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Faculty of Social Sciences, School of Economics and Business Administration

Master's Thesis:

**A Comparative Study of Innovation Processes: COVID-19
Era - Exploring Adaptation and Resilience Strategies**

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We have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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Abstract

We acknowledge that many global issues have been related to each other over the past few years, which have changed businesses. This study examines how companies in the service sector adapted their innovation processes in response to the COVID-19 pandemic, explicitly focusing on innovation, adaptation, and resilience strategies. This thesis aims to find ways for businesses to stay strong and innovative in the face of challenges. The present research employed a qualitative approach to gather empirical data from service sector managers. Specifically, open-ended interviews were conducted with managers from diverse service industries. This study underscores the vital role of changing customer expectations and preferences in driving innovation within the service sector, particularly during periods of disruption. This research suggests that companies demonstrating resilience in their innovation processes prioritized developing or further refining digital service offerings in response to future crises. The study's findings shed light on the complex and multifaceted nature of the service sector and have important implications for managers, policymakers, and researchers in this field.

Introduction

International cooperation has gained an additional layer of importance, giving global responsibilities some practical aspects to change the global economic environment completely. The most memorable event of all is the pandemic of COVID-19 which is exceptionally significant for the impact on sectors and the vast tasks it has put on the service sector enterprises (Sohrabi et al., 2020). The firms themselves, by and large, are required to rethink their way of innovation, adaptation, and sustainability in the sense of modification of organizational strategy (Nesterenko, 2020).

The current research examines the effects of the COVID-19 pandemic on the service industry, explicitly emphasizing the interplay between innovation, adaptation, and resilience strategies. The paper highlights the need for companies to reevaluate their traditional approaches to innovation in light of the extraordinary challenges posed by the pandemic, such as lockdowns, disruptions in the supply chain, and shifts in customer behaviors. The objective of our research is to reveal the significance of the measures employed by service sector businesses to mitigate the immediate effects of the pandemic and provide a foundation for sustainable growth in the long run. The research is driven by the pandemic's significant influence on the service industry, including diverse sectors with distinct challenges and prospects. The research provides a valuable understanding of the strategic, methodological lessons the service sector companies learned in coping with pandemic-related disruptions. The aim is to provide businesses, stakeholders, and researchers with either the knowledge or the insights to enable them to get through the intricacies of COVID-19 and come out of it in a much stronger, more resilient, and better-prepared position to handle whatever comes their way.

Before addressing this point, enterprises need to thoroughly understand innovation processes by identifying different concepts and methods for creating and implementing new ideas.

Using knowledge from previous research, we continue to explore the area of adaptive strategies and resilience to innovation, placing these ideas within the context of the business environment after the COVID-19 pandemic. By conducting an extensive review of academic research, we aim to clarify how organizations manage uncertainty, use adaptive methods to sustain operations, and foster innovation in challenging environments.

The purpose of our study is to deliberately choose a qualitative research approach in order to accurately capture the intricate and comprehensive experiences of managers in the service sector during periods of instability. Our objective is to gather significant knowledge about the methods, difficulties, and successes faced in pursuing innovation during the COVID-19 pandemic through open-ended interviews with important individuals involved. Through an in-depth analysis of the

viewpoints and testimonies of these managers, our objective is to reveal unique and context-specific methods that cannot be fully captured by quantitative data alone. Using a qualitative method, we can create a comprehensive picture of the ever-changing innovation environment in the service industry during times of crisis.

This paper aims to enhance the ongoing conversation on innovation in the service industry by providing practical insights and ideas for firms looking to excel in a rapidly changing and unpredictable environment. Our goal is to provide managers, policymakers, and researchers with the necessary knowledge to traverse the intricacies of the modern business landscape by highlighting the adaptable and sustainable solutions organizations implement. This article will thoroughly comprehend how innovation can enhance success and competitiveness in the service sector through the analysis of case studies and industry trends. Furthermore, it will examine the possible obstacles and advantages that arise from adopting innovation in a rapidly changing industry.

Research Questions

1. How have companies, particularly in the service sector, altered their business strategies in response to the COVID-19 pandemic compared to their strategies before the pandemic?
2. What were the primary strategies adopted by the service sector to adapt and maintain innovation during the pandemic?

Keywords: Innovation, Adaptation, COVID-19, Resilience

Research classification code (CERCS): S190 – Management of enterprises

Literature review

The literature review is divided into three subsections. Initially, we explained what innovation is, the opening of this term, and the process we use when we say innovation. In the next stage, we reviewed the impact of COVID-19 on the innovation process and its positive and negative effects. In the last part, we discussed the adaptation and resilience strategies that companies have found and developed after the pandemic. By examining these different aspects, we were able to gain a deeper understanding of the current landscape of innovation in the face of challenges.

1. Understanding Innovation: Definitions and Processes

There is a strong link between economic processes, new technologies, and scientific breakthroughs today. Scientists and developers need to know precisely what kind of innovation should be used in production, scientific breakthroughs, project activities, making new high-tech products, providing services, and carrying out projects.

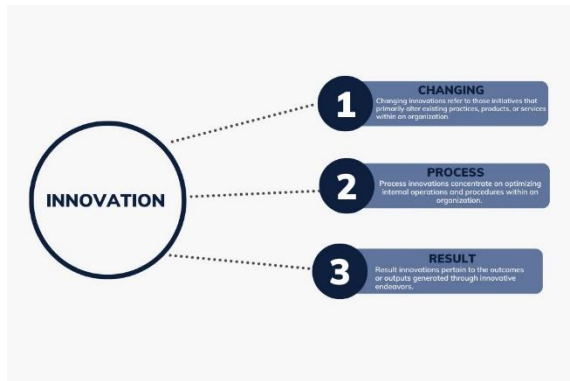
Innovation involves the creation of new and effective notions and their subsequent application to an entirely new product, technique or service. This process leads to the development of the national economy, plays an important role in reducing unemployment and brings significant income to the innovative business organization. Innovation is an ongoing and iterative procedure that encompasses several organizational processes for decision-making, beginning with the creation of a new idea and progressing through its implementation. The word "new idea" refers to identifying a unique customer need or a creative manufacturing method. It is generated through the progressive aggregation of data and an incessantly challenging entrepreneurial outlook. The implementation process entails creating and commercializing an innovative idea, resulting in a practical product or service that generates cost reductions and improves efficiency (Kuniyoshi Urabe, 1988). Notable point is that innovation, a continuous and iterative process, generates economic growth, new jobs and significant profits by transforming original concepts into new products or services. From identifying unique customer needs to commercializing startup ideas, innovation requires finding creative solutions that simplify operations and increase efficiency, ultimately adding value to both businesses and consumers.

The term "innovation" is a topic that is extensively studied due to its intricate and multifaceted nature. Nevertheless, it is important to acknowledge that there is still room for improvement in establishing a globally accepted definition of innovation in the field of science. There are three main approaches for analyzing the term. The classification illustrated in Figure 1 is presented below (Siauliai A., 2013; Twiss & Goodridge, 1989). The diagram presents a comprehensive perspective on innovation, highlighting its core importance, process-driven characteristics, transformative impacts, and resulting consequences. It functions as a visual tool to facilitate

comprehension and visualization of the intricacies of innovation within both organizational and wider contexts.

Figure 1

The classification of innovation (Siauliai A., 2013).



Source: Created by the author, based on (Siauliai A., 2013)

Schumpeter, who is widely recognized as the originator of the notion of innovation in the larger economic framework, defined innovation as the financial outcome of technological progress that involves new combinations of existing productive resources to tackle business problems (Schumpeter, 1982). Innovation is a complex process that combines science, technology, economics, and management to create originality. It covers the entire lifespan of an idea, starting from its creation to its commercialization through manufacturing, commerce, and consumption (Twiss & Goodridge, 1989). Molchanov's approach posits that innovation emerges from scientific efforts aimed at improving social activities and streamlining community production (Siauliai A., 2013).

In accordance with Afuah's findings, *innovation* involves the incorporation of new and original knowledge into a wide range of products, procedures, and services (Afuah, A, 1998). The Table 1 illustrates the categorization of innovations according to their technological, commercial, and administrative/organizational characteristics.

Table 1

Generic classification of innovation

Technological	Market	Administrative
Product	Product	Strategy
Process	Price	Structure
Service	Place	Systems
	Promotion	People

Source: Created by the author, based on (Afuah, A, 1998)

Technological innovation means understanding and using different relationships, methodologies, procedures, and strategies to create a product or service. Administrative innovation may or may not be necessary. An asset can be a product, process, or service. Service and product innovations are new offerings designed to meet specific market demands. Process innovation is a focus in organizational operations, which involves introducing the latest components, such as input supply, business requirements, work and information flow methods, and equipment used to produce products or provide services (Afuah, A, 1998). It can be concluded that technological innovation involves the creation of new products or services, while process innovation enhances organizational operations.

Drucker argues that innovation in society is highly relevant, contrary to the common belief that innovations are mostly associated with certain fields, exact sciences, and technologies (Afuah, A, 1998; Sohrabi et al., 2020). There are several cases where social innovation has caused significant changes within society. Recognizing workplace safety and health innovation is crucial in modern times.

In this domain, it is possible to identify the subsequent sub-groups depending on the innovation outcomes.

- The social consequences, namely in the form of exceptional, physically demanding occupations, enhance safety and health conditions and prevent occupational illnesses and workplace accidents.
- The economic outcomes include enhanced labor productivity, heightened profitability, and increased production.
- Technical outcomes encompass enhancing the technical parameters of machinery, equipment, and products and optimizing work organization and process flow.

We see that different sub-groups are formed based on the results of innovation in this field. Social outcomes include improved safety and health conditions, and economic outcomes include increased productivity and profitability. In addition, technical results include machine and work process optimization.

2. The impact of COVID-19 on innovation processes

The World Health Organization declared the COVID-19 pandemic a global emergency on 11 March 2020 (Sohrabi et al., 2020). The virus that started in Wuhan, China has spread to Japan, South Korea, Europe and the United States. Economic indicators have shown the biggest turning point in human history (Gopinath, 2020), indicating that the global situation is inevitable. In an illuminating body of research, professionals from various fields have consistently argued that the global pandemic will put pressure on supply chain components and demands around the world, resulting in a crisis stemming from the interconnected nature of our transnational modern world. Economic disaster (Webster, 1997). According to all reports, the pandemic has caused more chaos than anticipated in these statements. According to statistics, the virus has claimed the lives of more than 800,000 people worldwide (JHO, 2020; Naidoo & Fisher, 2020), caused significant disruptions in the way people earn their living, cost billions of dollars, and is causing a global recession (Naidoo & Fisher, 2020). Countries worldwide have taken strict measures, such as mandatory quarantines and border closures, to control the spread of the virus, isolate patients, and reduce the virus's transmission rate.

As a result, the measures taken have caused a sharp decrease in economic activity among various firms. According to Nicola, even countries with strong economies like the UK are projected to experience a 3.0% drop in GDP during the quarantine (Nicola et al., 2020). According to Blustein, Nicola and O'Connor highlight that the implementation of quarantine measures has led to an increase in unemployment and a decrease in the number of companies, thereby causing socio-economic inequality (Blustein et al., 2020; Nicola et al., 2020; O'Connor et al., 2020).

