outcomes from table 4.3 show that the minimum average of the four statements is (3.291) for the statement "the company's policy is interested in producing green products that improve environmental performance". Although this statement has a medium importance implementation agreement from the point of view of the employees working for Jordanian technology companies, it also still shows the Jordanian technology companies' policy interested in producing green products that improve environmental performance.

Importantly, the average score for the four statements of the green product innovation dimension is 3.34 with a 0.83 standard deviation. This exposed that the green product innovation dimension has a high implementation agreement from the point of view of employees working in Jordanian technology companies, indicating the high importance of the green product innovation dimension. The results of other statements also support this finding, for instance, Jordanian technology companies are using eco-friendly materials to reduce environmental impact and encourage recycling and pollution prevention while using products.

5.4 Descriptive analysis for service innovation variable

Table (4.4) service innovation Item

	Service Innovation	Mean	Std. Deviation	Statement Importance	Importance Degree
1	my company can solve service problems independently (service errors, disputes, and complaints)	3.885	.7729	1	High
2	Does my company provide many opportunities for business development.	3.573	.8610	4	High
3	My company takes several measures to continuously develop and train employees.	3.661	.9975	2	High
4	Technology is enough for my company to provide services that increase competition.	3.630	.9842	3	High
	Service Innovation	3.6872	.70568		**High**

Table 4.4 presents the descriptive analysis of the four statements of the service innovation dimension using mean and standard deviation as well as the importance of respondents' answers for the service innovation dimension. The findings demonstrate that the maximum average value is (3.885) for the statement "my company can solve service problems independently (service errors, disputes, and complaints)" with a standard deviation of (0.7729). This illustrates that the majority of respondents agreed that the Jordanian technology companies could independently solve several service problems (such as service errors, disputes, and complaints).

On the other hand, the results from table 4.4 show that the minimum average of the four statements is (3.573) for the statement "Does my company provide many opportunities for business development" which specifies that the service innovation dimension has a high importance implementation agreement from the point of view of the employees working in Jordanian technology companies. Furthermore, it shows that the Jordanian technology companies provide many opportunities for business development to increase service innovation.

Importantly, the average score for the four statements of the service dimension is 3.69 with a 0.71 standard deviation. This revealed that the service innovation dimension has a high implementation agreement from the point of view of employees working in Jordanian technology companies, indicating the high importance of the service innovation dimension. The results of other statements also support this finding with high importance level, for instance, Jordanian technology companies take several measures to continuously develop and train employees to improve service innovation. Moreover, Jordanian technology companies have enough technology to provide services that increase competition.

5.5 Descriptive analysis for organizational performance

this section presents the results of the descriptive analysis for organizational performance as the dependent variable in the model of the current study.

Table (4.5) Organizational performance Item

	Organizational Performance	Mean	Std. Deviation	Statement Importance	Importance Degree
1	innovation in my company has led to increasing competitive advantages.	3.604	.8422	3	High
2	My company uses modern training techniques to improve employee performance.	3.410	1.0324	4	High
3	Innovation enhances organizational performance through customer relations and the development of customer loyalty.	3.819	.7859	1	High
4	My company relies on work quality to evaluate organizational performance.	3.683	.9388	2	High
	Organizational Performance	3.6289	.73711		High

Table 4.5 presents the findings of the descriptive analysis for the four statements of the organizational performance variable using mean and standard deviation as well as the importance of respondents' answers for the organizational performance variable. The findings demonstrate that the maximum average value is (3.819) for the statement "innovation enhances organizational performance through customer relations and the development of customer loyalty". This illustrates that the majority of respondents agreed that the Jordanian technology companies could use customer relations and the development of customer loyalty as an innovation strategy to enhance Jordanian technology organizational performance.

On the other hand, the results from table 4.5 show that the minimum average of the four statements is (3.41) for the statement "My company uses modern training techniques to improve their performance". which specifies that the organizational performance variable

has a high importance implementation agreement from the point of view of the employees working in Jordanian technology companies providing many opportunities for modern training techniques for their employees to improve their performance.

