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Multinationals in the pandemic context: The case of Brazilian companies and China

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Resumo

A crise de saúde pública do COVID-19 e os esforços políticos para combatê-la levaram a consequências econômicas e comerciais significativas (Evenett, 2020). As empresas multinacionais tiveram que se esforçar para responder à nova realidade (Van Assche & Lundan, 2020), principalmente as empresas que fazem negócios com a China (Chen et al., 2021). O papel da China como polo fabril e principal parceiro comercial do Brasil gerou disrupção para diversas empresas do país latino-americano. O fechamento das fronteiras e as medidas de confinamento tornaram o comércio complicado e mais caro (Morgan et al., 2021), e junto com os resultados da desaceleração econômica, os negócios internacionais no Brasil tiveram desafios inegáveis a enfrentar. Desta forma, foram levantadas duas perguntas de partida para investigar os principais desafios enfrentados e as estratégias utilizadas pelas Multinacionais no Brasil para superar a crise do COVID-19. Este estudo exploratório foi realizado por meio de revisão de literatura, além de questionários e entrevistas direcionados a profissionais específicos no Brasil que lidam com a China. Os principais resultados retidos são os principais desafios das empresas brasileiras internacionais em seus negócios com a China e as estratégias por elas implementadas. Assim, este estudo permite que empresas no mesmo contexto reanalisem seu planejamento operacional e evitem futuras disrupções.

Palavras-chave - COVID-19; Brazil; China; Multinational Firms; International Business.

JEL Classification System: F23 Multinational Firms • International Business; F20 General

Abstract

The COVID-19 public health crisis and policy efforts to combat it have led to significant economic and commercial consequences (Evenett, 2020). Multinational enterprises had to strive to respond to the new reality (Van Assche & Lundan, 2020), particularly companies doing business with China (Chen et al., 2021). The role of China as a manufacturing hub and as Brazil's main trading partner disrupted several companies in the Latin American country. The closing of borders and confinement measures made trade difficult and more expensive (Morgan et al., 2021); together with the economic slowdown, the international business in Brazil faced undeniable challenges. Thus, two research questions were raised to investigate the main challenges faced and the strategies used by Multinationals in Brazil to overcome the COVID-19 crisis. In this exploratory study, we used a literature review, questionnaires, and interviews directed at specific professionals in Brazil who deal with China. The key findings reflect the main challenges of Brazilian international companies in their business with China and the strategies they have implemented to overcome them. This study shows how companies in the same context could reanalyze their operational planning and avoid future disruptions.

Keywords - COVID-19; Brazil; China; Multinational Firms; International Business.

JEL Classification System: F23 Multinational Firms • International Business; F20 General

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Chapter 1

Introduction

The coronavirus pandemic (SARS-CoV-2 or COVID-19) resulted in the loss of hundreds of thousands of lives (Abu-Farha et al., 2020). Moreover, the outbreak's effects have been felt widely by the healthcare systems; it also altered all facets of daily life and sparked unprecedented levels of economic crisis and recession anxiety (Nicola et al., 2020). This situation had unprecedented human and social costs and seriously threatened multinational corporations and the ongoing success of their operations (Margherita & Heikkilä, 2021).

The virus outbreak exposed flaws in several institutions, demonstrating that no preparations had been made for dealing with a pandemic (Dobrowolski, 2020). Given this lack of control in unforeseen circumstances, crisis and supply chain management have become recurrent subjects in the literature over the last two years (Seuring & Müller, 2008). Additionally, the international business field has witnessed recurring management techniques, including supply chain resilience, sustainability, and relocation, with a special focus on China's role in the global business environment (Fonseca & Azevedo, 2020).

Since global corporations are interdependent, they were extremely vulnerable to the outbreak's repercussions; that is, “no country is immune to the economic and health impacts of the virus unless it is totally isolated from the rest of the world” (Strange, 2020, p. 456). Many gaps remain in the international business literature, and therefore, global studies demand that researchers employ broad analytical conceptions and integrate external regulatory and geopolitical influences when investigating strategic management (Teece, 2022). The same applies to crisis management, which can no longer be only reactionary and must be incorporated into companies' operational strategies (Leflar & Siegel, 2013).

Disruption, which means “serious deviation from the planned operations” (Yin et al., 2016, p. 49), has different effects across industries and nations. They are particularly relevant in countries with significant international dependence and in sectors that require production intermediaries, such as manufacturing industries (Reiter & Stehrer, 2021). Brazil, for example, is highly dependent of China; the country imported US\$27 billion from China, representing 21.6% of the country's total imports (Cariello, 2020). Furthermore, in 2021, more than one-third of the entire volume exported by Brazilian companies had China as the destination country, representing a growth of 1.7% compared to 2020, reaching 34.1% between January and September (Cariello, 2020). The fragility of interlinked economies and

the associated consequences on supply chains have been emphasized by the COVID-19 crisis, highlighting China's role in the economic and trade environment (Mena et al., 2022).

The turbulence caused by COVID-19 has passed, the way countries deal with the pandemic has been diversified, and most countries are facing the end of health and safety concerns. However, some countries still manage the crises austerely. For example, Brazil is facing new variants and new cases in the form of a seasonal flu, while China, an essential country for Brazil's supply chain, is still dealing with the pandemic strictly and instituted new lockdowns in 2022 through its "Zero Covid-19 Policy".

Such issues have also been reported by the OECD, even though "international trade in 2021 has recovered sharply from the slump in 2020, trade impacts across specific goods, services and trade partners are highly diverse and have been creating pressures on specific sectors and supply chains" (OECD, 2022, p. 12). Therefore, it is critical to investigate how the pandemic has impacted international business and its management, as well as potential actions that arose at this unique moment.

In our analysis, we will concentrate on the relationship between two business partners. We have seen the growth of economic links between Brazil and China since the turn of the century (Cariello, 2020). The growth of the Chinese economy has led to a tremendous increase in business and investment between the two countries (Jenkins, 2012). As a result, in 2009, the Asian giant surpassed Brazil's other main economic partners and, today, is the main importer of oil, soy, and iron ore, as well as the main exporter of manufactured products (Cariello, 2020).

The impact of COVID-19 on international trade relations has been studied by several authors and institutions. For example, according to a survey applied by the Canada China Business Council, due to China's large consumer market and export demand, Canadian companies have sustained and increased their business with China despite the pandemic (Hejazi et al., 2021). However, as Canadian companies recognize the complexities and dangers of this market, they are gradually developing alternative strategies (Hejazi et al., 2021). Another study by Depoux, (2021), in aggregation with the European Union Chamber of Commerce in China, showed that in 2020, the reality of European companies was to seek market alternatives outside China. However, in 2021, many companies had already indicated that they were building resilience in China to guarantee their position (Depoux, 2021). Therefore, the challenges imposed by the pandemic that led to such changes in companies' strategies and the way managers' have dealt with the crisis are the topics of investigation in this research.

1.1. Purpose and delimitations

The objective of this study is to explore how international companies in Brazil were affected by the pandemic outbreak regarding their relations with China, as well as the strategies they used to deal with the crisis. The outcomes of this work may benefit businesses and enhance the academic literature, as it could be used as an aid for future operational decisions. Thus, this thesis intends to explore the impact that this unprecedented disturbance caused by the COVID-19 pandemic had on Brazilian MNEs doing business with China, as well as their responses to the crisis. The following research questions were developed to fulfill the research objective:

Research question 1: “What challenges have the disruption caused by the COVID-19 pandemic posed for Brazilian companies in their business with China?”

Research question 2: “What management strategies did Brazilian MNEs use to the respond to the disruption caused by COVID-19?”

The COVID-19 pandemic has led companies to rethink global business concerns and improve their management strategies (Miroudot, 2020). Consequently, the key obstacles Brazilian companies faced doing business with China during the pandemic can be identified through a deep analysis concentrating on specific variables. At the same time, we will study how managers dealt with the scenario.