Negative consequences were more pronounced in Latin America, especially in developing regions. These factors include the prevalence of diabetes and metabolic diseases, inadequate health systems, and clean water services. frameworks, inclusion against vulnerability, and precarious employment conditions among certain ethnic groups (Burki, 2020). Today, Small and Medium Enterprises (SMEs), which are mainly linked to the family structure, face serious economic difficulties with high levels of performance. Implementing some programs to help most countries recover from these conditions was not enough when additional resources were needed to protect workers, pay rent, and record conditions.

Now, we can look at many challenges in the innovation process. As we know, the effectiveness of regulation in stimulating innovation may vary depending on factors such as the sector, the type of government involvement, and the specific goal of that action. It is crucial to fully understand how government policy affects innovation. However, most studies in this field have focused on drugs or biotechnology. Regulations are often identified as a significant barrier to innovation in medical device development (Bergsland et al., 2014; Warty et al., 2021). Given this barrier and the limited degree of innovation in the industry, it is vital to understand how companies and the government can encourage innovation in medical devices (Bayon et al., 2016).

The contemporary COVID-19 pandemic as a public health emergency is particularly challenging due to innovation barriers. This is because severe consequences, including a high death toll, may occur if the invention is delayed. When a national emergency occurs, the United States has established the Emergency Use Authorization (EUA) pathway to accelerate the development and availability of certain medical technologies and supplies (FDA EUA, 2022).

Innovation is vital in the medical device industry as it enables the development of new solutions and the improvement of existing ones. Important factors such as regulatory processes, company size, university-industry relationships, and costs primarily drive innovation in medical devices. Time-consuming regulatory processes hinder innovation in medical devices (Bayon et al., 2016; Krucoff et al., 2012; Warty et al., 2021). According to companies, the biggest barrier to innovation and cost growth is the uncertainty inherent in the regulatory process. Companies hesitate to develop new products because the time required to ensure a return on investment is unknown (Krucoff et al., 2012).

Additionally, many academics emphasize the conservative tendencies of medical equipment companies and organizations operating in the healthcare sector. If it is possible to assert considerable equivalence to predicate devices, the duration for approving new and unique devices is considerably extended. This enables the utilization of the 510(k) method, a streamlined regulatory procedure for medical devices with minimal risk. According to the FDA method of Approval (2018), the 510(k) method is utilized to assess the safety of a device by relying on a predicate device, as opposed to a clinical study (Bayon et al., 2016).

The significance of these limitations is that small companies are more likely to engage in early-stage innovation and develop new products to meet unmet market demands. In addition, these businesses often face constraints regarding resources devoted to regulatory compliance (Bergsland et al., 2014; Roberts, 1988). In the context of innovation, most giant corporations focus on improving pre-existing gadgets rather than creating new ones, preferring the latter stages of the development process. They argue that it is difficult for universities that contribute significantly to early-stage innovation to independently seek approval for innovative devices due to the high costs and extensive regulatory compliance procedures required (Bergsland et al., 2014).

Now let's turn our dictum to Marketing Innovation in Times of Crisis after examining the issues involved in this process. Given the major disruptions caused by the COVID-19 pandemic, organizations across many sectors have been forced to innovate rapidly to effectively respond to the evolving environment. Marketing innovation, which refers to significant changes in the marketing mix affecting product design, positioning, promotion or price, has played an important role in successfully navigating this challenging environment (OECD, 2005).

In response to the restrictions highlighted by the pandemic, many service companies have turned to web-based tools to communicate with their customers. Several companies have used social

media influencers to endorse sales of their products. During times of crisis, creative advertisements emphasizing the social responsibility of companies also increased.

For example, the “Quarantine Art” campaign launched by Ukraine's Ministry of Culture and Information Policy redesigned traditional works of art to prevent the COVID-19 pandemic (Nesterenko, 2020). This effort demonstrated marketing prowess and social responsibility in times of crisis.

However, companies like Uber and Burger King have changed their marketing strategies by making ads that reflect the agenda. Uber released a funny ad expressing gratitude to its customers for not driving. Burger King facilitated food orders with its mobile application by supporting social distance rules and using humor (G. Bilir, 2020).

Managing the pandemic requires companies to leverage marketing innovation to engage with customers, demonstrate empathy, and demonstrate social responsibility. As a result of these efforts, organizational cultures become more enduring and flexible.

Table 2

Main findings for the impact of COVID 19 on innovation processes

Main Findings	Source
Strict pandemic measures (quarantines, border closures) have led to decreased economic activity and rising unemployment.	<i>(Nicola et al., 2020; Blustein et al., 2020; O'Connor et al., 2020)</i>
Regulatory processes, particularly for medical devices, can pose significant barriers to innovation.	<i>(FDA EUA, 2017; Warty et al., 2021; Bayon et al., 2016; Krucoff et al., 2012)</i>
Small companies face greater challenges with regulatory compliance and are more likely to innovate with new products.	<i>(Bergsland et al., 2014; Roberts, 1988)</i>
SMEs face significant economic challenges	<i>Burki, 2020; Dúaz-de-Leon-Martùnez et al., 2020</i>
The COVID-19 crisis has spurred marketing innovation, with companies using online platforms, social media, and socially conscious messaging.	<i>(Nesterenko, 2020; Bilir, 2020)</i>
Small companies prioritize early-stage innovation	<i>Roberts, 1988; Bergsland et al., 2014</i>

The results of this study show that the recent COVID-19 pandemic has had a different impact on innovation. As a result of the epidemic, significant economic problems have also emerged for vulnerable countries. We should not forget that the medical device development industry also faces numerous regulatory challenges, especially for smaller companies. Despite these challenges, the pandemic has led to the development of innovative marketing strategies focused on digital platforms and social awareness (Table 2).

3. Adaptive Strategies and Innovation Resilience in the Post-COVID-19 Business Landscape

Micro, small, and medium-sized enterprises across all sectors face significant challenges in enduring a humanitarian catastrophe such as the COVID-19 pandemic. Furthermore, artistic and creative firms have more difficulties. A few of these firms have effectively managed the consequences of the pandemic by using revised business strategies that have provided added value in light of environmental challenges. They have intentionally adapted their business models to adequately address the issues. The notions of adaptability and resilience exert a considerable effect on the creative processes of organizations in response to the unpredictable and challenging conditions that have arisen due to the COVID-19 epidemic. The pandemic has had a significant impact, highlighting the importance of organizations adapting to the immediate changes and developing resilience in their creative strategies for handling future disturbances.

The COVID-19 pandemic has caused extensive and diverse disruption across various industries, affecting most businesses across the world. The COVID-19 pandemic has significantly impacted labor markets and temporarily destroyed many traditional business models. Unforeseen competitive issues can be attributed to the ability of micro, small and medium enterprises (MSMEs) to adequately address these issues. As of 2020, 97 percent of Spanish companies fall into this category. 2,910,016 (73%) of all companies are in the service sector, with the cultural industry being the largest. It is crucial for cultural enterprises to survive and continue to exist within the wider social framework. In 2021, the National Institute of Statistics in Madrid, Spain, the fields of history, visual and performing arts, film, music, publishing and fashion design play a major role in people's daily lives and contribute significantly to the social and economic progress of our global society (Peñarroya-Farell & Miralles, 2022).

As defined by Zahra, dynamic capabilities are adaptable and help companies realign and reorganize their resource sources to better meet changing customer needs and rival tactics (Zahra et al., 2006). Dynamic capabilities comprise a variety of actions, such as understanding the market, capitalizing on opportunities, and using, modifying, or reconfiguring the business model (Teece, 2007). However, the highly hostile circumstances of the COVID-19 pandemic make this traditional approach obsolete in terms of strategic reassessment. When the business's immediate

viability is at risk, and immediate actions are required, the dynamic capacities approach in isolation is inadequate in explaining specific strategic decisions made by firm owners.

In general, the reason why some small and medium enterprises (SMEs) lose out to the competition is due to pre-existing and unsolved problems. These problems include a lack of formal planning and demand forecasting, inadequate management and technical expertise, and limited resources. Small and medium-sized enterprises (SMEs) have become more vulnerable to internal and external conditions such as reduced financial resources, budget constraints, layoffs of key employees, and reduced market demand due to the emergence of competitors (Eggers, 2020). Forsman, Uçaktürk and others acknowledge the importance of innovation in supporting economic growth in the service and industrial sectors and increasing the organizational resilience of small businesses during the COVID-19 crisis (Forsman, 2011; Uçaktürk et al., 2011). Nah and Siau, Fernandes and Hamilton suggested that the COVID-19 pandemic has significantly affected businesses (Fernandes, 2020; Hamilton, 2020; Nah & Siau, 2020).

Assessment of technological development in small and medium-sized enterprises (SMEs) can be done by assessing three main components, as outlined in a study (Guzman et al., 2018). These components include management systems, operations and product innovation. According to Hernández-Espallardo and Delgado-Ballester, introducing new products has a crucial role in improving the overall performance of companies. A comprehensive study of the temporal, spatial and methodological aspects of innovation is necessary to effectively choose and implement the necessary technical and managerial strategies and tools. Significant innovation-related risks and costs, which have negatively impacted the operational efficiency of small and medium-sized enterprises (SMEs), exacerbated by the ongoing COVID-19 pandemic, are major contributing factors (Espallardo & Ballester, 2009; Felipe Rodriguez-Hernandez & Rincon-Flores, 2023)

Furthermore, Eggers argues that the development of appropriate approaches to strengthen the performance of small and medium enterprises (SMEs) offers two distinct advantages: high flexibility and enhanced interaction between decision makers and customers. The proposed methodology thoroughly explores this benefit by identifying the most efficient strategies and resources to mitigate the associated costs and threats (Eggers, 2020). According to Nah and Siau, the proposed technique aims to improve cost optimization and efficiency for small and medium-sized firms (SMEs), ensuring their sustainability and expansion (Nah & Siau, 2020).

In general, innovation involves the creation of new items that meet the needs and preferences of consumers. This goal can be achieved without the need to improve the previous process. Optimization and innovation use a systematic approach that combines strategic planning techniques such as Porter's Five Forces and Blue Ocean Strategy (Kim & Mauborgne, 2015) .

Porter's Five Forces and Blue Ocean Strategy - Hernández and Ballester brought to light the fact that smaller firms mainly depend upon their business environment for survival, growth, and performance of small firms. The general context is determined by Porter's Five Forces model of new entrants and competition of existing ones as well as the power of customers and suppliers, and substitute goods and services. The first factor is the contention of new entrants (Espallardo & Ballester, 2009; Felipe Rodriguez-Hernandez & Rincon-Flores, 2023; Porter M.E, 2008). As Dälken points out, via this method we can map the following five variables that contribute to the consolidation of the organization's competitive strength and, on the other hand, these factors may indicate the threat that the company faces, which may evolve into a competitive advantage for the firm at its side (Dälken, 2014). In explaining consequences of a competitive environment, Porter, Dalken, and Hernández and Ballester 2009 emphasize that it is shown in the Porter's five forces diagram (Dälken, 2014; Espallardo & Ballester, 2009; Felipe Rodriguez-Hernandez & Rincon-Flores, 2023; Porter M.E, 2008) (see Table 3).

