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Institute of Business Development and Infocommunications**

DEGREE PROJECT

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Student's name: **PALMEIRA SABBAG, PAULO HENRIQUE**
Student's registration number: **T008217/FI12904/G**



ÓBUDAI EGYETEM
ÓBUDA UNIVERSITY

Óbuda University
Keleti Károly Faculty of Business and Management

Department of Business Development and
Infocommunications

THESIS ASSIGNMENT

Student's surname, forename (s): Paulo Henrique Palmeira Sabbag

Thesis number: [REDACTED]

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Electrical Engineering

Thesis title: The impact of a pandemic on a corporative strategy

Task description:

1. Present the main literature on the topic!
2. Introduce the implementation of strategies dynamics!
3. Do secondary research on the chosen industry!
4. Formulate the conclusions, suggestions and lessons that can be drawn from the results!

Institutional consultant's name: Péter Földi

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.....
Director of Institute

The Thesis is suitable for submission:

.....
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STUDENT'S DECLARATION

I the undersigned student named PALMEIRA SABBAG, PAULO HENRIQUE (Neptun code: [REDACTED]) hereby declare that the degree project is the result of my own work; I referred to the special literature and the means used in an identifiable manner. The results included in the degree project completed are allowed to be used by the university and the institution announcing the task for their own purposes free of charge, subject to any restrictions on classification as confidential.

Budapest, 12.12.2023.

student's signature

Table of Contents

1 Introduction.....	2
1.2 Goals and Objectives	5
1.2.1 General objectives:.....	5
1.2.2 Specific objectives:	5
2 Processing of specialized literature	6
2.1 Implementation of strategies dynamics	17
3 Own Research.....	21
3.1 Introduction.....	21
3.2 Consumer behavior	23
3.3 Organizational strategy and dynamic capabilities	27
3.4 Crises and Pandemic from covid-19	31
3.5 Complexity in Supply Chain Management.....	32
3.6 Uncertainty in industrial purchasing processes.....	37
4 Conclusion	45
5 References.....	47
I. ABSTRACT	54
II. ZUSAMMENFASSUNG	54

1 Introduction

How the pandemic affects companies is a question present in the minds of many managers and entrepreneurs, in light of the global health crisis. This pandemic scenario presents a series of challenges and risks for organizations, covering different areas:

1. **Health and safety risks:** Employees, customers and suppliers face the possibility of contracting and transmitting the virus, in addition to dealing with stress, anxiety and depression resulting from the situation.
2. **Risks to productivity and quality:** The reduction of personnel, difficulty in accessing inputs, interruption of supply chains and drop in demand are factors that can directly affect the productivity and quality of products and services.
3. **Risks to profitability and financial sustainability:** Increased operating costs, decreased revenue, loss of market share, customer default and lack of credit are elements that can compromise the company's profitability and financial sustainability.
4. **Legal and regulatory risks:** Non-compliance with current rules and laws, increased legal demands, application of fines and sanctions by supervisory bodies are legal risks that may arise.
5. **Reputational risks:** Loss of trust and credibility from stakeholders, negative exposure in the media and criticism on social media represent significant challenges to companies' reputations.

Faced with these challenges, companies need to implement strategies to manage the pandemic effectively and responsibly. These strategies range from planning and monitoring the situation to communication and the implementation of protection, flexibility and adaptation measures. The main objective is to minimize the negative impacts of the pandemic, ensuring the continuity of the organization's essential activities.

A pandemic can have substantial impacts on an organization's health, safety, productivity, profitability and reputation. Given this reality, it is imperative that companies are properly

prepared to face the different possible scenarios and, thus, minimize adverse effects. In this context, a fundamental strategy is to establish a comprehensive contingency plan. This plan must define clear objectives, assign specific responsibilities, identify actions to be taken and allocate the necessary resources to effectively deal with the situation.

Furthermore, it is essential to maintain constant vigilance over official information related to the evolution of the pandemic. This includes monitoring prevention and control measures, as well as guidance issued by health authorities, to adjust company practices as necessary.

Transparent communication plays a crucial role during a pandemic. Companies must communicate clearly, regularly and transparently with employees, customers, suppliers and other stakeholders. This involves sharing the measures taken by the company and providing recommendations to prevent the spread of the virus.

The implementation of protection measures, both individual and collective, is a priority. This may include the use of masks, social distancing, frequent hand and environmental hygiene, and isolation of suspected or confirmed cases.

Flexibility in ways of working is also crucial. Promoting home office, teleworking, reducing working hours or working hours, and implementing team rotation are practices that contribute to adapting to new conditions and demands, ensuring the continuity of essential activities.

At the same time, the review of internal and external processes is necessary to ensure operational efficiency under the new circumstances. This analysis aims to ensure the adaptation of processes to emerging demands, maintaining the continuity of the organization's essential activities.

Finally, a comprehensive risk assessment is crucial. This involves analysing the financial, operational, legal and reputational risks associated with the pandemic. Finding solutions to mitigate or overcome these risks is essential to preserve the company's financial stability and image.

These strategies represent just some options that a company can adopt in managing a pandemic. However, it is crucial that each organization analyses its specific context and defines best practices to effectively address this challenge.

1.2 Goals and Objectives

The goals and objectives of this research are

1.2.1 General objectives:

1. Conduct a comprehensive review of current scientific literature related to the impact of a pandemic on a company's strategy.
2. Analyse the impact of a pandemic on business strategy, considering changes in management practices, strategic decision-making and organizational resilience.

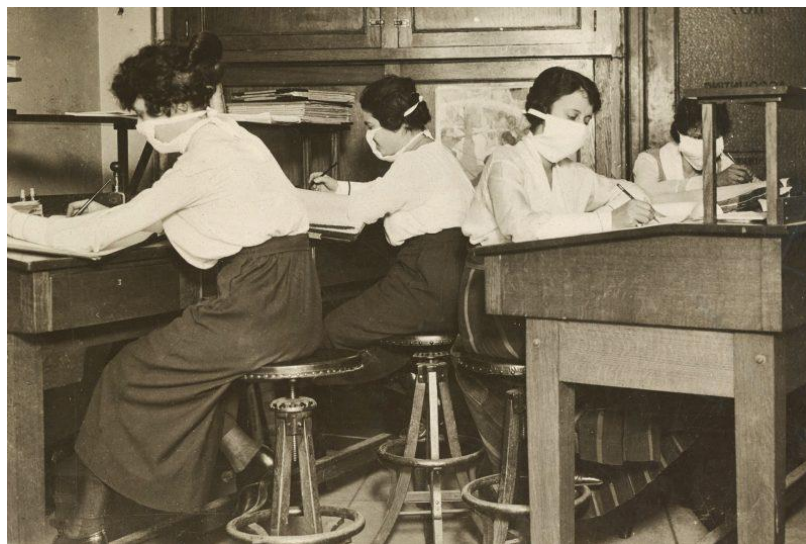
1.2.2 Specific objectives:

1. Investigate how pandemics influence the formulation and implementation of business strategies, highlighting the necessary adaptations to existing strategies and the incorporation of new approaches to dealing with health crises.
2. Assess the role of emerging technologies in transforming business strategies during a pandemic, examining how digitalization, automation and technological innovations affects the agility and sustainability of organizations in times of crisis.

2 Processing of specialized literature

Pandemics have had a profound and far-reaching impact on the world throughout history, shaping the trajectory of societies, economies and health systems. These global health crises, characterized by the rapid and widespread spread of infectious diseases such as the 1918 Spanish flu, the HIV/AIDS pandemic and, more recently, the COVID-19 pandemic, have triggered a series of significant changes in various spheres of human life.

Figure 1: Clerks in masks collecting and classifying statistics during the 1918 influenza pandemic (Virginia Tech, 2023).



From public health implications to economic, social and political consequences, the impact of pandemics has challenged governments, institutions and communities around the world, requiring effective responses, adaptations and continuous learning. In this context, it is essential to analyse the impact of these global events and the lessons that can be drawn to improve society's resilience and preparedness in the face of future health crises.

Pandemics in the past have had a profound impact on companies, shaping their operations, strategies and resilience in the face of global health crises. A notable example is the Spanish flu pandemic of 1918. At that time, many companies were heavily affected, with factories and offices closed due to the high rate of infection among workers. Supply chains have also been disrupted, leading to shortages of raw materials and final products. Companies that relied heavily on labour were particularly impacted, as employees became ill or were required to quarantine.

This pandemic has also highlighted the importance of effective communication in companies. The lack of clear information and coordinated actions hampered companies' ability to respond appropriately. Some companies stood out by adopting health and safety measures, such as providing masks and hand sanitizer for employees.

Furthermore, the HIV/AIDS pandemic in the 1980s also profoundly affected businesses, especially those in the healthcare and pharmaceutical sector. Pharmaceutical companies have had to invest in research and development to combat the disease, and healthcare companies have had to deal with issues of prevention, treatment and stigma related to HIV/AIDS.

In recent times, the COVID-19 pandemic has had an unprecedented global impact on businesses. It has accelerated the adoption of remote work practices, spurred innovation in technology and e-commerce, and highlighted the importance of companies' financial resilience.

In all of these cases, past pandemics have had lasting impacts on business strategies. Companies that learned from these experiences became more agile, diversified their supply chains, invested in technology, and prepared business continuity plans for future health crises. The impact of past pandemics has served as a valuable lesson in the importance of adaptation and preparedness, not just for businesses but also for society as a whole.

The consequences arising from the pandemic and social isolation measures, experienced by the global population in this century, brought changes that transcended national borders. It is estimated that the Covid-19 pandemic affected the world economy by around 90 trillion dollars, being considered the most serious crisis in the last 100 years (Jackson et al, 2020). The Latin American region has been particularly severely impacted. After several years of limited economic growth, Latin American countries found themselves on the brink of implementing drastic social isolation measures, which had significant effects on the availability of products and services, especially in the tourism sector. The restrictions imposed by national authorities varied in intensity, ranging from very strict measures in Peru to more lenient approaches in Uruguay, including notable differences between states, as is the case in Brazil (World Bank, 2020).