1.1.2. Research Structure

The six chapters of this thesis are outlined below, and the dissertation will be conducted based on the following structure. The first chapter comprises the introduction, purpose, and objective of this study, as well as the research structure and the contextualization of the subject. This chapter introduces the research topic by outlining the context of the main theme. We also include our research topic, objective, cited research context, and research questions.

Chapter 2 discusses of the most significant and recent disruptions to global trade caused by the pandemic. In the methodology section, we discuss the choice of methodology and its ramifications, including the delimitations of the data collection process. The results section presents the findings from the survey and interviews. The chapter is organized in line with the reasoning behind our research questions. The discussion chapter analyzes the findings using the literature review as a guide. Based on other authors’ research, we discuss our observations and reconsider how the study answers the research questions. Finally, the conclusion

summarizes the findings and presents the practical and theoretical implications of the present study, as well as its limitations. The chapter ends with suggestions for future research.

1.1.3. Contextualization

The year 2022 marked the 48-year anniversary of the diplomatic partnership between Brazil and China, which began in 1974 (Jenkins, 2012). However, Brazil and China have a century-long history, which began with the Treaty of Friendship, Commerce, and Navigation of 1881, which led to the opening of the first Brazilian consulate in China (in Shanghai) in 1883 (Oliveira, 2004). The history of the two nations' partnership was reinforced in 1993 when China named Brazil its first Strategic Partner in Latin America (Jenkins, 2012). Nevertheless, the most significant milestone in the cooperation between countries occurred at the beginning of the millennium (Jenkins, 2012).

Since their trade became prominent on the global stage, Brazil and China had formed a strong commercial partnership by the turn of the twenty-first century. COSBAN (High-Level Sino-Brazilian Commission for Dialogue and Cooperation, translated) was established in May 2004 during former president Luiz Inácio Lula da Silva's visit to China to stimulate bilateral relations (Chamber of Deputies, 2006). Furthermore, the BRICS (Brazil, Russia, India, China, and South Africa) was founded in 2011 to develop various sectors in the participant countries, such as science and technology, trade promotion, and energy (BRICS Brazil, 2019).

The growth of Brazil's relations with China has been noticeable since 2005 (Trading Economics, 2022). In 2009, China surpassed the former main trading partners of Brazil, namely Argentina and the United States (Cariello, 2020; Jenkins, 2012). China became Brazil's top commercial partner in 2010, accounting for more than 15% of all Brazilian exports and providing more than 14% of its imports (Cariello, 2020; Jenkins, 2012).

The growth of the Chinese population and its demand for commodities was a fundamental factor in the development of the partnership (Jenkins, 2012). China became Brazil's major importer of iron ore and soy, and exports to China increased almost 30 times between 2000 and 2010 (Trading Economics, 2022; Cariello, 2020; Jenkins, 2012).

Furthermore, between 2007 and 2020, China and Brazil expanded their economic ties, intensifying their cooperation beyond import and export. This process continued to increase until 2020, with Chinese companies completing around 180 projects in Brazil, totaling US\$66.1 billion in investments (Cariello, 2020).

Brazil's relationship with China has been a cause of considerable contention (Jenkins, 2012). Although the Workers' Party government established strong ties with China, the

current Brazilian administration, led by Jair Bolsonaro, faces significant challenges regarding Brazil-China relations.

Brazil's current president has often been entangled in national and international political and diplomatic unrest. The expansion of COVID-19 across Brazil intensified the disagreement between Brazil and China. Subsequently, following the speech of former US President Donald Trump, Bolsonaro publicly attacked China in the national media and on his social media, which generated several diplomatic reactions from China.

An example of such a confrontation was the publication of the congressman and son of the president, Eduardo Bolsonaro, on his social networks. The publication read, "Replace the nuclear plant with the Coronavirus and the Soviet dictatorship with the Chinese one [...] once again a dictatorship preferred to hide something serious rather than expose it [...] it is China's fault, and freedom will be the solution" (BBC News Brazil, 2020, translated). The above comment received the following response from the Chinese embassy in Brazil: "Your words are extremely irresponsible [...] which is infecting the friendships between our peoples" (BBC News Brazil, 2020).

In addition to the political disturbance in the relations between Brazil and China, the business community in Brazil also has opposing views on the subject. Despite the formation of the Brazil-China Business Council in 2004 to improve the countries' economic relations, the Federation of Industries of the State of São Paulo and other associations representing the industries requested greater government support given Chinese competition in 2007 (Jenkins, 2012). The conflicting actions demonstrate the complex nature of the expanding relationship between China and Brazil (Jenkins, 2012).

Considering the context, China and Brazil were chosen as the objects of study. However, this study is limited to understanding the challenges that Brazilian companies faced when dealing with Chinese business environment during the pandemic and their adaptations to survive the crisis; this study does not delve into issues of political diplomacy.

Literature Review

The issues raised in this thesis are pertinent to numerous branches of academic research, as well as to business practice. The unique nature of the COVID-19 pandemic demands an interdisciplinary approach because “combining ideas from different areas often leads to new insights that would otherwise be missed or underdeveloped” (Budhwar & Cumming, 2020, p. 441). Therefore, in this literature review we overview how international businesses have been affected by the pandemic and the importance of effectively managing a crisis in a broad framework. While our empirical analysis focuses primarily on the concrete challenges and changes brought about by COVID-19 responses, we believe our findings embody a practical component in the international trade and strategic management literature.

The literature discussed below aids the theoretical framework of the challenges faced by Brazilian companies in their business with China in recent years. It also supports the analysis of the practical management of the crisis by multinationals in Brazil. These theoretical guidelines are a fundamental component to understanding the trade relationship between countries during the disruption caused by COVID-19. By clarifying the main difficulties experienced by MNEs in Brazil during COVID-19, this thesis aims to provide a deep understanding of the consequences of the increasing disturbances to the global trade system and the strategic responses required from international businesses (Curran et al., 2021).

In this section, we overview the literature on the main challenges faced by companies and the effects of COVID-19. This topic is critical because of the of the different impacts the scenario brought and because it is conceivable that viruses will emerge and spread more often as the population grows and lives closer to animals (Donthu & Gustafsson, 2020).

2.1. Covid-19 and International Business

Today, companies operate in an increasingly globalized and integrated environment, and, as a result, international business circumstances have become gradually more unpredictable (Tan & Enderwick, 2006). Furthermore, due to economic, technological, and human uncertainties, crises can occur at any time, limiting companies’ abilities to operate (Herbane, 2010). Consequently, the most common risk aversion strategies put forth in the literature have focused on efficiency and cost structures. These strategies must now be reviewed to account for a constantly changing and uncertain environment.

Global businesses can be affected by a variety of crises or crisis-like events, for example, changes in regulations, trading alliances, and acquisitions (Darling, 1994). However, new forms of risk are unpredictable, occur suddenly, and spread quickly, thus interrupting the operations of companies globally (Tammineedi & RL, 2010; Tan & Enderwick, 2006; Yu & Qi, 2004). That is, risks can no longer be seen only through a specific lens focusing on a country or region or the peculiar difficulties of a company's host's headquarters (Tan & Enderwick, 2006).

The COVID-19 pandemic crisis and measures to control it have altered what is considered normal while exposing emerging threats and challenging the value chain (Ivanov, 2021). Furthermore, businesses now operate on an unprecedented scale under extreme uncertainty (Ivanov, 2021), affecting businesses' operating conditions and even their long-term viability. The pandemic exposes "the dangers of complex global supply chains where any node can become a 'choke point' that threatens to close down the entire network" (Kobrin, 2020, p. 282). However, although risks and crises are generally considered negative (Tan & Enderwick, 2006), studying the challenges that this unique environmental uncertainty provided also allows for an analysis of the strategies applied to respond to the crisis. In the following sections, we analyze the main challenges and risk factors faced by international companies during the pandemic.

2.1.1. The global economic recession's impact on international business

The proliferation of COVID-19 has significantly reduced economic activity and translated into an economic crisis (Brodeur et al., 2021; Ozili & Arun, 2020). As the pandemic rose in developed and emerging economies, the lockdown, economic policymaking, and global tourism restrictions led to large-scale interruptions in economic activity. By the second quarter of 2020, global GDP declined by more than 4.9%, global trade was reduced by 3.5%, and nearly 300 million full-time jobs were lost (Padhan & Prabheesh, 2021). The main affected industries were hospitality, sports, events, and entertainment. The pandemic also affected oil- and import-dependent countries; financial markets, banks, and fintech; and the health and education sectors (Ozili & Arun, 2020).