Importantly, the average score for the four statements of the organizational performance variable is 3.63 with a 0.74 standard deviation. This revealed that the organizational performance variable has a high implementation agreement from the point of view of employees working in Jordanian technology companies, indicating the high importance of the organizational performance variable. The results of other statements also support the findings with high importance level, for instance, innovation in Jordanian technology companies has led to an increase in the competitive advantages, where the Jordanian technology companies rely on work quality to evaluate organizational performance.

5.6 Relationship Between Variables

To examine the relationship between the study variables, the Bivariate Pearson Correlation test has been used. Table (4.6) includes the relationship between innovation dimensions as independent variables (organizational eco-innovation, green product innovation, service innovation) with organizational performance as the dependent variable. The results in table 4.6 reveal a strong relationship across innovation dimensions (organizational eco-innovation, green product innovation, service innovation), ranging between 0.675 to 0.785. Moreover, the results in Table 4.6 also demonstrate a strong relationship between innovation dimensions and organizational performance, ranging between 0.692 to 0.802. this shows that there is a significant positive relationship between better organizational performance.

Table 4.6: Correlation analysis

		Organizational Eco-innovation	Service innovation	Green product innovation	Organizational performance
Organizational Eco- innovation	Correlation	1	.716**	.785**	.712*
	Sig. (2-tailed)		.000	.000	.000
	N	227	227	227	227
Service innovation	Correlation	.716**	1	.675**	.802**
	Sig. (2-tailed)	.000		.000	.000
	N	227	227	227	227
Green product innovation	Correlation	.785**	.675**	1	.692**
	Sig. (2-tailed)	.000	.000		.000
	N	227	227	227	227
Organizational performance	Correlation	.712**	.802**	.692**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	227	227	227	227

5.7 Collinearity Statistics

to test the assumption of multicollinearity, this study used both the Variable inflation factor (VIF) and the tolerance test for each dimension of the study's independent variables as shown in table (4.7).

Table 4.7: Collinearity Statistics matrix

	Collinearity Statistics	
	Tolerance	VIF
Organizational Eco-innovation	.305	3.275
Service innovation	.426	2.348
Green product innovation	.350	2.857

It is obvious from the results in a table (4.7) that all the variables obtained VIF values less than 5 and more than 0.2 tolerance values, implying that the independent variables in this research are not multicollinear (Mim et al., 2018).

5.8 The findings of the main testing hypotheses

Deciding which multivariate approach will be utilized for the hypotheses is the most important part of the findings. The current study aims to analyze the influence of innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance in Jordanian technology companies. As a result, the most appropriate analysis method was selected as multiple regression analysis.

Table 4.8: Regression analysis

R	**R Square**	**Adj. R Sq.**	**F**	**Sig.**
.833[a]	.694	.690	168.615	.000[b]
	Standardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.393	.148	2.659	.008
Organizational Eco innovation	.161	.063	2.572	.011
Green product innovation	.163	.055	2.971	.003
Service innovation	.582	.057	10.130	.000

Table 4.8 presents the findings of multiple regressions analysis that aims to test the main null hypotheses, which states that there is no significant impact of innovation (organizational eco-innovation, green product innovation, service innovation) on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this fitness of the model for multiple regressions is demonstrated by the value of R^2, which is .694. This indicates that the dimension of the innovation can explain 0.694 of variance in the organizational performance of Jordanian technology companies. This is also supported by the results of the F-test, which is significant at a 5% level (F-test = 168.615, sig =0.000).

Consequently, the main null hypothesis that states that there is a significant impact of innovation on the organizational performance of Jordanian technology companies should be rejected at a 5% significant level. Therefore, the findings in a table (4.8) confirm that there is a significant impact of innovation (organizational eco-innovation, green product

innovation, service innovation) on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$).

5.8.1 Results pertaining to Hypothesis H01

H01: there is no significant impact of Organizational Eco-innovation on the organizational performance of Jordanian Technology Companies at a significant level ($\alpha \leq 0.05$).