The impacts of the crisis were readily perceived in several countries, due to the fact that, in the short term, the consumer sector plays a preponderant role in stimulating economic growth. The ramifications of the total or partial interruption of productive activities have

generated repercussions that will have long-term effects, and the extent of the economic crisis varies from one country to another. According to Abhijit Surya, analyst at the Economist Group (2020), Chile and Uruguay expect a faster recovery compared to other Latin American countries, which will probably take until 2024 to re-establish balance in their economies. According to the World Bank, a 7.9% contraction in Latin America's Gross Domestic Product (GDP) is forecast, while the Organization for Economic Co-operation and Development (OECD) estimates a 6% decrease in global GDP and a decline of 7.6% in the event of a second wave of the pandemic by the end of 2020 (OECD, 2020).

In certain countries, governments have guaranteed a share of wage income for employees who were required to take leave, or expanded their social security systems to assist recently laid-off workers or small business owners (Cowling et al, 2020). According to the International Labour Organization (ILO), fiscal stimuli totalled 982 billion dollars, with 45 billion dollars directed to low-income nations and 937 billion dollars to lower middle-income nations. Although these measures are extremely important, they cannot compensate for the lack of revenue generated by companies and the population in general. Governments have limited resources for assistance and financing, which makes it impossible to fully cover and support the national workforce and entrepreneurship. Countless small businesses were impacted, and millions of people lost their jobs (ILO, 2020).

Following the global health crisis, some countries faced a subsequent political crisis, increasing public insecurity and instability in commercial and financial systems. This had a negative impact on stock markets, caused production systems to come to a standstill and resulted in collapses in consumption, leading to a serious economic crisis (OECD, 2020). As a result of this new scenario, organizations have had to adapt to several significant changes, including the interruption of their operations, losses to old and traditional institutions, disruptions in national and international supply chains, damage to technological and innovative capital, as well as challenges for networks and knowledge flows (Zahra, 2020).

This highly impactful event brought to light the economic, political, social and administrative challenges faced by organizations and nations, putting the solvency capacity of institutions to the test. A survey carried out in the United Kingdom by Cowling, Brown and Rocha (2020) revealed that 8.6% of companies faced the crisis without financial reserves, and only 39% had saved resources in the last 5 years to prepare for a crisis, which suggests that 61% of them could run out of funds. Furthermore, it was found that microenterprises, which

represent the dominant business category in developed and underdeveloped economies, were the most likely to be classified as immediate and medium-term risk. The immediate risk relates to the lack of liquidity, while the medium-term risk indicates the absence of evidence of accumulation of financial reserves. These problems can be worsened by the lack of physical and tangible assets that can be used as collateral to obtain loans (Coco, 2000).

The COVID-19 pandemic triggered a series of impacts that echoed across the world, affecting not only public health, but also economic and social stability. The impact of the virus extended to financial markets, causing a considerable reduction in investor confidence and a restriction on access to credit. These repercussions, in turn, had a significant impact on companies of different sizes, from large corporations to Micro and Small Enterprises (MSEs) (OECD, 2020).

However, it is worth highlighting that MSEs face particularly severe challenges. According to research carried out by the Federal Reserve Bank of New York in the United States, around half of small businesses were operating with less than 15 days of cash reserves. Even MSEs considered financially healthy were vulnerable, with insufficient cash reserves to cover their expenses for a period of more than two months (OECD, 2020).

The situation of MSEs is a global concern, since, in all member countries of the Organization for Economic Cooperation and Development (OECD), Micro and Small Businesses represent a significant portion of the business fabric and workforce. They are the backbone of the economy in many nations. However, the severity of the impact varies across different regions and sectors, and in the areas hardest hit by the crisis, the prevalence of MSEs is even higher (OECD, 2020).

In this challenging context, the economic and social implications of the health and financial crises become evident. The vital role played by MSEs in the global economy requires careful attention from governments and financial institutions in order to support these companies during such a delicate period (OECD, 2020).

As nations seek strategies to recover from these impacts, the question of how to strengthen and protect Micro and Small Businesses becomes crucial. The resilience and adaptability of these companies are determining factors for economic recovery and the reconstruction of the post-pandemic business scenario. Therefore, financial support, training

and assistance measures are essential to ensure that MSEs continue to play their vital role in the global economy and in job creation (OECD, 2020).

In light of the events triggered by the global health crisis, which generated intense trade disputes, the global supply chain is showing signs that it could undergo significant changes. One of these changes under discussion is the possible relocation of the productive force that, for years, was concentrated in China, to other rising countries, such as India, Vietnam, Cambodia and Africa. Furthermore, there is a tendency towards internalization of production chains by advanced economies, such as Europe, the United States, Japan and the Middle East (Zahra, 2020).

If these prospects materialize, it is likely that companies' internationalization patterns will be profoundly affected. This includes changes to the location of your business, the selection of new business partners, the reconfiguration of collaborative networks, adaptations in supply and value chains, as well as the reformulation of resource sourcing strategies. The decision to invest in one's own territories or in neighboring countries can mark the beginning of a process that some call "deglobalization" (Zahra, 2020).

The move toward deglobalization signals a shift in global economic and trade dynamics. As nations seek to strengthen their economic resilience and ensure the security of their supply chains, excessive dependence on a single country such as China has been called into question. Diversifying production and supply sources has become a vital strategy to mitigate risks and uncertainties, especially in times of crisis (Zahra, 2020).

Thus, the consequences of these changes will not only affect companies and their global expansion strategies, but will also have a profound impact on economic and political relations between nations. As economic geography is redesigned, new trade balances and alliances may emerge, challenging traditional configurations of international trade. Therefore, we are facing a moment of transformation that will require agile adaptation and a constant reassessment of business strategies and economic policies (Zahra, 2020).

Despite the growing tendency of companies to return to their countries of origin and seek regionalization, aiming to conquer closer and more stable markets, it is interesting to note that some developing countries, notably Brazil, are committed to making considerable efforts to become members of the Organization for Economic Co-operation and Development (OECD, Brazil, 2020). Furthermore, Brazil played a key role in leading trade agreements, including the

historic agreement between Mercosur and the European Union, as well as the agreement with the European Free Trade Association (EFTA), which encompasses Switzerland, Norway, Iceland and Liechtenstein.

The consolidation of these partnerships is seen as highly likely, especially due to the support of the presidency of the Council of the European Union. This perspective suggests that Mercosur countries are on the verge of a significant expansion of their internationalization policies, which aim to improve the qualifications of their companies to actively participate in global trade, whether through direct or indirect exports to markets around the world. (Agência Brasil, 2020).

Additionally, it is important to highlight that Brazil was chosen to host one of the four offices of the World Tourism Organization (WTO) around the world. This initiative represents a significant step towards the development of the tourism sector in Latin America, as the country begins to play a key role in promoting and fostering this important industry in a diverse region rich in tourist attractions (Agência Brasil, 2020).

Such movements indicate that Brazil is actively working to become a relevant actor in the global economic scenario and in the tourism sector, seeking to strengthen its commercial relations and contribute to economic growth not only nationally, but also regionally and internationally (Agência Brasil, 2020).

Given the encouragement of countries with important economies, such as those in Europe, Japan, the Middle East and India, for companies to localize their investments, a reconfiguration is taking place in the economic geography of global production chains. This scenario opens up new opportunities for the economies of emerging countries, highlighting the urgency in attracting, promoting and retaining export-oriented investments (Gasser, 2020).

Furthermore, a recent significant event was the signing of the world's largest trade agreement, the Regional Comprehensive Economic Partnership (RCEP), which took place in Hanoi in November 2020. This agreement involved ten members of the Association of Southeast Asian Nations, together with China, Japan, South Korea, Australia and New Zealand, with the forecast of gradual elimination of import tariffs over the next 20 years. It is worth noting that these nations represent almost a third of the global population and contribute 29% of the world's Gross Domestic Product (GDP) (Smith, 2020).

In this context, the movement towards the regionalization of production chains, strengthening existing economic blocs and promoting trade agreements at a regional level, offers substantial export opportunities, especially for small and medium-sized entrepreneurs. These entrepreneurs form the backbone of the business fabric of developing countries and represent the driving force for the economic growth of these nations. The strengthening of regional economic blocs and the advancement of trade agreements in regional chains expand opportunities for these companies, allowing them to actively participate in global trade and contribute to the economic development of their countries of origin.

In an extremely brief period, organizations found themselves faced with the need to create methods and tools to adapt to the new scenario. Many companies had to reconfigure their services to operate remotely, adopting home office as a means of complying with safety protocols and ensuring collective health. However, this process was marked by considerable challenges, as many employees were unfamiliar with the technologies required for remote work. Furthermore, several organizations have found it impossible to implement remote work due to the nature of their operations (Joshi et al, 2020).

The lockdown abruptly adopted in most countries took many organizations by surprise, leaving them unprepared to guarantee the continuity of their services. In the initial phase of the pandemic, significant noise in communication between workers and companies was also evident, as the lack of adaptation and clarity resulted in difficulties in adequately guiding employees (Joshi et al, 2020).

Never before have people faced the need to exercise resilience and develop new skills so quickly. Many have had to balance the additional demands of educating and caring for their children while carrying out their professional activities remotely. At the same time, workers in sectors considered essential, such as health, social assistance, security and some in wholesale and retail, were urged to continue working during periods of social isolation, facing different challenges, such as the feeling of insecurity in the face of the imminent threat (Blundell et al, 2020).

The experiences of people who have adopted teleworking and the new technologies that have become widely used represent a significant turning point that can drive changes in the way we view and perform work (Blundell et al, 2020). These transformations in the workforce and work practices can pave the way for new approaches and opportunities in the world of

work. It is certain that new habits will take the place of old customs and old practices will give way to modern procedures, connected to digital tools and new technological solutions.

In the private sector, people responded quickly to the challenges posed by the pandemic. However, it is essential to highlight that the COVID-19 crisis did not spare any institution, including those in the public sector, and demanded immediate responses that, in many cases, implied the need to prioritize the resolution of urgent demands, relegating to the background the order and status quo that had been established until then (Pilkington & Kumar, 2020).

These changes in the way institutions operate also resulted in positive externalities. For example, the pandemic has accelerated the adoption of digital information management platforms, making the use of physical financial documents unnecessary. These innovations have not only increased efficiency in business relationships but also made them more secure (Alabdullah et al, 2020).