Table 3
Michael Porter's Five Forces

Force	Description
Threat of Entry	The presence of obstacles preventing new businesses from entering a certain sector. The introduction of new businesses into established markets has an impact on the competitive advantages, earnings, and competition amongst rivals. Access to distribution channels, government policy, capital requirements, product differentiation, cost disadvantages, and economies of scale are the six main obstacles to market entry.
Intensity of Competition	The presence of several competitive models, such as price reduction, product innovation, marketing campaigns, and enhanced services. The degree of competition amongst current rivals may have an impact on an industry's profitability.
Power Relative to Buyers	The presence of influential consumers who have the ability to drive down costs or demand better or longer-term services. When buyers are few and big, they often have more power than sellers because they may quickly choose another source.
Power Relative to Suppliers	The presence of suppliers having the ability to intimidate businesses by raising the cost of products or services. Therefore, if suppliers are few and huge, they have a lot of influence since a wide range of clients are ready to use their products or services.
Threat of Substitutes	Products and services that can perform the same role as others within the industry under consideration are termed substitutes. The profitability of all competitors in an industry is impacted by the availability of several replacements.

Source: Created by the author, based on (Dälken, 2014; Espallardo & Ballester, 2009; Felipe Rodriguez-Hernandez & Rincon-Flores, 2023; Porter M.E, 2008)

It is essential to highlight that several factors influence the degree of competition experienced by enterprises operating within a particular industry (Porter M.E, 2008). Most small and medium-sized enterprises (SMEs) compete within industries that provide different options. This poses a greater challenge for small and medium-sized enterprises (SMEs) to endure during periods of crisis. However, employing the Five Forces methodology can aid in evaluating the industry and devising the most optimal strategy.

Given the anticipated presence of significant competition, it is imperative to formulate strategies to modify the market dynamics and mitigate the number of competitors. According to Nah and Siau, the Blue Ocean Strategy is a strategic approach to achieve this objective (Nah & Siau, 2020). The term "red ocean" is derived from the analogy between a red ocean, characterized by high shark consumption, and a blue ocean, characterized by low shark presence (a market with several competitors). According to Kim and Mauborgne, the main objective of this strategy is to create a new market by capturing emerging market needs. Canon, Apple, iTunes, and Cirque du Soleil are notable examples of firms that have effectively implemented a Blue Ocean strategy (Kim & Mauborgne, 2015). The table 4 provides a summary of the attributes of enterprises operating in red and blue oceans.

Table 4:
Characteristics of Red Oceans and Blue Oceans

<i>Red Ocean</i>	<i>Blue Ocean</i>
<i>Existing Businesses</i>	<i>New Business Ideas</i>
<i>Complete in the existing market where there is high competition</i>	<i>Create spaces with little or no competition (make the competition irrelevant)</i>
<i>Exploit existing demand</i>	<i>Create and take advantage of new demand</i>
<i>Give in the value-price relationship</i>	<i>Break the value-price relationship</i>
<i>Low cost or product differentiation</i>	<i>Significant profit and product differentiation</i>

Source: Created by the author, based on (Kim, Mauborgne, 2004)

Now let's analyze the specific types of innovation preferred by service organizations in times of crisis. During times of crisis, firms often use cost-cutting methods, which can result in a number of problems, such as reduced product quality, consumer dissatisfaction, and reduced employee autonomy. Establishing a balanced and mutually beneficial relationship between cross-cutting and investment is paramount for survival and post-crisis growth (Gulati et al., 2010).

There are four main kinds of innovation that service firms may employ, namely product/service, process, marketing, and organizational/management (Landry. L, 2020) (OECD 2005, 2010). Product and service innovation includes developing original products or improving current ones (OECD, 2010). George argues that during periods of economic distress, organizations tend to prioritize cost-reduction methods, necessitating creative project implementation. Airbnb launched a novel service known as Airbnb Online Experiences throughout the COVID-19 outbreak (M.

George, 2020). According to the Innovation Board (2020), the newly introduced service allows users to engage in a variety of virtual tours and activities led by local hosts. During the Great Recession, Venmo and Dropbox emerged as prominent examples of service innovation (Dullea.S, 2020).

Process innovation, formerly known as the creative ideas that come out during manufacturing of delivering, becomes a general term. During the difficult times of the infection some providers of services were also modifying the way of their service deliverance. Nowadays, the entertainment, the education, and the health care areas use digital platforms to provide tele-distance services to their customers. There is an emerging inclination toward utilizing virtual concerts, conferences, online education, and telemedicine sessions to mitigate individuals' susceptibility to COVID-19 (CDC, 2020; Ethan Millman, 2020). During the pandemic, the food industry relied on third-party delivery platforms, including Grubhub, Doordash, and Uber Eats (Jonathan Maze, 2020).

Innovation in the organizational strategies can gateway to corporate prosperity even during crises through the incorporation of new corporate strategies, the management of knowledge base, new workforce organization approaches and externalization of relationships. At the start of this process, usually the leaders looking for new options suffer the current method provision and the best practice. Similarly, in accordance with the study by Polder, first, leaders across various departments and teams of the organization examine the situation and then they come with a few solutions, which can enhance the existing processes and internal practices (Polder et al., 2010). As indicated by the work of Birkinshaw and Mol organization rules linked to consumer protection, telecommuting, and possibly modifications of duties and decision-making procedures had to be implemented by companies in the case of a personnel rise or temporary layoffs during the COVID 19 pandemic (Birkinshaw & Mol, 2006).

Table 5

Main findings for adaptive Strategies and innovation resilience during the COVID-19

Main Findings	Source
Adaptive strategies and resilience are crucial for businesses to navigate COVID-19 disruptions.	<i>(Nah & Siau, 2020; Eggers, 2020)</i>
Dynamic capabilities theory alone may not fully explain strategic decisions made under highly disruptive circumstances like the pandemic.	<i>(Zahra, 2006; Teece, 2007; Eggers, 2020)</i>
Innovation plays a key role in organizational resilience and growth during the COVID-19 crisis.	<i>(Forsman, 2011; Uçaktürk et al., 2011; Nah and Siau, 2020; Fernandes, 2020; Hamilton, 2020)</i>

<p>Porter's Five Forces and Blue Ocean Strategy aid in evaluating industry competitiveness and creating new market domains</p>	<p><i>Porter (2008); Kim and Mauborgne (2004); Dälken (2014); Hernández-Espallardo and Delgado-Ballester (2009)</i></p>
<p>Service firms prioritize different forms of innovation during crises, including product/service, process, marketing, and organizational/management innovation</p>	<p><i>Landry (2020); OECD (2005, 2010); George (2020); Dullea (2020); Maze & Lalley (2020); Polder et al. (2010); Birkinshaw and Mol (2006)</i></p>

This subsection discusses the important role of adaptive strategies and innovation to increase business resilience during the COVID-19 pandemic. It highlights specific challenges faced by small and medium-sized enterprises (MSMEs), particularly in the creative industries. Additionally, strategic frameworks such as Porter's Five Forces and Blue Ocean Strategy have provided useful ways to assess industry competitiveness and create new market areas. Service organizations have successfully adapted to a variety of innovations, including product/service, process, marketing, and organizational/management innovation, while responding successfully to the volatile business environment (Table 5).

We concluded by reviewing the extensive literature study, which explores the complex terrain of innovation by looking at its definitions, workings, and effects in relation to the COVID-19 epidemic. The review emphasizes the critical role that innovation plays in promoting organizational resilience, economic growth, and societal advancement, drawing on everything from Schumpeter's groundbreaking concepts to modern viewpoints on dynamic capacities and adaptable strategies.

The COVID-19 pandemic is proving to be a major disruptor, having an impact on companies in a variety of industries and forcing an assessment of conventional business strategies. Small and medium-sized businesses (SMEs), especially those in the creative industries, confront specific difficulties, but they also show incredible flexibility and resistance to innovation. Academics highlight the significance of strategic frameworks such as Porter's Five Forces and Blue Ocean Strategy, together with dynamic capabilities, in steering organizations through challenging periods.

Furthermore, the evaluation emphasizes how important innovation is to lessening the effects of the crisis, with service companies demonstrating a willingness to innovate in a variety of fields. Businesses have used innovation to navigate the unstable business environment and come out stronger, from process optimization and organizational restructuring to product and service innovation.

Overall, the literature review shows how innovation continues to be crucial for building organizational resilience and spurring growth, even in the face of novel obstacles like the COVID-19 epidemic. Organizations may position themselves to succeed in a world that is changing quickly by adopting adaptive methods and encouraging an innovative culture.

Research Methodology

Schwandt defines analysis as dividing a whole into its individual components or constituent elements (Schwandt, 2014). The comprehension of the entirety is achieved by assembling the individual components. Qualitative approaches to data analysis are suitable for analyzing literature because, as mentioned by *Onwuegbuzie*, every piece of literature, regardless of whether it is qualitative, quantitative, or a combination of both, contains various sources of qualitative data. These sources include the literature review of the source article, the conceptual or theoretical framework, and the author's conclusions. Therefore, it is justified to use qualitative analysis methods within each case. In addition, when comparing and contrasting multiple sources, irrespective of whether they provide qualitative, quantitative, or hybrid research, it is appropriate to do cross-case qualitative investigations (Onwuegbuzie et al., 2012).

We have utilized a qualitative study methodology to examine the innovative processes of enterprises in response to the COVID-19 pandemic. Qualitative research is particularly suitable for this study as it allows for an in-depth exploration of the complex and dynamic nature of innovation strategies and business adaptation methods. This approach enables us to address our research questions effectively: *1) How have companies, particularly in the service sector, altered their business strategies in response to the COVID-19 pandemic compared to their strategies before the pandemic? and 2) What were the primary strategies adopted by the service sector to adapt and maintain innovation during the pandemic?* By focusing on the lived experiences and perspectives of key stakeholders within the service sector, qualitative research facilitates a nuanced understanding of how companies have navigated the unprecedented challenges posed by the pandemic. It captures the context-specific adaptations and resilience strategies that quantitative methods might overlook, thus providing a rich, detailed narrative that reflects the real-world intricacies of business innovation during a global crisis. Furthermore, qualitative methods such as interviews and case studies allow for the emergence of themes and insights that may not be anticipated, offering a comprehensive understanding of the strategies employed to foster innovation and resilience in a rapidly changing environment.

The sample comprises four organizations from different industries: Edde Global, SEB Bank, Apromore, and Ericsson. We deliberately chose these firms based on their direct relation to the research objectives and willingness to participate in interviews. Our sample includes organizations from many areas, such as telecoms (Ericsson), software (Apromore), and banking (SEB Bank) and managers were interviewed using a semi-structured format (Table 6). This is worth mentioning, by intentionally choosing, we can thoroughly comprehend innovation processes in many businesses and investigate possible response differences depending on industrial circumstances.

