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# The COVID-19 Pandemic's Influence on Born-digitals' Internationalization and Performance

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## Abstract

In this qualitative research, the purpose is to explore the influence of the COVID-19 pandemic on born-digital firms' international expansions and performance. This is to fill in the gap in research where many other industries have been examined in relation to the pandemic but not the born-digital firms. To be able to answer the research question, a theoretical framework is used and a conceptual model is developed. This will be analyzed using interviews with six born-digital firms along with secondary data about them. The conceptual model displays the born-digital firms' growth patterns in relation to the performance outcome where there are five contextual changes influencing the relation. These five contextual changes are consumer behavior, regulatory framework, acceleration of digitalization, crisis management, and turbulence. The results of this research show a variety of different outcomes due to the COVID-19 pandemic. Although, most of the firms don't seem to have been as negatively influenced in the midst of the turbulence as the need for digitalization surged. However, none of the firms felt that the pandemic created additional opportunities to internationally expand. The results also showed that all of the six firms managed the years 2020 and 2021 with positive results and where many had increased revenues and results as well. The findings of this research can then be of value to managers, employees as well as the rest of society since the surge of digitalization is becoming more apparent.

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# 1 Introduction

In the following chapter, an introduction to this research will be presented. This will be done by briefly introducing the topic and the problem. As the background will include previous research on the topic, the problem discussion will focus on identifying the existing gap in research and highlight the relevance of this research topic. Furthermore, the research question and purpose of this research will also be covered in this chapter.

## 1.1 Background

### 1.1.1 Previous research on born-digitals' characteristics and internationalization

To introduce the topic of born-digital firms, it's important to understand the transformation of digitalization. In the book *International Business* , the digitalization transformation is claimed to have affected different business operations through the usage of digital technology (Cavusgil, Knight & Riesenberger, 2020). Digital technology has enabled interactions, collaborations, and the collection of information between people as well as businesses. As a result, E-commerce is included on many platforms where products and services are sold online. Also, with the help of digitalization, geographic boundaries are being blurred.

Further effects of digitalization are reductions in coordination costs and transactions over geographic boundaries through the increased capacity for scaling up in international markets (Tippmann, Ambos, Giudice, Monaghan & Ringov, 2022). Scaling in this context, refers to the persistent rapid growth to deliver a viable business model. Contributing factors to this are the fidelity, speed, and marginal cost of replicating the digital processes which are helping digitalization remove limitations of the firm growth rates.

As a result of digitalization, there are now digital firms on the market that depend on the Internet for different parts of the value chain such as production, operations, and delivery processes (Monaghan, Tippmann & Coviello, 2020). Included in these digital firms are digital solution firms, e-commerce, retail firms, producers of digital content, and internet platform businesses.

In the environment that digital firms grew from, entrepreneurial firms were competing globally to improve the experience for the customers (Jarosiński, Sekliuckiene & Kozma, 2023). Merging this with digital transformation helped make firms more digital. The globalization of firms accelerated this digital transformation. Innovation also played a

supporting actor in this acceleration. In 2016, Mckinsey & Company claimed that the world was more connected than ever with developed technology that could manage flows of information, communication, searches, transactions, video and intracompany traffic (Manyika, Lund, Bughin, Woetzel, Stamenov & Dhingra, 2016). This har opened the doors to smaller firms, start ups, developing countries as well as the rest of the world. The increased digital era of digitalization has made international operations more efficient with the use of digital tools and platforms.

Monaghan, Tippmann, and Coviello (2020) mention two characteristics that born-digital firms possess in their article. The first one is that a born-digital firm uses digital infrastructure to create an online presence that is possible to identify. However, the firms still use warehouses, centers, and offices for parts of their organization. The second characteristic of a born-digital firm is that they use the digital infrastructure for activities such as collaborations, communications, and/or developing capacity that lets them have a digital business model. The digital business model lets them create and sell their products or services online. As these were the two characteristics of digital firms, there is one characteristic that is needed for them to be a born-digital firm which is that the firm should be digital from the establishment.