The global economic recession is projected to affect all regions of the world as a kind of synchronous stoppage, with some regions doing worse than others (Jackson, 2021). The severity of the economic crisis is determined by the intensity of the domestic outbreak, the economy's vulnerability to the consequences of financial stress, the severity of underlying

issues such as widespread poverty, and the extent to which debt levels constrain fiscal responses (Jackson, 2021).

Although China was the epicenter of the disease, the country was the first to announce a return to economic growth since the beginning of the outbreak around June 2020. In 2022, China is still dealing with the economic and health effects of the COVID-19 pandemic. In addition, they are also dealing with sluggish domestic consumption, the slow recovery of export markets, and reliance on government spending to drive growth (Jackson, 2021).

The pandemic is expected to have significant lasting effects on globalization due to increased inequalities within the global economy. Other long-term effects could be increased poverty; intensified populist sentiments, nationalism, and state intervention in the economy; and weakened multilateral institutions (Ciravegna & Michailova, 2022).

These growing global uncertainties, together with rising international transaction costs, have reconfigured global value chains, creating a trend towards a less globalized and more regionally fragmented world economy (Ciravegna & Michailova, 2022). Thus, we analyze how COVID-19 has increased the existing trends towards a less globalized world.

2.1.2. The pandemic's impact on globalization

Globalization emerged to ensure economic growth by obtaining intermediate inputs and selling final goods globally (Sforza & Steininger, 2020). However, COVID-19, as well as other diseases (e.g., the Ebola virus, the Spanish Flu), spread due to modern globalization, which leads to increased mortality rates and economic recession (Mas-Coma et al., 2020; Shrestha et al., 2020). The economic effects relate both to supply and demand. Consumers and investors tend to lose confidence in affected markets, disturbing the demand side; meanwhile, the reduced workforce distresses the supply side (Shrestha et al., 2020).

Even before the pandemic, anti-globalization and protectionist sentiments discourses were growing throughout the world, creating strategic challenges for multinationals (Curran et al., 2021). When US-China trade disputes escalated, thus weakening confidence in the world trading system, COVID-19 highlighted the risks of globalization and foreign-reliant multinational corporations (Curran et al., 2021). In other words, the scenario that has unfolded over recent years has highlighted the role of globalization in the spread of infectious diseases (Shrestha et al., 2020) and the lack of self-sufficiency (Curran et al., 2021).

2.1.3. The pandemic's impact on Supply Chains

In this section, we overview the literature on supply chains and assess the effects of COVID-19 on the normal operations of companies. We address this topic because of the vulnerability added to supply chains with a global network and the focus placed on international networks as the main driver of the global economy during the COVID-19 crisis (Bonadio et al., 2021).

The term “supply chain” relates to the integration of crucial business processes that start with suppliers and end with the final consumer, benefiting all stakeholders (Fonseca & Azevedo, 2020; Lambert & Cooper, 2000). A supply chain rupture occurs when the flow of products or services in a distribution network is disrupted (Ciravegna & Michailova, 2022; apud Ambulkar et al., 2015).

The key drivers of supply chain performance are complexity, workload, design reuse, project type, outsourcing, and technical expertise and knowledge, while the primary causes of unpredictability are consumers, manufacturers, and suppliers (Fonseca & Azevedo, 2020). Furthermore, according to Sawik (2017), four main categories of disruption can occur: interruptions in production, interruptions in supply, interruptions in transport, and fluctuations in demand.

Sodhi et al. (2021) asserted that when demand is steady and predictable, supply chains can be effective or efficient. However, the COVID-19 crisis demonstrated global supply chains' fragility, low resilience, and simultaneous sensitivity to supply and demand (Fonseca & Azevedo, 2020). The insecurity associated with the increased use of sanctions, particularly those originating from China, first affected the supply side of the market, which increased demand as other nations began to implement containment policies (Fonseca & Azevedo, 2020; Wagner et al., 2012).

According to Ivanov (2020), COVID-19, like other epidemic outbreaks, triggered a specific form of disruption defined by three characteristics:

- (i) [the] existence of long-term disruption and its unpredictable scale, (ii) [the] spread of simultaneous disruption in SC (i.e., the ripple effect) and propagation of epidemic outbreaks in the population (i.e., pandemic spread), and (iii) simultaneous interruptions in supply, demand, and logistics infrastructure. Unlike other disruption risks, epidemic outbreaks start small but scale quickly and disperse across many geographic regions (Ivanov, 2020, p. 2).

Examples of the disruptions and complications created by COVID-19 in the regular operation of international trade that impacted the supply chain include tensions in transportation services related to issues with border controls (Bonadio et al., 2021), travel bans, reduced availability of air cargo services because of fewer passenger flights, and longer

border delays for customs procedures because of new health regulations and tighter controls (Bonadio et al., 2021).

However, the pandemic also created an opportunity to better understand the importance of studying supply chains. The literature on this topic focuses on creating strong, resilient, and smart supply chains through decentralization, diversification, multi-sourcing, domestic (short) production, small-batch production, and digitization since low-cost supply chains are frequently unable to adjust to unforeseen changes in supply or demand (Fonseca & Azevedo, 2020; Miroudot, 2020). China, a major exporter of inputs (e.g., raw materials, semi-finished products), was the first nation to impose a blockade, which immediately sparked concern that the supply chains would be disrupted (Bonadio et al., 2021).

2.1.4. Other challenges brought by the pandemic

Countries throughout the world have simultaneously decreased their economic activity through several domestic lockdown and quarantine policies during the COVID-19 outbreak when infection levels plummeted in healthcare systems (Bonadio et al., 2021). Additionally, extreme restrictive measures led to outright restrictions on the sale of medical supplies, the shutdown of ports and factories, and increased costs of exporting and importing goods (Curran et al., 2021).

Even though numerous trade and commerce laws protect international businesses, members of the WTO (World Trade Organization) may implement policies that conflict with an organization's fundamental guidelines if they are "necessary to protect human, animal, or plant life or health," (WTO, 1947, p. 562) as stated in Article XX of the General Agreement on Tariffs and Trade (Curran et al., 2021). Because multinationals are vulnerable to both domestic and international sanctions, they were directly impacted by the extreme measures implemented by several nations to a greater extent than other companies (Curran et al., 2021).

The effects of the pandemic's weakening of the global trading system heightened the US's earlier concerns about the stability of international trade. As a result, these concerns are likely to be raised in the post-pandemic period as well (Curran et al., 2021). In this approach, a deeper comprehension of the effects of the pandemic-related measures is essential for business strategy, as multinationals need to modify their market strategies to the new environment and fortify themselves against additional external pressures (Baron, 1995).

Moreover, the epidemic has emphasized the importance of recognizing the role that nations and their national policies play in the management of multinational enterprises and international supply chains (Curran et al., 2021). Although there was already significant

pressure on geopolitical risk before the pandemic (Curran et al., 2021), this new scenario created uncertainty over international activities. The consequences of this scenario are longer delivery times and fewer flexible contracts that can result from a lack of political trust (Christopher & Lee, 2004).

Companies had to deal with the unforeseen labor shortage due to changes in how people worked and various quarantines (Sodhi et al., 2021). Overall, the rise in COVID-19 cases in numerous nations has led to uncertainty regarding business reopening, laws and regulations, lockdowns and quarantines, political unrest, and supply chain disruption. These factors have seriously disrupted operations, forcing companies in various industries to close (Sodhi et al., 2021).

2.1.5 The importance of managing crises and disruptions

In this section, current theories about business crisis management are investigated to explain how businesses may deal with disasters. The epidemic highlighted the weaknesses of multinational corporations, creating uncertainty about their reliance on external factors for the actual functioning and resilience of their operations (Strange, 2020). It also demonstrated the importance of strategic planning considering the new national health and safety concerns, as well as the changing dynamics of global trade (Curran et al., 2021). The term "crisis management" is often used because it refers to a wide range of conditions that may disturb a firm's normal business flow (Darling, 1994).