Table 6
Sample characteristics

Participant ID	Current Job Title	Company	Type of Company
<i>A</i>	<i>Senior Consultant</i>	<i>Edde Global</i>	<i>Education/Travel</i>
<i>B</i>	<i>Chief Product Officer</i>	<i>Apromore</i>	<i>Software</i>
<i>C</i>	<i>Baltic Head of Innovation</i>	<i>SEB bank</i>	<i>Bank</i>
<i>D</i>	<i>Line Manager Operational Sourcing</i>	<i>Ericsson</i>	<i>Telecommunication</i>

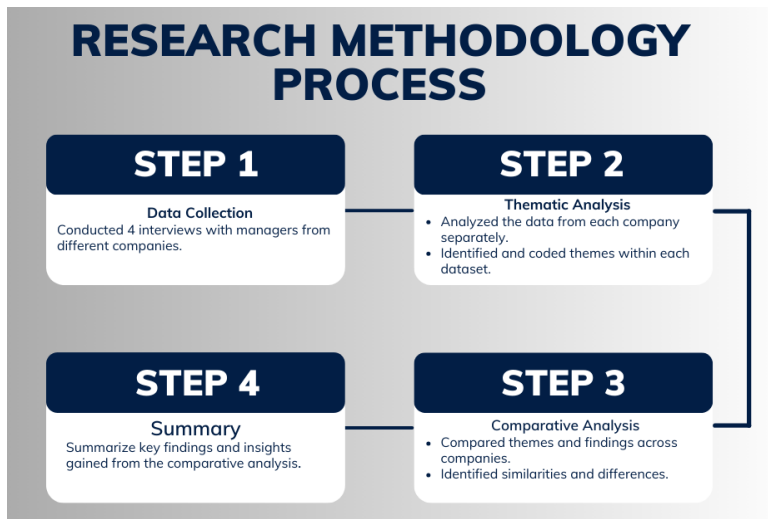
Source: Created by the author

Each interview ranged from 20 to 40 minutes, allowing for extensive conversation with the participants. Video conferencing facilitated flexibility and streamlined participant scheduling while promoting a more natural conversational dynamic. The interviews were done in person or through video conferencing technologies like Zoom and Microsoft Teams, allowing for flexible scheduling and ensuring accessibility regardless of location. They were audio-recorded and transcribed for analysis under their permission. This study was carried out as an ethical research according to the research rules related to human research. Participants were informed about the purpose of the study and their right to withdraw from the study at any time without giving any reason, and were assured of confidentiality. We have removed any personally identifiable information from the transcript to protect participants' privacy. The interviews adhered to a predetermined set of questions (as specified in Table 7), ensuring uniformity in data gathering and facilitating the examination of emerging patterns. These questions are created based on literature review part.

The process of creating frequency tables using the double classification method was a detailed and meticulous approach. To begin, each response was methodically coded into its relevant category to ensure accuracy and consistency. Then, the responses were tabulated for each category to provide a comprehensive view of the data. The resulting frequency tables allowed for a more in-depth analysis, revealing valuable insights into the specific actions that are most in demand to decrease and adapt to the impact of COVID-19. This approach proved to be highly effective in identifying trends and patterns in the data that might not have been apparent otherwise. You can meet our research methodology process on Figure 2.

Figure 2

Research Methodology Process



Source: Created by the author

Thematic analysis provides systematic techniques for extracting codes and themes from qualitative data in a way that is easy to understand. Codes are essential elements of analysis, encapsulating significant parts of the data pertinent to the research question. These codes are the basis for creating themes and larger patterns of meaning based on a single organizing principle—a common fundamental concept. Themes provide a framework for organizing and presenting the researcher's analytical observations. The objective of theme analysis extends beyond simple data summarization. It involves recognizing and interpreting significant data characteristics, but not necessarily all, led by the study topic. It is essential to mention that the research question is not set in stone in thematic analysis and may change as the coding and topic explanation stages progress. The primary emphasis is on producing thorough and top-notch analysis, supported by quality assurance techniques such as a two-stage review process. This process involves examining prospective themes against both the coded data and the complete dataset, ensuring rigorous examination (Braun & Clarke, 2006, 2012, 2013).

Result

Edde Global's interview findings provide important insights into the company's ability to develop regulation and resilience during the COVID-19 outbreak. The analysis emphasizes the significant *market disruption* caused by decreased student mobility. This interruption required a change in company strategies. The organization adopted methods that focused on emphasizing the needs and preferences of customers by providing them with flexible booking options and expanding the range of programs it offers. These modifications exemplify the company's ability to quickly and effectively adapt to changing market circumstances.

The interview also provides a comprehensive account of the specific *adaptation tactics* implemented by the company in question. These strategies emphasize the importance of technology in adapting to the 'new era'. The emergence of *Virtual Study Abroad Programs* represents a significant development brought about by the epidemic. In addition, the organization has strengthened its focus on *digital support* by expanding online resources to assist students and incorporating advanced *technologies* such as AI-powered chatbots.

The company's strategy for innovation during the pandemic places a high importance on ensuring that its actions *align with its fundamental values*. It concentrates on generating ideas that improve the student experience, even in a virtual environment. Nevertheless, the emphasis on *digital transformation* indicates a change in the approach to innovation, with a greater emphasis on using technology to develop new service delivery methods.

The interview also highlights the company's *resilience strategies*: *The cost-control* measures were apparently implemented in response to the economic downturn caused by the pandemic. Additionally, the company leveraged data-driven decision-making through *data analytics tools*, demonstrating a data-centric approach to managing uncertainty.

Table 8
Keynotes from an interview with Edde Global

Category	Code	Interview extract
Changes in Strategy	Market Disruption	<i>"sharp decline in student mobility"</i>
Changes in Strategy	Customer-Centric Shift	<i>"offering flexible booking and cancellation policies."</i>
Changes in Strategy	Revenue Diversification	<i>"Diversifying our portfolio"</i>
Adaptation Tactics	Virtualization	<i>"developing virtual study abroad programs."</i>
Adaptation Tactics	Digital Support Emphasis	<i>"enhancing online resources and support services."</i>
Adaptation Tactics	Technology Integration	<i>"AI-powered chatbots"</i>
Innovation Focus	Alignment with Values	<i>"prioritize those [ideas] that align with our strategic goals and enhance the student experience."</i>
Innovation Focus	Digital Transformation	<i>"Investing in digital technologies."</i>
Resilience Strategies	Cost Control	<i>"reducing operating costs."</i>
Resilience Strategies	Data-Driven Decision Making	<i>"data analytics tools"</i>

Source: Created by the author based on study result

Overall, the interview describes how a service sector business in the education sector adapted and promoted resilience by emphasizing agility, customer focus, and technology utilization (Table 8).

The interview with Apromore which operates in a software industry, provides insight into how an established remote-first work framework can significantly influence a company's durability during a global economic crisis. Their case brings valuable perspectives on adaptability, resilience, and the impact of the industry on these factors.

One of the most notable and impressive findings about Apromore is their adoption of a remote-first approach. This approach was established and implemented well before the COVID-19 pandemic hit, and it has proven to be a remarkably resilient strategy. While many other companies have struggled to adapt to remote work during the pandemic, Apromore's operations have experienced minimal disruption. This speaks to the effectiveness of their remote work model and the "business as usual" mentality they have maintained throughout the pandemic. Overall,

Apromore's remote-first approach has been a critical factor in their ability to maintain their operations and continue to serve their customers effectively.

Let's delve into how Apromore maintained its focus on innovation during the pandemic. Based on our interview, we found that Apromore's approach to innovation remained *unchanged*, as it was incorporated into every stage of the product development process. This approach to innovation suggests that Apromore values innovation as a fundamental aspect of their business strategy, even in challenging times like the pandemic. This could be due to the inherent scalability of a software product compared to a service industry that relies on physical interactions. Further research, including interviews with companies from different sectors, can help shed light on whether the impact of the pandemic on innovation focus varies by industry.

As per the interview, it was revealed that the pandemic has had a notable impact on Apromore's *sales cycles*, leading to a slower process. However, the interviewee did not provide specific details regarding the measures taken to address this challenge. It can be inferred that Apromore's cloud-based and remote work infrastructure played a vital role in ensuring business continuity during these challenging times. This indirectly highlights the importance of their remote work model, which serves not only to improve operational efficiency but also to enable adaptability in unforeseen circumstances.

Table 9
Keynotes from an interview with Apromore

Category	Code	Interview extract
Changes in Strategy	Office Postponement	<i>"All that COVID did is that we postponed the establishment of the office."</i>
Adaptation Tactics	Remote-First Model	<i>"The team was already working remotely from the company's start."</i>
Innovation Focus	Innovation as Integral	<i>"For us, [innovation] is an integral part of our product management and development process."</i>
Pandemic Impact	Sales Cycle Slowdown	<i>"Sales cycles have become much slower than they used to be."</i>
Resilience Strategies	Cloud-Based & Remote Focus	<i>"Online collaboration, distribution of human resources has become an integral part."</i>

Source: Created by the author based on study result

The interview brings to light an interesting observation regarding the software industry, which was already heavily dependent on online operations even before the pandemic hit. Consequently, the competitive landscape of the industry may have seen a lesser degree of disruption due to COVID-19. The case of Apromore is a prime example of how remote work can serve as a powerful resilience strategy. By adopting a remote-first model well before the pandemic, Apromore was

able to minimize disruption and potentially gain a competitive edge within the software industry (Table 9).

This analysis explores a critical interview with a representative from SEB Bank, examining how the bank industry adapted to the challenges presented by the COVID-19 pandemic. The focus is on identifying critical themes related to strategic shifts, adaptation tactics, and resilience strategies employed by the bank.

The interview reveals a clear shift towards a *digital-first approach* at SEB Bank. This is evidenced by increased discussions around internal process automation, aiming to streamline operations and reduce reliance on human interaction. Notably, the pandemic acted as a catalyst, accelerating pre-existing trends in *digitalization*. *Customer service adaptations* were another critical change. The bank pivoted to video call consultations to maintain service levels despite branch closures. This highlights their focus on alternative service delivery methods to meet evolving customer needs during the pandemic.

Based on the manager's answer, COVID-19 significantly boosted the bank's overall digital transformation efforts. They were able to quickly leverage new channels and develop them further, demonstrating agility in the face of disruption. A significant tactic involved the development of self-service tools like *robot advisory services*. This catered to a customer base increasingly comfortable with digital interactions, particularly first-time investors. The emphasis on self-service solutions aligns with a broader industry trend toward *automation* and *customer empowerment*.

The interview provides us with the result of SEB Bank's focus on fast decision-making during the crisis. The ability to streamline internal approval processes and adapt decision-making structures highlights the importance of organizational agility in navigating unforeseen challenges.

Another key resilience strategy involved leveraging *pre-existing technology* adoption. While video conferencing wasn't previously used extensively, the bank's familiarity with the technology allowed them to scale it up and meet customer needs quickly. This underscores the importance of ongoing investment in technological infrastructure, even for tools not yet central to operations.