With the necessary adaptations, companies began to use training platforms for their employees, allowing them to maintain a healthier balance between personal and professional life, adopting flexible schedules and eliminating the need for constant travel. This generated benefits both for employees, who were able to enjoy a higher quality of life, and for companies, who experienced a reduction in operational costs and an increase in their team's productivity (Joshi et al, 2020).

These rapid and profound changes in the way organizations operate represent a significant transformation in the way work is conceived and carried out. They also point to the need for continuous adaptation and a more flexible approach to work practices, aiming for greater efficiency and improved quality of life in the workplace (Joshi et al, 2020).

The impact of the pandemic on business volume was negative and pronounced. During the month of April, the vast majority of companies (80%) suffered a significant drop in sales, when compared to a situation without a pandemic. Only a very small percentage (around 4% of the total) saw an increase in turnover due to the COVID-19 outbreak.

The negative impact on turnover affected the various size scales in a similar way. By sector, the extent of the losses was particularly high in Accommodation and catering and Transport and storage (98% and 85% of companies, respectively). The drop in sales in April

was also transversal by operating situation, having affected 72% of active companies and virtually all companies temporarily closed. In response to the challenges posed by the pandemic crisis, companies sought to adapt by finding alternatives to their way of operating. In April, around 40% of operating companies chose to adjust their production process and almost 30% changed their distribution channels. The implementation of these strategies was slightly more frequent in companies that showed significant drops in turnover. Industry and energy stands out as the sector with the fewest companies changing the way they operate, while at the opposite extreme are Commerce, Accommodation and restaurants and Information and communication.

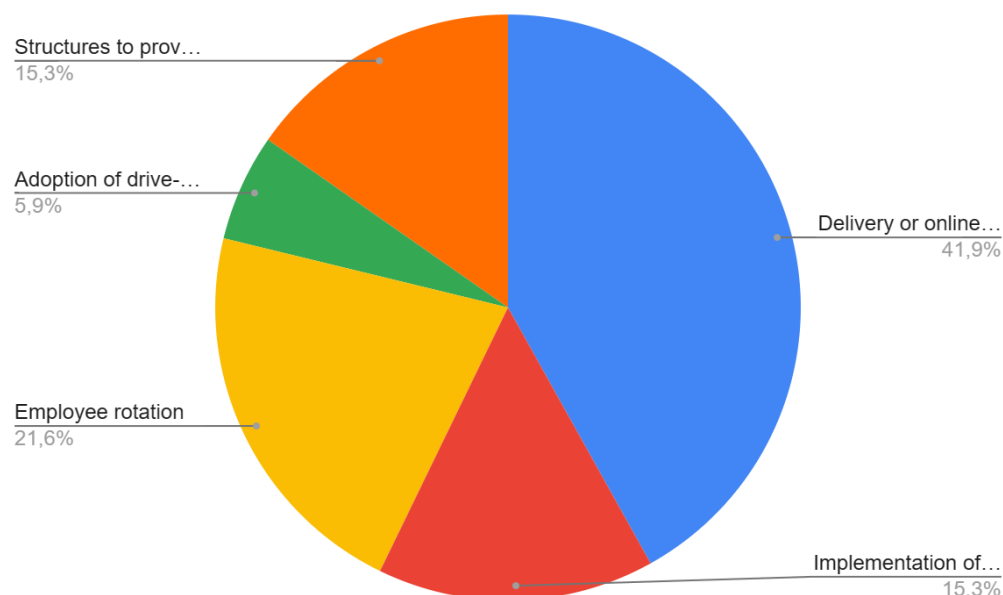
The pandemic shock on activity brings together factors that act simultaneously on the supply and demand sides, making it difficult to identify them in isolation. Box 3 of the Banco de Portugal Economic Bulletin of June 2020 presents a general equilibrium perspective on the evolution of GDP in Portugal (in the period 2020-2022) and concludes that the reduction in 2020 is motivated by shocks originating either from the supply and demand side.

This topic is complex and has been debated in the literature, with no consensus among authors. The combination of effects is recognized by companies that associate the reduction in turnover with the evolution of demand and the restrictions associated with the state of emergency (particularly relevant in the Accommodation and catering sector). These reasons are mentioned together by almost all companies – most of them attributing a very important role to them – illustrating the difficulty in disentangling the different transmission channels of the shock.

The distribution of the variation in turnover confirms that the falls during the state of emergency, in addition to being widespread, were significant. In companies temporarily closed, turnover collapsed, while in operating companies there was a concentration of falls of up to 50%.

According to a survey conducted by the Brazilian Micro and Small Business Support Service (SEBRAE) involving 6,080 Micro and Small Businesses (MSEs) in Brazil, it was found that several of them implemented significant changes to their operating processes in response to the pandemic. These changes included the delivery or online service (41.9%), the adaptation of its structures to provide service in a reduced time (15.3%), the implementation of home office (15.3%) with employee rotation (21.6%), or the adoption of drive-thru systems (5.9%) as it show on figure 2 (SEBRAE, 2020).

Figure 2: Changes in the company's processes in response to the pandemic.



It is important to note that, within the universe of 17.2 million MSEs in Brazil, around 5.3 million of them changed their ways of working during the pandemic period. These changes, in many cases, can become permanent as companies adapt to new emerging needs. Despite the challenges faced, such as the closure of 522.7 thousand companies in Brazil (IBGE, 2020a), the IBGE survey (2020b) revealed that 37.9% of businesspeople assessed the impact of the pandemic as small or not very significant, and 28.6% reported having noticed positive effects on their business.

These results highlight the resilience and adaptation capacity of Brazilian MSEs in the face of adversity, as well as the ability to transform challenges into opportunities for growth and innovation. The pandemic has demonstrated the importance of companies' flexibility and responsiveness to remain competitive in a constantly evolving business environment.

With regard to organizations' responses to environmental pressures, the analysis reveals that some companies were better prepared to mitigate the impact of the crisis. These companies adopted strategies such as diversifying supply chains, reducing risks associated with supply by purchasing inputs from different sources, establishing solid relationships with suppliers to reduce dependence on a single supplier, and creating inventories as a protective measure against interruptions in the supply chain. of supply.

Additionally, these companies have developed agility in their production and distribution networks, allowing them to quickly reconfigure their operations to meet global demands, and have invested in supply chain planning and control solutions. These investments aimed to predict and effectively respond to problems in the supply chain (Deloitte, 2020). These actions demonstrate the commitment of some companies to strengthening their operations and increasing their resilience in the face of environmental and market challenges. The ability to diversify, adapt quickly and effectively plan your supply chains can be a crucial differentiator for the survival and success of organizations in a constantly evolving world.

On the other hand, there are companies that depend on a single supplier for essential products. While this dependence can in some cases offer protection against supply shocks, at other times it can make them vulnerable, especially if these suppliers are located in areas affected by outbreaks or infections (OECD, 2020).

These companies often do not have a complete view of the entire extended supply chain, which prevents them from adequately identifying associated risks. They may lack the systems necessary to understand the status of their inventories, project possible disruptions in the supply of direct materials and optimize production, or even anticipate stockouts of finished products to optimize allocation to customers. Furthermore, these companies may not have flexible logistics networks that guarantee the effective flow of goods in a profitable way (Deloitte, 2020).

This lack of visibility and integrated systems can represent a major challenge for companies facing environmental and market pressures. Excessive dependence on single suppliers or a lack of capacity to effectively manage the supply chain can expose these organizations to significant risks in crisis situations, such as the one we have experienced during the COVID-19 pandemic. Therefore, diversification and improving resilience in the supply chain are crucial for sustainability and business continuity.

Many companies face significant challenges in seeking to improve their processes, with many of them depending on investments and an external environment conducive to entrepreneurship. This is particularly observed in companies located in developing countries, which often require government intervention to overcome structural, regulatory and tax failures, as well as to receive economic and financial incentives that enable the development of their activities both nationally and internationally.

Therefore, it is essential that governments in developing countries act as partners in supporting the growth and expansion of MSEs, creating an enabling environment for entrepreneurship, providing incentives, and investing in digital infrastructure and regulations that facilitate international trade. This support plays a fundamental role in strengthening the competitiveness of these companies in global markets and promoting their sustainable growth.

In the context of the international expansion of Micro and Small Enterprises (MSEs), support for digitalization and internationalization plays a crucial role. This is because all developed economies have already made significant progress in digitalizing their operations. Strengthening electronic commerce (e-commerce) and digital marketing can represent the first fundamental step for these companies to launch themselves on the international stage (Gasser, 2020; Thorstensen, 2020).

2.1 Implementation of strategies dynamics

The path to conquering foreign markets requires the implementation of solid and well-defined strategies. An essential part of this process involves building a positive image of the company and its products, associated with quality and compliance, which generates the credibility necessary to enter markets that previously could be more resistant to new competitors. With the ongoing transformations in global markets, countries that are major buyers are demonstrating greater openness and receptivity. However, to effectively enter these markets, it is essential to meet a series of essential requirements, including:

- A. **Offer attractive prices:** This often requires reducing tariffs to make products more competitive on the international market.
- B. **Adapt to technical and sanitary barriers:** It is crucial that products comply with the specific standards and regulations of each country, ensuring that they meet the required standards.
- C. **Adopt sustainability policies:** The growing emphasis on sustainable practices, such as obtaining green seals and certifications, has become an important factor in conquering international markets.

D. Seek regulatory convergence: The unification of accreditations and regulations to ensure acceptance in the most stringent purchasing countries is essential to facilitate international trade.

Furthermore, it is essential to promote an export culture, which involves active collaboration between companies, government and society. This collaboration is crucial for the development and promotion of the internationalization and export ecosystem. Through partnerships and strategic cooperation, it is possible to overcome challenges and seize opportunities in the global market, strengthening the position of companies internationally. These solid strategies and commitment to quality, sustainability and regulatory compliance contribute to the success of companies in expanding their businesses beyond national borders.

The transformation in the dynamics of global markets creates a window of opportunity for new countries to participate in global production and trade chains. However, it is essential to carefully observe the value chains prioritized in each specific market. Large buyers, such as the European Union, attach great importance to certifications, such as ISO, and show a growing interest in circular (green) economy practices and the digitalization of operations. In turn, Asian countries have led the digitalization revolution in their operations. Although they have established the largest trading bloc in the world, covering around 40% of all trade relationships between these countries and their partner nations, significant opportunities remain for companies from developing countries to establish negotiations and partnerships with these countries. These opportunities open doors for companies in developing countries, encouraging them to adopt more sustainable business practices, seek internationally recognized certifications and invest in digitalization. These strategies not only strengthen competitiveness in global markets, but also contribute to economic development and the expansion of commercial opportunities in a constantly evolving international scenario (Thorstensen, 2020).