Hong, Singh, Elangovan, and Yeon, 2022, asserted that issues and difficulties can arise at any time, yet the COVID-19 pandemic has undoubtedly increased environmental uncertainty. Hence, the literature described here provides a background to crisis management and different strategies used to manage uncertainties.

Change is a determinant of management (Lauer, 2010). Therefore, strategic crisis planning must play an active role in business adaptation, as formal planning is not optimal in unstable environments (Grant, 2003; Chakravarthy, 1982). At this unprecedented time, economic, technological, and human uncertainties present organizations with the possibility that crises can arise at any time, creating situations that can hinder firms' ability to operate (Herbane, 2010).

In general, organizations face business disruptions due to natural disasters, artificial disruptions, logistical challenges, health-related issues, and macro- and micro-economic shocks (Hong et al., 2022; Hiles, 2007). Overall, many of the changes caused by a crisis can be described by certain probabilities and considered in operational plans. However, some

crises are very difficult or even impossible to predict (Yu & Qi, 2004). As a result, the business literature has created several systems that enable enterprises to respond swiftly and reduce the impact of such disruptive events (Hong et al., 2022). Crisis management, in essence, offers a business a planned, orderly reaction to a crisis, this reaction allows the organization to continue its day-to-day operations and, when systematic, establishes a framework for the early detection of a new crisis (Darling, 1994).

According to the literature, to manage a disruption, an organization must follow a two-phase process involving discovery and recovery (Messina et al., 2020). In addition, management theories present different tools that companies can use to prepare for a crisis. First, in the contingency theory, “goals and objectives are defined by constituents of the social system in terms of relevant environmental and resource constraints” (Luthans & Stewart, 1977, p. 184), considering the opportunities, restrictions, and contextual needs (Hong et al., 2022). This necessitates the development of organizational plans that address both current and future business needs, as well as a sufficient grasp of external possibilities and obstacles (Hong et al., 2022).

Thus, by identifying internal vulnerabilities and potential threats, this technique helps managers launch organizational change initiatives (Hong et al., 2022). However, it is difficult to create a backup plan for every event that could result in an interruption, given the breadth of potential future possibilities in a global economy (Yu & Qi, 2004). Although crisis management is not equivalent to contingency planning (the latter concentrates on a particular result), several components of contingency planning apply to crisis plans (Pollard & Hotho, 2006).

Another strategy is to rely on organizational culture processes to coordinate internal and external elements (Hong et al., 2022). Institutional theory suggests determining responsive practices and establishing strategic goals while keeping the business's uniqueness in the market (Hong et al., 2022). A third strategy is based on dynamic capability theory, which claims that disruptions can be foreseen by creating risk response systems with adaptable alternatives for expected future circumstances (Hong et al., 2022). Therefore, organizations can mobilize reserve resources and establish routines before and after disruptive events by managing risk along the entire value chain (Hong et al., 2022).

In general, there are no perfect plans, and organizations must consider their interrelationships with their departments, which are often overlooked when plans are generated (Yu & Qi, 2004). That is, any operational crisis management plan must be subject to dynamic and periodic review to ensure that it remains current, effective, and reliable during

its execution and that it is consistent with management expectations (Tammineedi, 2010; Yu & Qi, 2004). Overall, the most important step in the post-COVID-19 scenario is to learn from failures and their implications by reviewing the crisis and its lessons. Taking such a step helps prevent new crises and improves short-term solutions and long-term implications (Pollard & Hotho, 2006).

The COVID-19 pandemic highlighted the need for risk planning to be among the priorities in organizational planning (Wagner & Neshat, 2012). In addition, companies need to be informed and resilient, given that post-pandemic economic recovery depends on the development of strategic plans and crisis management (Moosavi et al., 2022). Therefore, enterprises that relied on the continuance of current market circumstances have had to drastically rethink their strategies (Ratten, 2020). Moreover, even though few businesses were prepared for the COVID-19 health crisis, firms whose business models emphasize resilience often anticipated and adjusted to market needs despite not having risk management strategies in place (Ratten, 2020).

Considering the above literature review, the pragmatic section of this study will concentrate on gathering data from Brazilian companies regarding the significant challenges they faced during COVID-19 and will examine the strategies used to overcome them. The literature supports by overviewing the general challenges faced by international business, and the main technics used to avoid and handle crisis.

Methodology

The methodology described in this section was carried out to answer the two key research questions and meet the main research objectives:

Objective 1: Identify and describe the challenges companies in Brazil faced in their business with China during the pandemic.

Objective 2: Discover the strategies they used to handle the conditions imposed by COVID-19.

Based on the research questions and objectives, we chose to combine two qualitative methodologies: a questionnaire and interviews. We did this because triangulating information from different approaches increases the confidence in study results (Heale & Forbes, 2013).

As a primary data collection method, questionnaires were chosen to provide data for many different companies (Flynn et al., 1990). Second, structured interviews with companies' managers and analysts generated additional in-depth contextual data (Eisenhardt, 1989). Since the present work is an exploratory study, it makes initial ventures into uncharted areas while researching novel phenomena rather than following the specific goal of testing hypotheses or resolving practical issues (Colman, 2015). Thus, to explain the particular and novel scenario being studied, 56 questionnaires were distributed, and six interviews were carried out.

Therefore, this thesis used an exploratory research approach with a qualitative design. The data were collected from questionnaires and semi-structured interviews following a non-probabilistic and convenient sampling method.

3.1. Questionnaire

A questionnaire (Table 3.1) was created to answer the first research question: "What challenges have the disruption caused by the COVID-19 pandemic posed for Brazilian companies in their business with China?" The questionnaire was administered among a group of 56 representatives of Brazilian companies with active business with China during the last two years (2021/2022), following the pattern of questions applied by institutions in Canada and Europe. The survey includes only closed-ended questions, the objective of each question and its source can be found below in table 3.1.

Table 3. 1 - Questionnaire structure

Survey Question	Objective	Source
Number of collaborators	Contextualization	
Activity time (in years)	Contextualization	
Location	Contextualization	
Activity sector	Contextualization	
Which of the following best describes your company's current business activity with China?	Contextualization	
Rank the top three challenges for your business during 2020 and 2021.	Estimate the main challenges faced by Brazilian companies in 2020/2021	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
Please specify how your business with China has been affected by the coronavirus outbreak.	Estimate the main challenges that the Covid-19 pandemic has created for Brazilian companies	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
How did your company's business with China develop in the years 2020 and 2021?	Estimate the level of perceived challenge	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
In your company's global plan for 2020/2021 versus previous years, how has China's role changed?	Estimate how companies appraised their business with China	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
Is your company considering, or has it considered, moving the current or planned business from China to other markets?	Estimate whether companies intended to change their international strategy	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
If yes, where?	Estimate where companies intend to move in case a new international strategy is implemented	European Business in China Business Confidence Survey, 2020. (European Union Chamber of Commerce in China)
In the past two years, from which of the following sources has your company felt the most pressure related to its business in/with China?	Estimate the main social and political challenges faced by Brazilian companies in 2020/2021	Canada-China Business Survey 2020/2021, 2021. (Canada China Business Council)

Previous research has shown that using the qualitative method allows the interpretation of the meaning of data and concepts, which cannot always be quantified (Queirós et al., 2017). Moreover, Cluster sampling was used, as it was not feasible to compile a list of the elements that make up the population studied (Creswell, 2009), namely, all managers or companies in Brazil that do business with China. Additionally, Companies were identified using commercial groups, organizations, and social networks. In this way, individuals were selected through non-probabilistic sampling, as they were chosen based on convenience and availability while considering that the selected candidates needed to have specific

characteristics as defined in this thesis (Creswell, 2009). Since the study used naturally formed groups, only a convenience sample was possible; therefore, a quasi-experimental procedure was followed (Creswell, 2009).

