

The Impact Of Innovation On Business Sustainability: Applied To Foodics Company In Al-khobar, KSA

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Finally, I thank my family and friends for their unwavering support and encouragement

Dedication

I dedicate this humble effort to my honorable parents, may God protect and protect them

To my husband and children who were my support and help in completing this journey, hoping that God Almighty will protect them and guide them to what is good and fulfilling.

To my brothers and sisters, my support and pride, and to their children, wishing them good luck and success

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Abstract

The aim of the research: This research aims to reveal The Impact Of Innovation On Business Sustainability

The methodology of the research: The researcher employed a descriptive analytic approach to meet the research's objectives. where the researcher community was used 100 of employees and the researcher was applied to 30 of employees at Foodics Company In Al-khobar

The results of the study:

- There is a statistically significant effect of innovation on business sustainability in Foodics Company.
- There is a statistically significant effect of innovation in products on business sustainability in Foodics Company.
- There is a statistically significant effect of innovation in operations on business sustainability in Foodics Company.
- There is **NOT** a statistically significant effect of innovation in marketing on business sustainability in Foodics Company.
- There is a statistically significant effect of administrative innovation on business sustainability in Foodics Company.

Theoretical contribution: This research contributes to the existing body of knowledge by extending the theory of innovation and sustainability to the technology industry. By examining the case of Foodics, the research provides insights into how specific innovation strategies can enhance business sustainability in a dynamic market environment.

Practical applications: The findings of this research have practical implications for Foodics by providing a roadmap for integrating innovation into its business strategy to enhance sustainability performance. Moreover, the research offers valuable insights for other companies seeking to achieve sustainable growth through innovation.

Keywords: Innovation, Business Sustainability

المستخلص

هدف البحث: يهدف هذا البحث إلى الكشف عن أثر الابتكار على استدامة الأعمال

منهج البحث: استخدم الباحث المنهج الوصفي التحليلي لتحقيق أهداف البحث، حيث تم استخدام مجتمع البحث 100 موظف وتم تطبيق الباحث على 30 موظف في شركة فودكس بالخبر

نتائج الدراسة:

- يوجد تأثير ذو دلالة إحصائية للابتكار على استدامة الأعمال في شركة فودكس.
- وجد تأثير ذو دلالة إحصائية للابتكار في المنتجات على استدامة الأعمال في شركة فودكس.
- يوجد تأثير ذو دلالة إحصائية للابتكار في العمليات على استدامة الأعمال في شركة فودكس.
- لا يوجد تأثير ذو دلالة إحصائية للابتكار في التسويق على استدامة الأعمال في شركة فودكس.
- يوجد تأثير ذو دلالة إحصائية للابتكار الإداري على استدامة الأعمال في شركة فودكس.

المساهمة النظرية: يساهم هذا البحث في مجموعة المعرفة الموجودة من خلال توسيع نظرية الابتكار والاستدامة إلى صناعة التكنولوجيا. من خلال دراسة حالة شركة فودكس، يقدم البحث رؤى حول كيفية تعزيز استراتيجيات الابتكار المحددة لاستدامة الأعمال في بيئة السوق الديناميكية.

التطبيقات العملية: إن نتائج هذا البحث لها آثار عملية على شركة فودكس من خلال توفير خارطة طريق لدمج الابتكار في استراتيجيتها التجارية لتعزيز أداء الاستدامة. وعلاوة على ذلك، يقدم البحث رؤى قيمة للشركات الأخرى التي تسعى إلى تحقيق نمو مستدام من خلال الابتكار.

الكلمات الرئيسية: الابتكار، استدامة الأعمال

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1 Chapter 1: Introduction

1.1 Introduction

Developments in the global economy have changed the traditional balance between customer and supplier. New communications and computing technology, and the establishment of reasonably open global trading regimes, mean that customers have more choices, variegated customer needs can find expression, and supply alternatives are more transparent. Businesses therefore need to be more customer-centric, especially since technology has evolved to allow the lower cost provision of information and customer solutions. Commonly accepted explanations consider that business models refer to the logic of how a firm does business, and explain how the firm creates, delivers and captures value (Teece, 2010). Business sustainability seeks to create long-term shareholder value by embracing the opportunities and managing the risks that result from an organization's economic, environmental, and social responsibilities. Business sustainability must meet the needs of the organization and its stakeholders today while also protecting, sustaining, and enhancing the environmental, social, and economic resources needed for the future (Pojasek et al, 2007).

Business models are seen as a vehicle for innovation and a necessary means for commercializing technological innovations, as well as a subject of innovation, e.g. open innovation, collaborative entrepreneurship, the business model itself as part of the intellectual property (Zott et al, 2011). The growing complexity of different products and services, fluctuating demands in markets and shorter product life cycles urges entrepreneurs to develop new or improved capabilities and be innovative in order to secure sustainable competitive advantages. The marketing literature highlighted that firms which emphasize on the introduction of innovative products and services and promote them through digital marketing technologies can achieve distinctive advantages. Moreover, successful entrepreneurs tend to exploit business opportunities and improve their capabilities continuously in an attempt to reinforce the competitiveness and performance of their businesses (Afzali & Ahmed, 2016).

Sustainable business, operated through the implementation of many ecological concepts (such as the Industrial Ecology, Ecological Modernization, Triple Bottom Line, or Cradle-to-Cradle design), is seen as a worldview in which business managers are economically incentivized to innovate towards sustainability (Luqmani et al, 2017). Wirtenberg et al, (2017) Increased global competition is pushing companies to become more sustainable in the economic, environmental and social senses. To really become sustainable, enterprises must build true smart systems (including human and technological systems) to react rapidly and flexibly to the changing environment. Product

innovation enables firms to respond to changing market needs and develop brand image product innovation enables firms to respond to changing market needs and develop brand image (Expósito & Sanchis Llopis, 2019).

The lack of case studies makes it challenging for firms to understand how to innovate their business models, identify and design alternatives, then assess and select the most adequate one. When considering business model innovations for sustainability, this leads to a higher complexity related to how to preliminarily assess the impact of the sustainability innovations and how to understand their effects on the whole business network (Evans et al, 2017). Innovation is an essential element of business sustainability, but there are many gaps that can hinder its impact. Some companies may have difficulty allocating the necessary resources for research, development and innovation. Companies may be concerned about the risks associated with trying new ideas, which may hinder innovation. Bureaucracy within companies may also inhibit Adopting innovative ideas quickly and efficiently.

The most prominent factors that prevent business sustainability are the lack of a focus on innovation, the lack of a culture that supports innovation, and the lack of a process for developing and implementing new ideas. Focusing on innovation is essential to the success of any business today. There are many ways to help focus on innovation and enhance the chances of long-term business success to achieve business sustainability (Pichlak, et al, 2021). To profit from innovation, business pioneers need to excel not only at product innovation but also at business model design, understanding business design options as well as customer needs and technological projects. Developing a successful business model is insufficient to assure competitive advantage as imitation is often easy: a differentiated (and hard to imitate) – yet effective and efficient – business model is more likely to yield profits. Business model innovation can itself be a pathway to competitive advantage if the model is sufficiently differentiated and hard to replicate for incumbents and new entrants alike (Teece, 2010).

This research helps companies invest in their primary goal of long-term business sustainability. Companies can succeed in improving their products and services, reducing their costs, efficiency, developing new markets, adapting to newcomers in the market, and being able to achieve the goal (Pichlak, et al, 2021). This is why it is also necessary for small businesses, as it can help them compete with larger companies, enter new markets and thus new business opportunities.

1.2 Research Problem

Many companies struggle to achieve business sustainability due to a lack of focus on innovation. This includes the failure to develop a culture that encourages new ideas, and the lack of a structured process for developing and implementing them. However, innovation is critical to success today. By adopting different strategies, companies can foster an environment that embraces innovation and increase their chances of long-term success.

1.2.1 Theoretical Gaps:

Previous research has indicated the important role of innovation in achieving business sustainability. However, innovation is not always compatible with the long-term strategic goals of the company. Innovation is not properly evaluated to measure its impact on business sustainability. Some companies do not have the skills to successfully develop and implement innovations and it is difficult to attract and retain innovative talent. Some companies focus on short-term profits at the expense of long-term innovation.

1.2.2 Empirical Gaps:

Many empirical researches have been conducted to determine the impact of innovation on business sustainability. However, there are limited results due to the difficulty of applying the theoretical results of innovation on the ground. This is due to practical challenges such as lack of resources or regulatory restrictions, which have caused a gap in the literature that needs to be addressed. More studies can be conducted on Innovation in different contexts, developing clear plans to implement innovation taking into account practical challenges, creating a culture that supports innovation and encourages risk-taking and experimentation with new ideas, and developing a comprehensive theoretical framework that links various aspects of innovation and its impact on business sustainability.

Main research question:

"What is the impact of innovation on business sustainability?"

1.3 Research Significant

Business Sustainability is Achieving Vision and Mission Through Innovation. it goes beyond mere survival; it's about thriving in the long term while creating positive social and environmental impact. This requires aligning your organization's vision and mission. Innovation plays a crucial role in bridging the gap between vision and mission. it is the introduction of a new concept, process, service, or product in an organization to adapt to environmental changes, and may be seen as the adoption of a new idea, method, service, or product.

1.3.1 Theoretical Significance:

This research aims to fill the theoretical gaps to understand the importance of the role of innovation in achieving business sustainability in the Kingdom of Saudi Arabia By addressing these gaps, companies can improve their understanding of the impact of innovation on business sustainability and develop more effective strategies to foster innovation and achieve long-term success.

Bridging the gap between vision and mission: Existing research often explores innovation and sustainability in isolation. This study proposes a novel framework that examines how innovation acts as a bridge between an organization's vision and mission, specifically focusing on achieving long-term sustainability goals in Saudi Arabia. This framework can contribute to the theoretical body of knowledge by offering a more holistic perspective on how companies can align their aspirations with sustainable practices through innovative strategies. Understanding innovation types and sustainability impact: While the importance of innovation for sustainability is acknowledged, limited research differentiates the impact of various innovation types (e.g., product, process, business model) on different sustainability dimensions (environmental, social, economic). This study aims to shed light on this gap by analyzing how specific innovation types contribute to achieving various sustainability goals in the Saudi Arabian context. This deeper understanding can inform future research and guide companies in selecting the most impactful innovation strategies for their unique sustainability objectives.

1.3.2 Empirical Significance:

Limited research on Saudi Arabia: Existing empirical studies on business sustainability and innovation often focus on developed economies. This research delves into the specific challenges and opportunities faced by companies in Saudi Arabia. This research aims to exam how business can be innovated to achieve sustainability goals. Analyzing innovation activity undertaken by companies to assess sustainable business. The results will contribute to creating a culture that supports innovation, encourages risk-taking, experimenting with new ideas, and developing more effective strategies to foster innovation, enabling companies to improve their understanding of innovation.

1.4 Research Questions

- What is the impact of innovation in products on business sustainability in Foodics Company?
- What is the impact of innovation in operations on business sustainability in Foodics Company?
- What is the impact of innovation in marketing on business sustainability in Foodics Company?
- What is the impact of administrative innovation on business sustainability in Foodics Company?

1.5 Research Objectives

- Exploring the effect of innovation on business sustainability in Foodics Company.
- Identifying the effect of innovation in products on business sustainability in Foodics Company.
- Identifying the effect of innovation in operations on business sustainability in Foodics Company.
- Identifying the effect of innovation in marketing on business sustainability in Foodics Company.
- Identifying the effect of administrative innovation on business sustainability in Foodics Company.

1.6 Research Hypotheses

- Main hypothesis H:
 - There is a statistically significant effect of innovation on business sustainability in Foodics Company.
- The first sub-hypothesis Ha:
 - There is a statistically significant effect of innovation in products on business sustainability in Foodics Company.
- The second sub-hypothesis Hb:
 - There is a statistically significant effect of innovation in operations on business sustainability in Foodics Company.
- The third sub-hypothesis Hc:
 - There is a statistically significant effect of innovation in marketing on business sustainability in Foodics Company.
- The fourth sub-hypothesis Hd:
 - There is a statistically significant effect of administrative innovation on business sustainability in Foodics Company.