Little by little, we are beginning to notice market reactions and even a certain optimism regarding the future on the part of organizations that managed to resist the crisis (Nery, 2020). Although many of them are still dealing with the consequences of this crisis, the most recent research from the OECD (2020) points to an improvement in the confidence of entrepreneurs around the world.

In this new scenario, it is crucial that companies prioritize the search for information and are ready to assimilate the changes that are occurring in different areas, including the economic, political, social, environmental, technical and technological spheres. This must be combined with significant efforts to achieve rapid responses and adapt your organizational structures according to emerging needs.

As organizations adjust to this constantly evolving new reality, adaptability, innovation and resilience become critical factors for long-term success. Those who can effectively adapt to change and take advantage of emerging opportunities will likely be better positioned to meet challenges and thrive in the post-crisis business environment.

The COVID-19 pandemic has had an unprecedented global impact, significantly affecting both public health and the economy. In this challenging context, organizations around the world have been forced to quickly adapt to new realities and develop strategies to face the challenges presented by the crisis. Resilience and innovation have become essential elements for the survival and success of companies.

The crisis generated by the COVID-19 pandemic caused profound changes in global economic dynamics. Latin America was one of the hardest hit regions, facing a sharp drop in economic growth. The economic situation has worsened further due to the need to impose social isolation measures to contain the spread of the virus. The severity of these measures varied from country to country, with some imposing stricter restrictions than others.

The impacts of the crisis manifested themselves in several ways, affecting both the consumption and production sectors. The partial or total shutdown of productive activities has had short- and long-term consequences, with some countries facing deeper and longer-lasting economic challenges than others. Latin America, for example, faced forecasts of a significant drop in Gross Domestic Product (GDP), while the Organization for Economic Co-operation and Development (OECD) warned about the possibility of a second wave of the pandemic, which could further worsen the situation..

In response to the crisis, many governments have adopted measures to protect workers and businesses, including fiscal stimulus and financial support. However, these actions had limitations, as they could not fully compensate for the loss of revenue for companies and the population. This has led to a large number of affected small businesses and increased unemployment.

The crisis was not just limited to the economic sector, but also had political impacts, which in turn affected the commercial and financial system. Political instability generated uncertainty in the markets, paralyzed production and affected consumption, leading to a serious economic crisis in several parts of the world. Additionally, organizations have had to adapt to a range of changes to their operations, including business disruptions, damage to technological capital and innovation, as well as the disruption of national and international supply chains..

In terms of social impact, the crisis has affected not only workers who have been forced to take leave, but also families and communities around the world. Many individuals have faced hardship due to job loss or small business closures, which has led to an increased need for financial support and social assistance.

The crisis also exposed the vulnerability of Micro and Small Enterprises (MSEs), especially in relation to their ability to face crisis situations and maintain the continuity of their operations. Many MSEs operate on thin margins and have limited resources, making them particularly susceptible to economic shocks

The crisis had significant impacts on financial markets, with a reduction in confidence and a decrease in credit. This affected companies of all sizes, but Micro and Small Enterprises (MSEs) suffered a more severe impact. Many MSEs operated with limited cash reserves, which placed them in a vulnerable position.

Faced with these challenges, many organizations needed to quickly innovate and adapt their operations. Adopting remote work has become a crucial solution to complying with public health protocols. However, many companies faced difficulties due to their employees' lack of familiarity with technologies and the lack of contingency plans for the continuity of operations. The pandemic has also highlighted the importance of resilience and adaptation in the face of unprecedented challenges. Organizations that have managed to weather the crisis have demonstrated a remarkable ability to adjust to changing circumstances.

3 Own Research

3.1 Introduction

The need for rapid adaptation in the face of global crises, natural disasters, competition and new technologies is evident for companies (GIROD; WHITTINGTON, 2017). These situations demand an organizational response for business continuity.

Dynamic Capability (CD) theory is an approach that explains these processes of rapid adaptation and organizational change. It highlights organizational reconfiguration and skills development, considering the environment and organizational resources.

Despite progress in understanding this topic over the years, there is a lack of consensus among authors regarding their different approaches (Guerra; Tondolo; Camargo, 2016). While some focus on internal aspects of the organization (Eisenhardt; Martin, 2000; Collis, 1994; Teece 2007), others associate it with the dynamism of the environment (Teece; Pisano; Shuen, 1997; Wang; Ahmed, 2007). There are still those who focus their analysis on the trajectory, mechanisms and devices that configure dynamic capabilities (Zollo; Winter, 2002).

In 2020, a global crisis resulting from COVID-19 and social isolation measures abruptly impacted companies and consumers, requiring immediate adaptation. Faced with this challenge, companies had to design and implement coping strategies.

In this scenario, understanding which organizational reconfiguration strategies, skills and resources were used in organizational management and adaptation becomes crucial. This understanding not only allows for smoother preparation for similar situations in the future, but also provides valuable insights for other companies. Furthermore, an organization capable of improving its skills and optimizing its resources in critical moments can capitalize on these same skills and resources in periods of greater stability.

On December 31, 2019, the first discoveries about the new Coronavirus were made, identifying a family of viruses that causes respiratory infections and results in the disease known as COVID-19, with the first cases detected in China (WU et al., 2020). The disease quickly spread to several countries, with Brazil recording its first case on February 25, 2020, associated with a Brazilian who had visited Italy, a region already affected by the outbreak.

On March 11, 2020, WHO Director-General Tedros Adhanom Ghebreyesus declared the situation a pandemic, with more than 118,000 cases in 114 countries and 4,200 deaths,

urging countries to take urgent measures to suppress and control the spread. propagation (Paho, 2020). These measures, in turn, triggered an economic crisis (Nicola Et Al., 2020).

The recession resulting from the Covid-19 pandemic has the potential to result in spikes in unemployment and loss of income, especially in already vulnerable countries. Similar to the 2008 global financial crisis, this crisis negatively impacts businesses.

Managing global crises, marked by unpredictability and severe consequences, can present significant challenges for companies (Cortez; Johnston, 2020). In turbulent environments like this, dynamic capabilities play a crucial role, providing an agile response to changes and substantially increasing companies' innovative performance (Haarhaus; Lienen, 2020).

It is noteworthy that some authors highlight the relevance of dynamic capabilities in dynamic and uncertain environments (Eisenhardt; Martin, 2000; Zahra Et Al., 2006). These capabilities are based on microfoundations (sensing, seizing and reconfiguring) that guide the behavior of organizations, involving the identification, exploitation and reconfiguration of assets in response to turbulent environments (Felin Et Al., 2012). Furthermore, the importance of robust dynamic capabilities is recognized in interdependent economies subject to rapid technological changes and financial disruptions (Teece; Leih, 2016).

Therefore, the central problem of this research lies in understanding how the perspective of dynamic capabilities contributes to the formulation of coping strategies in the face of the crisis triggered by the COVID-19 pandemic. The objective is to identify the strategies adopted to deal with this crisis, using the lens of dynamic capabilities as an analytical reference.

This work adopts a multiple case study approach, focusing on ten companies located in the Metropolitan Region of Porto Alegre, in the state of Rio Grande do Sul. These companies cover different segments and sizes, including micro, small and medium-sized. It is worth noting that most empirical studies on dynamic capabilities focus on large companies. Therefore, this empirical study, by covering a diversity of sizes and segments, aims to improve the application of the dynamic capabilities theory in little explored contexts.

Furthermore, the relevance of micro, small and medium-sized companies in the Brazilian economy is highlighted (Ribeiro; Correa; Souza, 2012). This study aspires to

contribute to the advancement of research that investigates dynamic capabilities in these categories of companies, especially in uncertain environments.

The empirical contributions of this work have the potential to provide companies, especially smaller ones, with insights and strategies to face pandemics and business crises. By exploring practical cases, this study seeks to offer valuable guidance that can benefit companies of different sizes when faced with challenges as complex as those imposed by global crisis situations.

3.2 Consumer behavior

The limitation in the supply of products and services, resulting from the current situation, has induced an adaptation in the consumption behavior of all social and economic agents, including individuals, companies and governments. In this context, consumers, especially those who play a central role in the economic process and in maintaining the commercial and financial flow, are prone to modify their behavior patterns in the face of adverse situations. This is particularly evident in directly life-threatening events, such as the current pandemic, as such a scenario confronts the basic instinct for survival.

Individual consumer behavior, according to Economic Theory, is based on a set of variables that usually influence their choices. These variables include: i. the price of the good; ii. consumer income; iii. the price of substitute goods; iv. the price of complementary goods; v. consumer preferences and advertising; vi. consumer expectations regarding prices in the future; and viii. tradition and cultural habits (O'sullivan; Sheffrin; Nishijima, 2004).

It is important to note that any changes in consumer behavior have the potential to generate fluctuations in demand for different types of goods, be they products or services. Given this scenario, the significant challenge for companies lies in stimulating demand in order to maintain it at satisfactory levels and, at the same time, developing effective strategies to retain these consumers. This becomes essential when building companies' sales strategies.

It is crucial to highlight that the company must address a set of variables that drive demand (as presented in Table 1), and not just one, to ensure the maintenance of a high market share. Thus, if there is an increase in income, but the company does not implement an effective advertising campaign to stimulate sales, the impact of this increase in income will have

practically no effect on sales growth and, therefore, on increased revenue. This highlights the importance of a comprehensive approach in managing the variables that influence consumer behavior, in order to guarantee significant results in the company's commercial performance.

Table 1: Factors Causing Variations in Demand for Goods

Increase in Demand	Decrease in Demand
➤ Increase in income; ➤ Increase in the price of a substitute good¹; ➤ Reduction in the price of a complementary good²; ➤ Increase in population; ➤ Change in consumer preferences; ➤ Favorable advertising; ➤ Expectation of higher future prices.	➤ Decrease in income; ➤ Decrease in the price of a substitute good; ➤ Increase in the price of a complementary good; ➤ Decrease in population; ➤ Change in consumer preferences; ➤ Expectation of future price decreases.