The internationalization of born-digital firms can be very quick as they are flexible, scalable, and can reach a new market through almost instant connection (Monaghan, Tippmann & Coviello, 2020). Sometimes, the internationalization to different markets can occur by accident as some business models already have an international reach without needing experience or adaptation to the customers. The born-digitals can also have a rapid and intentional expansion to different markets. Their expansions are more likely to possess these characteristics; less physical footprint, broader in scope, and time compressed.

### 1.1.2 Previous research on the COVID-19 pandemic

Furthermore, In 2020, the COVID-19 crisis began when multiple countries had lockdowns due to the virus, and many sectors were affected by this. According to an article by Davidsson, Recker & Von Briel (2021), the pandemic held five different factors. Firstly, it had an unbalanced environmental change that created external forces which were hard to ignore. Secondly, the negative external changes for the economy and society were still in favor of some businesses. For instance, those businesses that helped people hold social relationships during lockdowns. Thirdly, the pandemic showed that events like these can

occur in non-obvious and unintended ways. The fourth factor is that the pandemic varied greatly in severity and timing which is important when reading into environmental changes as the disease rate varied between high and low levels throughout. Lastly, it was multiple enabling elements occurring as a chain reaction during the COVID-19 pandemic. For example, the policies made, the health problems, technologies implemented, and so on.

Due to COVID-19 and other world occurrences such as Russia's invasion of Ukraine, many countries are facing record-high levels of inflation where many risk entering an economic recession (Barklie, 2023). According to an article by Armantier, Kosar, Pomerantz, Skandalis, Smith, Topa and Klaauw (2021), the pandemic led to an immediate increase in inflation. The pandemic was imprinted by uncertainty as no one knew how long it would last. It led to multiple disruptions such as temporary business closures, unemployment, and fiscal policies. Moreover, the pandemic resulted in a decrease in consumer demand, supply chain disruptions, and rising government debt.

## 1.2 Problem discussion

There have been lots of reports and news regarding the disruption of supply chains for different firms during and after the pandemic, which the accounting firm Ernst & Young decided to illustrate (Harapko, 2023). This highly affected the manufacturing companies as raw materials and finished goods weren't delivered. Industries such as retail, transportation, entertainment as well as travel were affected negatively due to disruptions in the supply chain and lack of demand (Dey-Chowdhury, Khaliq, Okoye & Abrahams, 2022). What's missing from the research is the effect the pandemic had on the born-digital firms' international expansion. As these firms don't have actual production chains like non-digital firms, it embarks the discussion of how digital firms were affected by the pandemic and a discussion regarding if the pandemic had a negative or even a positive effect on these firms.

Mckinsey & co also wrote about how the COVID-19 pandemic affected many firms' supply chains negatively (Alicke, Barriball & Trautwein, 2021). Due to the virus itself, lockdowns and travel restrictions, many supply chains were disrupted and some struggled to keep their businesses running, let alone expand internationally. This led to investments in further digitalization of the supply chain processes as the digitalization wasn't affected in the same way in this crisis. As the pandemic showed firms how sensitive their supply chains were at the time, there has been further investment in risk management.

To exemplify the disruptions to the value chain that occurred in other industries during the COVID-19 pandemic, Volvo Cars' lack of semiconductor is used as an example (Larsson & Nordevik, 2022). They still have a shortage of components to this day. Due to lockdowns in China, they were unable to get hold of semiconductors which are needed components to their cars. As Volvo Cars manufacture cars, this caused the production in Volvo Torslanda to stop at times leading to the supply not reaching the demand for the firm. This shows how the pandemic affected some types of firms' production and supply chains negatively which slowed down the sales expansion.

On the other hand, companies that have online buying of goods and services, have managed well and thrived through this pandemic according to OECD (2020). One of the reasons behind this thriving is that people wanted to avoid contagion during the pandemic and therefore preferred online shopping. The global management consulting firm McKinsey & Company conducted a Global Survey on digital strategy where they claim that the pandemic sped up the adoption of digital technologies by multiple years (Gavin, LaBerge & Williams, 2021). Also meaning that the pandemic showed firms the way for more technology-driven changes progressing. This still leaves some space in the research for a clear understanding of how the born-digital firms were affected in their international expansions.