1.7 Research Model

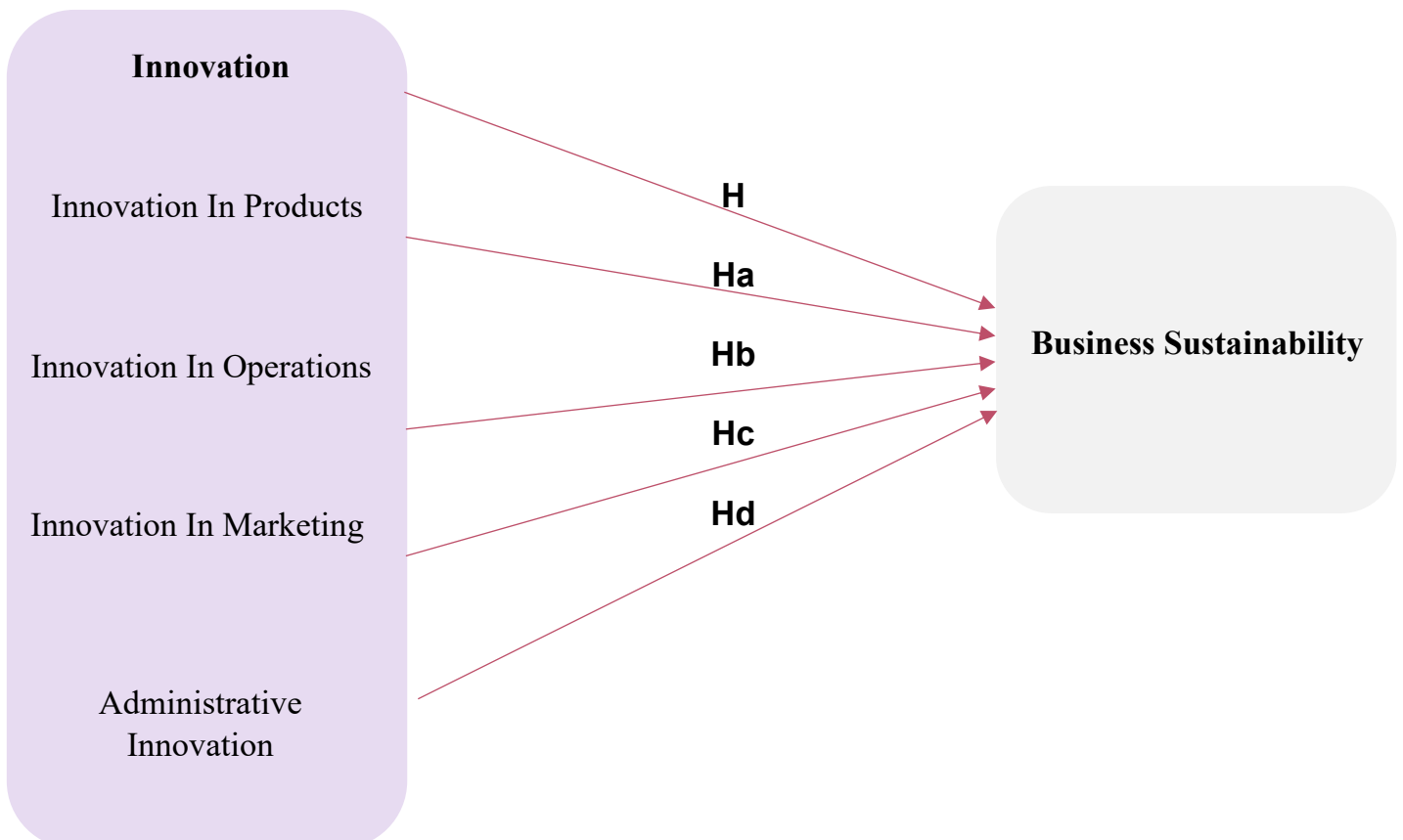


Figure 1: Designed By The Researcher, (2024)

1.8 Empirical Study

Company's website, (2024) Foodics, a leading MENA company in restaurant payment technology, offers a cloud-based software-as-a-service (SaaS) platform for managing restaurant operations. This research investigates the impact of Foodics' innovative solutions on its business sustainability. This empirical study will employ a mixed-methods approach, combining quantitative and qualitative data collection methods. This empirical study will provide valuable insights into the relationship between innovation and business sustainability in the restaurant technology sector. The findings can inform Foodics' future innovation strategy and inspire other companies in the MENA region to leverage technology for sustainable growth.

Data availability and access may limit the scope of the study. Additionally, isolating the sole impact of innovation on business sustainability might be challenging due to external factors influencing the industry. Future research could explore the long-term impact of Foodics' innovations on the restaurant industry and its competitive landscape. Additionally, investigating customer behavior changes due to Foodics' platform can provide deeper insights.

1.9 Project Structure

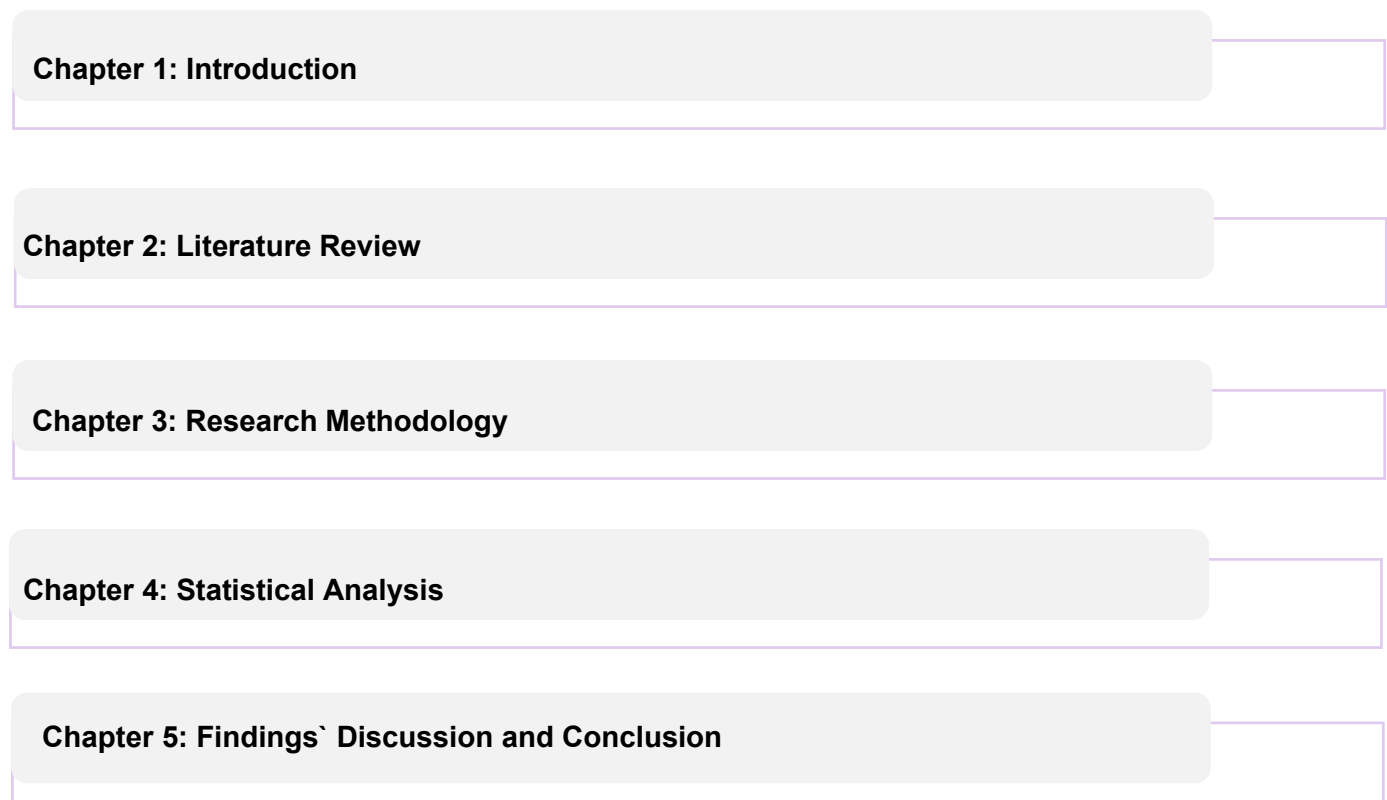


Figure 3: Designed By The Researcher, (2024)

2 Chapter 2: Literature Review

2.1 Introduction

In a world full of challenges and changes, where the pace of technical and technological progress is accelerating, and the needs of the market and consumers are constantly changing, innovation has become essential to ensure business sustainability in the long term. Innovation is a key driver of growth and competitiveness, through which companies can develop new products and services, improve operations, increase resource efficiency, and create new market opportunities. Innovation is considered one of the most important factors that drive business sustainability in light of the rapid changes in the business environment. As innovation enables companies to develop new products and services, improve the efficiency of operations, reduce costs, and enhance their ability to adapt to new challenges, projects can reduce their impact on the environment and increase their ability to survive in the long term (Lijster & et al, 2018).

This research aims to analyze the impact of innovation on sustainability in projects by comprehensively understanding the relationship between innovation and business sustainability, identifying the most important types of innovation that affect business sustainability, and analyzing the impact of innovation on various aspects of business sustainability. Gaps in knowledge about the impact of innovation will also be identified. On business sustainability and identify recommendations to enhance the use of innovation to achieve sustainability in projects. The research will rely on an analytical methodology, as the study will collect data through scientific references, websites, reports, and case studies.

The literature review will provide a comprehensive understanding of the relationship between innovation and business sustainability, identify the most important types of innovation that affect business sustainability, analyze the impact of innovation on various aspects of business sustainability, identify gaps in knowledge about the impact of innovation on business sustainability, and identify opportunities for future research in this area, including :

- The concept of innovation and its types.
- The concept of business sustainability and its dimensions.
- The relationship between innovation and business sustainability.
- The impact of innovation on various aspects of business sustainability.

2.2 First variable: Innovation

Surveys of the literature on innovation have found a variety of definitions. Baregheh et al ,(2009) found around 60 definitions in different scientific papers, while (Edison et al, 2014)'s survey found over 40. Based on their survey, attempted to formulate a multidisciplinary definition and arrived at the following:

Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace (Baragheh et al, 2009).

Innovation is production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and the establishment of new management systems. It is both a process and an outcome (Edison et al, 2014)

According to (Altshuler et al, 2010), innovation includes original invention and creative use. These writers define innovation as generation, admission and realization of new ideas, products, services and processes.

Two main dimensions of innovation are degree of novelty (i.e. whether an innovation is new to the firm, new to the market, new to the industry, or new to the world) and kind of innovation (i.e. whether it is process or product-service system innovation) (Edison et al, 2014).

Organizational researchers have also distinguished innovation separately from creativity, by providing an updated definition of these two related constructs:

Workplace creativity concerns the cognitive and behavioral processes applied when attempting to generate novel ideas. Workplace innovation concerns the processes applied when attempting to implement new ideas. Specifically, innovation involves some combination of problem/opportunity identification, the introduction, adoption or modification of new ideas germane to organizational

needs, the promotion of these ideas, and the practical implementation of these ideas (Hughes et al, 2018).

Drucker (2002), Innovation is the specific function of entrepreneurship, whether in an existing business, a public service institution, or a new venture started by a lone individual in the family kitchen. It is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth, Innovation may occur due to effort from a range of different agents, by chance, or as a result of a major system failure, the general sources of innovations are changes in industry structure, in market structure, in local and global demographics, in human perception, in the amount of available scientific knowledge, etc.



Figure 4: Original model of three phases of the process of Technological Change

By Aguzanotti, (2008)

Innovation by businesses is achieved in many ways, with much attention now given to formal research and development (R&D) for "breakthrough innovations". R&D help spur on patents and other scientific innovations that leads to productive growth in such areas as industry, medicine, engineering, and government (Muro et al, 2008). Yet, innovations can be developed by less formal on-the-job modifications of practice, through exchange and combination of professional experience and by many other routes. Investigation of relationship between the concepts of innovation and technology transfer revealed overlap (Dubickis et al, 2015). The more radical and revolutionary innovations tend to emerge from R&D, while more incremental innovations may emerge from practice – but there are many exceptions to each of these trends.

An important innovation factor includes customers buying products or using services. As a result, organizations may incorporate users in focus groups (user centered approach), work closely with so-called lead users (lead user approach), or users might adapt their products themselves. The lead user method focuses on idea generation based on leading users to develop breakthrough innovations. U-STIR, (2011) a project to innovate Europe's surface transportation system, employs such workshops. Regarding this user innovation, a great deal of innovation is done by those actually implementing and using technologies and products as part of their normal activities. Sometimes user-innovators may become entrepreneurs, selling their product, they may choose to trade their innovation in exchange for other innovations, or they may be adopted by their suppliers. Nowadays, they may also choose to freely reveal their innovations, using methods like open source. In such networks of innovation the users or communities of users can further develop technologies and reinvent their social meaning (Siltala, 2010).

Tarde, (1903) Diffusion of innovation research was first started in 1903 by seminal researcher Gabriel Tarde, who first plotted the S-shaped diffusion curve. Tarde defined the innovation-decision process as a series of steps that include:

1. Knowledge
2. Forming an attitude
3. A decision to adopt or reject
4. Implementation and use
5. Confirmation of the decision

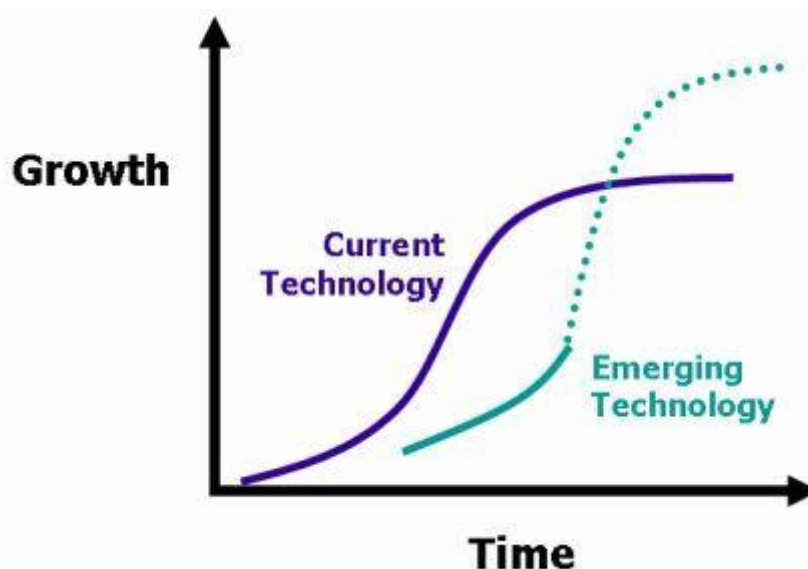


Figure 5: Innovation Life Cycle

By Davidmountain, (2006)

Once innovation occurs, innovations may be spread from the innovator to other individuals and groups. This process has been proposed that the lifecycle of innovations can be described using the 's-curve' or diffusion curve. The s-curve maps growth of revenue or productivity against time. In the early stage of a particular innovation, growth is relatively slow as the new product establishes itself. At some point, customers begin to demand and the product growth increases more rapidly. New incremental innovations or changes to the product allow growth to continue. Towards the end of its lifecycle, growth slows and may even begin to decline. In the later stages, no amount of new investment in that product will yield a normal rate of return.