¹ Substitute good or substitute is a good that can be consumed in place of another.

² Complementary good is a good that must be consumed with another good.

Source: Own elaboration. Adapted from O'Sullivan, Sheffrin, and Nishijima, 2004.

In the COVID-19 pandemic, the essential variables that determine consumption remain valid to this day; What changes is the profile of the goods demanded. People are now looking for products that provide a sense of security in the face of the problem. Notably, these products mainly include hygiene and cleaning items, food, or anything else that allows them to feel safe and protected in terms of their health and life. The shift in consumer behavior reflects the prioritization of needs related to personal safety amid the challenging circumstances of the pandemic.

Table 2: Nielsen's Six Stages of Consumer Behavior (Nielsen Company 2020b).

Proactive	Purchases	Pantry	Stocking up	Restricted	Adapting to
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Health Purchases	focused on proactive health choices.	Preparation	on pantry essentials and non-perishable items.	Living	a restricted lifestyle.
Consumer Habits Change					
Growing interest in general health and well-being maintenance products.	Prioritizing essential products for virus containment, health, and public safety.	Food storage and a wide range of health products.	Increase in online shopping and decrease in store visits.	Restricted shopping trips, concern about price hikes.	People resume daily routines but operate with renewed caution regarding health.
Events related to COVID-19					
Minimal localized cases of Covid-19 typically linked to the arrival of an infected person from another country.	First local transmission unrelated to another location + first deaths related to Covid-19.	Multiple cases of local transmission and multiple deaths related to Covid-19.	Localized emergency actions for Covid-19. The percentage of infected individuals continues to rise.	Massive cases of Covid-19. Communities are forced to close.	Covid-19 quarantines are enforced, and life begins to return to normal.

Besanko et al. (2006) define strategy not as simple adaptive responses to changes in the operating environment, but as the fundamental principles of companies in relation to the environment that surrounds them. However, they emphasize that a successful strategy results from the consistent application of these principles to business conditions that are constantly evolving (Fernandes et al., 2015; Besanko et al., 2006).

The successful strategy, given its innovative nature, is called emergent strategy by Mintzberg et al. (2010). They characterize it as one in which management faces challenges in contemporary strategic administration, because, when the need for reorientation arises in the company, there is an urgency to move from a safe scenario to a less defined future, in which many of the previous practices do not fit. apply more. At this moment of choice (trade-off), managers abandon their beliefs and adapt to new skills and attitudes, which is a requirement for a strategist (Mintzberg et al., 2010).

Rodrigues (2016) highlights that the emerging strategy is essentially reactive, emerging in response to threats and competitions, and the speed of adaptation will sustain competitive agility, as evidenced in the current Covid-19 scenario. Such strategies involve the creation of new configurations between organizations and their environments, behaving as a paradox between a revolutionary and evolutionary vision of change (Pereira et al., 2017).

The sale of products and services, which was previously carried out predominantly in physical stores with in-person customer service, had to migrate almost instantly to the virtual environment, using its own websites, social networks and WhatsApp (marketplace). This movement illustrates the need for emerging strategies in the face of disruptive events, such as the Covid-19 pandemic.

With broader access and increasing availability of the internet and Web 2.0, several marketing channels, in addition to companies' own websites, have emerged as integrated alternatives to e-commerce. These include the use of tools such as Google AdWords, email marketing and Facebook in the context of prospecting customers.

Many businesses, which initially had websites focused on information and advertising, were forced to make adaptations to support virtual sales. As observed by Maia et al. (2019, p. 45), business-to-business (B2B) companies face significant challenges in adapting to this new scenario. Previously, the internet and communication channels were perceived as informative means for customers, mainly because purchases in this market were often individualized, and negotiations were specific to each buyer and supplier in the business-to-consumer (B2C) model.

This new situation requires all actors in the process to rethink the most efficient strategies to keep the economy moving. In other words, it is necessary to innovate, develop and

expand channels that allow sales to be made efficiently, conveniently and safely to consumers. This is essential to maintain financial flow and guarantee the existence of companies in the post-pandemic period.

The impact generated by the Covid-19 pandemic on all of humanity, especially on the Brazilian population, forced companies of all sizes and types of business to quickly adjust to the new reality imposed by this virus.

Thus, innovation becomes essential in this scenario. In a time of crisis like the current one, it takes on a strategic character, because, as highlighted by Tidd and Bessant (2015, p. 15), "innovation depends, to a large extent, on our ability to find new ways of doing things things, as well as to obtain strategic advantage". Therefore, innovation not only allows you to overcome immediate challenges, but also creates new opportunities to gain and maintain a competitive advantage in the long term.

3.3 Organizational strategy and dynamic capabilities

There is no single concept of strategy; there are several meanings, each with its breadth and complexity. Some authors consider goals and objectives as an integral part of the strategy, while others establish clear distinctions between them (Mintzberg, 2006). The origin of the term is associated with military activity, representing the union of forces against the enemy. Over the years, the concept has evolved in several ways, from observing the lack of strategy standards in companies to the incorporation of consultancies in the area, culminating in the formalization of strategic planning and its integration into management.

Kennet Andrews, a professor at Harvard, published a work of great relevance and influence for the dissemination of knowledge about strategy in organizations. He is also responsible for creating the SWOT analysis model, in which the opportunities and threats external to the organization are crossed with its strengths and weaknesses (Villar; Walter; Braum, 2017).

Subsequently, the different levels of strategy emerge: strategic, tactical and operational. Michael Porter introduced the concept of the "five competitive forces", presented the "generic strategy model" and introduced the idea of the "value chain". Edward Mason and Joe Bain are

pioneers in SCP (Structure-Conduct-Performance) analysis, in which company performance depends on the strategies of buyers and sellers (Schneider et al., 2009).

With the publication of Birger Wernerfelt's article (1984), the RBV (Resources-Based View) emerged, which considers an organization's internal resources as responsible for competitive advantage (Barney, 1991). However, an advance in studies occurs when some authors, such as Priem and Butler (2001), argue that the RBV is static in nature and inadequate to explain the competitive advantage of companies in environments of rapid and unpredictable change. From this, the concept of dynamic capabilities emerges, which addresses how resources can be created and renewed in changing environments.

Although some previous references to the concept can be found in the literature, it is after the publication of the seminal article by Teece, Pisano and Shuen (1997) that the view of dynamic capabilities generated a growing flow of research (Barreto, 2010). These capabilities are associated with the ability to integrate, build and reconfigure internal and external competencies in response to the rapid changes that occur in the environments in which organizations operate. The essence of dynamic capabilities and competitive advantage is based on three pillars: processes (routines or patterns of current practices and learning), positions (assets, governance structure, consumer base and external relationships with suppliers and partners) and trajectory (history of decisions and technological and market opportunities) (Teece; Pisano; Shuen, 1997).

It is worth noting that there are different views from different authors on the topic. For some, dynamic capabilities are the organizational and strategic processes by which companies obtain new resource configurations as markets emerge, collide, divide, evolve and die (Eisenhardt; Martin, 2000). Others define it as the organization's ability to create, extend or modify its resource base (Helfat Et Al., 2007). Some refer to capabilities to operate, extend, modify or create common capabilities (Zollo; Winter, 2002). It is also conceptualized as organizational behavior aimed at integrating, reconfiguring, renewing and recreating its resources and capabilities, in addition to improving and rebuilding its key capabilities in response to changes in the environment, aiming to achieve and sustain competitive advantage (Wang; Ahmed, 2007).

In 2007, Teece presented a new concept in which the dynamic capabilities of sensing, seizing and reconfiguring are supported by microfoundations. Sensing refers to detecting and shaping opportunities and threats, involving activities such as research, creation, learning and

interpretation. Investments in research, exploration of markets and technologies, and capturing ideas from employees contribute to this stage (Teece, 2007). Collecting information about customers is also an important basis (Kindstrom; Kowalkoski, 2013). This identification of opportunities and threats allows the organization to develop strategies to meet market trends.

Seizing refers to taking advantage of opportunities. This phase must be addressed through new products, processes or services, with investments in development and commercialization activities. It involves the maintenance and improvement of technological skills and complementary assets (Teece, 2007). It considers decision-making and the execution of technological or marketing opportunities, made tangible in products or services (Maranzato; Salerno, 2018). In addition to these aspects, there must be a business model that supports and explores new opportunities as they arise (Kindstrom; Kowalkoski, 2013). This is a challenging task, which involves investment skills, decision making and the ability to take risks.

Reconfiguring can be understood as recombining and reconfiguring organizational assets and structures. Taking advantage of opportunities can lead to growth and an increase in the company's resources and assets (Teece, 2007). To achieve this, it is necessary to reconfigure and renew routines, management processes and incentives, allowing the company to maintain itself and continue to evolve.

Scherer (2017) examines applications of the microfoundations of dynamic capabilities in the routines of a large company. For example, for microfoundation sensing, visits to customers are carried out, participation in fairs and events, market research, competitor analysis, internal campaigns to generate ideas, and technology development in conjunction with universities, among others. With regard to the seizing microfoundations, these include economic viability analysis, product launch plan, prototype evaluation, assessment of the company's physical and technological capacity, and training plan for employees, among others. As for reconfiguring, it considers multifunctional teams in projects, idea banks, patenting and property rights certifications. Finally, the study concludes that dynamic capabilities contribute to the innovation process.

The operationalization of these microfoundations occurs during the organization's trajectory, based on the definition of its positioning and the consolidation of organizational processes. Dynamic capabilities contribute to innovation, allowing the appropriation of a stock of knowledge that supports the development of other and different capabilities to be used according to the organization's strategic trajectory (Aguilar et al., 2020). The same authors cite

examples of actions in their study, such as encouraging the development of process improvements and new ideas, identifying new technologies and partnerships with universities, contributing to microfoundational sensing. As for seizing, the highlights are changes to products and processes, investments in actions aimed at new projects and the construction of an internal environment of loyalty and commitment. Employee participation in decision-making, knowledge management and information management are practices of the reconfiguring microfoundation (Aguilar et al., 2020).

In relation to the size of companies, multinationals and large companies absorb environmental changes better due to their diversity and variety of products and markets (Frank; Guttel; Kessler, 2017). Smaller companies generally depend more on the skills of the founders, that is, their dynamic management capabilities.