Moreover, the pandemic accelerated customer adoption of *digital banking* solutions, emphasizing the need for financial institutions to prioritize user-friendly interfaces and robust customer support channels.

The competitive landscape also shifted considerably. The interviewee mentions an influx of smaller players offering more self-service options. This suggests that the pandemic may have lowered barriers to entry in the financial services sector, with increased digitization potentially making it easier for new competitors to emerge.

Table 10

Keynotes from an interview with SEB Bank

Category	Code	Interview extract
Changes in Strategy	Digital-First Emphasis	<i>"More discussions started to appear related to automation internally... to ensure processes can be delivered without human interaction."</i>
Changes in Strategy	Customer Service Adaptations	<i>"...we started to move to video call servicing customers, and that behavior is still there..."</i>
Adaptation Tactics	Digital Transformation	<i>"COVID boosted general overall digitalization... we were able to jump into something like a new channel and then develop it."</i>
Adaptation Tactics	Self-Service Emphasis	<i>"...robot advisory tool, ...for the first-time investors ... I think that this, as I mentioned, are like self-service tools kind of technology-wise..."</i>
Pandemic Impact	Increased Customer Digital Literacy	<i>"Customers...were not able to come to the branches... there were more jumping into the digital world."</i>
Pandemic Impact	Competitor Adaptations	<i>"...smaller companies...started to provide more services as well in a more self-serviced way... competition was pushing us to react..."</i>
Resilience Strategies	Fast Decision-Making	<i>"The organization managed to review some internal processes to prove the changes ... to quickly decide and reshuffle..."</i>
Resilience Strategies	Pre Existing Technology Adoption	<i>"This video conferencing, we used it, but it was not on that scale... when COVID hit us, and we were rather quickly able to jump into something like a new channel..."</i>

Source: Created by the author based on study result

Overall, Seb Bank's experience offers valuable insights for organizations navigating disruption. A strong emphasis on digital transformation, customer-centric service adaptations, and agile decision-making processes proved crucial for their success. Additionally, investments in core technologies, even those not initially central to operations, can provide a significant advantage during unforeseen circumstances. By understanding how customer behaviors and the competitive landscape can evolve during a crisis, financial institutions like SEB Bank can position themselves to not only survive but also thrive in a rapidly changing environment (Table 10).

The last analysis explores a critical interview with a representative from Ericsson, a leader in the telecommunications industry. The focus is on understanding how Ericsson's pre-existing remote work culture and emphasis on employee adaptability contributed to their successful navigation of the COVID-19 pandemic.

The interview suggests that Ericsson's business strategy remained essentially *unchanged* during the pandemic. This is attributed to their established model of *virtual teamwork*, which minimized operational disruptions for core functions. This highlights the potential advantage of pre-existing remote work structures in ensuring business continuity during unforeseen crises.

Despite minimal strategic changes, Ericsson implemented specific tactics to further enhance its *remote work capabilities*. A key example is their focus on *improving existing technology* like Microsoft Teams, enabling smoother collaboration amidst geographical separation.

Another adaptation tactic involved the "*Ideas Box*" tool, an internal platform for generating and developing employee ideas. This focus on internal, incremental innovation suggests a company culture that prioritizes continuous process improvement.

The interview emphasizes the importance of individual employee characteristics, particularly adaptability and the ability to work remotely. This highlights Ericsson's approach to resilience, placing significant weight on the flexibility and resourcefulness of its workforce.

It's essential to compare Ericsson's emphasis on employee adaptability with the resilience strategies identified in previous interviews. Some organizations focused on rapid decision-making processes or pre-existing technology adoption for resilience. Ericsson's experience suggests that fostering a workforce capable of adapting to changing circumstances can be another successful strategy for navigating disruption.

While core operations at Ericsson seemed relatively unaffected by the pandemic, there were challenges in secondary functions such as Human Resources and Facilities Management. These departments likely required more significant adjustments to accommodate remote work on a large scale. This finding underscores the uneven impact of pandemics across different organizational departments.

Table 11
Keynotes from an interview with Ericsson

Category	Code	Interview extract
Changes in Strategy	Minimal Strategic Shift	<i>"No changes in the business strategy during the Pandemic...from employees' perspective...no major impact."</i>
Adaptation Tactics	Tech-Driven Remote Work	<i>"Improving the ability to work remotely...significantly reduced the space-time differences..."</i>
Adaptation Tactics	Idea Generation Tool	<i>"Employees are encouraged to post any ideas through the Ideas Box tool. A team is working behind the tool...to generate business value for our company."</i>
Innovation Focus	Innovation as Mindset	<i>"For Ericsson employees, Innovation is a mindset. It is about challenging how we perform our tasks...digitalization and automation play a crucial role..."</i>
Pandemic Impact	Minimal Operational Impact	<i>"No major impact on employees...we used to work in a virtual team mainly through Microsoft Teams..."</i>
Pandemic Impact	Challenges in Support Functions	<i>"People Function and Real Estate...suffered the main impact, resizing and reshaping the business."</i>

Resilience Strategies	Employee Adaptability	<i>"People resilience, adaptability, ability to work independently and remotely made the difference."</i>
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Source: Created by the author based on study result

Ericsson's experience offers valuable insights for organizations navigating disruption, particularly in technology-driven sectors with the potential for remote work models. A vital pre-existing remote work infrastructure, combined with a culture that fosters employee adaptability and continuous improvement, can significantly enhance resilience in the face of unforeseen challenges. By understanding the importance of both technological and human resources in building adaptability, organizations can be better prepared to weather future crises (Table 11).

Comparative Analysis of Four Key Sectors: Education/Travel, Banking, Software, and Telecommunications, based on Interview Results

The result of our analysis from Edde Global shows a very strong correlation between the research objective to understand how businesses are adapting to the COVID-19 pandemic. Edde Global's emphasis on customer focus and digital transformation is reflected in the literature that emphasizes the importance of flexibility and innovation in times of crisis (Forsman, 2011; Uçaktürk et al., 2011). Virtual work schedules and the enhanced digital transition are influencing the importance of businesses turning to online solutions to maintain relevance and sustainability (Eggers, 2020). In another respect, Apromore's case study offers insights into the effectiveness of a remote-first business model. although their continued focus on innovation reflects research that emphasizes the importance of innovation in maintaining competitive advantage (Forsman, 2011) is in line with the literature on digitalization of financial services (M. George, 2020)- Adoption. Ericsson's study of manufacturing and technology to respond to disruptive events caused by the pandemic case study reinforces the adaptability of pre-existing remote work structures and employees, emphasizing the importance of developing an innovation mindset for long-term success Focus on continuous improvement and innovation.

Despite EDDE Global's traditional reliance on in-person business, other industries successfully pivoted to virtual programs, showcasing their customer-centric approach amid the pandemic's disruptions, which may prompt market shifts. Apromore Software thrived with its pre-existing remote model, bolstered by internal innovation like cloud integration, ensuring resilience. Seb Bank, operating with a hybrid model, swiftly adjusted service delivery via digitalization and video consultations while closely monitoring competitor strategies and evolving customer preferences. Ericsson's robust remote work culture ensured minimal operational disruptions, with a unique emphasis on employee adaptability, although they encountered challenges in support functions despite largely unaffected core operations (Table 12).

Table 12

Comparative Analysis of four interview findings

Company	Operational Model	Innovation Focus	Key Adaptations	Resilience Strategies	Pandemic Impact
Edde Global	<i>In-Person Emphasis</i>	<i>Transformative Product/Service</i>	<i>Virtual Programs, Digital Enhancement</i>	<i>Customer-Centric Shift, Tech Integration</i>	<i>Severe Disruption, Market Shift</i>
Apromore Software	<i>Pre-existing Remote Work</i>	<i>Internal, Process-Driven</i>	<i>Cloud & Remote Focus (Reinforced)</i>	<i>Pre-existing Remote Setup, Agile Decision-Making</i>	<i>Minimal Operational Impact</i>
Seb Bank	<i>Mixed Model, Physical Branches</i>	<i>Service Transformation, Process Optimization</i>	<i>Digitalization, Self-Service, Video Consultations</i>	<i>Fast Decision-Making, Pre-existing Tech Adoption</i>	<i>Customer Behavior Shift, Competitor Adaptations</i>
Ericsson	<i>Established Remote Work</i>	<i>Internal, Process-Driven</i>	<i>Enhanced Remote Capabilities, Idea Generation</i>	<i>Employee Adaptability, Existing Tech Infrastructure</i>	<i>Limited Impact on Core Operations, Challenges in Support Functions</i>

Source: Created by the author based on study result

The analysis clearly demonstrates that service-based companies (Edde Global and SEB Bank with physical branches) faced the most significant disruptions and strategy shifts due to their reliance on in-person interactions. These service companies had to transform service delivery models, such as virtual service delivery, increasing emphasis on digitalization and self-service tools. Companies with pre-existing remote work capabilities (Apromore, Ericsson) experienced significantly less disruption and required fewer strategic overhauls. This highlights the importance of operational flexibility in business strategy. The study abroad company innovated new virtual programs for customers. Seb Bank also adapted services (video consultations) to meet new needs. Companies like Ericsson focused on internal improvement (Ideas Box), likely driven by increased demands for efficiency while working remotely. Companies able to rapidly adapt operations, regardless of innovation type, demonstrated resilience, such as technology adoption (video conferencing, online platforms, self-service tools) and agile decision-making (Seb Bank showcases the importance of rapid adaptation in response to new regulations or customer behaviors).

The pandemic may have accelerated digitization across many sectors, with smaller competitors offering self-service options (Seb Bank's observations). This raises questions about the long-term impact on industry dynamics. Ericsson's interview points to the importance of a workforce capable of independent and adaptive remote work. This highlights the interplay between human resource

considerations and tech-focused resilience strategies. While only directly addressed in some interviews, successful adaptations likely hinge on both technology adoption and maintaining positive customer experiences in new service delivery formats.

Our findings reveal that companies significantly altered their business strategies to navigate the challenges posed by the COVID-19 pandemic. Companies that quickly embraced digital solutions were better equipped to adapt their service delivery models. For example, Edde Global shifted to offering virtual study abroad programs and flexible booking options, allowing them to continue meeting customer needs despite a sharp decline in student mobility. Similarly, SEB Bank accelerated its digital transformation by automating internal processes and adopting digital-first customer service methods, including video consultations, to maintain high service levels despite branch closures. These strategic shifts illustrate how digitalization enabled companies to adapt to the pandemic's disruptions effectively.

The primary strategies adopted by companies to adapt and maintain innovation during the pandemic centered around enhancing digital capabilities and leveraging technology. Companies like Apromore, with pre-existing remote-first models, seamlessly transitioned to remote work, allowing them to maintain continuous operations and support ongoing innovation. Their cloud-based infrastructure facilitated swift responses to operational challenges and ensured that innovation remained a core part of their business strategy. Ericsson's established virtual teamwork and digital tools minimized operational disruptions, while their "Ideas Box" tool encouraged employees to generate new ideas, fostering a culture of continuous improvement and adaptability.