2.3 Second variable: Business Sustainability.

A sustainable business, or a green business, is an enterprise that has a minimal negative impact or potentially a positive effect on the global or local environment, community, society, or economy—a business that strives to meet the triple bottom line. They cluster under different groupings and the whole is sometimes referred to as "green capitalism" (Balch, 2019). Often, sustainable businesses have progressive environmental and human rights policies. In general, a business is described as green if it matches the following four criteria: (Cooney, 2009).

1. It incorporates principles of sustainability into each of its business decisions.
2. It supplies environmentally friendly products or services that replace demand for nongreen products and/or services.
3. It is greener than traditional competition.
4. It has made an enduring commitment to environmental principles in its business operations.

A sustainable business is any thing that participates in environmentally friendly or green activities to ensure that all processes, products, and manufacturing activities adequately address current environmental concerns while maintaining a profit. In other words, it is a business that “meets the needs of the present [world] without compromising the ability of future generations to meet their own needs (Anderson, 2006).

Rennie, (2008) It is the process of assessing how to design products that will take advantage of the current environmental situation and how well a company's products perform with renewable resources.

The Brundtland Report emphasized that sustainability is a three-legged stool of people, planet, and profit (Zhivkova, 2022). Sustainable businesses with the supply chain try to balance all three through the triple-bottom-line concept—using sustainable development and sustainable distribution to affect the environment, business growth, and society (Galvao, 2008-2020).

Everyone affects the sustainability of the marketplace and the planet in some way. Sustainable development within a business can create value for customers, investors, and the environment. A sustainable business must meet customer needs while, at the same time, treating the environment well (Rennie, 2008).

To succeed in such an approach, where stakeholder balancing and joint solutions are key, requires a structural approach. One philosophy, that includes many different tools and methods, is the concept of Sustainable Enterprise Excellence (Edgeman, & Eskildsen, 2014). Another is the adoption of the concept of responsible growth.

Sustainability is often confused with corporate social responsibility (CSR), though the two are not the same. Bansal and DesJardine (2014) state that the notion of 'time' discriminates sustainability from CSR and other similar concepts. Whereas ethics, morality, and norms permeate CSR, sustainability only obliges businesses to make intertemporal trade-offs to safeguard intergenerational equity.

Short-termism is the bane of sustainability (Bansal et al, 2014). While CSR and sustainability are not the same, they are related to each other. Determining salaries, implementing new technology, and retiring old plants all have an impact on the firm's stakeholders and the natural environment (Hussain et al, 2023).

Green business has been seen as a possible mediator of economic-environmental relations, and if proliferated, would serve to diversify our economy, even if it has a negligible effect on lowering atmospheric CO2 levels. The definition of "green jobs" is ambiguous, but it is generally agreed that these jobs, the result of green business, should be linked to "clean energy" and contribute to the reduction of greenhouse gases. These corporations can be seen as generators of not only "green energy", but as producers of new "materializes" that are the product of the technologies, these firms developed and deployed (Caprotti, 2012).

Organizations that give back to the community, whether through employees volunteering their time or through charitable donations, are often considered socially sustainable. Organizations can also encourage education in their communities by training their employees and offering internships to younger members of the community. Practices such as these increase the education level and quality of life in the community.

For a business to be truly sustainable, it must sustain not only the necessary environmental resources, but also social resources—including employees, customers (the community), and its reputation (Keenan et al, 2008).

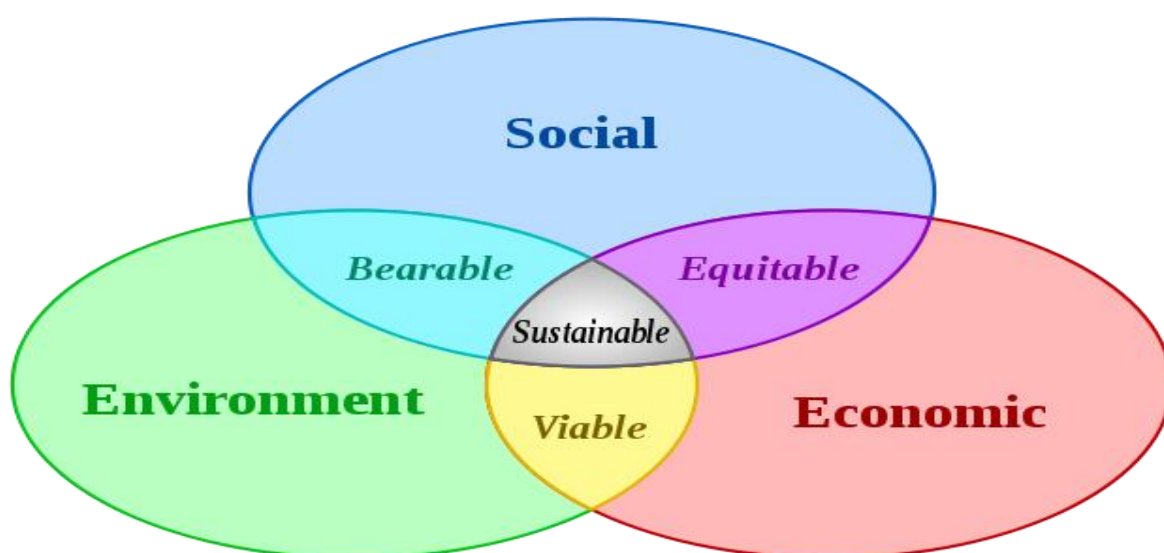


Figure 6: Business Sustainability Resources

By Keenan, (2008)

A term that is directly relates to the social aspect of sustainability is Environmental justice. Sustainability and social justice are directly connected to one another, and seeing these as separate unrelated issues can lead to more problems for the environment and potentially businesses (Sze et al, 2018).

When people are choosing to purchase goods or services, they care what a company stands for. This includes social and environmental aspects that may not have seemed important in business in the past. Consumers nowadays are demanding more sustainable goods and services (Ahmad et al, 2021). Because of this demand, companies must focus on their environmental impact to gain consumer loyalty.

Ahmad et al, (2021) Because ecological awareness can be treated as a choice of personal taste rather than a necessity, it can be a method to try to increase capital from a marketing standpoint.

Kemper et al, (2019) When marketing a product or service it is important that a business is actually following through with environmental claims, and not just pretending to be in order to gain customers. False advertising leads to distrust among consumers and can ultimately end a company.

2.4 The Relationship Between Innovation And Business Sustainability

Innovation and sustainability form an important link in the pursuit of environmental, economic, and social development (Michelino et al., 2019). Innovation has been seen as an important tool for achieving sustainability (Adams et al., 2016). The extraction and use of resource resources continues to grow in absolute terms, due to the magnitude of production growth, mainly related to excessive consumption and excessive use of natural resources. Society and organizations, therefore, demand innovation systems oriented towards sustainability that allow for increasingly rational consumption. Many studies highlight the importance of innovation for sustainability as well as the goals of sustainable development (Hallenga-Brink and Brezet, 2005). Given this abundant research, innovation is recognized as the main engine of industrial growth on the planet, as well as one of the main causes of social and environmental disturbance, due to the amount of resources consumed and the levels of pollution inherent to the production process (Hall and

Vredenburg, 2003). Innovation is an important development mechanism, especially if encouraged by public policy or voluntary initiatives.

Despite the presumption that innovation breeds sustainability, innovations should generate positive economic, social, and environmental outcomes at the same time. Those outcomes are not easy to establish given the uncertainties that innovations bring, especially when they are radical, disruptive, or highly novel to the mainstream (Hallenga-Brink and Brezet, 2005; Nill and Kemp, 2009; Barbieri et al., 2010). The mapping carried out in previous studies does not indicate the existence of studies that assess the combined effects of the implications of innovation on sustainability performance, nor the size of the effect in the organizational contexts in which it occurs (Jin et al., 2018; Borsato et al., 2020). This study contributes to providing a combined effect of innovation on the sustainability performance of organizations.

There are studies that address the transformation from innovation to sustainability (Leach et al., 2012); environmental innovation and transition to sustainability (Truffer and Coenen, 2012); social sustainability and supply chain innovations (Beltagui et al., 2019); the key drivers of lean innovation-led approaches to achieve sustainability in manufacturing supply chain, the impact of Lean and Sustainability Oriented Innovation on Sustainability Performance (Debashree De et al., 2019), service innovation in sustainable product service systems (Tseng et al., 2018), innovation, lean manufacturing, and sustainability (Ghobadian et al., 2018); innovation-led Lean programs and sustainability (Genc and Giovanni, 2018); eco-efficient Lean innovation in operations through maintenance organization (Ball and Lunt, 2018); Lean, green practices and process innovation (Cherrafi et al., 2018); eco-innovations in more sustainable supply chains for a low-carbon economy (Jabbour et al., 2015), the role of 3D printing and open design on adoption of socially sustainable supply chain innovation (Beltagui et al., 2019); stakeholder engagement to profitability through sustainability-oriented innovation (Bogers and Ghassim, 2019), anchoring innovations in oscillating domestic spaces to transition to sustainability (Cherunya et al., 2020), among others.

Given the context, this article aims to analyze the effects of innovation on sustainability performance, and it considers the economic, environmental, and social dimensions. Such

sustainability performance focuses on the definition of the triple bottom line, which considers sustainability in environmental, economic, and social areas of concern.

The selection of articles and study screening procedures followed the methodology proposed by Field and Gillett (2010). This set of procedural methods and actions has been widely used in several meta-analytic studies related to the environmental and business areas. The search for empirical articles was performed with quantitative data that could be combined in the effects of meta-analysis. The databases used were the Web of Science, Scopus, Science Direct, Emerald, Sage, ProQuest, and Wiley Online Library. The search was performed in July and August 2019. No chronological restriction was employed in the selection of studies. From the search problem question, the following keywords were defined to compose the search strings, using the logical operator AND and OR to add combinations, as follows: “innovation” AND “sustainability” OR “sustainable practices” OR “sustainable operations” AND “quantitative”. To ensure maximum amplitude in the return of articles, considering generic terms in the search, this search resulted in 5209 articles. After screening, the final return was 15 articles, of which 37 studies were identified and 9785 total effects were obtained.

The main results of the meta-analysis contribute to the existing literature as follows:

1. A positive and significant relationship has been demonstrated between innovation and sustainability, corroborating previous findings identified in the literature.
2. The effects of innovation on sustainability performance, considering the economic, environmental, and social dimensions had a positive and significant effect on the relationship between the constructs.
3. Innovation positively influences organizational sustainability performance.
4. The study provides evidence that organizations can benefit from achieving better sustainability performance from innovation-driven practices.

From a managerial point of view, the ability to propose innovative product, service or process solutions is a valuable skill and can be converted into a range of valuable organizational resources. Considering the long-term perspective, that guides sustainability, the possibility of innovating and

improving the way the company operates is of considerable relevance. The gains from the incorporation of differentiated and innovative forms, both in terms of operations and in terms of the management and decision process, allow for an improvement in the efficiency of the use of materials and energy and the optimization of resources. Therefore, higher levels of innovation imply significant and positive effects on the performance that the organization obtains in the environmental, social and economic dimensions of sustainability.

Business sustainability is understood as the ability to generate resources to compensate factors of production, to replace used assets, and to invest to continue competing (Barbieri et al., 2010). Further, we must take into account the dimensions of the triple bottom line that include environmental and social-economic factors (Elkington, 2013). Although sustainability has become a kind of mantra in the contemporary world, there are significant gaps in commitments related to reducing

Innovation is an essential element of the *modus operandi* of organizations. It assumes that the organization continually develops tangible and intangible resources to continuously innovate. Ideally, companies must balance concerns of economic and environmental aspects while they promote themselves as an instrument of social justice, encourage social inclusion, the protection of minorities and vulnerable groups, and observe gender equality, etc. (Barbieri et al., 2010).

In any case,

The selection of articles and study screening procedures followed the methodology proposed by Field and Gillett (2010). This set of procedural methods and actions has been widely used in several meta-analytic studies related to the environmental and business field (Byron and Post, 2016; Field, 2005; Van Essen et al., 2012; Suurmond et al., 2017). In addition to these, we can mention the meta-analytic studies of Zubeltzu Jaka et al. (2018), Mardani et al. (2017), and Fang (2018).

2.5 Conclusion

In conclusion, this article provides a compelling analysis of the synergy between innovation and sustainability performance. The meta-analysis confirms a positive and significant relationship between these two constructs, emphasizing that innovation can be a powerful driver of progress across the environmental, economic, and social dimensions of sustainability. This finding aligns with previous research and offers valuable insights for both academics and practitioners.

For academics, this study contributes to the growing body of knowledge on innovation and sustainability. The methodology employed, including the comprehensive search strategy and robust meta-analysis techniques, strengthens the validity of the results. Future research could delve deeper into specific types of innovation and their differential effects on sustainability performance. Additionally, exploring the role of moderating variables, such as industry context or organizational culture, could provide further nuance to the understanding of this complex relationship.

From a managerial perspective, the article offers practical guidance for organizations seeking to enhance their sustainability performance. The ability to develop innovative solutions, whether in products, services, or processes, presents a valuable opportunity to improve resource efficiency, reduce environmental impact, and contribute to social well-being. The article emphasizes the long-term benefits of integrating sustainability considerations into innovation strategies.