Research on dynamic managerial capabilities focuses on the role of managers in systematically changing the resource base (Helfat; Martin, 2015). Having resources does not, in itself, guarantee that an organization will have superior performance. Therefore, managerial ability to orchestrate resources and gain advantage is necessary. Just as a conductor is essential for the performance of an orchestra, the manager plays a fundamental role in orchestrating resources in an organization, especially in uncertain environments (Chirico et al., 2011).

The literature highlights that micro and small companies may face greater resource limitations, with fewer investment possibilities. However, its reduced structure facilitates the flow of information and proximity to customers and suppliers. It is necessary to establish valuable relationships, oriented towards joint work on innovation and the formation of partnerships and strategic alliances (Morales-Rubiano et al., 2016). Company management plays a crucial role in proposing appropriate dynamics to guide the culture of innovation and achieve goals together.

In this scenario, it is essential to anticipate the future and work to build it. If the company can quickly identify developments in the business environment, it will have more time to respond to positive and negative shocks (Teece; Leih, 2016). Furthermore, a culture of continuous renewal keeps organizations flexible and responsive to deal with uncertainty.

3.4 Crises and Pandemic from covid-19

Understanding and dealing with the external environment is, in fact, a constant challenge for organizations. Uncertainty, in its various dimensions, plays a crucial role in this context. Uncertainty can manifest itself as ambiguity, complexity and risk in specific problems and decision making, influencing business at different levels (Sharma Et Al., 2020). This concept is particularly relevant in the context of the Covid-19 pandemic, where the global spread of the virus has caused a widespread and unpredictable impact on different countries and sectors, making it difficult for companies to predict and control.

In addition to uncertainty, crises, such as the Covid-19 pandemic, can trigger significant changes and pose threats to the survival of organizations. An organization's ability to deal with a crisis is crucial as these events have a profound impact on people, organizations and even at a national level. The capacity for adaptation, innovation and resilience becomes fundamental to face the challenges imposed by crises (Keown-Mcmullan, 1997).

In this context, dynamic capabilities, discussed previously, play a crucial role. They enable organizations to adapt quickly, identify opportunities amid uncertainty, and reconfigure their resources and strategies to face changes triggered by crises. The ability to continuously learn, quickly identify opportunities and be agile in implementing changes are essential elements for survival and success in turbulent and uncertain environments.

The 2008 economic crisis, triggered by the housing credit crisis in the United States, had global impacts, compromising international trade and affecting economies around the world. Considered the biggest economic recession since the Second World War, it had devastating effects on companies (Kuckertz et al., 2020).

In 2020, the COVID-19 crisis emerged, a global disaster that had a significantly negative impact on the development of the global economy. The discovery of the SARS-CoV-2 coronavirus in 2019 led to the rapid spread of the COVID-19 pandemic (Wang Et Al., 2020). The director-general of the World Health Organization (WHO), Tedros Adhanom Ghebreyesus, declared the situation a pandemic on March 11, 2020 (Spinelli; Pellino, 2020).

The pandemic brought with it infection control measures, such as social distancing, which, although necessary to contain the spread of the virus, put pressure on the economy (Spurk; Straub, 2020). Shutdowns, business and school closures, hygiene regulations, social distancing and mobility tracking have become common practices in many affected countries.

Literature on the effects of COVID-19 on the economy is still limited due to the novelty of the situation, but it is clear that the crisis has affected many aspects of people's lives around the world. Remote working became a common practice, demands for domestic deliveries increased, business failure rates grew and business models began to be reviewed to adapt to the challenges posed by the pandemic (Abubakar, 2020).

Given this context, it is crucial that companies understand how to act to survive and ensure the sustainability of their businesses in the face of the impacts of the pandemic. The capacity for adaptation, innovation and resilience becomes even more essential in times of crisis.

3.5 Complexity in Supply Chain Management

A supply chain, as defined by Craighead et al. (2007), it is a supply network made up of different entities connected by the physical flow of materials. These entities, represented as "nodes", range from raw materials to finished products, including transportation and storage at each point in the chain.

Treville et al. (2004) offer another perspective, defining the supply chain as the integration between supply and demand, from the end user to primary suppliers. They highlight the importance of availability of demand information for effective supply chain performance.

By combining the division proposed by Fisher (1997) for supply chains, based on the nature of demand (functional or innovative), with the change in terminology suggested by Vollmann et al. (2000) from "supply" to "demand chain management", Treville et al. propose the concept of "demand chain". This approach emphasizes market mediation to a greater degree than the role of ensuring efficient physical supply of products. In essence, a demand chain places greater emphasis on responding to market needs and supply and demand dynamics.

The inherent complexity of a supply chain highlights the crucial importance of its efficiency to overall performance. Fisher (1997) highlights the need to consider the nature of product demand as the first step in creating a supply chain. Lee et al. (1997) emphasize the complexity of supply chain management, given the challenge of coordinating multiple members, including manufacturers, distributors, wholesalers and retailers.

These authors emphasize that effective coordination between these members is fundamental, and the flow of information plays a crucial role in this coordination. Properly sharing information between different links in the supply chain directly impacts production schedules, inventory controls and product delivery schedules. Efficiently synchronizing these elements is essential to optimizing the performance of the entire supply chain.

Risk management in supply chains has gained increasing importance in recent years, as highlighted by Tsai (2017). This increase in importance is attributed to an increasingly interconnected economy and the increase in disasters, both natural and man-made. Tsai highlights that disruptions in the supply chain can propagate to other members of the chain, causing a cascade effect, as conceptualized by the Ripple Effect.

This observation is in line with the statement by Craighead et al. (2007), who argue that supply chain disruptions are inevitable, making all supply chains inherently risky. Therefore, effective risk management in supply chains becomes crucial to mitigate the adverse impacts of disruptions and ensure the resilience of the system as a whole.

Determining the severity of a disruption in a supply chain is challenging, but, according to Craighead et al. (2007), severity can be assessed by the number of entities (or nodes) within the supply network whose ability to send and/or receive goods and materials may be harmed by an unplanned event. When an unexpected event interrupts the normal flow of supply, companies in the supply chain are exposed to operational and financial risks.

The severity of the disruption directly impacts the scope and effect within the supply chain. Craighead et al. (2007) describe that more serious ruptures have greater devastating potential, significantly affecting the financial results of companies involved in the chain. Therefore, assessing the severity of a disruption takes into account not only the number of entities affected, but also the extent and intensity of the impact caused by the unexpected event on the supply chain.

The COVID-19 pandemic, with restrictions imposed by governments, has had a significant impact on global supply chains. The 'lockdown' and other containment measures have led to the total or partial stoppage of the flow of supplies in many regions around the world. This was evidenced by studies such as that by Saha et al. (2020), which analyzed mobility in India during the initial period of the pandemic.

The aforementioned study revealed that one of the main global exporting countries and suppliers of raw materials and finished products, including pharmaceutical products, had an impressive reduction in mobility, reaching a negative mark of -94.0% in some regions on 04/30/2020. This means that the mobility of the Indian population was practically at a standstill at that time.

This halt in mobility and commercial activities has had ripple effects across supply chains, affecting the production, distribution and availability of products across multiple industries. Businesses have been forced to deal with unprecedented disruption, highlighting the importance of risk management and the need for robust strategies to ensure the resilience of supply chains in crisis situations.

Ivanov and Dolgui (2021) highlight that the pandemic introduced unprecedented and previously unstudied characteristics, such as the long duration of the event interruption, simultaneity in supply chains, variability of intensity and unpredictability of consequences, which they describe as "forward propagations in interruptions and backward, i.e. forward ripples with reverse ripple effects".

In a study focused on how suppliers positioned upstream deal with the uncertain supply of inputs to meet the needs and desires of industrial customers, Ottesen and Grønhaug (2002) highlighted the existence of few empirical studies on industrial purchasing behavior in environments where there is uncertain supply. They emphasized that the further upstream suppliers are, the more exposed to uncertain supply they will be, as opposed to "actors" positioned further down the supply chain, as, according to them, "supply uncertainty will, to some extent, absorbed by upstream actors", thus benefiting downstream actors.

Given this scenario of uncertainty, Habermann et al. (2015) and Zhao et al. (2019) address the human factor as a possible aggravating factor in the impact of interruptions, as, by not understanding aspects related to this, they can enhance its propagation and consequences.

In experimental studies using the Beer Game, Sterman (1989) demonstrated that the limited rationality of decision makers can cause excessive order variability. Chen and Lee (2012), when addressing the main drivers for the bullwhip effect (a concept that will be discussed later), highlight that, in addition to rational causes, there are behavioral factors. They cite a previous empirical study that showed that store managers sometimes smoothed system-generated orders by moving them from peak days to non-peak days.

In the study carried out by Geary et al. (2006), ten causes of the bullwhip effect were identified, such as inadequate control systems (control system principle), demand forecasting unable to reflect reality (demand forecasting principle) and requests made by chain members to protect from events with unpredictable consequences (game principle). They highlight that all of these causes can be eliminated through supply chain reengineering as the learning experience gains momentum, as long as human factors are properly addressed.

Habermann et al. (2015) highlight that supply chain interruptions can spread both upstream and downstream, and their risks are often interrelated, which can lead to the emergence of the bullwhip effect, depending on the intensity of the event. Coppini et al. (2010) attribute the first academic description of this phenomenon to Forrester (1961), who stated that the bullwhip effect (CE) is generated due to the lack of information exchange between supply chain actors and the existence of undesirable interactions between these members. . In the same year, Burbidge (1961) described and graphically represented the EC as being the "effect of the lack of balance between inventory input and output", adding that the opposite, balanced flow, occurs when, successively, the production of a batch ends at the same time as the consumption of the last batch available in stock.

Lee et al. (1997) define the Bullwhip Effect as being "the distortion of fluctuations in demand, which are amplified as they move upstream" - which can be described as the difference between the variation in downstream sales and the variation in orders placed upstream, and as you go up the chain, the variation intensifies (increases). This results, at least in part, from strategic interactions between rational members of the supply chain. Treville et al. (2004) highlight the contradiction between this statement by Lee et al. and Sterman's (1989) conclusion that "the Bullwhip Effect arises from irrationality or misinterpreted feedback."