Table (4.8) presented that the beta coefficient for the organizational eco-innovation variable is 0.161, with a calculated t-value (2.572) that higher than the critical t-value (1.96), and the significant level is less than 0.05 (sig = 0.011). this demonstrates that there is high importance of organizational eco-innovation and its effect on the organizational performance of Jordanian technology companies. Consequently, the first sub-null hypothesis should be rejected and conclude that there is a significant positive impact of organizational eco-innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this indicates that when the Jordanian technology companies depend more on organizational eco-innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

5.8.2 Results pertaining to Hypothesis H02

H02: there is no significant impact of Green product innovation on the organizational performance of Jordanian Technology companies at a significant level ($\alpha \leq 0.05$).

Table (4.8) presented that the beta coefficient for the green product innovation variable is 0.163, with a calculated t-value (2.971) that the higher than the critical T-value (1.96), and the significant level is less than 0.05 (sign = 0.003). the demonstrates that there is high importance of green product innovation and its effect on the organizational performance of Jordanian technology companies. Consequently, the second sub-null

hypothesis should be rejected and conclude that there is a significant positive impact of green product innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this indicates that when the Jordanian technology companies depend more on green product innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

5.8.3 Results pertaining to Hypothesis H03

H03: there is no significant impact of service innovation on the organizational performance of Jordanian Technology companies at a significant level ($\alpha \leq 0.05$).

Table (4.8) presented that the beta coefficient for the service innovation variable is 0.582, with a calculated T-value (10.130) that is higher than the critical T-value (1.96), and the significant level is less than 0.05 (sig=0.000). this demonstrates that there is high importance of service innovation and its effect on the organizational performance of Jordanian technology companies. Consequently, the third sub-null hypothesis should be rejected and conclude that there is a significant positive impact of service innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). This indicates that when the Jordanian technology companies depend more on service innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS

6 Introduction

This chapter described the results in the lighting of the statistical analysis of the sample member's response to the survey variable item, to identify the effect of innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance (customer relation, employee performance, competitive advantage) in the Jordanian technology sector at Amman.

6.1 Academic Discussion

The results show that innovation (organizational eco-innovation, green product innovation, service innovation) positively impacts organizational performance (customer relations, employee performance, competitive advantage), indicating that the more innovation and its dimensions are used, the better organizational performance is.

Results related to the first main hypothesis showed that there is a statistically significant impact on all dimensions of innovation on organizational performance, where the coefficient of determination (69.4%) and the level of statistical significance are less than 0.05, which means that the innovation follows strategies enables to enhance the dimensions of innovation represented (organizational eco-innovation, green product innovation, and service innovation) and that innovation affects organizational performance statistically.

6.2 Study Conclusion

This study is dedicated to answering the study's main question: what is the impact of using innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance in the Jordanian technology sector? Data

collection by questionnaires was tested for validity and reliability, then the hypothesis was tested using correlation and multiple regression.

The result of the study shows the influence of innovation and its dimensions on organizational performance in Jordanian technology companies. Organizational eco-innovation has a significant positive impact on the organizational performance of Jordanian technology companies. Although green product innovation and service innovation have a significant positive impact on organizational performance in Jordanian technology companies.

Based on the discussion above, innovation and its dimensions have a significant positive influence on the organizational performance of Jordanian technology companies and could improve and add value to them.

6.3 Recommendations and Suggestions for Further Future

- The current study recommends the need to pay attention to innovation on organizational performance, because of its positive impact on Jordanian technology companies.

- This study recommends that all employees and managers participate in presenting innovative ideas because of the effect on the organizational performance of Jordanian technology companies.

- The study recommends the importance of using modern training techniques to improve employee performance to achieve organizational performance in Jordanian technology companies because the results show the high importance of using modern training techniques in this sector.

- This study recommends that Jordanian technology companies use eco-friendly materials to reduce environmental impact and encourage recycling and pollution prevention while using products because the result shows the high importance of using them in this sector.

- Since this study was conducted for a limited period, future researchers are encouraged to repeat this study on another occasion and compare the results based on a longer study period.

- Conducting more studies related to the impact of innovation on organizational performance with new variables.

- This study recommends the importance of taking into account service innovation in companies, as it has the greatest impact among dimensions 58.2%.

- Conducting more studies related to the impact of innovation on organizational performance in different sectors.