The interviews highlight digitalization as a critical factor in enabling businesses to stay strong and innovative during times of crisis. Companies that rapidly embraced digital solutions, such as online platforms, self-service tools, and streamlined digital processes, were better equipped to adapt their service delivery models. For instance, Edde Global pivoted to virtual study abroad programs and flexible booking options, while SEB Bank accelerated its digital transformation with automated processes and video consultations, ensuring continued customer service despite branch closures.

Pre-existing digital capabilities and remote work infrastructure also created significant resilience advantages. Apromore's remote-first model facilitated a seamless transition to remote work, supporting continuous operations and ongoing innovation. Similarly, Ericsson's established virtual teamwork minimized operational disruptions, with their "Ideas Box" tool fostering continuous employee-driven innovation.

These findings underscore the importance of digital readiness. Companies with robust digital infrastructures could better handle the abrupt changes brought about by the pandemic, maintaining operational continuity and driving innovation. In conclusion, prioritizing investment in digital

transformation is essential for businesses to not only survive but thrive in an increasingly unpredictable and technologically driven landscape.

Conclusion

The primary objective of this research was to determine the most effective business strategies during the COVID-19 pandemic and to identify new and efficient ways to maintain innovation and vitality for businesses in future crises. It is acknowledged that the recent pandemic has had a significant impact on companies worldwide.

While discussing the literature, we uncovered several important points. In order to mitigate the negative impact of the COVID-19 pandemic, governments around the world have implemented strict and stringent regulations, resulting in a significant reduction in economic activity and an increase in unemployment. Additionally, regulatory processes are always significant barriers to innovation in the medical devices industry, restricting progress and development in this critical area.

On the other hand, the pandemic has had a positive impact on marketing innovation, as companies have changed their attention to online platforms and social media to connect with their customers and deliver their products. In this context, innovation has played a crucial factor, enabling companies to stay strong and innovative during the COVID-19 crisis. Service firms started to use different forms of innovation during the crisis, including product, process, marketing, and organizational innovation. As a result, it has played a significant role in helping them adapt to the dramatically changing business environment and sustain their operations during these challenging times.

Our empirical research findings highlight the significant role played by digitalization in businesses worldwide during the COVID-19 pandemic. Our focus was on analyzing the service industry and identifying adaptation and resilience strategies, particularly its four sectors - education/travel, telecommunications, banking, and software. Our study revealed that companies directly interacting with customers encountered the most significant challenges due to the pandemic's reliance on in-person interactions. These companies had to undergo an essential strategic shift and adopt new service delivery models, such as virtual delivery, with a greater emphasis on digitalization and self-service tools. In contrast, companies that had pre-existing remote work capabilities, such as software and telecommunications, experienced fewer disruptions and required minimal strategic changes. This highlights the importance of operational flexibility in a business strategy. Our research also uncovered that software companies prioritize innovation and consider it an integral part of their business. This implies that software companies are better positioned to face any crisis, such as the COVID-19 pandemic, with their innovative approach.

In conclusion, the COVID-19 pandemic has underscored the need for digitization for organizations. Those who had already adopted digital tools and technologies were better able to adapt and thrive in the face of unprecedented challenges. Firstly, digitalization enabled businesses to quickly adjust their operations to remote work setups, ensuring continuity amidst lockdowns and restrictions. This flexibility allowed them to maintain productivity and keep essential functions running smoothly. Moreover, digital platforms provide businesses with expanded reach and market opportunities. Online sales channels became crucial for reaching customers beyond local areas, while e-commerce platforms sustained businesses unable to operate physically. Digital tools also improve efficiency and cut costs for businesses. Automation, data analytics, and cloud computing streamlined processes, helping companies do more with fewer resources during uncertain times. Furthermore, digitalization facilitated ongoing customer engagement and personalized experiences. Virtual events, online customer service, and targeted digital marketing strategies enabled businesses to stay connected with their audience and build lasting relationships. In reflecting on the lessons learned, it's evident that businesses embracing digitalization are better prepared to navigate future disruptions and capitalize on emerging opportunities. The pandemic has underscored the importance of digital transformation as a strategic imperative for businesses in today's rapidly evolving landscape.

Our thesis has contributed new insights to the existing literature by examining various industries within the service sector. The research findings have practical implications for organizations, offering fresh ideas and strategies to enhance their operational efficiency. This study lays the groundwork for future research in this area and emphasizes the crucial role of digitalization in the contemporary business world.

Appendix

Table 7
Interview Questions

Interview Questions
<i>Could you please briefly describe your company, emphasizing its core products or services and the industry it operates in?(Miles et al., 1978)</i>
<i>How do you define innovation at your company? (Afuah, A, 1998)</i>
<i>How does your company approach innovation? Can you describe your innovation process or methodology? (Tidd & Bessant, 2021)</i>
<i>How has the COVID-19 pandemic impacted your company's operations and business strategies? (Gita Gopinath, 2020)</i>
<i>What are the key challenges your company has faced in navigating innovation processes during and after the COVID-19 pandemic? (Eggers, 2020)</i>
<i>How did your organization identify areas requiring adaptation during the pandemic?(Teece, 2007)</i>
<i>What specific adaptations or changes has your company made to its business strategies in response to the COVID-19 pandemic?(G. George et al., 2020)</i>
<i>In your opinion, what distinguishes successful adaptation strategies from less successful ones during the COVID-19 era in your company? (Nah & Siau, 2020)</i>
<i>Can you discuss any resilience strategies your company has employed to mitigate the impact of the pandemic on its operations? Can you bring any technological solutions that you used during a crisis?(Resilience and Ingenuity Global Innovation Responses to COVID-19, n.d.)</i>
<i>How do you see the competitive landscape evolving within your industry as a result of the pandemic, and how does your company plan to stay competitive through innovation? How will lessons from COVID-19 guide your long-term innovation strategies? (Kim & Mauborgne, 2015; Porter M.E, 2008)</i>
<i>How do you foresee the evolution of adaptation and resilience strategies in a post-pandemic world?(Fernandes, 2020)</i>
<i>How has the experience of navigating the COVID-19 era shaped your organization's approach to risk management and strategic planning?(Eggers, 2020)</i>

Source: Created by the author based on study result

1. Interview transcripts from Edde Global

- 1.** Our company specializes in facilitating study abroad programs for students. We provide comprehensive services including assistance with university admissions, visa processing, accommodation arrangements, and cultural orientation. We operate in the education and travel industry, aiming to offer transformative experiences for students seeking international education opportunities.
- 2.** Innovation at our company is defined as the process of continuously improving and adapting our services, processes, and technologies to better meet the evolving needs of our students and partners in the study abroad industry.
- 3.** Our company approaches innovation through a structured yet flexible process. We encourage idea generation from all levels of the organization and prioritize those that align with our strategic goals and enhance the student experience. Our innovation process involves research, prototyping, testing, and implementation, with a focus on agility and responsiveness to market trends and student feedback.
- 4.** The COVID-19 pandemic significantly impacted our company's operations and forced us to rethink our business strategies. Travel restrictions, university closures, and health concerns led to a sharp decline in student mobility and disrupted our traditional study abroad programs.
- 5.** Key challenges we faced during the pandemic included managing cancellations and refunds, transitioning to remote work, maintaining student engagement, and adapting our services to virtual formats. Additionally, uncertainty about the duration and severity of the pandemic made it challenging to plan for the future and invest in long-term innovation initiatives.
- 6.** During the pandemic, we identified areas requiring adaptation through regular monitoring of global health and travel advisories, consultations with university partners and students, and analysis of market trends and competitor responses.
- 7.** To respond to the pandemic, we implemented several adaptations including developing virtual study abroad programs, enhancing online resources and support services for students, offering flexible booking and cancellation policies, and diversifying our portfolio to include short-term and domestic study options.
- 8.** Successful adaptation strategies during the COVID-19 era were characterized by agility, creativity, and a customer-centric approach. Companies that were able to pivot quickly, leverage technology effectively, and prioritize the needs of their stakeholders emerged stronger from the crisis.

9. To mitigate the impact of the pandemic, we employed resilience strategies such as diversifying revenue streams, reducing operating costs, and leveraging technology for remote work and virtual engagement. We also invested in AI-powered chatbots to provide round-the-clock support to students and implemented data analytics tools to monitor market trends and student preferences.

10. The competitive landscape in the study abroad industry is likely to evolve as a result of the pandemic, with increased demand for flexible and hybrid study options, greater emphasis on health and safety protocols, and growing competition from online education providers. To stay competitive, our company plans to continue innovating by investing in digital technologies, expanding our virtual offerings, and strengthening partnerships with universities and other stakeholders. Lessons learned from COVID-19, such as the importance of agility and resilience, will guide our long-term innovation strategies.

11. In a post-pandemic world, adaptation and resilience strategies will continue to be essential for companies across industries. However, there may be a shift towards proactive risk management and scenario planning, as organizations seek to anticipate and mitigate future disruptions. Additionally, there may be greater emphasis on sustainability and social responsibility, as companies recognize the interconnectedness of global challenges.

12. Navigating the COVID-19 era has shaped our organization's approach to risk management and strategic planning by highlighting the importance of flexibility, agility, and preparedness. We now place greater emphasis on scenario planning, stress testing, and building resilience into our operations and supply chains. Additionally, we have become more attuned to emerging trends and risks, allowing us to adapt quickly to changing market conditions and customer preferences.

2. Interview transcripts from Apromore.

1. Apromore operates in the software space. Generally speaking, we develop and commercialize a software that allows business managers and analysts to understand and improve their business processes based on data extracted from their information systems. It is a software as a service product, and we operate the market globally, basically, with customers across US, Europe, and Asia Pacific.

2. One of the values of the company indeed is innovation, and we are proud to We are the forefront of innovation in the field where we operate, which is called process mining. We have been pioneers in driving some of the evolutions in this this discipline, including the introduction of AI techniques as part of our platform several years ago and the introduction of different simulation technologies. We strive to continue bringing, breaking ground in the market and bringing ideas from research labs into practice. For us, it is an integral part of what we do and an integral component of our product mission and roadmap.

3. We do not have a separate process for innovation. For us, is an integral part of our product management and development process. We have a certain percentage of our product development that is targeted towards staying ahead of the competition and taking ideas from research prototypes and testing them with end users in different ways and integrating them into the product. So it's the same for us. It's exactly the same process as how we will bring any other new capability into the product. So no, we don't distinguish like there is an innovation process and there is a non-innovation process. It is part of it. I will not be able to conceive even how you have an innovation process because then it means that all the other processes are non-innovation processes.

4. The company started to... The company was very small. Before COVID, there were only five people. And we grew during COVID from around 5 to 12. And then in 2021, even further, up to perhaps 35. So the team was already working working remotely from the start of the company. We had not yet established an office because we were so few. And all that COVID did is that we postponed the establishment of the office. Perhaps we were going to establish it around the middle of 2020, and we postponed it until early 2022, basically. And then we grew from, let's say, 5 to 35 completely remote workers. So because of the timing with respect to the development of the company was not... It merely postponed the time where an office was created. And then even when we created an office in our headquarters in Melbourne, we continued to have a lot of people in other places which were remote. And so nowadays, the company continues operate largely remotely with a subset of the team working in the Melbourne office. Okay.