Lee et al. (1997) also demonstrated that the severity of the Bullwhip Effect is positively related to order delivery times. They also highlight that the Bullwhip Effect is present in several markets and point out four factors as being the main ones for its generation:

- (i) distortions in demand information and delivery times;
- (ii) rationing game;
- (iii) batch of orders; and
- (iv) price fluctuations as potential problem creators.

Shukla et al. (2009) complement these factors with:

- (i) Forecast compounding: the use of statistical forecasting techniques that become more magnified due to non-zero lead times.
- (ii) Excess orders in situations of shortages/capacity bottlenecks at suppliers.
- (iii) Forridge Effect (described by Towill 1997): batches of orders used to achieve economies of scale in production and/or transportation.
- (iv) Fluctuations in demand for price-based promotions.

Finally, Chen and Lee (2012) expand the understanding and present EC as being the result of a combination of important factors such as finite capacity, batch ordering and seasonality.

Another effect that can occur in this scenario is the cascade effect, domino effect or even ripple effect, which is a term coined by Ivanov et al. (2014) to define the phenomenon that arises from the interruption of a supply chain that, instead of remaining localized or even being contained by some component of the chain, positioned immediately after, propagates in a cascade and downstream, affecting the entire performance of this supply network. Dolgui et al. (2018) recall that these impacts may result in reduced revenue, loss of reputation or market share or even other negative implications of an operational, strategic or financial nature.

Over the decades, these disruptions could be observed affecting the most diverse supply chains, to a greater or lesser extent, resulting from different factors. The same authors cite as examples fires in distribution centers, floods and 'tsunamis' in production plants, legal conflicts with suppliers or modal strikes, and even present a vast table describing a series of these events.

Lohmer et al. (2020) note that, in recent decades, the vulnerability of supply chains has grown due to the intensification of collaborations (links), driven by the significant focus on efficiency. This results in disruptions that not only affect individual members, but tend to spread throughout the chain, generating a cascade effect. In response to this phenomenon and seeking greater protection, chain members are investing in improving resilience through the development of redundant resources, 'multi-sourcing', collaboration and flexible inventory capacity. Furthermore, Lohmer et al. highlight that a common strategy for managing these disruption risks is the application of digital technology, with blockchain technology (BCT)

being cited as the main one. Through data analysis, this approach aims to increase visibility, response time and efficiency in the supply chain.

Dolgui et al. (2018) emphasize the crucial distinction between the ripple effect and the bullwhip effect. The first results from disruptive events, while the second is related to operational and recurring aspects. Furthermore, they point out that the cascade effect is associated with high-impact, low-frequency interruptions, and is considered an exceptional risk. In contrast, the bullwhip effect involves low-impact but high-frequency risks.

Ivanov (2020) highlights the peculiarity of an epidemic outbreak, characterized by specific disruption that involves long-term interruptions with total unpredictability regarding their size. This scenario also presents simultaneity in propagation, resulting in a cascade effect, with complete disruption in supply, demand and logistics infrastructure. Hosseini et al. (2020) complement, mentioning that the cascade effect can manifest itself when an interruption occurs in the supplier base and cannot be located, causing its consequences to propagate downstream of the supply chain, negatively impacting its performance.

3.6 Uncertainty in industrial purchasing processes

Asadabadi and Sharpe (2019) clarify the fundamental distinction between risk and uncertainty in procurement processes. "Risk" refers to measurable situations with a clear relationship to probability, while "uncertainty" is present in events that do not have a "natural" or "objective" probability measure, although a probability can be inferred subjectively. Gadde and Wynstra (2018) also highlight that risk represents the lower limit of uncertainty, where risk occurs when the probabilities of possible outcomes can be objectively specified, while uncertainty arises when this is not possible. Furthermore, they mention that some authors refer to uncertainty as "ambiguity". In this context, they define uncertainty as something "not certain and exactly known", emphasizing that companies face uncertainty in relation to "market behavior, supplier deliveries, shareholder attitudes, competitor behavior, future actions of government agents, among others" .

Milliken (1987) highlights a fundamental concept of uncertainty, stating that it is the "perceived inability of an individual to predict something accurately". For him, uncertainty

arises when there is a lack of sufficient information to make accurate predictions or when the individual "feels unable to discriminate between relevant and irrelevant data". In his classification of types of uncertainty, Milliken introduces "effect uncertainty", which refers to "the inability of the individual to predict the nature of the impact of an event on the organization", as is the case with a pandemic. In this study, we will adopt this specific definition of effect uncertainty.

When this "effect uncertainty" component is introduced into a supply chain, companies are compelled to take steps to mitigate it. Dolgui and Ould-Louly (2000) state that one of the strategies used by companies to face uncertainty is the use of safety stocks, although they recognize that this approach involves significant costs.

In practice, if companies choose this approach, they would need to maintain substantial inventories to ensure the continuity of their operations over several periods. However, it is important to consider that inventories are expensive, and maintaining them can ultimately make an operation financially unviable. Dolgui et al. (2005) highlight that inventory controls play a crucial role in companies' production systems. Furthermore, they emphasize that an inadequate inventory management policy can result in both shortages and the existence of unnecessary stocks. Efficient supply planning methods seek to order the exact quantity at the precise time, ensuring that it is available for application at the appropriate time, avoiding stockouts and maintaining a high level of service.

Regarding mitigation measures for random factors, Dolgui and Ould-Louly (2002) highlight three fundamental questions related to planning decisions: (i) what is the ideal time and quantity to be supplied?; (ii) which product to manufacture, when and how much?; (iii) which demands to satisfy, with which products and in what quantities?

The authors mention five works that offer analytical solutions to address the problem of supply planning in the presence of uncertainty. However, they highlight the application of MRP (Material Requirements Planning) planning systems, which perform calculations with purchasing planning suggestions based on parameterizations. However, Dolgui et al. (2005) regret that there are no methods that take into account all possible sources of uncertainty, which makes this a highly complex issue. They add that simultaneously considering uncertain demand and delivery time is the problem that they consider the most complex and least studied.

Chavan et al. (2018) conducted bibliometric research on industrial purchasing processes, defining it as "the mathematics and statistical analysis of bibliometric records" between 1965 and 2015. They compared and analyzed the history of industrial purchasing as a field of study, identifying changes in its structure. The research revealed that only in the late 1980s did academia begin to discuss uncertainty in the purchasing process.

Hong et al. (2018) address uncertainties in industrial purchasing, highlighting uncertainty in demand, price, production, delivery time, risk of interruption and uncertainties that they call "multiple". They also consider the human factor in decision making, stating that in purchasing situations involving multiple items, deciding on acquisitions in a scenario of uncertainty is challenging. They recommend carrying out more in-depth studies in this direction.

In Lee's (2002) conclusion, he suggests that uncertainties in supply and demand can be used as a framework for designing the right supply chain strategy. In contrast, Fischer (1997) addresses uncertainty only from the demand side for innovative products, stating that they are inherent to these products. Ho et al. (2015) introduce a third source of uncertainty, manufacturing uncertainty, related to unpredictable and uncontrollable factors throughout the manufacturing process.

In the context of uncertainty and its consequences, Gadde and Wynstra (2018) highlight the intimate interconnection between uncertainty and purchasing management, influencing perceptions and behavior in relation to the dependence between buyer and supplier. They argue that aspects of uncertainty impact the behavior of companies, increasing the complexity and variability of the work performed by an organizational unit. However, they emphasize that uncertainty is not a problem in itself, becoming an issue when it involves a significant interaction with other elements important to the organization. This expanded perspective of purchasing management intensifies the perception of uncertainty, since the reorientation increases interaction with other actors crucial to the organization.

Gadde and Wynstra (2018) further state that uncertainty "refers to the buyer's inability to evaluate the extent to which different offerings meet performance requirements, while consequences refer to the outcomes associated with the offerings and their relevance to the buying organization". Although most research on this perceived risk framework has been conducted with consumers, it has also been applied in research on purchasing managers' evaluation of suppliers participating in competitive bidding processes." They complement by

highlighting that in “an extensive review of the literature on organizational purchasing behavior, Johnston and Lewin (1996) concluded that perceived risk is one of the main determinants of variations in organizational purchasing behavior processes”. Dealing with the relationship between customer and supplier within the corporate market, Brown et al. (2012) highlight that purchases in the corporate market are more rational, guided by objective attributes within the decision-making process.

To summarize the situation, we faced a pandemic that revealed the weaknesses of companies, which depend heavily on increasingly global supply chains. These chains have experienced significant interruptions at various points, causing several implications in a scenario of great uncertainty. Faced with this complex situation, purchasing managers, together with their teams, must make crucial decisions.

Thus, the presence of uncertainties in supply chains, arising from different sources of supply and demand, makes the purchasing decision-making process excessively complex. These complexities demand structured thoughts, which, in a rationally limited context, increase the risk of deviating from the ideal point. Knowing the impact of uncertainty on business behavior (Gadde and Wynstra, 2018) and considering that fundamental supply decisions are linked to the moment (Webster and Wind, 1972), based on the literature review carried out to date, this study proposes, in the subsequent sections, hypotheses for analysis in this research. The objective is to investigate how the uncertainty generated by the pandemic influences purchasing behavior in the industry. In particular, the hypotheses will address the relationship between uncertainty and the pandemic with order size, order frequency and order mix in the industry.

In a study that addresses the joint procurement configuration, involving both lot size and the choice of supplier and carrier, conducted by Choudhary and Shankar (2013), it is stated that an increase in the size of the purchase order tends to result in a increase in storage costs, despite implying a reduction in costs associated with orders (smaller orders are related to lower inventory costs). The researchers also suggest that, in situations where inventory maintenance costs are high, the product should be purchased from a nearby supplier, in small batches.

Maintaining a reduced stock has as one of its main purposes the preservation of the company's costs, along with mitigating the risk of loss of products due to their expiration date while they are in stock (shelf life control), especially in sectors that deal with with perishable

items, such as the food industry. In this sense, faced with an environment characterized by greater uncertainty, it is expected that the size of purchase orders will be reduced.

In short, the challenges presented by the pandemic have highlighted the vulnerabilities of companies, especially those heavily dependent on global supply chains. The complexity in making purchasing decisions was accentuated by the presence of uncertainties in various sources of supply and demand. The literature review indicated that uncertainty, intensified by the pandemic, may influence the industry's purchasing behavior, affecting the size, frequency and mix of orders.