- When considering diversity, future studies need to include a large sample size to collect more diverse data.

- The current study recommends carrying out a similar study in the same sector in other countries.

- The current study recommends sharing other levels of employees working in Jordanian technology companies, as this study was limited to the first line of employees and managers.

- Since this study was conducted for a limited period, future researchers are encouraged to repeat this study on another occasion and distinguish the results based on a more extended study period. More studies referred to the impact of innovation on organizational performance with new variables.

- The senior management made an extra effort in Jordanian technology companies to instill the concept of innovation because of its direct impact on organizational performance.

- The results can be generalized to other types of companies.

- This study was conducted during the period of COVID-19 and can be made after the control of the pandemic.

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Appendices

Appendix (A): Definition of Terms

1. **Innovation:** it means experimenting, responding to change, events, and creative processes that can result in new products, services, and jumping onto another wave of technology.
2. **Organizational eco-innovation:** it is an approach of several companies that leads to sustainability and thinking creatively over the life cycle.
3. **Green product innovation:** it works to satisfy the market needs by creating a new product that has value and allows for the development of success.
4. **Service innovation:** the company's applications of new and unique ideas and technology in the service process to increase customer satisfaction.
5. **Organizational performance:** it's a continuous and flexible process that involves the analysis of the company's progress processes starting from customer relations, and employee performance, which set out how they can best work together to achieve a competitive advantage.

Appendix (B): Letter and Questionnaire of Respondents

Dear Participant

This questionnaire is a part of a thesis titled**: The effect of innovation on organizational performance; study at Jordanian technology sector** this questionnaire includes 16 questions and may take only 10 minutes for you to answer the questions.

The purpose of this questionnaire is to collect data for the academic research and thesis. Being a master's student, I have to conduct this research for my final project which would help me in completing my degree. Kindly take some time and answer the below-mentioned questions I'll be highly obliged for it.

Thank you

All dimensions will be measured with a Likert five-point scale to evaluate the actual perceptions of the respondent regarding each dimension ranging from '1 =strongly disagree to "5= strongly agree.

Part one: Demographic information

Gender: □Female □Male

Qualification: □High Diploma □Bachelor □Master □ other option

Age: □less than 30 □30-39 □40-49 □50 or above

years of experience: □10 or less □11-15 □16-20 □21 or more

Job Position: □Employee □Manager

NO.	**Independent Variable and dimensions Innovation**	**Belonging to the domain**		**Validity of the statement**		**Proposed Adjustment**
	Innovation: it means experimenting, responding to change, events, and creative processes that can result in new products, services, and jumping onto another wave of technology.	**yes**	**No**	**yes**	**No**	
	Organizational Eco-innovation: it is an approach of several companies that leads them to the path of sustainability and it is a never-ending transformation mechanism that forces the business to think creatively and systematically over the life cycle.					
1.	The company provides resources to engage in developing new products?					
2.	The company's policy is about creating products to reduce the environmental impact?					
3.	My company provides skills to apply appropriate process technologies to produce new products?					
4.	My company is working on a continuous program of inventions?					
	Green product innovation: it works to satisfy the market needs by creating a new product that has value allowing to development of new success.					
1.	The company's policy is interested in producing green products that improve environmental performance?					
2.	My company uses eco-friendly materials to reduce environmental impact?					
3.	My company encourages recycling and pollution prevention while using products?					
4.	Employees are motivated to take the lead in developing new project ideas?					

	Service innovation: the company's applications of new and unique ideas and technology in the service process to increase customer satisfaction.			
1.	My company can solve service problems independently (service errors, disputes, and complaints)?			
2.	Does my company provide many opportunities for business development?			
3.	My company takes several measures to continuously develop and train employees?			
4.	Technology is enough for my company to provide services that increase competition?			
	Dependent Variable Organizational performance: it's a continuous and flexible process that involves the analysis of the company's progress processes starting from customer relations, and employee performance, which set out how they can best work together to achieve a competitive advantage.			
1.	Innovation in my company has led to increasing competitive advantages?			
2.	My company uses modern training techniques to improve employee performance?			
3.	Does innovation enhance organizational performance through customer relations and the development of customer loyalty?			
4.	Does my company rely on work quality to evaluate organizational performance?			