By fostering a culture of innovation that embraces environmental and social responsibility, organizations can gain a competitive edge and contribute positively to a more sustainable future. The limitations of the study, such as the potential for publication bias or the focus on quantitative data, highlight the need for further research that incorporates qualitative methods and explores the specific mechanisms through which innovation translates into improved sustainability performance.

However, the overall findings provide a strong foundation for organizations to leverage innovation as a key driver of their sustainability journey.

3 Chapter 3: Research Methodology

3.1 Introduction

This chapter outlines the research methodology employed to investigate the impact of innovation on business sustainability, utilizing Foodics Company in Al-khobar, KSA, as a case study. It details the research design, data collection methods, data analysis techniques, and the ethical considerations adhered to throughout the research process.

By outlining these aspects, this chapter will provide a clear understanding of how the research will be conducted to investigate the impact of innovation on Foodics' sustainability efforts. this chapter will provide a robust and transparent framework for the research methodology. It will demonstrate a clear plan for data collection, analysis, and ethical considerations, ensuring the credibility and effectiveness of investigation into Foodics' innovative practices and their contribution to business sustainability.

3.2 Operational definitions for research variables

This section details the operational definitions for the key research variables Innovation and Business Sustainability. It clarifies how these concepts will be measured in the context of Foodics Company.

3.2.1 Innovation

Innovation refers to the introduction of new ideas, processes, or products that enhance the company's value proposition and create competitive advantage.

Operational Definition: Measures: The following measures will be used to assess innovation at Foodics:

Number and type of new products and services launched in the past 3 years. Investment in research and development (R&D) as a percentage of revenue. Existence and scope of formal innovation processes within the company (e.g., idea generation workshops, hackathons). Implementation of new technologies (e.g., artificial intelligence, big data) in business operations. The presence and

extent of these measures will be used to evaluate the level and type of innovation practiced at Foodics.

3.2.2 Business Sustainability

Business sustainability refers to the ability of a company to maintain its operations and profitability while minimizing its environmental and social impact over the long term.

Operational Definition Measures: The following measures will be used to assess business sustainability at Foodics:

Reduction in waste generation (e.g., packaging waste, food waste). Implementation of energy-saving practices. Adoption of sustainable sourcing practices. Employee satisfaction and well-being initiatives. Diversity and inclusion programs. Community engagement and social responsibility programs. The extent to which Foodics implements these measures will be used to evaluate their commitment to environmental and social sustainability.

3.3 Research Design

This research adopts a quantitative case study approach. A case study allows for an in-depth exploration of a specific phenomenon within its real-world context (Yin, 2018). In this case, the phenomenon being investigated is the impact of innovation on business sustainability, and Foodics Company serves as the case study subject. The quantitative approach enables a nuanced understanding of the company's innovation practices and their influence on sustainability efforts.

- **Research philosophy:** Positivism
- **Research approach:** Deductive
- **Research strategy:** Case study
- **Research choice:** Mono Method
- **Time horizon:** Cross-sectional
- **Data collection and analysis techniques:** Questionnaires

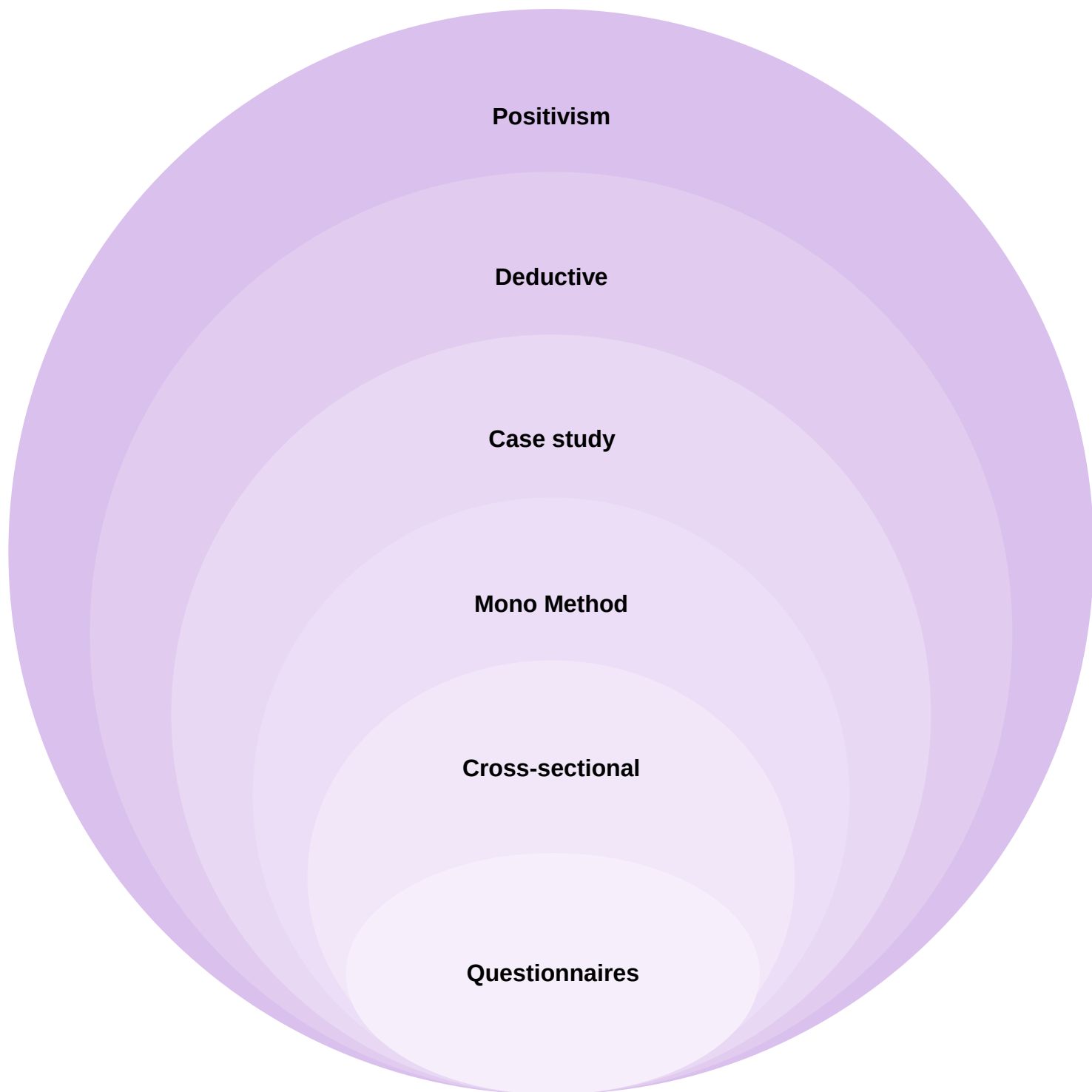


Figure 2: Designed By The Researcher, (2024)

3.4 Research population & Sampling methods and technique

To understand the merits of the research, it is necessary to present the methodology followed by introducing the sources. Data, study population, how to choose the study sample, study model as the tool used to complete it.

3.4.1 Research Population

The research population for this study is Foodics Company in Al-khobar, KSA. This includes all employees of the company, with a particular focus on personnel involved in innovation and sustainability initiatives. These individuals can provide valuable insights into the company's practices and experiences.

Table (1) Research Population

Company Name	Classifications	Number Of Employees
Foodics	Managers	10 - 15 Managers
	Stuff	100 – 150 employees

Source: the researcher, (2024)

3.4.2 Research Sample

Employees will be selected according to various criteria, including: job role and responsibilities, and length of experience at Foodics, and participate in specific innovation or sustainability projects.

The sample size for quantitative research ranges from about 30 to 40 employees

Table (2) Research Sample

The Research Sample	Sample Size
Target employees in Foodics company	30 – 40 employees

Source: the researcher, (2024)

3.4.3 Sampling Method & Techniques

Since this research employs a quantitative case study approach, a probability sampling method will be utilized. Probability sampling is more aligned with positivism. This ensures all members of the population have a known chance of being selected, allowing for greater generalizability of findings.

The specific sampling technique chosen will be Simple Random Sampling. This technique involves selecting random participants, Each member of the population (all Foodics employees) has an equal chance of being selected.

3.5 Data collection method

The collected data will be analyzed Statistically. Statistical analysis involves identifying, analyzing, and turning raw data into useful information. This approach will help to uncover the key relationships between innovation practices and business sustainability at Foodics Company.

3.5.1 The independent variable (Innovation)

The researcher is relied on the questionnaire of Darar, (2024). In order to measure the independent variable Innovation, in terms of four dimensions namely:

- Innovation in product
- Innovation in operations
- Innovation in marketing
- Administrative innovation

With overall 12 items for the whole variable. As, Innovation in product dimension consists of 3 items, Innovation in operations dimension consists of 3 items, Innovation in marketing dimension consists of 3 items, and Administrative innovation dimension consists of 3 items. The instrument type is Likert **Agree**, **Neutral** and **Disagree**

Table (3) for the instrument of the independent variable Innovation

Variable	Variable Dimensions	Number Of Statements	Source
Innovation	Innovation in product	3	Darar (2024) The role of innovation in improving the profitability of agricultural projects in the eastern Algerian region
	Innovation in operations	3	
	Innovation in marketing	3	
	Administrative innovation	3	
	Overall	12	

Source: the researcher, (2024)

3.5.2 The dependent variable (Business Sustainability)

The researcher is relied on the questionnaire of SCHWARZKOPF, et al (2019). In order to measure the dependent variable Business Sustainability in terms of one dimension namely:

- Business Sustainability

With overall 12 items for the whole variable .The instrument type is Likert **Agree, Neutral** and **Disagree**

Table (4) for the instrument of the dependent variable Business Sustainability

Variable	Variable Dimensions	Number Of Statements	Source
Business Sustainability	Business Sustainability	14	SCHWARZKOPF, et al (2019) Self-assessment questionnaire on CSR/sustainability for automotive sector suppliers

Source: the researcher, (2024)

3.6 Types Of Data

Strong research hinges on using two complementary data types: primary and secondary. Primary data allows for in-depth exploration of specific questions, while secondary data provides a solid foundation and broader context. By strategically combining them, researchers gain a richer understanding of the research question and contribute valuable knowledge to the field.

3.6.1 Primary data

In this study, a carefully designed questionnaire served as the primary data collection tool. The questionnaire covered all relevant aspects of the research topic and was distributed to a representative sample of the target population, resulting in a high response rate. Advanced statistical software was then used to analyze the quantitative data, extracting key indicators and metrics to draw conclusions.

3.6.2 Secondary data

To establish a strong theoretical foundation, the research extensively reviewed existing studies, relevant books, and scientific articles. Additionally, information and data from the company's website were analyzed to understand the organizational and operational context surrounding the research topic. By systematically analyzing and interpreting this secondary data, the research was able to link its findings to previous literature and build a strong theoretical framework.

3.7 Data Analysis Methods & Procedures

After collecting data, it is essential to analyze the information gathered to draw meaningful conclusions. As, the Statistical Package for the Social Sciences (SPSS), specifically version 28, were used to analyze the collected data.

The sample profile test was conducted, via descriptive analysis, to gain insights into the characteristics of the sample population. It helps researchers understand the demographics, preferences, and other relevant information about the individuals involved in the study.

Validity and reliability tests are crucial in ensuring that the data collected is accurate and consistent. Validity tests (Exploratory factor analysis) to determine if the research instruments measure what they are intended to measure, while reliability tests (Cronbach's Alpha test) assess the consistency of results over time.

The sample profile test was conducted, via descriptive analysis, to gain insights into the characteristics of the sample population. It helps researchers understand the demographics, preferences, and other relevant information about the individuals involved in the study.

3.8 Conclusion

This chapter dives deep into the research methods employed to explore the intricate connection between Foodics Company's internal innovation programs and its long-term business sustainability in Khobar, KSA. Utilizing a rigorous and clearly defined methodology, this research surpasses a simple correlation analysis. It delves into the unique context of Foodics, offering valuable insights that can be applied by similar organizations striving to cultivate a culture of innovation.

The anticipated findings hold significant potential to broaden our understanding of how internal innovation programs influence a company's ability to flourish in the long run. By examining the impact of these programs within Foodics, this research aims to illuminate best practices and potential hurdles that can be generalized to other companies in the region and beyond.

Furthermore, the research has the potential to directly impact Foodics's internal operations. The findings can serve as a catalyst for refining and optimizing the company's innovation and development strategies. By aligning these programs with the specific needs of employees and demonstrably linking them to enhanced business sustainability, Foodics can foster a workforce that is more innovative, engaged, and contributes directly to the company's long-term success.

Ultimately, this research bridges the gap between theoretical knowledge and practical application. By investigating the impact of internal innovation in a real-world setting, this study aims to yield insights that can inform strategic decision-making at Foodics and contribute valuable knowledge to the field of organizational development. The potential outcomes create a win-win situation: enhanced business sustainability for Foodics and a more comprehensive understanding of how internal innovation programs contribute to long-term success for the broader business community.

4 Chapter 4: Statistical analysis of the research results

4.1 Introduction

This chapter presents the results of a field study analyzed using SPSS version 28. It begins with descriptive statistics of the sample, followed by an assessment of the questionnaire's validity and reliability. The chapter concludes with a simple linear regression analysis to test the research hypotheses and model fit.

4.2 Characteristics of the research sample

The research sample was distributed according to Gender – Age – Qualification - Seniority in the company.