In other words, Brazilian companies with active businesses in China (Table 3.2) were intentionally sought from a random population, and they were contacted through professional social platforms, such as LinkedIn. Participating individuals had, on average, more than 22 years of experience in partnering with China; thus, they demonstrated substantial experience in collaboration and value creation with China. The characterization of the sample is presented in the table 3.2 below.

Table 3. 2 - Characterization of the sample for the questionnaire

Industry	N° of Employees	Time	Location	Activity with China	Global Gross Revenue
Foreign trade	20	6	Southeast	Import and export	N/A
Services	500	1	Midwest	R&D	N/A
Infrastructure	5	3	South	Import	51–75%
All sectors	80	13	Southeast	Import and export	> 75%
Customs clearance	11	30	Southeast	Operations in China	< 11%
Transportation	38	38	South	Import	11–25%
Agriculture or livestock	5000	69	Southeast	Export	N/A
Distribution	500	20	Northeast	Chinese capital	N/A
Foreign trade	120	3	South	Export	26–50%
Manufacture	50	30	South	Import	< 11%
Agriculture or livestock	400	22	Southeast	Import	> 75%
Services	30	20	Southeast	Import	51–75%
Import and export	310	10	Southeast	Import and export	N/A
Technology	1	1	Southeast	Import and export	< 11%
Foreign trade	150	11	Southeast	Import	51–75%
Textile, plastic, and food	5	20	South	Import and export	51–75%
Metallurgy	1000	60	Southeast	Operations in China	< 11%
Cargo clearance	34	90	South	Import and export	< 11%
Sports	2500	20	Southeast	Import	11–25%
Logistics, legal and customs	15	12	Southeast	Import	11–25%
Technology	20	9	Southeast	Import	11–25%
Agriculture or livestock	170	30	Southeast	Import	51–75%
Transportation	12	20	South	Freight	N/A
Transportation	120	60	Southeast	Import	N/a
Logistics	100	30	South	Commercial activities	> 75%
Transportation	67	11	South	Import and export	< 11%
Agriculture or livestock	2	25	South	R&D	< 11%
Automotive	50	15	Southeast	Import	> 75%
Consultancy	1	15	Southeast	Consultancy	N/A
Import and export	20	15	South	Import and export	26–50%
Import and export	50	1	South	Import	N/A
Consultancy	500	10	Southeast	Import	11–25%
Transportation	10	11	South	Import and export	51–75%
Finance	2	3	South	Import and export	26–50%
Transportation	30	20	Southeast	Import	< 11%
Foreign trade	53	30	South	Import and export	N/A
Consultancy	25	20	Southeast	Import	11–25%
Agriculture	12000	22	Southeast	Export	< 11%
Services	100	6	South	Operations in China	26–50%
Manufacture	850	68	Southeast	Import	< 11%
Transportation	130	37	Southeast	Import	N/A
Services	100	6	South	Operations in China	26–50%
Transportation	100	9	South	Import and export	51–75%
Finance	9	8	Southeast	Import	> 75%
Telecommunication	43000	3	Southeast	Import	< 11%
Telecommunication	50	30	Southeast	Import	26–50%
Import and export	1	8	Midwest	Export	26–50%
Agriculture	650	50	South	Operations in China	51–75%
Construction	2500	82	Southeast	Import	< 11%
Consultancy	13	12	South	Import and export	11–25%
Transportation	5	20	Southeast	Services	< 11%
Manufacture	20	6	Southeast	Import	< 11%
Agriculture or livestock	45	15	Southeast	Import	11–25%
Import and export	15	5	Southeast	Import	26–50%
Import and export	30	20	Southeast	Import	26–50%
Foreign trade	3	7	Southeast	Cargo release	> 75%
Import	8	25	Southeast	Customs advice	26–50%

Due to capacity and availability limitations, the sample of 55 participants was asked to identify possible causes of disruption through an online survey. All participants received the

online questionnaire, which introduced the study and the objectives of the data collection process. Participants then answered the questions, which were organized into three phases. The first phase dealt with the company's positioning in the research topic (Table 3.2). The questions in the second phase addressed the causes of supply chain disruptions in the company's business with China. The questions in the third phase determine possible changes caused by the interruption. As a result, the main causes of interruption in the operation of Brazilian companies with business with China were mapped.

3.2. Interviews

After the questionnaires were applied, semi-structured interviews were carried out to examine the implications derived from the questionnaires. That is, the interviews were intended to capture the perspectives of a similar sample of respondents regarding the management of disruptions due to COVID-19, as well as to potentially add new results or reject developed perspectives. Data saturation was employed, as “the more similar participants in a sample are in their experiences with respect to the research domain, the sooner we would expect to reach saturation” (Guest et al., 2006, p. 76). The participants in this thesis were similar, as they shared the same nationality, company scope, and context. Considering these similarities, six interviews were sufficient to produce a reliable data set.

A second qualitative method was employed to study “things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (Neergaard & Ulhøi, 2007, p. 21). The interviews addressed the experiences of managers representing their companies during the crisis. That is, the method chosen to focus on a delimited time and place (Creswell, 2007) was the semi-structured interview. This method allows “the use of multiple quotes based on the words of different individuals and presenting different perspectives” (Creswell, 2007, p. 18). The structure of the interview is illustrated in Table 3.3 below.

Table 3. 3 - Interview Structure

Interview Question	Objective	Literature
What is your business relationship with China?	Contextualization.	
How was your business with China impacted by COVID-19?	Contextualization.	
How did your business with China react to the pandemic?	To understand the perceived crisis management response and key challenges.	Durach, C. F., Glasen, P. C., & Straube, F. (2017). Disruption causes disruption management in supply chains with Chinese suppliers.
Was your company prepared for this type of scenario?	To understand if the company was prepared with a contingency plan.	Ratten, V. (2020). Coronavirus and international business: An entrepreneurial ecosystem perspective. <i>Thunderbird International Business Review</i> , 62(5), 629–634.
Was there the ability to reduce the consequences of the pandemic?	To better comprehend the functionality of crisis management in the company.	Macdonald, JR, & Corsi, TM (2013). Supply chain disruption management: Severe events, recovery, and performance.
Can you list measures taken by your company to deal with the consequences of this crisis?	To understand what changes were adopted to handle the crisis.	Macdonald, JR, & Corsi, TM (2013). Supply chain disruption management: Severe events, recovery, and performance.
How do you believe that the opinions of society, customers, or the government contributed to the scenario for your business with China?	To understand if there were any disruptions caused by social or political pressure.	Sodhi, MS, & Tang, CS (2021). Supply chain management for extreme conditions: research opportunities.
What kinds of changes do you think could occur in your company regarding crisis planning? Why?	To understand changes in business strategies in response to the pandemic.	Pollard, D., & Hotho, S. (2006). Crises, scenarios, and the strategic management process. <i>Management Decision</i> .
Do you think the COVID-19 crisis has prepared international businesses for future crises?	To understand if the decisions are seen as having a positive impact on the long-term.	Darling, J. R. (1994). Crisis management in international business: Keys to effective decision making. <i>Leadership & Organization Development Journal</i> .

For the sample, individuals whose positions allowed them to share their company's experience during the crisis were identified. Upon being invited, these individuals agreed to participate in the interviews. That is, a non-probabilistic sample was used. The interviews took place in a digital format.

Since the intended interviewees were in Brazil, the interviews were conducted online, owing to the geographic distance and pandemic restrictions. The interviews were conducted between April and July 2022. An asynchronous interview method was applied, meaning the questions were sent to the participants in advance, which allowed them to respond in their

own time and reflect on their answers (Opara et al., 2021). This method removed the need for transcription and made it possible to reach groups with availability restrictions (Opara et al., 2021). In addition, participants provided authorization to share the information from the interviews in the form of citations while using their names and positions. Respondents were informed of the context of the research and the objectives of the interview. Table 3.4 indicates the data of respondents.