Appendix (C): Panel of Referees committee

NO	Name	Qualification	Organization
1.	Dr. Mohammad N. Alqudah	Assistant Professor	Petra University
2.	Dr. Wasef Mater	Assistant Professor	Petra University
3.	Dr. Anas Ghassan Kannan	Assistant Professor	Petra University
4.	Prof. Raed Kannan	Professor of MIS	Amman Arab University
5.	Dr. Mahmoud Hussein Abu Joma	Assistant Professor	Amman Arab University
6.	Dr. Ahmad Albloush	Doctor of HRM	Amman Arab University
7.	Dr. Amer Hatamleh	Assistant Professor	Irbid national university
8.	Dr. Salman Mohammad Abu Lehyeh	Doctor of Business Administration	Amman Arab University
9.	Dr. Laith Abdallah Alqhaiwi	Assistant Professor	Zarqa University

Appendix (D):

Green option matrix for the environmental focus pollution in the Technology sector.

Impact	Life cycle phase		
	Before usage	Usage	After usage
Less negative	- Reduction of emissions in production processes - Reduction of emissions due to transportation (e.g. use of local materials, transportation optimization, products' size and weight reduction, software delivery through downloading instead of CD)	- energy efficient products and applications microprocessors meeting the most stringent international interference and health standards for radio frequency	-
Null	- Processors produced with a lead-free process - Preventing the use of hazardous materials and chemicals - Use of renewable energy sources - Use of supercritical fluid technology as alternative to classic solvents - No ozone-depleting substances (e.g. CFCs) used in the production process	-	- Elimination of CFCs and radioactive materials - Elimination of harmful substances - Halogen-free products - Lead-free products - Elimination of PVC in packaging - Safe disposal of used products - Recyclable products (no electronic wastes in landfill)
Positive	-	-	-

Summary

This study aims to understand the effects of innovation on organizational performance in the technology sector of Jordan-Amman and show how the technology sector will achieve innovation. This study will help the managers and employees to understand the importance of innovation in companies, which will improve organizational performance among customer relations which indicates increased customer satisfaction. Although, employee performance seeks to increase employee engagement by making a decision, creating methods that focus on achieving objectives, through competitive advantages, a case of protection against competing companies is developed and includes an advantage that allows companies to distinguish themselves from their competitors.

Problem Statement

The pandemic of COVID-19 was one of the reasons that led to this weakness, which led to a large-scale shift to hybrid work and some of the difficulties that technology companies have faced, including high worker turnover, high competition between employees, and a constant shortage of skills, including weak teamwork (Watson et al., 2022). From this point, managers and employees must use the power of creativity and innovation to adapt to and keep pace with rapid changes in a business environment characterized by increasing complexity and turmoil to modify to such changes and developments and address the needs of the nation if they want to survive (Farhang et al., 2018).

- This research investigates the effect of innovation (independent variable) on organizational performance (dependent variable) in the Jordanian technology sector. The researcher chose these three dimensions because they have great importance in technology companies. Eco-innovation is one of the most important types of marketing innovation; it is a strong indicator of implementing eco-innovation, which helps companies in R&D. It has been proven that companies that use R&D are eco-innovation and have a higher absorption capacity, therefore

improving their productivity (Granero and Gomez, 2018). Regarding green product innovation in technology companies, previous research indicated that companies have the absorptive capacity to implement a knowledge acquisition strategy or through external sources; this absorptive capacity helps companies innovate. External sources of knowledge are determinants of absorptive capacity. Therefore, companies need external knowledge and combine it to develop innovative green products (Awan et al., 2021). The importance of service innovation in technology companies; the idea here is not only the process of providing excellent service to the customer but instead providing an innovative service to customers, for instance, a new communication channel to interact with customers or an innovative distribution system (Arshad et al., 2016).

Starting with Innovation

Innovation is anywhere; it is not the handiest within the world of products (technology); however, within the global of words. Innovation is a phrase used to explicit our idea of change or as a substitute for a specific form of change. Innovation is trade. This is human-made and planned (Godin, 2015).