Frequencies and percentages were calculated for the study sample members and are represented by demographic information that includes:

- Gender includes: (Male, Female)
- Age includes: (From 20 to 30, From 30 to 40)
- Qualification includes: (Secondary, Bachelor's, Master's)
- Seniority in the company includes: (Less than 3 years, 3-5 years, More than 5 years)

Table (5) Characteristics of the research sample

Variable	Variable classes	The number	Percentage of the total sample
Gender	Male	15	41.7%
	Female	21	58.3%
	Total	36	100%
Age	From 20 to 30 years	20	55.6%
	From 30 to 40 years	16	44.4%
	Total	36	100%
Qualification	Secondary	9	25%
	Bachelor's	23	63.9%
	Master's	4	11.1%

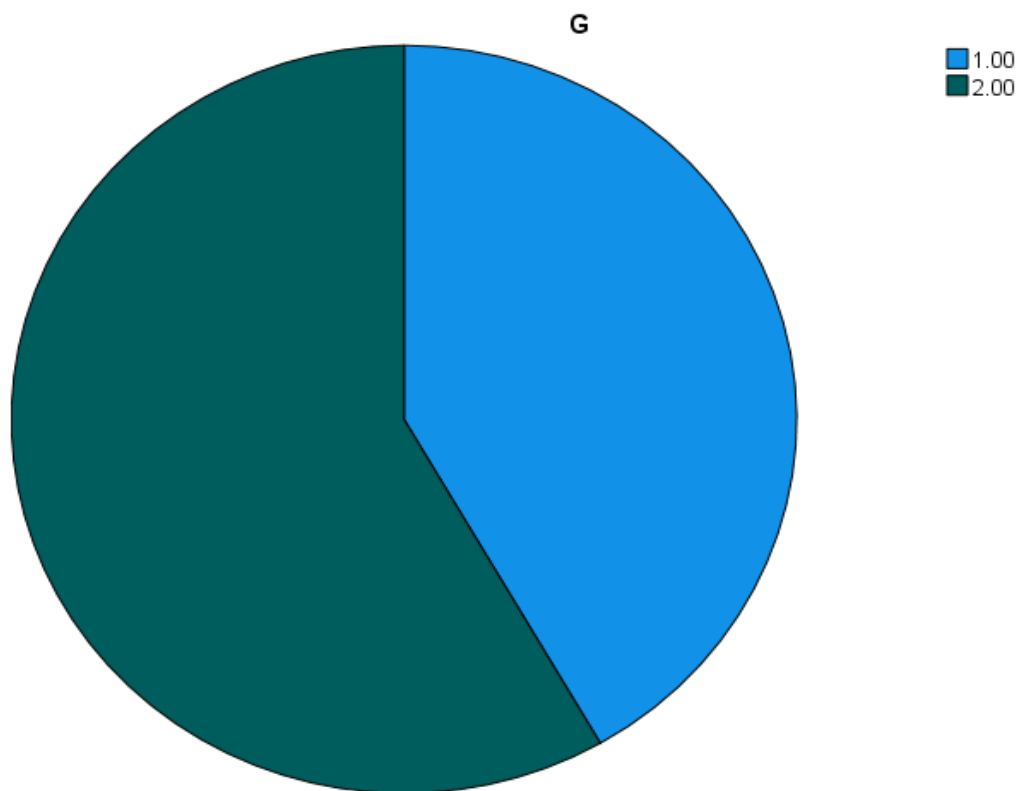
	Total	36	100%
Seniority in the company	Less than 3 years	19	52.8%
	3-5 years	8	22.2%
	More than 5 years	9	25%
	Total	36	100%

Source: the researcher, (2024)

From the previous table we conclude the following:

As for **Gender**, the number of Females is greater than the number of Males, as Females represent 58.3% percentage of the total sample while the Males represent 41.7% percentage of the total sample, as the following:

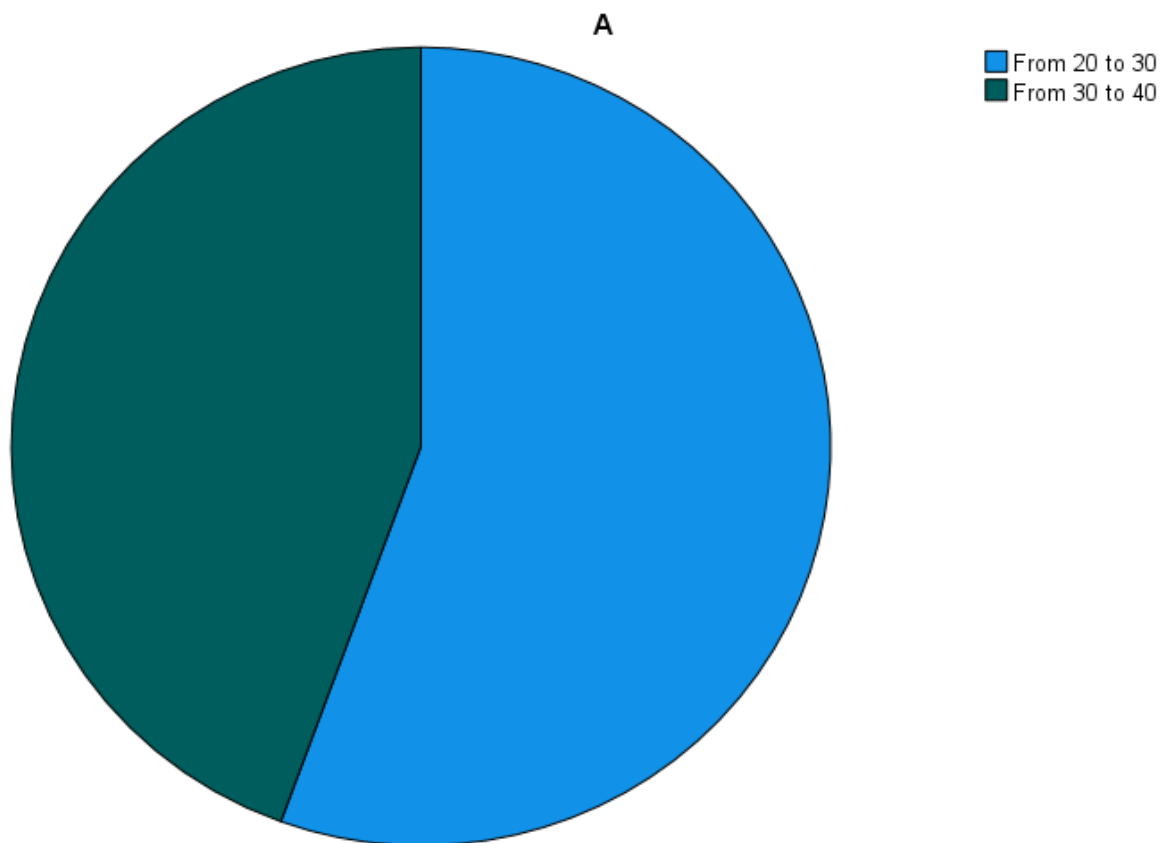
Figure (7) Gender percentage



Source: SPSS V. 28

As for **Age**, From 20 to 30 years is greater than the number of From 30 to 40 years, as From 20 to 30 years represent 55.6% percentage of the total sample while the From 30 to 40 years represent 44.4% percentage of the total sample, as the following:

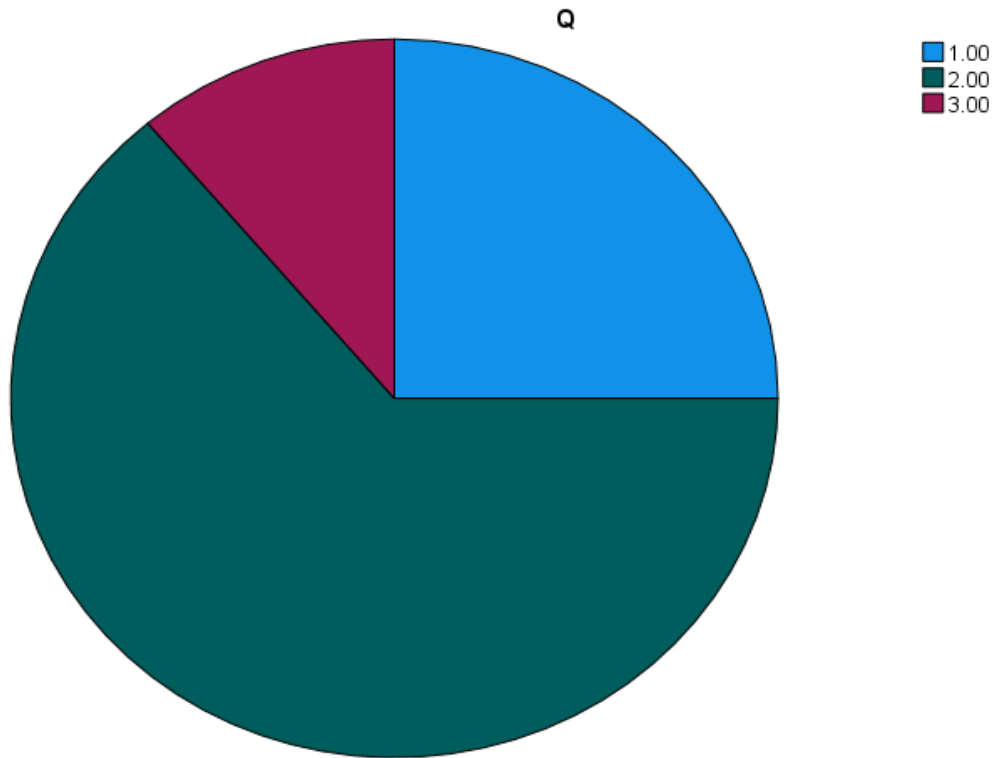
Figure (8) Age percentage



Source: SPSS V. 28

As for **Qualification**, Bachelor's is greater than the number of Secondary and Master's, as Bachelor's represent 63.9% percentage of the total sample while the Secondary represent 25% percentage of the total sample, and Master's represent 11.1% percentage of the total sample as the following:

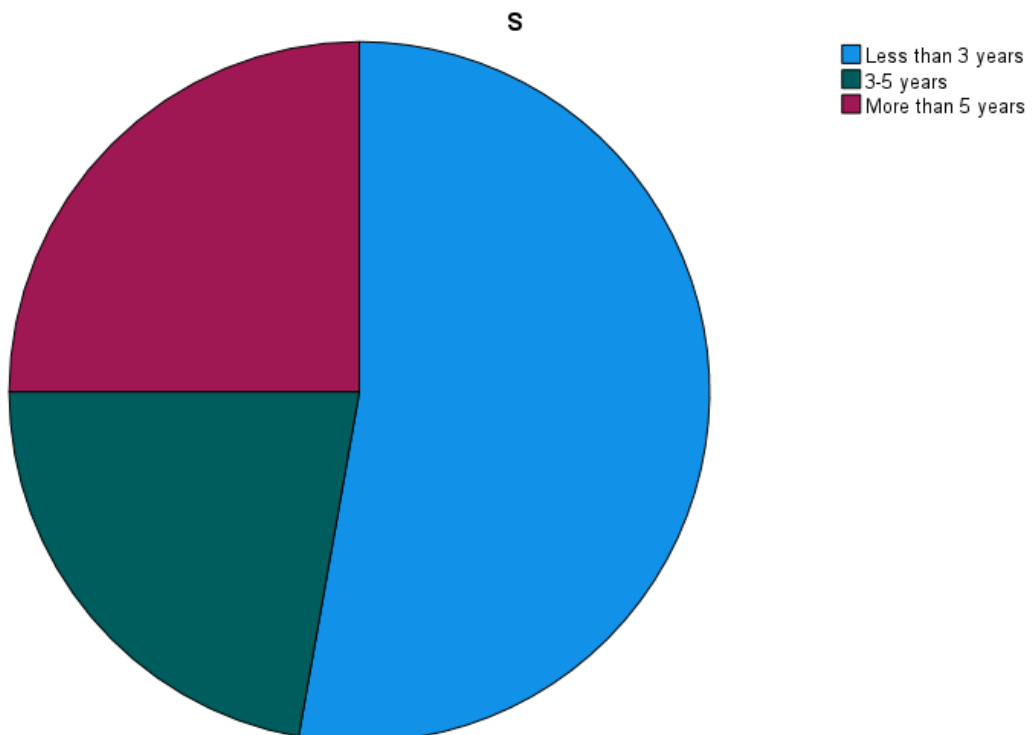
Figure (9) Qualification



Source: SPSS V. 28

As for **Seniority in the company**, Less than 3 years is greater than the number of 3-5 years and More than 5 years, as Less than 3 years represent 52.8% percentage of the total sample while the 3-5 years represent 22.2% percentage of the total sample, and More than 5 years represent 25% percentage of the total sample as the following:

Figure (10) Seniority in the company



Source: SPSS V. 28

4.3 Measuring the validity and reliability of research instruments

In order to verify the validity and reliability of the measures used in the research, the internal consistency validity of the questionnaires used to measure the research variables was tested, in addition to measuring the convergent validity by measuring the Average Variance Extracted (AVE). While the reliability of the measures used in the research was measured by Measuring the value of Cronbach's alpha, through the structural equation modeling (SEM), using the statistical analysis program SPSS version 28. The following paragraphs and tables explain this.

4.3.1 Validity of the measures used in the research

The internal consistency validity of the scales used to measure the research variables was tested, in addition to measuring the convergent validity by measuring the average variance extracted.

Internal consistency validity: It means the extent to which each statement of the questionnaire is consistent with the variable to which it belongs. Therefore, the researcher measured the internal consistency of the questionnaires by calculating the correlation coefficients between the score of each statement and the total score of the variable to which it belongs. According to Kaiser (1974) study, a correlation coefficient of less than 0.5 is removed from the questionnaire.