Table 3.4: Characterization of the interview sample

Name	Position	Description	Reference
Pedro Rebelo	Partner	Institutional relations, and foreign trade	1
Elton Feijó	Import and export analyst	Customs clearance with Brazilian import companies	2
Emerson Junior	Foreign trade analyst	Branch in China	3
Daniel Marchi	Director	Intermediation of operations between exporters and importers	4
Salete Pilati	Director	Import of products	5
Anonymous	Import and export coordinator	Buyer and supplier capture	6

Qualitative Results

The purpose of this study is to illustrate the major difficulties felt by Brazilian companies when doing business with China in the last two years, as well the strategies applied to deal with the outbreak. This research outcome allowed the creation of a set of data that indicates the main challenges experienced by organizations and how companies in Brazil perceive the business environment in the Asian country. As well as, evaluate the strategies implemented, and the overall management environment during the COVID-19.

4.1. Questionnaires Outcome

The questionnaire was completed by 56 respondents. Considering the target participants of the survey and the need to obtain a satisfactory response rate, it was fundamental to preserve only the questions necessary to obtain a complete picture of the challenges and the confidence of the companies. Answering the first research question is the main goal of the questionnaires.

An online survey platform (i.e., Google Forms) was used to ask participants six questions about the business area and type of collaboration with China (Table 3.2), 3 questions about the challenges of doing business with China during the pandemic, and 3 questions to understand how the respondent's perceived business with China (Table 3.1). The results were analyzed using frequency and multiple variable frequencies in IBM SPSS Statistics (Statistical Package for the Social Sciences).

Participants were asked to rank the top three business challenges experienced in 2020 and 2021, and quarantines related to the COVID-19 pandemic dominated their responses (38 respondents). When doing business with China, respondents also selected uncertainties related to logistics and supply planning (34) and rising raw material prices (32). Another relevant factor was the global economic slowdown (26). The remaining alternatives were listed in the top three challenges relatively rarely: market access barrier and investment restriction (5), the US-China trade war (4), Chinese economic slowdown (2), ambiguous rules and regulations (2), economic nationalism (1), and competition from Chinese state-owned companies (0). Table 4.1 below shows the number of participants that chose each of the alternatives.

Table 4. 1 - Respondents' rankings of the top three challenges faced by businesses in 2020 and 2021

	N	Percent
Quarantines related to COVID-19	38	26.40%
Logistics and supply chain planning	34	23.60%
Rising raw material/commodities prices	32	22.20%
Global economic slowdown	26	18.10%
Market access barriers and investment restrictions	5	3.50%
US-China trade war	4	2.80%
Ambiguous rules and regulations	2	1.40%
Chinese economic slowdown	2	1.40%
Economic nationalism	1	0.70%

Note: Multiple answers were possible.

Participants were then asked to specify how business with China was affected by the Covid-19 outbreak. This question was asked to determine the practical challenges that companies faced that were directly related to the pandemic. The most relevant impact was the inability to meet contractual delivery deadlines due to disruptions in logistics (35), followed by manufacturing delays due to a lack of supplies (28), uncertainty, and an inability to make business and investment decisions (18). Other relevant challenges were increased demand for products/services (14), cash flow challenges (13), and a lack of staff or layoffs (9).

Regarding the effects of quarantines and travel restrictions, 14 of the respondents felt challenged by the restrictions/risks of business travel to China, while travel to Brazil was not often cited as a challenge (2.8%). Restrictions and risks of travel within the territories of Mainland China and Brazil, the results were selected as challenges by 2.1% and 2.8% of participants, respectively. Participants also described the lack of containers, space on ships, lack of equipment, and increased freight prices as challenges (these are included in the "Other" option). Table 4.2 below shows the number of participants that chose each alternative.

Table 4. 2 - Respondents' rankings of the impacts directly related to COVID-19

	N	Percent
Inability to meet contractual delivery deadlines due to disruption in logistics	35	24.30%
Manufacturing delays due to lack of supplies	28	19.40%
Uncertainty and inability to make business and investment decisions	18	12.50%
Increased demand for products/services	14	9.70%
Restrictions/risks of business travel to China	14	9.70%
Cash flow challenges	13	9.00%
Staff shortage or layoffs	9	6.30%
Restrictions/risks of business travel to Brazil	4	2.80%
Restrictions/risks of business travel within Brazilian territory	4	2.80%
Restrictions/risks of business travel within Mainland China	3	2.10%
Other	2	1.40%

Note: Multiple answers were possible.

When asked to select sources of pressure related to their business in or with China in the last two years, 25% of respondents selected “none of the above.” Furthermore, only 5.4% responded that they felt pressured by the Brazilian government, while 14.3% felt pressured by the Chinese government. However, the main concern of the Brazilian business community is pressure from clients or consumers (28.6%). Others said that both Brazilian (7.1%) and international (8.9%) media were sources of pressure during 2020 and 2021. In addition, 7.1% of respondents named Brazilian public opinion as a source of pressure, and 1.8% felt pressure from multilateral organizations.

Table 4. 3 - Respondents' rankings of the sources of pressure related to business with China

	N	Percent
Customers and/or consumers	16	28.60%
None of the above	14	25.00%
Chinese government	8	14.30%
International media	5	8.90%
Brazilian public opinion	4	7.10%
Brazilian media	4	7.10%
Brazilian government	3	5.40%
Chinese public opinion	1	1.80%
Multilateral organizations	1	1.80%

Note: Multiple answers were possible

Overall, 53.6% of respondents responded that doing business with China has become more difficult, 41.1% suggested that the business environment has remained the same, and

5.4% felt that doing business with China has become easier. However, more than two years after the outbreak of COVID-19 and with the opening of business borders, 25% responded that the Chinese market has the highest priority, while 41.1% responded that the pandemic has not changed the priority given to China.

Table 4. 4 - Company's perception of business with China development in 2020 and 2021

	N	Percent
Easier	3	5.40%
No change	23	41.1%
Harder	30	53.60%

Most companies participating in the study (73.2%) reported that they did not consider moving their current or planned business from China to other markets.

Table 4. 5 - Respondents intention of moving their business away from China

	N	Percent
Yes	15	26.80%
No	41	73.20%

Of the 26.8% who have considered or are considering moving their business, the most significant result was that 11 participants stated they would move their business from China to Europe, while 6 respondents showed interest in moving to Latin America. Other destinations had less significant responses: North America (3), Pacific Asia (3), South Asia (3), Middle East (2), Southeast Asia (2), and Africa (0).

Table 4. 6 - Respondents' ranking of where they would move their business if out of China

	N	Percent
Europe	11	35.50%
Latin America	6	19.40%
North America	3	9.70%
South Asia	3	9.70%
Pacific Asia	3	9.70%
Southeast Asia	2	6.50%
Middle East	2	6.50%
None of the above	1	3.20%

Note: Multiple answers were possible.

A significant number of respondents expressed optimism about the future of their organization's Brazil-China business (69.6%). The results identified the potential for Brazil's strong external relations with China to continue and that these relations are highly exposed to risks related to logistics and the supply chain. Only 8.9% of respondents reported feeling pessimistic about their business relations with China after 2021, and 19.6% declared neutrality towards this market.

Table 4. 7 - Respondent's perception of future business with China

	N	Percent
Optimistic	39	69.60%
Pessimistic	5	8.90%
Neutral	11	19.60%
N/A	1	1.80%

The survey results demonstrate the main challenges experienced by companies in Brazil while doing business with China during the COVID-19 pandemic. The results demonstrate that most respondents had problems with supply chains and logistics. However, most enterprises do not intend to move to other markets, and they feel optimistic about their business with China. The survey results also highlight that despite political disturbance between the countries, most companies do not feel political or social-related pressure.

4.2. Interviews Outcome

The interviews had the main purpose of answering the second research question: "What crisis management strategies did Brazilian MNEs use to respond to the disruption caused by COVID-19?" Therefore, it was necessary to understand how the companies dealt with the COVID-19 crisis through their management strategies while doing business with China.

The interviews were conducted in Portuguese with Portuguese-speakers Brazilian professionals, the outcomes had to be translated from Portuguese to English. The goals were to interpret the findings of the six interviews conducted, understand the issues and changes at stake in the business in Brazil on the Chinese market or dealing with China since the COVID-19 crisis first began, describe the difficulties lived by multinationals in Brazil doing business with China during COVID-19, explore the management efforts made by such businesses to overcome the challenges during the Covid-19, and reveal how managers and business owners envision and perceive the learning provided for a post-pandemic era.