The literature on innovation shows that every business needs innovation to survive and achieve a sustainable competitive advantage successfully. In addition to innovation allowing institutions to coordinate with any change in the market and the environment, innovation is usually described as a critical factor in the organization's performance and its survival in a competitive environment. Besides, innovation doesn't only affect firm performance but also job satisfaction, as it is the key to success for organizations (Tohidi and Jabbari, 2012). Many authors state that innovation consists of generating a new and unique idea and implementing it in a new product, service, or process, which leads to an increase in job opportunities.

Inspiration and imagination are important factors for the emergence of new ideas, and effort and occupation have the strongest impact on creating opportunities for innovation. Innovation is one of the most important elements that have the greatest impact on the performance of organizations and countries; besides that, it has become one of the strategies that organizations use to achieve a competitive advantage, therefore, increasing their performance.

Organizational Eco-Innovation

This concept is a step in the right direction because it is the idea that eco-innovation is a type of innovation that seeks not only to create new markets but also to satisfy human needs (Pansera, 2011). According to (OECD, 2009) eco-innovation "is the growth or integration of unique or improved greatly, goods, procedures, marketing method, organization structure, and institutional structure, an obvious mention to the organization and organizational factors as a single category of eco-innovation can be included in a framework". All of the writers listed regard eco-innovation as a method of invention generation it should contribute to some better and more effective and responsible knowledge use as well as limiting the risk of development on the environment. However, most eco-innovation occurs only within the context of the innovation theory. The purpose of innovation is often a technique, product, service, or strategy. Eco-innovation can be organizational, technical, or marketing innovations that can improve the company's competitiveness because it is important to have a competitive factor in the process of predicting the new concept of eco-innovation and its dimensions in companies (Ahmed and Kamruzzaman, 2010).

Furthermore, in terms of environmental applications, organizational eco-innovation mostly represents new or considerably enhanced procedures, business practices, and activities that transform an organization's behaviors, interactions, and decisions. To put it another way, organizational eco-innovation is concerned with the incorporation of environmental aspects into management operations (Payne et al., 2021).

Green Product Innovation

Before going deeply with the definition of green product innovation, companies need to understand what it means to present a green image, displaying a green-looking or green image as a group of customer satisfaction about a brand's sustainability awareness and concerns. Raising consumer expectations for consideration and sustainability also helps companies create a more positive image, which can lead to higher sales and higher stock prices (Xuemei et al., 2019).

Green product innovation is also important in achieving environmental sustainability and corporate growth. In addition, by investing in green product innovation, companies can avoid environmental protests and legal sanctions while opening up new market opportunities. (Xuemei et al., 2019). In this case, it is considered a challenge for many consumers to encourage companies to continuously innovate green products (Xuemei et al., 2019).

Green product innovation has gained attention as a lot of companies see this as a reason to stay successful in the future. As with traditional innovation, companies introduce new expertise, materials, and techniques to meet changing customer preferences and requirements, as well as organizational expectations. Customers are now beginning to notice the negative impact of the products they opened. As a result, they are looking for and changing to less polluted products with longer lifespans (Khan et al., 2021). Usually, consumers are not able to pay a higher price for the features of green products. This leads to consumers feeling an important affinity for the company and this product, which certainly increases brand loyalty as well as, increases satisfaction (Xuemei et al., 2019).

Service Innovation

Service innovation is the use of new tools and advanced technologies in the service experience to continuously keep improving current product offerings, as well as improve service efficiency and effectiveness, keep updating the resulting product, add new support items, start creating benefits for its customers, and, after all, boost enterprise's in

competitive advantage. The expansion and development of new services lead to increased sales as well as an increase in the proportion of their entire revenue. Businesses must also look for new and inventive service options that are beneficial to clients (Arshad et al., 2016).

As a result, business executives who want to achieve service innovation success and improve their firm's performance have given careful consideration to the strategic orientation of service innovation (Ryu and Lee, 2018). An attitude toward service innovation is required for successful service innovation (Ryu and Lee, 2018). As a result, in today's business world, the importance of technology in service innovation is becoming increasingly important. As a result, technology is critical to the success of service innovation.