Convergent Validity: The average variance between statements that measure the same scale is measured by calculating the average variance extracted (AVE), whose value must be greater than 0.5 according to Hair et al (2006).

The following tables show the statistical results for (correlation coefficients, standard deviation, calculated P value between the score of each statement and the total score of the variable to measure the validity of the internal consistency of the questionnaires. Also, calculating the value of the average variance extracted (AVE) to measure the convergent validity of the questionnaires through the equation model. Structural SPSS version 28, as follows:

Table (6) Validity of the measures used in the research

Variable		Statements	KMO	Factor loadings	Standard deviation	P Values	Average variance extracted	
Innovation	Innovation in product	IP1	0.721	0.692	0.52478	0.00	2.526	1.000
		IP2		0.747	0.46718	0.00		
		IP3		0.720	0.31873	0.00		
	Innovation in operations	IO1		0.700	0.50000	0.00	0.868	
		IO2		0.614	0.46718	0.00		
		IO3		0.851	0.50000	0.00		
	Innovation in marketing	IM1		0.836	0.46718	0.00	0.440	
		IM2		0.801	0.50000	0.00		
		IM3		0.635	0.63932	0.00		
	Administrative innovation	AI1		0.582	0.65949	0.00	0.167	
		AI2		0.644	0.87515	0.00		
		AI3		0.663	0.87423	0.00		
Business Sustainability		BS1	0.482	0.827	0.232	0.00	1.000	
		BS2		0.896	0.615	0.00		
		BS3		0.921	0.351	0.00		
		BS4		0.629	0.68776	0.00		
		BS5		0.842	0.37796	0.00		
		BS6		0.530	0.443	0.00		
		BS7		0.762	0.467	0.00		
		BS8		0.496	0.688	0.00		
		BS9		0.676	0.50000	0.00		

	BS10		0.676	0.87786	0.00	
	BS11		0.753	0.803	0.00	
	BS12		0.730	0.55420	0.00	
	BS13		0.810	0.80623	0.00	
	BS14		0.836	0.81064	0.00	

Source: the researcher, (2024)

It is clear from the table above:

Innovation Scale: All correlation coefficients for all statements are closely related to their dependent variable (business sustainability), at values greater than 0.7. In addition, the values of all correlation coefficients for the statements are statistically significant at a significance level less than 0.001. Accordingly, the internal consistency validity of the scale has been achieved. Also, from the above results related to the value of the average variance extracted AVE, it is clear that its value for the innovation variable and its dimensions is 2.526, 0.868, 0.440, 0.167 respectively.

Business Sustainability Scale: All correlation coefficients for the statements measuring business sustainability have a value greater than 0.7. In addition, the values of all correlation coefficients for the statements are statistically significant at a significance level less than 0.0001. Accordingly, the internal consistency validity has been achieved as well as from the previous results related to the value of the average variance extracted AVE for the business sustainability variable as a whole, which is equal to 1.00 for the values of the average variance extracted, and accordingly, the convergent validity of the questionnaire has been achieved.

4.3.2 Reliability of the research tool

The stability of the questionnaire refers to the stability of the questionnaire results and their non-change significantly if they were redistributed to the sample individuals several times during specific time periods. To measure the stability of the questionnaires used to measure the research variables, Cronbach's alpha values were calculated using SPSS version 28. According to (2010) Hair et al, the value must be greater than 0.7 for the scale to be stable.

Table (7) Reliability of the research tool

Variable		Number of Statements	Cronbach's alpha	
Innovation	Innovation in product	3	0.811	0.827
	Innovation in operations	3	0.811	
	Innovation in marketing	3	0.814	
	Administrative innovation	3	0.821	
Business Sustainability		14	0.637	

Source: the researcher, (2024)

It is clear from the table above:

Innovation Scale: The statistical results showed that the values of Cronbach's alpha are (0.811, 0.811, 0.814, 0.821), which indicates that all values are greater than 0.7. According to Hair et al (2010), the stability of the scale has been achieved.

Business Sustainability Scale: The statistical results showed that the values of Cronbach's alpha is 0.637, which indicates that the value is almost 0.7. According to Hair et al (2010), the stability of the scale has been achieved.

According to the statistical results above, which proved the validity and reliability of the scales used in the current research, which means the possibility of relying on its results and the validity of these questionnaires for application and trust, and using them in conducting analyses to test the research hypotheses.

4.4 Descriptive analysis of the research variables

The sample members' responses to the scale items were measured according to a three-point Likert scale, according to:

Agree	Neutral	Disagree
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The level of importance was calculated according to the following equation:

The relative weight corresponding to each category was calculated by multiplying the arithmetic mean by $[100 \div 3]$ (the three-point scale) = 33.3%

The following table shows the significance of the arithmetic means, as follows:

Table (8) Significance of arithmetic means

Arithmetic mean value	General trend	Ratio	Level
From 1 to 1.9	Disagree	From 0 to 33.3%	Low
From 2 to 2.5	Neutral	From 33.3 to 66.6%	Med
From 2.6 to 3	Agree	From 66.6 to 100%	High

Source: the researcher, (2024)

The following table shows the descriptive analysis of the research variables represented by the arithmetic means based on the three-point Likert scale and the standard deviations of the variables according to the table related to the significance of the arithmetic mean, where the significance of the arithmetic mean shown in the table above is considered to know the level of application of the **Innovation** and its dimensions, as well as the **Business Sustainability** according to the point of view of the study sample, as follows:

Table (9) Arithmetic means and standard deviations of research variables

Variable		Mean		Standard deviation		General trend		Level	
Innovation	Innovation in product	2.7963	2.7083	0.436897	0.566104	Agree	Agree	High	High
	Innovation in operations	2.7593		0.48906		Agree		High	
	Innovation in marketing	2.7315		0.5355		Agree		High	
	Administrative innovation	2.5463		0.802957		Agree		High	
Business Sustainability		2.68		0.586689		Agree		High	

Source: the researcher, (2024)

According to the descriptive results of the study variables, the descriptive statistical results regarding the independent variable innovation and its dimensions indicated that the general trend among the research sample is approval and that its application in the company is high, while the descriptive statistical results for the dependent variable business sustainability were at a high level in the company, from the point of view of the research sample.

4.5 Linear correlation coefficients between research variables

Table (10) correlation coefficients between research variables

Variable		Innovation	Innovation in product	Innovation in operations	Innovation in marketing	Administrative innovation	Business Sustainability
Innovation	Pearson Correlation	1	0.842	0.822	0.798	0.820	0.567
	Sig. (2-tailed)	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	N	36					
Innovation in product	Pearson Correlation	0.842	1	0.711	0.598	0.562	0.494
	Sig. (2-tailed)	< 0.001	-	< 0.001	< 0.001	< 0.001	0.002
	N	36					
Innovation in operations	Pearson Correlation	0.822	0.711	1	0.626	0.470	0.459
	Sig. (2-tailed)	< 0.001	< 0.001	-	< 0.001	0.004	0.005
	N	36					
Innovation in marketing	Pearson Correlation	0.798	0.598	0.626	1	0.471	0.412
	Sig. (2-tailed)	< 0.001	< 0.001	< 0.001	-	0.004	0.013
	N	36					

Administrative innovation	Pearson Correlation	0.820	0.562	0.470	0.471	1	0.487
	Sig. (2-tailed)	< 0.001	< 0.001	0.004	0.004	-	0.003
	N	36					
Business Sustainability	Pearson Correlation	0.567	0.494	0.459	0.412	0.487	1
	Sig. (2-tailed)	< 0.001	0.002	0.005	0.013	0.003	-
	N	36					

Source: the researcher, (2024)

From the above table, it is clear that there is a significant relationship between innovation and business sustainability at the level of significant < 0.001

It also showed a significant relationship between the dimensions of innovation and business sustainability, which are:

- Innovation in product at the level of significant 0.002
- Innovation in operations at the level of significant 0.005
- Administrative innovation at the level of significant 0.003

It also showed a nonsignificant relationship between Innovation in marketing and business sustainability at the level of significant 0.013 **According to the opinion of the research sample**

4.6 Research hypothesis test results

Hypotheses were tested using SPSS version 28 as the following:

- **The hypothesis states that There is a statistically significant effect of innovation on business sustainability in Foodics Company.**

To test this hypothesis, the simple linear regression analysis method was used.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.567 ^a	.322	.302	.21370

a. Predictors: (Constant), Innovation

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.736	1	.736	16.112	<.001 ^b
	Residual	1.553	34	.046		
	Total	2.288	35			

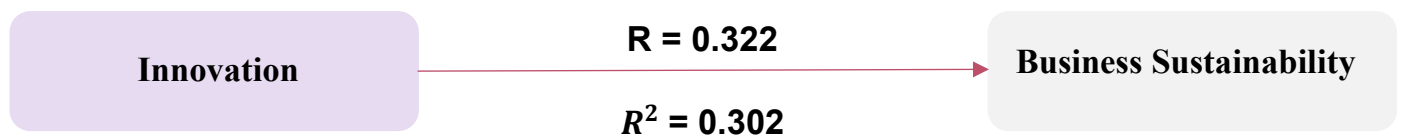
a. Dependent Variable: Business

b. Predictors: (Constant), Innovation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.535	.286		5.357	<.001
	Innovation	.421	.105	.567	4.014	<.001

a. Dependent Variable: Business



The tables above show the following:

The significance level of the (F) test (sig) is less than (0.001), which indicates the significance of the simple linear regression model at a significance level of 0.001

The value of the correlation coefficient ($R = 0.322$) indicates a positive relationship between the two variables. The value of R indicates that the association between the two variables is weak..

The adjusted coefficient of determination ($R^2 = 0.302$) indicates that (30.2%) of the variance of **Innovation** can be explained by the variance in the level of **Business Sustainability**.

The value of (T) indicates the significance of the regression coefficient beta (β), as the significance level calculated for the (T) test is less than (0.001).

Based on the previous results, the validity of the main hypothesis is accepted, which states that there is a positive correlation with statistical significance between **Innovation** as an independent variable and **Business Sustainability** as a dependent variable.

- **There is a statistically significant effect of innovation in products on business sustainability in Foodics Company.**

To test this hypothesis, the simple linear regression analysis method was used.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494 ^a	.244	.222	.22558

a. Predictors: (Constant), IP

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.558	1	.558	10.971	.002 ^b
	Residual	1.730	34	.051		
	Total	2.288	35			

a. Dependent Variable: Business

b. Predictors: (Constant), IP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.609	.324		4.966	<.001
	IP	.381	.115	.494	3.312	.002

a. Dependent Variable: Business

Innovation in product

R = 0.494

R² = 0.244

Business Sustainability

The tables above show the following:

The significance level of the (F) test (sig) is (0.002), which indicates the significance of the simple linear regression model at a significance level of 0.002

The value of the correlation coefficient ($R = 0.494$) indicates a positive relationship between the two variables. The value of R indicates that the association between the two variables is strong..

The adjusted coefficient of determination ($R^2 = 0.244$) indicates that (24.4%) of the variance of **Innovation in product** can be explained by the variance in the level of **Business Sustainability**.

The value of (T) indicates the significance of the regression coefficient beta (β), as the significance level calculated for the (T) test is less than (0.001).

Based on the previous results, the validity of the hypothesis is accepted, which states that there is a positive correlation with statistical significance between **Innovation in product** as an independent variable and **Business Sustainability** as a dependent variable.

- **There is a statistically significant effect of innovation in operations on business sustainability in Foodics Company.**

To test this hypothesis, the simple linear regression analysis method was used.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.459 ^a	.210	.187	.23053

a. Predictors: (Constant), IO

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.482	1	.482	9.060	.005 ^b
	Residual	1.807	34	.053		
	Total	2.288	35			

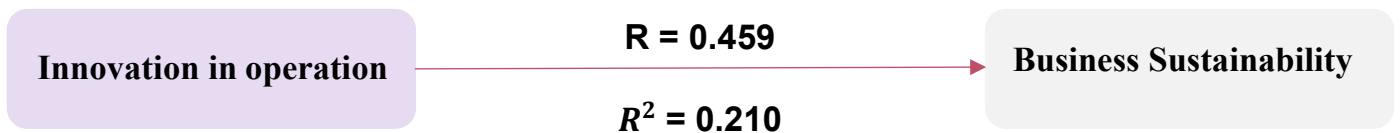
a. Dependent Variable: Business

b. Predictors: (Constant), IO

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.822	.286		6.361	<.001
	IO	.310	.103	.459	3.010	.005

a. Dependent Variable: Business



The tables above show the following:

The significance level of the (F) test (sig) is (0.005), which indicates the significance of the simple linear regression model at a significance level of 0.005

The value of the correlation coefficient ($R = 0.459$) indicates a positive relationship between the two variables. The value of R indicates that the association between the two variables is strong..

The adjusted coefficient of determination ($R^2 = 0.210$) indicates that (21%) of the variance of **Innovation in operation** can be explained by the variance in the level of **Business Sustainability**.

The value of (T) indicates the significance of the regression coefficient beta (β), as the significance level calculated for the (T) test is less than (0.001).

Based on the previous results, the validity of the hypothesis is accepted, which states that there is a positive correlation with statistical significance between **Innovation in operation** as an independent variable and **Business Sustainability** as a dependent variable.