Furthermore, previous studies, such as Choudhary and Shankar (2013), highlighted that order size can impact storage and ordering costs, and it is crucial to consider these factors in the joint procurement configuration. In sectors such as the food industry, inventory management plays a critical role, aiming not only at financial efficiency, but also at preventing losses due to product expiration dates.

The pandemic context reinforces the importance of more adaptive procurement strategies, with the hypothesis that greater uncertainty is associated with smaller purchase orders. This analysis aims to understand how uncertainty influences purchasing behavior, particularly in relation to order sizes, providing valuable insights for managers facing supply chain challenges during periods of uncertainty, such as those caused by pandemic events.

In addition to the practical implications for purchasing and inventory management, the studies reviewed highlight the need to consider industry-specific factors, such as the perishable nature of products in the food industry. The preservation of costs, combined with the prevention of losses due to expiration dates, makes shelf life control a crucial component in acquisition strategies. The pandemic scenario accentuated this dynamic, requiring an agile and adaptive response from managers, who are faced with unprecedented challenges in managing uncertainty.

Furthermore, the analysis of Hypothesis 1, which investigates the relationship between uncertainty and customer purchasing behavior, provides a valuable perspective on how organizations are adjusting their procurement strategies in response to the challenges posed by the pandemic. Understanding how uncertainty affects order sizes not only contributes to

operational effectiveness, but also opens up space for developing more flexible and adaptive strategies capable of dealing with volatile environments.

Ultimately, the interconnection between uncertainty, purchasing behavior and inventory management highlights the growing need for holistic approaches to supply chain management. The integration of factors such as market uncertainty, industry-specific characteristics and procurement strategies can be crucial for organizations to adapt effectively to challenging contexts, ensuring not only operational continuity but also long-term sustainability and resilience.

Hypothesis 1, which postulates that uncertainty exerts a negative influence on the size of industrial purchase orders, suggests a complex dynamic between uncertainty and companies' acquisition strategies. The argument proposed by Buvik (2000) offers a valuable perspective, highlighting that an increase in the frequency of orders can lead to an increase in coordination efforts between companies. These efforts, which include transaction costs, order scheduling and transportation planning, highlight the need for more careful and coordinated management in environments characterized by uncertainty.

Considering order frequency as a crucial component in the dynamics of coordination between companies resonates with the complexity of logistics management. Buvik emphasizes the importance of establishing arrangements that improve not only the economics of order scheduling but also coordination in upstream relationships. This highlights the interconnection between different elements of the supply chain, requiring strategies that seek to optimize not only acquisition costs, but also delivery efficiency.

Particularly relevant is the approach suggested by Buvik for dealing with demand uncertainty. He argues that under conditions of high uncertainty, specialized coordination arrangements have proven effective in reducing procurement costs and increasing delivery quality. This aligns with Hypothesis 1, which postulates an inverse relationship between uncertainty and purchase order size. In environments where environmental uncertainty is high, more specialized coordination strategies can be crucial to face challenges, reducing costs and improving the quality of transactions.

The study referenced by Buvik on industrial buyer-seller relationships provides concrete evidence of this dynamic. The finding that the level of relational contracting significantly reduced industrial buyers' procurement costs under conditions of high

environmental uncertainty highlights the effectiveness of these specialized strategies. This not only strengthens the argument for hypothesis 1, but also highlights the importance of building solid and coordinated relationships in industrial purchasing management, especially in unpredictable contexts.

In short, the intersection between uncertainty, order frequency and coordination strategies outlined by Buvik offers valuable insights for understanding the complex dynamics in industrial purchasing management. The search for more specialized arrangements and the emphasis on relational contracting emerge as crucial elements to face the challenges arising from uncertainty, providing not only operational efficiency, but also strengthening the resilience of the supply chain in the face of dynamic and uncertain environments.

The second hypothesis would be that the COVID-19 pandemic moderates the relationship between uncertainty and the size of purchase orders made by its customers. The proposed analysis suggests that in periods of high uncertainty, reducing the frequency of orders can be an effective strategy to reduce associated costs. This approach implies a decrease in transaction and transportation costs, resulting in an overall reduction in ordering costs. Furthermore, by keeping a smaller quantity of products in stock, it is possible to reduce storage costs, mitigating the risks associated with Shelf Life and the possibility of losses resulting from expired products.

In scenarios of uncertainty in demand, inventory management becomes even more crucial, as maintaining high levels can substantially increase the risk of product loss. Therefore, reduced order frequency may be a more prudent and efficient strategy in uncertain environments, allowing greater flexibility to quickly adjust to changing market demands.

Hypothesis 2 of this study, focused on the relationship between uncertainty and customer purchasing behavior, specifically measured by order frequency, is particularly relevant in this context. The analysis at two different moments during the pandemic aims to understand how companies are responding to emerging uncertainties. The expectation is that, in periods of greater uncertainty, customers will adopt a lower order frequency as part of a more cautious and adaptive strategy.

This strategic approach highlights the importance of understanding the dynamics between uncertainty and purchasing behavior. As companies seek to optimize their

procurement processes in unpredictable contexts, the ability to adjust order frequency in a manner sensitive to uncertainty can be a significant strategic differentiator.

Ultimately, the analysis proposed by Hypothesis 2 contributes to a deeper understanding of how uncertainty influences not only the size but also the frequency of purchase orders. This understanding is vital for managers and strategists as it provides practical insights into how to adjust procurement strategies to meet the specific challenges posed by uncertain environments, such as those experienced during the pandemic. In conclusion, hypothesis 2 highlights the relevance of adapting acquisition strategies in response to uncertainty, especially during challenging periods, such as those caused by the pandemic. Analysis of the relationship between uncertainty and order frequency reveals that, in times of high uncertainty, reducing frequency can be an effective approach to mitigate costs and manage risks associated with inventory. This more comprehensive understanding of how uncertainty influences customer purchasing behavior provides a solid foundation for formulating more adaptive and context-sensitive strategies, enabling companies to successfully address the dynamic challenges of the business environment. The study therefore highlights the importance of proactive and flexible supply chain management, where adjustability in order frequency emerges as a key component for operational effectiveness in the face of uncertainty.

4 Conclusion

Analyzing the impact of a pandemic on business strategy reveals a complex interconnection between changes in management practices, strategic decision-making and organizational resilience. By meeting the first specific objective, it was possible to identify that pandemics trigger substantial adaptations in business strategies, requiring a critical review of existing approaches and the incorporation of new practices to face health crises.

When delving deeper into the second specific objective, it was observed that emerging technologies play a fundamental role in transforming business strategies during a pandemic. Digitalization, automation and technological innovations emerge as essential tools to boost the agility and sustainability of organizations in times of crisis, providing competitive advantages and enabling efficient adaptation to changes in operational conditions.

These findings highlight the importance of companies not only adjusting their strategies in the face of a pandemic, but also integrating innovative technologies as a fundamental part of their strategic arsenal. The current scenario requires a dynamic and flexible approach, with the ability to respond quickly and proactively incorporate technological solutions to overcome the challenges posed by health crises.

Therefore, understanding the impact of pandemics on business strategies not only emphasizes the need for organizational resilience, but also highlights the importance of innovation and strategic adoption of technologies to effectively address the complexities and uncertainties associated with pandemic events. This integrated perspective is crucial for companies looking to not just survive, but thrive in an ever-evolving and challenging business environment.

Furthermore, the successful implementation of these strategies requires efficient management of internal and external communication. Transparency in information and frequent communication with employees, customers and stakeholders are fundamental elements to ensure understanding of changes in strategies and promote trust in the business environment.

Continuous evaluation of the strategies adopted during the pandemic is imperative. The ability to adapt and adjust strategies based on lessons learned throughout the process is crucial to effectively responding to dynamic situations. Regularly reviewing strategy performance

allows companies to identify areas for improvement, refine their approaches and be prepared to face future challenges.

In summary, analyzing the impact of a pandemic on business strategy not only highlights the need for flexibility and resilience, but also highlights the importance of a proactive and innovative approach. By integrating emerging technologies, adapting existing strategies, and promoting transparent communication, companies can position themselves more robustly to not only face today's challenges, but also to thrive in an ever-evolving business landscape. Continuous learning and the ability to adapt emerge as essential pillars for success in a global context characterized by uncertainty and rapid transformation.

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I. ABSTRACT

The huge effects of a worldwide pandemic on business strategy were carefully investigated in this thesis. Examining the complex relationships between business dynamics and international health emergencies, the study clarifies the various changes that businesses underwent following the pandemic. The analysis emphasizes how the crisis acted as a trigger for a strategic realignment, demanding an immediate review of the organization's goals, risk management strategies, and operational robustness. The thesis redefines the strategic imperatives for a post-pandemic period by examining how successful organizations embraced agility and innovation to navigate through uncertainty. The research provides important insights on the long-term effects of the pandemic on company strategies through a thorough analysis of real-world cases and industry patterns. It also provides strategic frameworks for companies looking to prosper in a constantly changing environment.

II. ZUSAMMENFASSUNG

Die enormen Auswirkungen einer weltweiten Pandemie auf die Geschäftsstrategie wurden in dieser Arbeit sorgfältig untersucht. Die Studie untersucht die komplexen Zusammenhänge zwischen Geschäftsdynamik und internationalen Gesundheitskrisen und verdeutlicht die verschiedenen Veränderungen, die Unternehmen nach der Pandemie durchgemacht haben. Die Analyse unterstreicht, wie die Krise als Auslöser für eine strategische Neuausrichtung fungierte und eine sofortige Überprüfung der Ziele, der Risikomanagementstrategien und der operativen Robustheit der Organisation erforderte. Die Dissertation definiert die strategischen Imperative für die Zeit nach der Pandemie neu, indem sie untersucht, wie erfolgreiche Unternehmen Agilität und Innovation nutzen, um durch Unsicherheit zu navigieren. Die Studie liefert wichtige Erkenntnisse über die langfristigen Auswirkungen der Pandemie auf Unternehmensstrategien durch eine gründliche Analyse realer Fälle und Branchenmuster. Es bietet auch strategische Rahmenbedingungen für Unternehmen, die in einem sich ständig verändernden Umfeld erfolgreich sein wollen.