Organizational Performance

Organizational performance it has been formulated as the correlation of the value created by a company with the value owners expect to receive from the firm.

Organizational performance is defined as the organization's overall results as assessed against its intended goals and objectives. Furthermore, organizational performance is linked to the concepts of efficiency and effectiveness. Because each organization needs to generate the correct products with the smallest possible inputs, these organizations ensure strong organizational performance (Azzeh and Nuaimi, 2015).

Customer Relations

Today, the evolution of personalization and customer expectations has resulted in a period in which CRM is critical to the company's existence and helpful connections through partnerships with suppliers and customers that are required to implement successful systems and procedures. (Azzeh and Nuaimi, 2015).

Customer relationship goals include classifying new possibilities, reducing the number of opportunities lost, lowering defection of users, developing customer loyalty, customer support improvement, improving company image, saving expenses, increasing income, and reducing marketing plans. The capacity to develop strong relationships with consumers will provide businesses with a long-term competitive advantage (Azzeh and Nuaimi, 2015).

Employee Performance

It's a functional action within an organization to achieve an employee's goals and therefore recognize the obligations and responsibilities of the job description that convey the job to the employee (Azzeh and Nuaimi, 2015). To the laws and regulations that manage, organize, and prepare its tasks and roles (Azzeh and Nuaimi, 2015). Because of this importance, recent years have been marked by continuous research and study to remove any problems related to job performance.

Competitive Advantage

Whereas competitive advantage is a collection of qualities and variables that have consistently demonstrated the firm's superior performance of the firm above competitors.

Competitive advantages include the ability to sustain business in innovation training and the ability to create value for customers to mitigate risks that companies may face. Therefore, by innovating green products, companies are working to improve the quality and design of products by building a positive image that is in the minds of customers because of the benefit of achieving competitive advantage (Al-Abdallah and Al-Salim, 2021).

The impact of the dimensions of the independent variables (organizational eco innovation, green product innovation, service innovation) on the dependent variable (organizational performance).

Because of resource shortages, environmental crises, and environmental degradation, all countries in the world have paid attention to sustainability. Eco-innovation has become an important option and a way to gain a competitive advantage and pursue sustainability. As a result of the new technology and the construction and development of new equipment, companies are under pressure to improve their ability to innovate (Wugan and Guangpei, 2018). Technology companies are more innovative in competitive markets if they adopt new administrative processes, giving them a competitive advantage in the future. Improving product quality and environmental performance play an important role in increasing the demand for eco-innovation (Wugan and Guangpei, 2018). Many studies have found that innovation in green products is positively related to the competitive advantage of companies. Therefore, reducing pollution and toxic hazardous waste leads to improving the external environment and ensuring a green image. Companies must integrate green innovation into business strategies to build and maintain a competitive advantage (Ribeiro and Steiner, 2021). Service innovation means new products and services that are innovative to meet rapidly changing customer needs. All companies, regardless of the type of their sector, need to innovate their services to increase profitability and improve sales growth, therefore working to increase their competitive advantage in the future. Today, in the world of technology, companies are constantly exploring tools and services that help them improve their competitive advantage (Noorani, 2014). Customer relations and employee performance help enhance customer loyalty and satisfaction. It is a goal-oriented process. The goal here is for companies to build long-term relationships with their employees. Service innovation, green product innovation, and eco-innovation all work to increase employee relationships in the future by being the service that they will provide innovatively, new products and processes that benefit the company's future (Waldemar, 2021).

This research will be carried out in the technology sector for the first line of employees and senior-level (managers). It will carry out in Jordan-(Amman). And will be implemented during the second semester of 2022. It aims to find out the impact of innovation on organizational performance in the Jordanian technology sector, therefore this research is limited to the Jordanian technology sector. This research attempted to cover the main dimensions of innovation.