- **There is a statistically significant effect of innovation in marketing on business sustainability in Foodics Company.**

To test this hypothesis, the simple linear regression analysis method was used.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.412 ^a	.169	.145	.23644
a. Predictors: (Constant), IM				

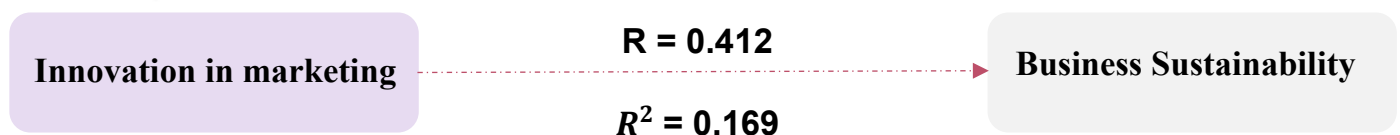
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.388	1	.388	6.936	.013 ^b
	Residual	1.901	34	.056		
	Total	2.288	35			

a. Dependent Variable: Business

b. Predictors: (Constant), IM

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	1.936	.283		<.001
	IM	.271	.103	.412	.013

a. Dependent Variable: Business



The tables above show the following:

The significance level of the (F) test (sig) is (0.013), which indicates the significance of the simple linear regression model at a significance level of 0.013

The value of the correlation coefficient ($R = 0.412$) indicates a positive relationship between the two variables. The value of R indicates that the association between the two variables is weak..

The adjusted coefficient of determination ($R^2 = 0.169$) indicates that (16.9%) of the variance of **Innovation in marketing** can be explained by the variance in the level of **Business Sustainability**.

The value of (T) indicates the significance of the regression coefficient beta (β), as the significance level calculated for the (T) test is less than (0.001).

Based on the previous results, the validity of the hypothesis is accepted, which states that there is a positive correlation without statistical significance between **Innovation in marketing** as an independent variable and **Business Sustainability** as a dependent variable.

- **There is a statistically significant effect of administrative innovation on business sustainability in Foodics Company.**

To test this hypothesis, the simple linear regression analysis method was used.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.487 ^a	.238	.215	.22653
a. Predictors: (Constant), AI				

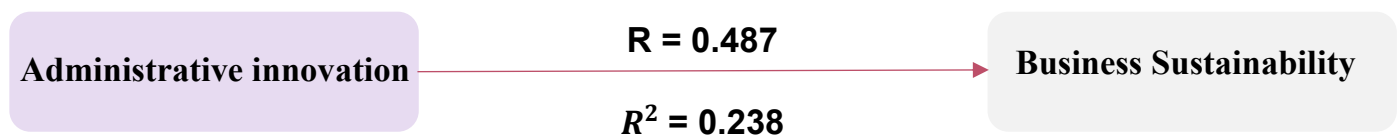
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.544	1	.544	10.595	.003 ^b
	Residual	1.745	34	.051		
	Total	2.288	35			

a. Dependent Variable: Business

b. Predictors: (Constant), AI

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.129	.172		12.378	<.001
	AI	.215	.066	.487	3.255	.003

a. Dependent Variable: Business



The tables above show the following:

The significance level of the (F) test (sig) is (0.003), which indicates the significance of the simple linear regression model at a significance level of 0.003

The value of the correlation coefficient ($R = 0.487$) indicates a positive relationship between the two variables. The value of R indicates that the association between the two variables is strong..

The adjusted coefficient of determination ($R^2 = 0.238$) indicates that (23.8%) of the variance of **Administrative innovation** can be explained by the variance in the level of **Business Sustainability**.

The value of (T) indicates the significance of the regression coefficient beta (β), as the significance level calculated for the (T) test is less than (0.001).

Based on the previous results, the validity of the hypothesis is accepted, which states that there is a positive correlation with statistical significance between **Administrative innovation** as an independent variable and **Business Sustainability** as a dependent variable.

According to the statistical results above:

- There is a statistically significant effect of innovation on business sustainability in Foodics Company.
- There is a statistically significant effect of innovation in products on business sustainability in Foodics Company.
- There is a statistically significant effect of innovation in operations on business sustainability in Foodics Company.
- There is **NOT** a statistically significant effect of innovation in marketing on business sustainability in Foodics Company.
- There is a statistically significant effect of administrative innovation on business sustainability in Foodics Company.

4.7 Conclusion

This chapter was analyzed using SPSS version 28. Through descriptive statistics of the sample, the validity and reliability of the questionnaire were evaluated. The chapter concluded with simple linear regression analysis to test the research hypotheses and the suitability of the model.

5 Chapter5: Findings` Discussion and Conclusion

5.1 Introduction

This chapter concludes the study by discussing its theoretical and practical contributions, offering recommendations, addressing limitations, proposing future research directions, and summarizing key findings.

5.2 Theoretical Contribution

This study contributes to expanding the scope of innovation and sustainability theories in the technology sector. Through the case study of Foodics, the study provides valuable insights into how innovation in digital technologies can be harnessed to enhance sustainability in corporate business, especially in a changing and demanding market environment. This study adds a new dimension to our understanding of the relationship between innovation and sustainability in the service sector. By analyzing Foodics' experience in designing electronic menus and programming payment devices, the study provides evidence on how to achieve sustainable growth for companies in meeting needs, especially in the restaurant and trade sector. The appropriate performance for collecting data from the research sample was questionnaires.

5.3 Practical Applications

Innovation and business sustainability are two essential pillars for the success of companies in our current era. In a world characterized by intense competition and rapid changes, it has become necessary for companies to adopt innovative strategies that contribute to achieving sustainable development.

Innovation and sustainability are linked in an integrated relationship, as innovation contributes to achieving sustainability goals by developing innovative solutions to environmental and social challenges.

The importance of this research lies in its practical application to Foodics, where the company can develop environmentally friendly products and services such as using recyclable materials, reducing waste, and designing products with a long shelf life. The efficiency of production processes can also be improved by adopting modern technologies that reduce energy and raw material consumption.

Innovative and sustainable companies have a significant competitive advantage, as they attract new customers and investors interested in sustainability. Sustainable innovation contributes to improving the company's image among customers and society, which enhances customer loyalty and attracts competent employees. Innovation also contributes to achieving sustainable development goals, such as reducing poverty, improving health, and protecting the environment..

5.4 Recommendations

- The company can use the results of the study to develop a more sustainable innovation strategy, focusing on developing products and services that contribute to achieving sustainability goals.
- The company can use the results to improve the efficiency of its operations, such as reducing energy consumption, reducing waste, and improving supply chain management.
- The company can use its reputation as an innovative and sustainable company to enhance its brand and attract more customers.
- The company can use the results of the study to convince investors to support its sustainable projects.
- The company can develop policies that encourage companies to innovate and be sustainable, such as providing tax incentives for companies that invest in green technologies.

5.5 Study's limitations

5.5.1 Objective Boundaries

The research is limited to stating the reality of management with the The Impact Of Innovation On Business Sustainability

5.5.2 Human Boundaries

The research is limited to employees in Foodics company

5.5.3 Spatial Boundaries

The research is limited to the geographical scope of Foodics, Al-Khobar KSA

5.5.4 Temporal Boundaries

The research will be conducted within 2024 year

5.6 Future studies

Through the results of the research that showed the existence of a relationship between innovation and business sustainability, the relationship between innovation and sustainability is a vital field of study, and opens up broad horizons for promising future research. The researcher suggests focusing on expanding research in this field, such as:

Innovation in the renewable energy sector: studying new technologies for generating and storing renewable energy.

Innovation in the agricultural sector: studying smart agriculture, urban agriculture, and hydroponics.

Innovation in the health sector: studying smart health applications, personalized medicine, and regenerative medicine.

5.7 Conclusion

At the conclusion of this research, which addressed the impact of innovation on business sustainability, we can draw a set of important results. The study showed that there is a strong positive relationship between the level of innovation in organizations and their sustainable performance. The results also revealed the importance of innovation in developing environmentally friendly products and services, improving the efficiency of production processes, and innovating sustainable business models.

By analyzing the data collected, it was found that companies that invest heavily in research and development, encourage a culture of innovation, and maintain strong relationships with suppliers and customers are more capable of achieving sustainability goals. The study also showed that there is a need for concerted efforts by various parties, including governments, companies, and civil society, to support sustainable innovation.

The results of this research open up new horizons for future research. It is necessary to conduct more detailed studies on the relationship between different types of innovation and different dimensions of sustainability. It is also possible to focus on studying the role of organizational culture in encouraging sustainable innovation, and evaluating the impact of government policies on innovation in the field of sustainability.

In conclusion, it can be said that innovation is the driver of change towards a more sustainable future. By investing in innovation, companies can achieve sustainable growth and improve the quality of life for current and future generations. However, achieving this goal requires the combined efforts of all concerned parties, and working collectively to achieve sustainable development.

List Of References

6 References

- "U-STIR". U-stir.eu. Archived from the original on 18 September 2011. Retrieved 7 September 2011.
- Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2016). Sustainability-oriented innovation: A systematic review. *International Journal of Management Reviews*, 18(2), 180-205.
- Afzali, M., & Ahmed, E. M. (2016). Exploring consumer doubt towards local new products innovation and purchase intention. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(1), 2-17. <https://doi.org/10.1108/WJEMSD-05-2015-0022>
- Ahmad, N., Mahmood, A., Ariza-Montes, A., Han, H., Hernández-Perlines, F., Araya-Castillo, L., & Scholz, M. (2021). Sustainable businesses speak to the heart of consumers: Looking at sustainability with a marketing lens to reap banking consumers' loyalty. *Sustainability*, 13(7), 3828.
- Alimena, J., Beacham, J., Borsato, M., Cheng, Y., Vidal, X. C., Cottin, G., ... & Rodriguez, K. J. P. (2020). Searching for long-lived particles beyond the Standard Model at the Large Hadron Collider. *Journal of Physics G: Nuclear and Particle Physics*, 47(9), 090501.
- Altshuler, A., & Behn, R. D. (2010). Innovation in American government: Challenges, opportunities, and dilemmas.
- Anderson, D. R. (2006). The critical importance of sustainability risk management. *Risk Management*, 53(4), 66-72.
- Approaches to environmental justice and social power. New York University Press.
- Balch, O. (2019). Good company: the capitalists putting purpose ahead of profit. *The Guardian*.
- Ball, P., & Lunt, P. (2020). Lean eco-efficient innovation in operations through the maintenance organisation. *International Journal of Production Economics*, 219, 405-415.
- Bansal, P., & DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic organization*, 12(1), 70-78.
- Barbieri, D. F., Braga, D., Ceri, S., Valle, E. D., & Grossniklaus, M. (2010). C-SPARQL: a continuous query language for RDF data streams. *International Journal of Semantic Computing*, 4(01), 3-25.
- Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management decision*, 47(8), 1323-1339. [doi:10.1108/00251740910984578](https://doi.org/10.1108/00251740910984578)
- Byron, K., & Post, C. (2016). Women on boards of directors and corporate social performance: A meta-analysis. *Corporate Governance: An International Review*, 24(4), 428-442.
- Cammarano, A., Michelino, F., & Caputo, M. (2019). Open innovation practices for knowledge acquisition and their effects on innovation output. *Technology Analysis & Strategic Management*, 31(11), 1297-1313.
- Candi, M., & Beltagui, A. (2019). Effective use of 3D printing in the innovation process. *Technovation*, 80, 63-73.
- Caprotti, F. (2012). Environment, business and the firm. *Geography Compass*, 6(3), 163-174. doi: 10.1111/j.1749-8198.2012.00478.x

- Chan, H. K., Wong, C. W., & Yazdanifard, R. (2016). The moderating effect of environmental dynamism on green product innovation and performance. *International Journal of Production Economics*, 171, 14–25.
- Cherrafi, A., Garza-Reyes, B. E., & Gimenez, C. (2018). Lean, green practices and process innovation: A model for green supply chain performance. *International Journal of Production Economics*, 197, 127–139.
- Cherunya, P. C., Wamukoya, G., & Mukabwa, M. (2020). Anchoring innovations in oscillating domestic spaces: Why sanitation service offerings fail in informal settlements. *Research Policy*, 49(3), 103822.
- Coenen, L., & Truffer, B. (2012). Places and spaces of sustainability transitions: geographical contributions to an emerging research and policy field. *European Planning Studies*, 20(3), 367-374.
- Cooney, S. (2009). *Build a green small business: Profitable ways to become an ecopreneur*. McGraw-Hill.
- De Tarde, G. (1903). *The laws of imitation*. H. Holt.
- Dey, P. K., Malesios, C., De, D., Chowdhury, S., & Abdelaziz, F. B. (2019). Could lean practices and process innovation enhance supply chain sustainability of small and medium-sized enterprises?. *Business Strategy and the Environment*, 28(4), 582-598.
- Dovers, S. R., & Boardman, R. (1992). Uncertainty, sustainability and change. *Global Environmental Change*, 2(4), 262–276.
- Drucker, P. F. (2002). The discipline of innovation. *Harvard business review*, 80(8), 95-102.
- Dubickis, M., & Gaile-Sarkane, E. (2015). Perspectives on innovation and technology transfer. *Procedia-Social and Behavioral Sciences*, 213, 965-970.
<https://doi.org/10.1016/j.sbspro.2015.11.512>
- Edgeman, R., & Eskildsen, J. (2014). Modeling and assessing sustainable enterprise excellence. *Business Strategy and the Environment*, 23(3), 173-187. <https://doi.org/10.1002%2Fbse.1779>
- Edison, H., Bin Ali, N., & Torkar, R. (2013). Towards innovation measurement in the software industry. *Journal of systems and software*, 86(5), 1390-1407.
<https://doi.org/10.1016/j.jss.2013.01.013>
- Elkington, J. (2013). Enter the triple bottom line. In *The triple bottom line* (pp. 1-16). Routledge.
- Endter-Wada, J., Kurtzman, J., Keenan, S. P., Kjellgren, R. K., & Neale, C. M. (2008). Situational waste in landscape watering: Residential and business water use in an urban Utah community 1. *JAWRA Journal of the American Water Resources Association*, 44(4), 902-920.
- Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E. A., & Barlow, C. Y. (2017). Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business strategy and the environment*, 26(5), 597-608.
<https://doi.org/10.1002/bse.1939>
- Expósito, A., & Sanchis-Llopis, J. A. (2019). The relationship between types of innovation and SMEs' performance: A multi-dimensional empirical assessment. *Eurasian Business Review*, 9(2), 115-135. <https://doi.org/10.1007/s40821-018-00116-3>
- Fairhead, J., Leach, M., & Scoones, I. (2012). Green grabbing: a new appropriation of nature?. *Journal of Peasant Studies*, 39(2).