The primary barriers imposed by COVID-19 to multinational Brazilian companies' business with China were investigated by asking the following question: "How was your business with China impacted by COVID-19?". Challenges related to logistics were mentioned by all participants. Specifically, Interviewee 4 mentioned that "the main challenge during the pandemic period and post-pandemic was logistical and cost-related." Moreover, comments about imports and exports (which were also related to logistics) were the second most often mentioned theme. For instance, Interviewee 2 stated that "the volume of imports has drastically reduced [...] especially in times of quarantine and lockdowns in Brazilian and Chinese cities." Furthermore, cost-related, and financial issues were related to imports and exports: "Due to the financial impact, the company could no longer carry out imports in the volume it would like" (Interviewee 6).

Respondents explained how the COVID-19 situation affected their firms' business relations with China and how they reacted to those challenges in answering the question, "How did your business with China react to the pandemic?" The most mentioned effect was related to logistics. Interviewee 3, for example, said, "We changed many procedures to adapt to the scenario we had. For example, we started to send some products through the air as an alternative to the sea route."

Moreover, looking for business operations diversification was mentioned by multiple participants. Interviewee 1, for example, said, "The advantage of working with China is that there is a wide range of possibilities for trade; everything can be bought and sold. We suspended operations in commodities and products that we imported to focus on hospital products, which was the primary need. The company is focused on developing the analysis department, considering the greater flexibility allowed in the area." The answers to this question elucidated companies' plans to adapt logistics and business strategies to fit the new environment marked by supply-chain disruption.

After the company strategy was understood, the following question was asked: "Was your company prepared for this type of scenario?" In essence, this inquiry was asked to comprehend whether the strategies were part of a contingency or crisis management plan or part of a reactionary approach. All the participants agreed that their companies were unprepared for the disruptive scenario.

The next question asked the interviewees, "Was there the ability to reduce the consequences of the pandemic?" Even though five of the six respondents agreed that it was possible to reduce the consequences in their firms, four participants stated that their business with China has remained affected by the disruptions caused by the COVID-19 pandemic.

The main strategies adopted due to the COVID-19 pandemic in the companies studied were identified by asking the following question: “Can you list measures taken by your company to deal with the consequences of this crisis?” The primary adaptation identified by the interviewees was related to the need to adjust stakeholders' expectations. Such adaptations were parts of companies' immediate reactions to several interruptions in operations. Participants mentioned that their companies had to "prepare the mind and the company for a longer period of scarcity" (Interviewee 4) and "give reliable updates to customers" (Interviewee 6). Moreover, interviewees also suggested that changing their strategy helped them survive the crisis. For example, Interviewee 1 stated that "there is a universe of possibilities involving China and Brazil. There are ways to work and earn money regardless of the imposed reality." Furthermore, Interviewee 3 said, “We adapt by making changes in logistics, especially in transport modes, so that our cargoes reach their destination” (Interviewee 3).

Moreover, we tried to understand whether the opinions of society, customers, or the government impacted companies. Participants showed disagreement, as 50% said there were no such impacts. For example, Interviewee 1 suggested that “in the private sphere, the Brazilian government's attempt to demonize China did not affect business with the country. For example, many entrepreneurs may speak ill of China on their private social networks, but they continue to sell or buy from China. The market logic is very beneficial with China, and there are no viable alternatives on the international stage.” Participants 1, 2, and 5 agreed that there was no impact in the private sector.

However, the other 50% of the participants had the opposite perspective. Interviewee 3 stated that "society, in general, began to perceive the immense dependence on Chinese products. The understanding was that "everything comes from China." Meanwhile, Interviewee 6 stated that "we had no business-related problems, but colleagues reported that after some speech by the Brazilian government, business with the Chinese became tenser."

In addition, when asked what adjustments they believed their companies could make to crisis planning, the respondents mentioned adapting to an online strategy, financial and logistical adaptation, and better dialogue within the company. However, two participants suggested that no change is possible: "It doesn't depend on us ... [W]e are always looking for alternatives for new markets and new products." (Interviewee 5).

Finally, when asked, “Do you think the COVID-19 crisis has prepared international business for future crises?” respondents disagreed, as 50% said yes, and the other 50% said no. Those who responded “yes” commented, for example, that "with the crisis, several

businesses had to find ways not to die during the crisis, [and] these lessons can be used in other crises" (Interviewee 1). those who felt the crisis did not prepare their companies' international business for a future crisis claimed, for instance, that "the biggest concern still seems to me to be with the reaction and not with the prevention in general, with certain exceptions" (Interviewee 5).

These responses demonstrate that companies in Brazil have developed various new strategies to handle the disruptions caused by the COVID-19 pandemic and that the scenario presented a great opportunity for them to rethink their approaches. The results show that most respondents agree that the field of logistics was the main problem when doing business with China. However, a firm conclusion could not be reached in terms of whether the pandemic has prepared companies for future crises. These interview results also show that the disruptions caused by the pandemic still affect most companies and need to be further studied.

Discussion

This chapter critically evaluates the findings considering the research questions. Specifically, this section details the challenges multinationals in Brazil have encountered when conducting business with China during the COVID-19 crisis and the strategies they used to overcome this unique context.

In different countries where a similar study was applied (e.g., Canada and Europe) the results show that the major challenges faced were related to mobility restrictions, reduced development activity, supply chain and shipping challenges, decreased demand, manufacturing delays, shortage of supplies, and disruptions to logistics (Depoux, 2021; Hejazi et al., 2021). In Brazil, our results show a similar scenario, the 5 more selected challenges were, logistics disruption, manufacturing delay due to lack of supplies, uncertainty to make investment decisions, increased demand, and mobility issues to travel to China. These comparisons show that multinational companies globally had alike issues during the last two years.

Moreover, the main overall challenges of 2020 and 2021 were, according to the respondents, quarantines related to COVID-19, logistics and supply-chain planning, rising material and commodity prices and global economic slowdown. Results similar to European companies that rated COVID-19 and economic slowdown as their main issues. According to Sawik (2017), there are four categories of supply chain disruptions (i.e., interruption in production, interruption in supply, interruption in transport, and fluctuations in demand), the results show that Brazilian companies experienced all the four categories.

Thus, the results from the questionnaires answer research question 1. We can state that, similar to other countries, in Brazil, supply systems have been severely damaged by the COVID-19 (Chowdhury et al., 2021) probably leading to lack of supplies, increased prices and demand and manufacturing delays, causing an overall difficulty in making business decision. According to Ozili & Arun, 2020 and Brodeur et al., 2021, these challenges were a result of the reduced economic activity and economic slowdown. So, the results agree with the literature that states that the pandemic and the safety measures imposed to control it exposed emerging threats, destabilizing the value chain and creating extreme uncertainty (Ivanov, 2021).

However, different from similar studies, the participants of our questionnaires felt less political pressure, 25% of the participants rated not being pressured from none of the

alternatives given in the study and 28.6% felt the most pressure coming from clients and customers. And, despite all the difficulties faced and business getting harder, according to 53.6% of the respondents, most of the participants don't have the intention of moving their businesses away from China and 69.6% feel optimistic about the future. On the other hand, the results from the interviews are contradictory, 50% of the interviewees mentioned a political impact on their business with China.

Therefore, even though it is not possible to assure the existence of political impact on the management of Brazilian international companies, the general topic remains unclear given the October 2022 presidential elections in Brazil. The context section of this thesis shows the different governmental approaches to the relationship with the Asian country. During Lula's government bilateral relations increased while during Bolsonaro's government several tensions occurred, both now in the presidential election run. This topic is relevant because according to Mari Pangestu, the World Bank's managing director for development policy and partnerships, "The choices policymakers make in the next few years will decide the course of the next decade" (The World Bank, 2022), increasing or dissipating the challenges mentioned above. Nevertheless, despite this plan of uncertainty, the results clearly deny the tendency toward economic nationalism.