- Population and sample: the study population consists of seven technology companies registered in the Amman Chamber of industry and commerce. The researcher chose seven technology companies because of the difficulty of distributing the questionnaire to all companies and because COVID-19, which was the biggest obstacle in the distribution process, is number in the Chamber of Industry and Commerce 197 companies. The sample consists of the first line of employees and managers from different companies.
- Because of The difficulty of reaching the target sample sometimes because of the department's procedures and the current COVID-19 crisis worldwide, especially in Jordan, made its necessary for the researcher to adopt the purposive sample method. Therefore, the purposive sample is "a form of non-probability sampling in which researchers rely on their own judgment when selecting members of the population to participate in the study" (Tongco, 2007).

The proposed sample size met the rule outlined by Roscoe (Cavana, et al., 2001), which states that the characteristics of the sample should be more than 30 but less than 500. Therefore, more than 300 questionnaires were distributed online using a Google form, and the total responses of the questionnaire were 250. The researcher eliminated 23 due to missing data, which led to a result of 227 being valid and read for analysis. The collected data was used through a statistical package for the social sciences (SPSS). The

questionnaire was distributed to the companies online by sending it to the human resources department.

- ✓ The demographic analysis was used for the questionnaire.

The findings of the main testing hypotheses

Deciding which multivariate approach will be utilized for the hypotheses is the most important part of the findings. The current study aims to analyze the influence of innovation (organizational eco-innovation, green product innovation, service innovation) on organizational performance in Jordanian technology companies. As a result, the most appropriate analysis method was selected as multiple regression analysis.

Table 4.8: Regression analysis

R	**R Square**	**Adj. R Sq.**	**F**	**Sig.**
.833[a]	.694	.690	168.615	.000[b]
	Standardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.393	.148	2.659	.008
Organizational Eco innovation	.161	.063	2.572	.011
Green product innovation	.163	.055	2.971	.003
Service innovation	.582	.057	10.130	.000

Table 4.8 presents the findings of multiple regressions analysis that aims to test the main null hypotheses, which states that there is no significant impact of innovation (organizational eco-innovation, green product innovation, service innovation) on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this fitness of the model for multiple regressions is demonstrated by the value of R^2, which is .694. This indicates that the dimension of the innovation can explain 0.694 of variance in the organizational performance of Jordanian technology companies. This is

also supported by the results of the F-test, which is significant at a 5% level (F-test = 168.615, sig =0.000).

Consequently, the main null hypothesis that states that there is a significant impact of innovation on the organizational performance of Jordanian technology companies should be rejected at a 5% significant level. Therefore, the findings in a table (4.8) confirm that there is a significant impact of innovation (organizational eco-innovation, green product innovation, service innovation) on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$).

the first sub-null hypothesis should be rejected and conclude that there is a significant positive impact of organizational eco-innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this indicates that when the Jordanian technology companies depend more on organizational eco-innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

the second sub-null hypothesis should be rejected and conclude that there is a significant positive impact of green product innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). this indicates that when the Jordanian technology companies depend more on green product innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

The third sub-null hypothesis should be rejected and conclude that there is a significant positive impact of service innovation on the organizational performance of Jordanian technology companies at a significant level ($\alpha \leq 0.05$). This indicates that when the Jordanian technology companies depend more on service innovation, this will lead to enhance the organizational performance of Jordanian technology companies.

The results show that innovation (organizational eco-innovation, green product innovation, service innovation) positively impacts organizational performance (customer relations, employee performance, competitive advantage), indicating that the more innovation and its dimensions are used, the better organizational performance is.

Results related to the first main hypothesis showed that there is a statistically significant impact on all dimensions of innovation on organizational performance, where the coefficient of determination (69.4%) and the level of statistical significance are less than 0.05, which means that the innovation follows strategies enables to enhance the dimensions of innovation represented (organizational eco-innovation, green product innovation, and service innovation) and that innovation affects organizational performance statistically.

- The current study recommends the need to pay attention to innovation on organizational performance, because of its positive impact on Jordanian technology companies.

- This study recommends that all employees and managers participate in presenting innovative ideas because of the effect on the organizational performance of Jordanian technology companies.

- Since this study was conducted for a limited period, future researchers are encouraged to repeat this study on another occasion and distinguish the results based on a more extended study period. More studies referred to the impact of innovation on organizational performance with new variables.

- This study was conducted during the period of COVID-19 and can be made after the control of the pandemic.