- Fang, C., Luo, L., & Li, Y. (2018). Performance of green supply chain management: A systematic review and meta-analysis. *Journal of Cleaner Production*, 190, 710–724.
- Farfan, J., & Blanco, I. (2017). Structural changes of global power generation capacity towards sustainability and the risk of stranded investments supported by a sustainability indicator. *Journal of Cleaner Production*, 166, 84–93.
- Field, A. P. (2005). Is the meta-analysis of correlation coefficients accurate when population correlations vary?. *Psychological methods*, 10(4), 444.
- Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, 63(3), 665-694.
- Galvao, A. (2008). *The Next Ten Years: Energy and Environment. Crossroads.*
- Galvao, A. (2020). Mind your own business, why sustainable operations must be everyone's chief concern. *APICS Magazine*. 18 (5).
- Genc, T. S., & De Giovanni, P. (2018). Optimal return and rebate mechanism in a closed-loop supply chain game. *European Journal of Operational Research*, 269(2), 661-681.
- Ghassim, B., & Bogers, M. (2019). Linking stakeholder engagement to profitability through sustainability-oriented innovation: A quantitative study of the minerals industry. *Journal of Cleaner Production*, 224, 905-919.
- Ghisetti, C., & Rennings, K. (2014). Environmental innovations and profitability: How does it pay to be green? An empirical analysis on the German innovation survey. *Journal of Cleaner Production*, 66, 414–424.
- Haedicke, M. A. (2019). *Sustainability: Approaches to Environmental Justice and Social Power.*
- Hall, J., & Vredenburg, H. (2003). The challenges of innovating for sustainable development. *MIT Sloan management review*.
- Hallenga-Brink, S., & Brezet, J. C. (2005). The sustainable innovation design diamond for micro-sized enterprises in tourism. *Journal of Cleaner Production*, 13(2), 141-149.
- Hair, E., Halle, T., Terry-Humen, E., Lavelle, B., & Calkins, J. (2006). Children's school readiness in the ECLS-K: Predictions to academic, health, and social outcomes in first grade. *Early Childhood Research Quarterly*, 21(4), 431-454.
- Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*, 29(5), 549-569. <https://doi.org/10.1016/j.leaqua.2018.03.001>
- Hussain, M. R., Szabados, G. N., Muhammad, K. B., Omarli, S., Murtaza, S. A., & Molnár, E. (2023). Examining the convergence of dominant themes related to social entrepreneurship, NGOs and globalization—A systematic literature review. *Plos one*, 18(5), e0283093. <https://doi.org/10.1371/journal.pone.0283093>
- Imperatives, S. (1987). Report of the World Commission on Environment and Development: Our common future. Accessed Feb, 10(42,427).
- Islam, M. M., Islam, S., Habib, A. S., & Islam, G. M. T. (2018). Coastal and marine conservation strategy for Bangladesh in the context of achieving blue growth and sustainable development goals (SDGs). *Environmental Science & Policy*, 89, 141–150.
- Jabbour, C. J. C., Jabbour, A. B., & Filho, M. G. V. (2015). Eco-innovations in more sustainable supply chains for a low-carbon economy: A multiple case study of human critical success factors in Brazilian leading companies. *International Journal of Production Economics*, 164, 338–352.
- Jin, W., Yang, K., Barzilay, R., & Jaakkola, T. (2018). Learning multimodal graph-to-graph translation for molecular optimization. *arXiv preprint arXiv:1812.01070*.

- Kaiser, H. F. (1974). An index of factorial simplicity. *psychometrika*, 39(1), 31-36.
- Kemper, J. A., Hall, C. M., & Ballantine, P. W. (2019). Marketing and sustainability: Business as usual or changing worldviews? *Sustainability*, 11 (3), 780. doi:10.3390/su11030780
- Klewitz, J., & Hansen, E. B. (2014). Sustainability-oriented innovation of SMEs: A systematic review. *Journal of Cleaner Production*, 65, 5–15.
- Lijster, T. (2018). The future of the new: Artistic innovation in times of social acceleration. Valiz.
- Luqmani, A., Leach, M., & Jesson, D. (2017). Factors behind sustainable business innovation: The case of a global carpet manufacturing company. *Environmental Innovation and Societal Transitions*, 24, 94-105. <https://doi.org/10.1016/j.eist.2016.10.007>
- Mardani, A., Zavadskas, E. K., Streimikiene, D., Jusoh, A., & Khoshnoudi, M. (2017). A comprehensive review of data envelopment analysis (DEA) approach in energy efficiency. *Renewable and sustainable energy reviews*, 70, 1298-1322.
- McCabe, M. J. (2019). Driving Investment in High-Performance Commercial Buildings. *Sustainable Real Estate: Multidisciplinary Approaches to an Evolving System*, 273-311.
- Moffat, A., Lindgreen, A., & Westaway, E. (2006). Corporate Environmental Innovation (CEI): A government initiative to support corporate sustainability leadership. *Journal of Cleaner Production*, 14(9), 1488–1499.
- Muro, M., Katz, B., Rahman, S., & Warren, D. (2008). MetroPolicy: Shaping a new federal partnership for a metropolitan nation.
- Nill, J., & Kemp, R. (2009). Evolutionary approaches for sustainable innovation policies: From niche to paradigm?. *Research policy*, 38(4), 668-680.
- Pasts, S., & Futures, C. (2008). Corporate Social Responsibility and Corporate Sustainability. *Organization & Environment*, 21(3), 245-269. <https://doi.org/10.1177%2F1086026608321329>
- Pichlak, M., & Szromek, A. R. (2021). Eco-innovation, sustainability and business model innovation by open innovation dynamics. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 149. <https://doi.org/10.3390/joitmc7020149>
- Pojasek, R. B. (2007). A framework for business sustainability. *Environmental Quality Management*, 17(2), 81. <https://doi.org/10.1002/tqem.20168>
- Rametsteiner, E., Weissenbacher, A., & Gouriveau, F. (2011). Sustainability indicator development—science or political negotiation? *Ecological Indicators*, 11(1), 61–70.
- Rennie, E. (2008). Growing Green, Boosting the bottom line with sustainable business practices. *APICS magazine*, 18(2), 1-19.
- Sabri, N. A., & Nadarajah, G. (2016). Green supply chain: Challenges and practical issues. *International Journal of Supply Chain Management*, 5(4), 38-42.
- SCHWARZKOPF, J., & DORWALD, T. (2019). Self-assessment questionnaire on CSR/sustainability for automotive sector suppliers.
- Segarra-Oña, M., Boronat-Colomer, S., & Valor-Sabater, E. (2016). Twisting the twist: How manufacturing & knowledge-intensive firms excel over manufacturing & operational and all service sectors in their eco-innovative orientation. *Journal of Cleaner Production*, 114, 144–158.
- Siltala, R. (2010). Innovativity and cooperative learning in business life and teaching. *University of Turku*, 100-106.

- Suurmond, R., van Rhee, H., & Hak, T. (2017). Introduction, comparison, and validation of Meta-Essentials: a free and simple tool for meta-analysis. *Research synthesis methods*, 8(4), 537-553.
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long range planning*, 43(2-3), 172-194. <https://doi.org/10.1016/j.lrp.2009.07.003>
- Thies, C., Tseng, M. L., & Zhu, Q. (2018).
- Tseng, M. L., Tan, R. R., Chiu, A. S., Chien, C. F., & Kuo, T. C. (2018). Circular economy meets industry 4.0: Can big data drive industrial symbiosis?. *Resources, conservation and recycling*, 131, 146-147.
- Van Essen, D. C., Ugurbil, K., Auerbach, E., Barch, D., Behrens, T. E., Bucholz, R., ... & WU-Minn HCP Consortium. (2012). The Human Connectome Project: a data acquisition perspective. *Neuroimage*, 62(4), 2222-2231.
- Wirtenberg, J., Russell, W., & Lipsky, D. (Eds.). (2017). *The sustainable enterprise fieldbook: when it all comes together*. Routledge. <http://dx.doi.org/10.1016/j.compind.2015.07.002>
- Zhivkova, S. (2022). Sustainability in the companies practices. *European Journal of Marketing and Economics*, 5(1), 44-56.
- Zott, C., Amit, R., & Massa, L. (2011). The business model: recent developments and future research. *Journal of management*, 37(4), 1019-1042. <https://doi.org/10.1177/0149206311406265>
- Zubeltzu-Jaka, E., Erauskin-Tolosa, A., & Heras-Saizarbitoria, I. (2018). Shedding light on the determinants of eco-innovation: A meta-analytic study. *Business Strategy and the Environment*, 27(7), 1093-1103.
- درار, & لمين. (2024). دور الابتكار في تحسين مردودية المشاريع الفلاحية بمنطقة الشرق الجزائري (Doctoral dissertation).

List Of Appendices

7 Appendices

Kind regards

This questionnaire aims to better understand the behavior of organizations in the Kingdom of Saudi Arabia. We will use the information collected through this survey to improve and better meet the needs of our customers.

The target audience is employees and managers at Foodics Al-Khobar

This questionnaire takes 10 minutes to complete and will be distributed online and by email.

Innovation: At the unit or project level, innovation represents the launch of new products or services or the improvement of existing ones through innovative methods, and it may also relate to operations and methods of management and improvement.

Based on scientific knowledge on the one hand and the accumulated experiences of users on the other hand.

Sustainability is an ongoing journey. It's not something you achieve once and then forget about. It's a continuous process of learning, improving, and adapting.

Thank you for your time and efforts in completing this survey. Your contribution will help us improve our products and services and better meet your needs.

Variable	Variable Dimensions	Number Of Statements	Source
Innovation	• Innovation in product • Innovation in operations • Innovation in marketing • Administrative innovation	1-12	Darar (2024) The role of innovation in improving the profitability of agricultural projects in the eastern Algerian region
Business Sustainability	• Business Sustainability	1-14	SCHWARZKOPF, et al (2019) Self-assessment questionnaire on CSR/sustainability for automotive sector suppliers

7.1 Personal Information:						
Gender	Male		Female			
Age	From 20 to 30		From 30 to 40			
Qualification	Secondary		Bachelor's		Master's	
Seniority in the company	Less than 3 years		3-5 years		More than 5 years	

7.2 First variable: Innovation

No.	Statement	Agree	Neutral	Disagree
1. Innovation in product: represented by:				
1	• Introducing a new product to the market			
2	• Delivering a dramatically improved product			
3	• Finding new uses for the product			
2. Innovation in operations: represented by:				
4	• Using modern machines or techniques in production			
5	• Finding new uses for existing assets			
6	• Use economical energy sources and equipment			
3. Innovation in marketing: represented by:				
7	• Using new channels to sell the product			
8	• Adapting the product according to market requirements			
9	• Using new ways to display and market products			
4. Administrative innovation: represented by:				
10	• Using information technology in project management and employee training			
11	• Involving employees in facilitating the project and solving urgent problems			
12	• Using new mechanisms to finance the project			

7.3 Second variable: Business Sustainability.

No.	Statement	Agree	Neutral	Disagree
1	• Does your company have a management person responsible for Social Sustainability?			
2	• Does your company have a management person responsible for Compliance?			

3	Does your company have a management person responsible for Environmental Sustainability?			
4	Does your company publish a Sustainability Report?			
5	- Does your company have a Code of Conduct? - A Code of Conduct is a set of rules outlining the responsibilities or proper practice for an individual (employee) and organization. It could cover social, ethical and environmental aspects			
6	Does your company provide a grievance mechanism through which impacted stakeholders and rightsholders can raise complaints and seek to have them addressed with the enterprise?			
7	Does your company have a formal policy covering working conditions and human rights?			
8	Does your site have a management system in place to manage the working conditions and human rights issues?			
9	Does your company have a formal written health and safety policy, which complies with local law, industry requirements and international standards?			
10	Does your site have a health and safety management system in place?			
11	Does your company have a formal policy covering business ethics?			
12	Does your company have a formal environmental policy, which includes a commitment to legal compliance, continuous measurement and continuous improvements in environmental performance?			
13	Does your site have an environmental management system in place?			
14	Does your site have an energy management system?			

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	15	41.7	41.7	41.7
	2.00	21	58.3	58.3	100.0
	Total	36	100.0	100.0	

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	From 20 to 30	20	55.6	55.6	55.6
	From 30 to 40	16	44.4	44.4	100.0
	Total	36	100.0	100.0	

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	9	25.0	25.0	25.0
	2.00	23	63.9	63.9	88.9
	3.00	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 3 years	19	52.8	52.8	52.8
	3-5 years	8	22.2	22.2	75.0
	More than 5 years	9	25.0	25.0	100.0
	Total	36	100.0	100.0	

أثر التدريب على تحسين الأداء الوظيفي في شركة زومكو، الخبر، المملكة
العربية السعودية

أسم الطالب

فاطمة هاني العلوان

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المشروع النهائي

كلية الإدارة- جامعة ميدأوشن

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عضو هيئة التدريس- كلية الإدارة- جامعة ميدأوشن

2024