5. I don't think that we have a problem navigating through innovation processes. It is not more than... It's exactly the same challenges as navigating through any other type of feature request from our customers. We don't see... It is always the challenges of limited resources, in some cases, risks in terms of the delivery, technical risks, business risks that there is no market fit for new capabilities in the product, risks that we do not have the ROI that we were expecting. But it's the same processes for us, whether or not it is innovation or not. So I don't see any particular the challenges regarding innovation processes.

6. There's no explicit process for that. What happened is that When the pandemic hit, we just continued doing things the way we were doing it. There was no other change because we were already working remotely, we were already working in teams. We did not have an office, so maybe we are just an outlier in this equation. I can imagine that if you had an office before and you were used to meeting customers in person or you were used to traveling in person, then this will have affected you. But in our case, it just meant like you wake up on Monday and it's like it was Friday. So there was absolutely no change. Simply, it postponed the time when we decided to establish a physical office. And perhaps it saw the conferences where we could have gone in person, we We might have done them remotely during COVID, which we were already doing, so there was no real change.

7. -

8. Well, it would be difficult to say because there is no adaptation strategy. It was hard to be put in place. So there were no unsuccessful adaptation strategies, nor successful ones, because it was all like that. I think that perhaps where COVID impacted us was not in our internal processes or in the way we work it, but it impacted us business-wise in the sense that the sales cycles became much slower than they used to be. And whereas we have had sales cycles of a few months before COVID, maybe during COVID, those sales cycles were slowed down and stretched to 9-12 months because a lot of many companies were cautious in terms of progressing any expenditure decision or any investment decision. How we adapted to that was in terms of mode. We just had to adapt our cash flow planning and our business planning to fit the reality that there were a few months where the sales cycles just became much slower.

9. We continue to use our usual communication channels, which was basically all around Microsoft 365 and Teams. We continued to use them. When we did develop policies in the companies, because of the fact that we grew during the pandemic, those policies indeed were built around how we work it before and during COVID. So maybe what it contributed to is that we were, let's say, online first or virtual first from the start, and we remain a virtual company even during our growth phase. As a result of this, our resilience policies or business continuity policies are entirely like... It's based all on distribution, it's based all on online communication, online collaboration, online interactions with our customers. Yeah, that's how it went.

10. I don't think that being in the software space, but in the business to business software space, a software as a service cloud-based, I don't think that there was a before and an after. There are no major effects in terms of how our sales or where our competitors operate as a result of the strategy. It might be that some of the marketing and sales processes became more online channel-driven. That is probably true. We have never acquired a customer by traveling to the headquarters and actually presenting physically. I think the other companies in our space, the competitors are doing the same. They will rarely have to meet the customer in person to strike a sale. But apart from the sales and marketing side, it has not changed our processes. I don't think in the space of the soft, in our space, it has never been the case that innovation was determined by where you are in space. It's an industry that has naturally operated it's online. I don't think that the COVID, not COVID, has affected anything from our point of view. I do not think that in any way, anything that happened in COVID-19 affects our innovation strategies or processes. We were doing exactly the same thing before COVID, during COVID, and after COVID. I don't think that... I can safely say there's nothing about COVID or COVID lessons that has affected our innovation strategies in any way.

11. It is clear that a remote work, online collaboration, distribution of human resources has become an integral part of the business continuity and resilience strategy. The cloud strategy has become a clear element in the resilience strategy. A lot of many companies as a result of COVID. Yes. I think this was a trend that existed to some extent predated COVID, but not just COVID, that separated the trend towards building more business resilience via online, remote distributed work.

12. In terms of risk management, yes, the fact that we have developed a strongly remote online work is now an integral part of our development strategy. It gives us certain, in particular, an effects risk management strategy and yes, a lot of our risk management processes and policies are tailored to a company with these characteristics of remote online distributed work. So yes, it affected our response process. No, I don't think that it has affected our strategic management processes. I think that the strategy remains largely unchanged pre and post-COVID. It's still like the GTM strategy still targets the same regions, the same types of companies, the same types of personas. The product development strategy continues to be the same pre and post-COVID. It's like the risk management, yes, COVID affected it. Maybe it's more oriented towards remote cloud-based work, but the strategy management has not changed.

3. Interview transcripts from SEB Bank

1. So I'm representing Seb bank kind, so it's a north crude, but the representing the Kabalistic division here in like a Baltic state. So we are representing in each country. I would say that we are living in financial sector, so providing Universal Bank. Uh services, which would mean that wide range of it. But mainly I would say that kind of mainly 3 blocks, so one is about the savings and investments apart. So kind of helping people to kind of invest their money into assets that we believe are like a good enough ones including pension as well. The second one would be regarding loans and everything related to lending processing. The third one is more like a daily banking services which kind of try to kind of move money from one account to another account and make payments possible as well.

2. I think that in our side, the on the bank side, we haven't have a specific definition used internally. So I would say that more people can define it based on the gut feeling. So kind of what's kind of what is the thing that is new and have not been used before? Uh, from my side. There's like uh representing innovation side. So kind. I'm more treating innovation as an outcome. Uh, so following more Oslo Manual, which is like 1 document and organization of economic development or OCD, is defining innovation. Is that it's it's a product or a process and which is significantly different from the process or like a product that company has offered to their customers are using by themselves and is used by its users, OK. And there's some important pieces. OK, it's first. It's outcome, it's a product or related processes around. It's significantly different and the third one then it's like it's used. So it's not just like an idea somewhere, but it's really some something that people are using. So that's that's, that's my definition and I think but uh on organization why we haven't set. OK, there's one specific definition that we follow.

3. I think that the uh, from my perspective, as I mentioned that we are more helping with different formats that we see are used in the world when it comes to in innovation activities. So making sure that our employees are up to the date, so when it comes to the skill set that they need to use, so we are more used, we have more used previously more something like this called like idea banks

internal then it's like internal acceleration all like employee lab where it's like small acceleration for employees. Now the latest, most active for internal world is activity called Design Sprint, which is like a pushing employees in one week format to start from early idea level till the already validated the prototypes at the end of the week. Yeah, that journey. And then there is like other part where we are more ensuring the access to some, some somebody who has like different points of views or like extra resource when it comes to business academia One Direction another might be. Other companies as well, like big ones that are ready to call, create something together with us, or it could be as well, like a smaller ones, which are like Fintechs, financial technology startups, which are creating something New South and then we are our task is to ensure that there is regular interaction with them to say that if there is possibility to partner up and create some new service. But it's a as well it's it's linked to this disclaimer, which I mentioned because like for other part of organization which is more delivering the innovation I my my I would say that they are treating probably innovation more and discussing it more when it times the innovation as an outcome.

4. Again, yeah, it's I I think that there is one type of answers that you are looking after, which I would imagine that I could describe from those who are like more delivering really innovation as an outcome and what I can just like give an opinion from regarding those things. I would say that the COVID very much like boosted in general. Overall digitalization and our customers behavior when it comes to like ability to work in digital channels, especially in self serviced way. So kind of the I think that much more were able to kind of follow different type of activities in digital digital world versus they did previously even like simple thing is like logging in in the Internet bank and kind of making a payment but versus previously there were more relying on others including the bank but also sometimes more on relatives which queen the could come to their homes and can do some payments and then so on in our case it kind of boosted more great services which they actually they can self service and and in order. Another thing is more kind of. Once we want to onboard new customers and kind of want to interact from our side, then COVID restrictions pushed us to kind of develop or digital channels for the face to face interaction via video channels. So I think that lots of lots of change there and technology which we were like using kind of boosted like dramatically when COVID came. So kind of we started to move, move to video call servicing customers and that that behavior kind of, I would say it's still still there and quite a lot as well pushed to think that how to be more digital as a primary source of channel like a primary channel in a further developments and then only on top kind of thinking how to make it more human where where this really human interaction is needed and. Just off that the COVID times, yeah.

5. If if I think about Innovation processes, then I think that there is some kind of flavor that till discovered time, uh, we were using more face to face interactions. And the less digital ones and I even if I if I could, I preparing for this interview just recently remembered like 1 slide and I hope that also it might be that it will be recorded just to give a give a flavor. So kind of that I remember some kind of board meeting when we also can adjust the COVID came or like COVID was it was 2020 November. So it was few months already, six months in action. So it kinda had like different type of activities which were like a first regarding internal. Environment where different formats

where we're like in involving our employees into different actions face to face more often like than there was like mixture where we met world outside and then there is like some external companies partners which we can invite that they know innovation centers and then when COVID came then actually all of them kind of were impacted in one or another way and I would say that looked rather red color ish so it means that they couldn't continue in a format that we we did it before like and then kind of our task was. To evaluate, OK, we check activities. Actually we can transform more to the digital one and which are like still able to keep. Yeah. Keep uh uh. Physical. But that meant that we couldn't come to execute them because of like possibilities. And the restrictions which were there. So I would say that as, as we wrote that that time it like 60% of activities we managed to can transform mainly to the digital ones and those which we didn't manage to gain the move to some other formats actually were very much linked to the partners ability to transform their activities to the digital channels. So now outside, I would say that the our Inta like quick response was that we understood, OK, we have formats that work very well. So we moved more digital, started to use I think on Super early days, even shared PowerPoints to kind of put people together and let them vote something later on. We realize that kind of is PowerPoints with one shared PowerPoint which is like 100 slides long with different content and ask people to interact with routing will not work. So OK. And they started to jump on the mirror. Thoughts. And so on. And I think that this as well like brought us to kinda new ways of interaction which I see are still use the now after the COVID times. So this is like I think it's still these digital digital interaction and from innovation process is uh uh. I think that that was as well, like a good, good answer to the world. What happened around and let people to interact without like really traveling to the other countries, but still we manage to keep this innovation processes in place is the same kind of content which we're there.

6. I think that the, again, the comment I've been not from the role which I'm representing and from my my perspective. So I would say that mainly one was the just the circumstances out there which were like a pushing based on the customer behavior. So kind of seeing that people were not able to come to the branches so kind that they were like less digitally savvy at that momentum. So kind that there were more jumping into digital world. So our action was like to how to make all this infrastructure as well available for them. So this customer behavior impacted quite a lot and then another was I think that more some legislation like a push as well which said that OK, you cannot people in that way. So you can have to think about the ways how to how to manage people in the physical channels and how to interact with them, which impacted as well like the way how we are like servicing customers in our physical channels like bank branches, which prior to COVID was more that everybody could come in at any time more through the COVID times. It was more that OK, we have to prebook our meetings and kind of agree on specific time to make sure that there is only one person. Person that and maybe third block would be as well that as the world transformed more in the digital, I think that as well like more smaller companies and competitors like meaning like start startups and and so on started to provide more services as well more self serviced way. So it means that kind that there is competition was like pushing us to kinda react in eras where we felt that kind. OK, this we cannot stay where we are before as well. So can I think

that one one example could be our robot advisory tool, which is like more for the first time investors to try out and learn how to invest money in investment funds. Provide the best it be later on by ETFs and I think that that as well by having a COVID or boosted mode is like a self service possibility kind of created the situation where also maybe in the world some movement started that people started to see more such opportunities than also add the organization reacted that then kinda more boosted this information and product that was there as an answer to the world outside.