The above section answers research question 1, "What challenges have the disruption caused by the COVID-19 pandemic posed for Brazilian companies in their business with China?". In the next section, we will overview how the study relates to the literature, more specifically the suggestion that a less globalized world would be one of the results of the pandemic.

The literature review states a shift in globalization towards economic nationalism. According to Ciravegna & Michailova, 2022, the challenges faced by companies in the last years (e.g., uncertainty caused by COVID-19 and the rising prices) changed the way firms look at the global value chain, leading to a trend against globalization and towards regional economies. Moreover, the literature on the subject states that COVID-19 encouraged a review of the current multinational manufacturing systems (Bonadio et al., 2021; Sarkis et al., 2020), and intensified current tendencies toward an inward-looking state (Curran et al., 2021; Gruszczynski, 2020). However, the results contradict the literature; at least concerning Brazil's business relations with China, less than 30% of participants intended to move away from China, while only six participants planned to move back to Latin America.

Moreover, in the interviews, even though the strategy of looking for other markets was mentioned, the dependence of China was also stated as an impediment to changes in the

supply-chain structure, disproving the tendency of companies to move away from globalization and toward regionalization (Ciravegna & Michailova, 2022).

The next section answers research question 2 “What management strategies did Brazilian MNEs use to respond to the disruption caused by COVID-19”. The literature recommends that companies diversify their supplier bases and restructure their global value chains to emphasize resilience over efficiency (Javorcik, 2020; Fonseca & Azevedo, 2020; Miroudot, 2020).

However, the results show that the overall dependence on China will persist in Brazil despite the effects of COVID-19, while it was unclear if creating crisis management structures would be part of international firms’ future agenda. Overall, few respondents suggested that their companies will search for new markets or partners, and only half of the interviewed said that they can use their experience with COVID-19 to improve their strategies. So, answering research question 2, the most used strategies during COVID-19 in Brazil were based on cooperation and renegotiation at a multilateral level, agreeing with the literature that trustworthiness enhances the willingness of external interest groups to consider negotiation as a course of action (Christen, 2004). At the same time, companies also searched for different operational opportunities. This analysis supports the theory of Khodarahmi (2009) proposing that since global firms operate in a constantly changing world, regular plan updates (and, if necessary, adaptations) are needed.

In conclusion, we identified different situations. Some companies tried to adapt by changing their business and operational strategies, while others used communication and renegotiation to diminish the impacts. The results indicate a reactionary adaptation, meaning the strategies addressed the challenges as they arose, not following any structured plan. Furthermore, it remains unclear if COVID-19 has prepared international businesses for future crises, which may indicate that adaptations to COVID-19 will not change how these companies manage crises. Pointing this gap in management in Brazil is relevant given that the current state of the global economy and other factors, such as climate change, and multiple geopolitical tensions, point to a future that may contain volatility and upcoming international business crises (Jones, 2022).

Conclusion

This research aimed to identify the challenges faced and the strategies employed by international Brazilian companies in their business with China during COVID-19. Thus, we have analyzed this matter having in mind the following research questions: “What challenges have the disruption caused by the COVID-19 pandemic posed for Brazilian companies in their business with China?” and “What management strategies did Brazilian MNEs use to respond to the disruption caused by COVID-19?”.

Based on a qualitative analysis of challenges perception and the practical impact in response to the pandemic shock, the results show that Brazilian multinational companies suffered notably with the COVID-19 crisis when it comes to their business with China. It can also be concluded that the supply chain disruption caused by the safety measures was the main challenge to be faced, while changing operational structures, and good communication were the main strategies considered by companies. Furthermore, both the questionnaires and interviews show that companies recognized and generally assumed that business with China and their international approach is unchangeable.

Nevertheless, it should be noted that some of the challenges faced by the firms could in the future worsen or dissipate. Arguably, because the results are not clear whether international Brazilian companies consider themselves more prepared for future crises than before COVID-19, further research on appropriate action plans that companies in Brazil can apply to their business while doing business with China is needed.

In conclusion, we found that there was significant damage done to multinational companies during COVID-19, primarily in their operations and trade relations, and that the strategies (stakeholders, and operational management), were used based on short-term concerns. So, considering the economic recession fallout together with the war in Ukraine, companies could benefit from this study on the common challenges faced by them and the different approaches used in global management in the country.

6.1. Practical Contributions

This thesis contributes to the literature by highlighting the shortcomings in crisis management in Brazilian multinational corporations. In this way, it warns businesses with a strong global presence to pay closer attention to any lessons that might have been learned during COVID-19 and use them to better prepare their reactions, especially to the increasingly dynamic and

uncertain global environment. To do this, businesses that rely on global trade or supply chains should concentrate on occurrences that impact their everyday operations, such as border closures or modifications to laws and regulations. COVID-19 has demonstrated that while certain events may not directly affect a nation, the repercussions are unavoidable.

Managers must encourage a constant adaptation attitude. The difficulty of dealing with the global business environment increases every year, especially among MNEs dependent on China. Thus, businesses that do not acknowledge the changing environment will not be able to create better prospects or be ready for future crises. If managers in Brazil fail to understand this, their companies will probably struggle again in the future.

Moreover, managers of international companies must maintain good relationships with their stockholders. The findings indicate that one effective adaption strategy utilized in Brazil to deal with COVID-19 was maintaining trustworthy communication. Further, the results show that clients and consumers created challenges during the pandemic. Therefore, companies' relationships with investors, employees, customers, suppliers, and stockholders, represent an important resource during prosperous times and crises.

Even though another pandemic is improbable, the impact of global events will continue to influence the production, supply chains, and logistics of businesses that depend on world affairs. For this reason, COVID-19 should be used as a source of useful practical information.

6.2. Theoretical Contributions

The findings of this article endorse the conclusions of previous studies indicating that the pandemic is changing the structure and functioning of the world economy and that it has lasting impacts on international business strategies (Verbeke & Yuan, 2021). In addition, this thesis used qualitative research to further verify the challenges of Brazilian international companies doing business in the Chinese market during COVID-19, as well as the strategies they used to endure it.

Although the basis of international business studies does not change, research designs may need to be revisited due to the pandemic to “avoid ill-advised prescriptions, misaligned with the coming post-pandemic state of the world economy” (Verbeke & Yuan, 2021, p. 598).

Overall, the present qualitative research summarized the observations of Brazilian global companies on the Chinese market during COVID-19 and explored the strategies adopted to deal with it. Considering that COVID-19 is a unique experience in the current globalized

world, this thesis captured a general picture and specific personal experiences of Brazilian multinationals during this period by adopting a qualitative approach.

6.3. Limitations

The present study had four primary limitations. First, unlike the European Business in China Business Confidence Survey and the Canada-China Business Survey 2020/2021, which used a comparative method between different years to assess the level of challenge, impacts, and behaviors, this thesis used a single questionnaire, resulting in a lack of time accurate data interpretation of the conclusions.

Second, the interviewees were selected based on their availability and interest in participating in the study. Therefore, the interview results lack universality. Third, Portuguese was employed throughout the methodological procedure, and the data outputs were examined before being translated into English for linguistic coherence. Therefore, some word choice deviation may have occurred during the translation process.

Fourth, due to time and resource limitations, the questionnaires were applied between December 2021 and April 2022, and the interviews were conducted from May to June 2022. Therefore, even though the COVID-19 pandemic scenario has ended, it was not possible to fully observe the whole pandemic period, so the data can reflect only part of the cycle.

6.4. Future Research

More accurate data are needed to study the impacts that have not yet been reflected through other circumstances. In addition, it should be considered whether these influences are similar across different countries. Throughout the pandemic, the importance of the Chinese market and supply control in Brazil has become more prominent. Therefore, the possibility of profound studies on China's relevance to Brazil's international business environment must be considered. Furthermore, an understanding of opportunities for industry development and better control over global business expectations and management must be gained. In addition, future research can study substantial changes in data after the pandemic's impact completely dissipates. Researchers could even apply this study to a different crisis, such as the current war in Ukraine.

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