7. Now again a bit like would be hard to say as as as I am from my perspective I both have like a KPI. The time following more, which would be, I would say that rather similar that were like face to face to make sure that these like format which I'm providing like ensures the quality like there is a specific number of interactions that I showed from the for the organization like summarized KPI for both of those. OK, bill covered. We promised UH-50 explorations, which means that some some teams join some other formats, some kind of metrics. They're not people like 50 exploration opportunities for thermalization, and when the COVID came, we kind of kept the same number of explorations. In short, for for donation as such. But uh, if I think about the organization and saying maybe some shifts, then I think that more discussions started to appear more, more related to the automations internally when it comes to the processes within the organization. So the I think colleagues started to talk more about straight through process like SDPS, which meant kinda more to ensure that the processes such can be fully from the beginning till the end can be can be delivered fully without any human interaction. It's OK, it's not started to see such type of like indicator smaller on top the same like uh, percentage or like ability to conduct keep customers or get customers attention in digital first channels. So can I see that this was like more on the kind of feared even Net Promoter promoter scores and PBS around those type of channels which were not so like visible previously comparing that if previously were more monitoring for example uh satisfaction that ratios in branches in like a call centers then I think that more and more I start to say that this satisfaction indicators started to be measured as well in like a mobile apps and like Internet bank so kind of and video channels how we serve customers there. So can they created this like as soon as new channel opened as well? This like making sure that our customers get the best support. Also appeared in those those cases.

8. Very good question, yeah That let me think. I think that one one that came can then come into my mind is that the uh, can we really proceed in our strategy kind in the same way that this question, that kind, OK, if you have decided on specific strategy before and not knowing that COVID will come. So kind of this this question is that can we proceed with the same things that COVID came. So can the can we still keep the same direction that we have set previously? So that was like how this like how less the shift is happening, you know, like strategic also kind of how not to how to keep maybe resistance to the some, some kind of world which is happening outside the key to the same goals that we are there. And then in order to to do it just to shift maybe some some of the channels or like some of the ways we are like a serving our customers. So it means that ability to digitize things and in that sense, these characteristics are like would be more towards that. The same which I mentioned like a satisfaction levels, can we kind of keep the same and we

reach specific number of digital digital services provided to them. Probably those ones would be the ones.

9. Yeah. So I think that this, uh ability to react fast. Uh. Kind of what's happening out there and kind of with the information of new restrictions which like, OK, I mean I think that organization managed to review some internal processes when it comes to kind of proving the changes as such. So can the for example in some cases we can that we needed to restrict some specific like a payments going somewhere to one or another place or like not allowing to make transactions here and there that the law does to kinda learn this possibility to later on to use this other possibility to adopt in fast manner kind of that to quickly decide and reshuffle that the call is like decision body in kind of this crisis situation and not to wait maybe as it will be regular maybe the healthy year till the change is happening but rather. To be like 1-2 weeks and kind of that is decision made. So I think at that type of possibility kind of show for organization that it's possible to kinda to be really adoptive and reviewed the decision making bodies and the kind the the journeys as such and possibility to maybe step back from the longer reviews and longer kind of decision making processes. Uh. From several months maybe to kinda just to getting to the right decision maker in a quicker way and making decision in order to move further on. So I think that that's not that this resilient not that is technologies wise. I think that this really video video channel has such helped a lot video conferencing which was like used previously, but it was not on that scale that was before. So, OK. And then once the COVID hit us and we were rather kind of quickly able to jump into something like like new channel and then developing it. And I think that this is also kind of shows possibility like shows good direction that you have to explore before as well. But when crisis are happening on different type of technologies, so kind of this video conferencing, we used it but the very small level kind of piloting and trying it maybe one or another country more. But then when it came in, we were ready. So we didn't need to kind of create the channel from the scratch. So, OK. And then we were prepared for that. And the other, I think that this, uh, as I mentioned this like a self service tools kind technology wise as well this like booking meetings for the customers to the coming to the physical channels. So having them possibility to manage the things that they previously couldn't, uh result like digital interactions. So can that type of technology help us to help customers to be better at self service?

10. I think that the on a high level, maybe long term innovation strategies are not heavy impacted because we we already turned this organization like to think already some kind of now for example at the moment we are following more like strategy 2030 document such so kinda which says that OK and it started already like a few years back. So we have a guiding star which we are following and knowing what we want to reach in that sense. And I would say that there is not much changed as like one of the key pillars into that direction is also like a customer habits. And no matter what are they on that specific momentum we are like using the latest information. What we have there. So on the on tactical level might be that some, some smaller changes are like there and then competitive scale. I think that this more uh bringing more people digital into the at all as such kind open them possibilities to kind as well like look into the financial sector, offer offers. And as in

general like? Well, the such has been like more like digitized than there is less borders for some companies from abroad to come in smaller markets. It means that those who have like digitized themselves during the COVID they have maybe seen some more solutions. I don't know the same in savings investments and like, uh, that the area, some some tools that they now start to see that OK, I'm more digitized so OK. And I can see this tool and maybe I can send these €200 to this bank which is opened or like some solution which is open, I don't know in Spain or in USA versus it was prior to the kovid. So kind of that by by seeing that more people are in the digital way. One is that how to use it on order like a strategy 2030? OK. And also, uh and as I mentioned this like a savings investments here, I think that this is the area which kind of has boomed a bit after the COVID. My guess is because as well, like more people were like more digitized and more solutions could reach them somehow in some ways in different channels. And I don't know that's appeared in front of the Facebook and then somebody clicked on the and ohh yeah I can try it. Yeah. And I believe that competitors also can see that and use these things that kind of that less less so everybody can serve customer from anywhere in the world if they can get the attention. So no need to be locally based.

11. I would say that it's going quite much to discussions in the what are what are the part of our services that actually customers can really do in self serviced way. So can then that kind of brings us, well, the element of education for them. That's how in what portions can we give it to them so that they feel comfortable and when they make financial decisions, of course, like the process is from the bank inside are supporting that and kind of moving to this SDP like straight the process more indigital way which are supporting them. So on the, yeah, I think that this these type of discussions will be more more there around. So kind of how to use this possibility that people are more aware what to do and what to click in digital world so they need more support there. I think that more so, for example, the same virtual assistants like chatbots or. I know that on our side as well, we have integrated in our like official like a channel Internet bank. So it's something that kind of gives again like support for the customers who might have have some kind of a questions on simple things. So they can start interact there versus like we need to involve human and so can that helps as well kind then further on to think that how to allocate our resources in areas which is kind of creating more value to the customers knowing that basic things they can do more and more by themselves.

12. I think that the biggest focus in on on top of what I mentioned that that there are a lot more people who are more comfortable in the kind of work with digital technologies on their own and being more confident in that, uh, some risks on the financial side comes with it because like there are more people who want to maybe make some fraudulent activities in order to get uh attention of yours money from you when you are like on the digital world, when you were in the branch office kind, it was easy to kind of see. Everybody face to face and kind of to see if somebody is like attempting to do some fraud as well. But if you're like becoming more digital, so I think that one one important thing which is impacting outside ourselves as well. So how to be better in different cyber crimes prevention solutions? OK. And then how to boost ability as well to follow

all those new type of digital uh solutions which are popping up and kind of these journeys that some customers are more now being comfortable to do in self service they and how to make sure that kind of that none of kind of fraudsters kind of gets through or kind of how to educate customers so that they are really understanding so kind of when they are interacting with the bank like the bank bank in the real bank and when there might be some kind of critical thinking needed. Uh, because those who are like working with cybercrime, they're also become like a smarter so can this aspect. I think it's like a very, very crucial to balance these like going fully digital and self service to kind of how to balance it as well that to make sure that it's fully safe and the customers can understand that.

4. Interview transcripts from Ericsson

- 1.** Ericsson was founded in 1876 in Stockholm, it is a world leader in the rapidly changing environment of communications technology – by providing hardware, software, and services to enable the full value of connectivity. As an industry and society, Ericsson ensures a sustainable and connected future, because what we do today sets the foundation for what's possible tomorrow. Our purpose and vision set out the power of mobile connectivity to deliver positive change, and the focused role that Ericsson will play in shaping that change to create a better world.
- 2.** From Customers perspectives, Innovation means experimenting and implementing new solutions for product and services that meet Customers' expectations and anticipate the needs in long terms. For Ericsson employees Innovation is a mindset. It is about challenging the way we perform our tasks, to find new and more efficient ways of working. In this regard digitalization and automation play a crucial role to secure efficient processes and tools, and high-performance standards.
- 3.** Employees are encouraged to post any ideas through Ideas Box tool. A team is working behind the tool, to select ideas and support the ideas evolutions in projects for improvement to generate business value for our company.
- 4.** No changes in the business strategy during the Pandemic. About the service deliver I assume some delays in the delivery was inevitable. From employees' perspective as we used to work in virtual team mainly through Microsoft Teams, no major impact.
- 5.** Overall, we improve our capability to work remotely, keep up the Customer relationship, deliver in all circumstances.
- 6.** For sure People Function (HR) has been forced to change rapidly the ways of working, promoting smart working, securing agreement for each employee, implementing tools to track

presence in the office. Real Estate Facility Management, canteen services in particular, suffered the main impact, resizing and reshaping the business.

7. -

8. People resilience, adaptability, ability to work independently and remotely, made the difference.

9. -

10. -

11. Improving the ability to work remotely, we significantly reduced the space-time differences, securing high standards of performance and sustainability in any circumstances.

12. -

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Resümee

Innovatsiooniprotsesside võrdlev uuring: COVID-19 ajastu – kohanemis- ja vastupidavusstrateegiate uurimine
Nazrin Mammadova, Gadim Gadimov

Viimaste aastate globaalprobleemid on olnud omavahel seotud ja see on muutnud ka ettevõtete toimisviise. Selles magistritöös uuriti, kuidas teenindussektori ettevõtted on COVID-19 pandeemia tingimustes oma innovatsiooniprotsesse kohandanud, keskendudes eeskätt innovatsiooni-, kohanemis- ja vastupanustrateegiatele. Töö eesmärgiks oli leida mõned lahendused, mis aitaksid ettevõtetel keerulistes oludes tugevaks ja innovatiivseks jääda. Andmete kogumiseks viidi läbi avatud intervjuud teenindussektori juhtidega mitmesugustest teenindusharudest ning andmeid analüüsiti kvalitatiivselt. Uurimistulemuste põhjal järeldati, et klientide muutunud ootused ja eelistused on äärmiselt olulised teenindussektoris innovatsiooni käivitamisel. Vastupidavamad ettevõtted olid oma innovatsiooniprotsessides seadnud esikohale digitaalsete teenuste pakkumiste arendamise või täiustamise, et olla valmis potentsiaalselt ees seisvatele kriisidele. Läbiviidud uuring aitab teenindussektori keerulist ja mitmetahulist olemust paremini mõista, mis on tähtis selle valdkonna juhtidele, poliitikakujundajatele ja teadlastele.

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