In conclusion, understanding the impact of the pandemic on digital firms will help explain why some of these firms developed significantly during the pandemic while others struggled and failed. Since the pandemic is a relatively recent event and is still being studied, research is available on how companies have been affected in general but not particularly how born-digital firms have been affected. This presents an opportunity for further research to explore the challenges and opportunities that have emerged for born-digital firms during the pandemic as well as see how this was reflected in their performance outcome.

## 1.3 Research question

How has the COVID-19 pandemic influenced international expansions and performance for the born-digital firms?

## 1.4 Purpose

The purpose of this research is to explore the influence of the COVID-19 pandemic on born-digital firms' international expansion to new markets and performance outcomes with the help of research and interviews.

## 1.5 Outline and delimitations

This research aims to focus on the results from interviews with six born-digital firms where they are asked about how the COVID-19 pandemic influenced their international expansions and performance. The performance will be studied in terms of results and revenues during 2020 and 2021, as well as the scaling of the firm. The interviews will be with firms that are based in Gothenburg and that have been selling value in terms of digital solutions from the inception. This means that the results will be collected from Swedish firms but that can have international expansions worldwide. To be able to draw clearer conclusions, this research has been delimited to only use interviews with born-digital firms that work closely with the automotive and transport tech industry. Furthermore, the founding of all firms in this research are to be during the 21st century but not after the COVID-19 pandemic which means that both relatively old and new firms will be investigated.

# 2. Theoretical Framework

This chapter presents the theoretical framework that will be used to understand and analyze the empirical findings of the research. It starts by defining born-digital firms and discussing their unique characteristics. Next, it reviews the role of the external environment in previous models, focusing on the key concepts and theories used in this research. The chapter then explores the shift in the external environment and to what degree it has affected born-digital firms. Finally, a conceptual model is presented that integrates these key concepts, theories, and environmental changes, providing an overview of the theoretical basis for this research that lays the foundation for the empirical analysis presented in later chapters.

## 2.1 Born-digital firms

### 2.1.1 Characteristics of born-digital firms

According to Monaghan, Tippmann and Coviello (2020), born-digital firms are defined as "digital from inception" meaning that these companies have been utilizing digital infrastructure right from the beginning and are dependent on the internet for the development, management, and delivery of their services. Unlike firms that may have started the digitalization process later, born-digital affirms are built on a digital business model which provides them natural flexibility and scalability. Scalability refers to the ability of a firm to grow and expand its operation rapidly and efficiently to meet increasing demand without significant increases in costs or decreases in quality (Tippmann et. al, 2022). Scaling is also closely connected to high growth. The ability of born-digital firms to immediately access global markets due to the internet they use to do business makes them not only digital, but also global from the outset (Monaghan, Tippmann & Coviello, 2020). On the other hand, while born-digital firms are often defined as readily scalable, Mihailova (2023) claims that their dynamic process of the business model of adaptation plays a crucial role in achieving practical scalability while maintaining quality and cost-effectiveness.

Monaghan, Tippmann and Coviello (2020) further highlight that born-digital firms are characterized by quick and early internationalization. While not all born-digital firms may be international from the beginning, research suggests that some born-digital firms may undertake internationalization within just two to three years of their inception (Cavusgil, Knight & Riesenberger, 2020; Domurath et al, 2020). This highlights the dynamic and flexible nature of these types of firms, as they are able to quickly expand their operations beyond their local markets and tap into global opportunities.

### 2.1.2 Operations of born-digital firms

Besides flexibility and scalability that is already mentioned, direct stakeholder engagement and network effect are other critical elements that Monaghan, Tippmann and Coviello (2020) highlights as essential to the operation of born-digital firms. Through the use of existing stakeholders, these businesses can increase their network presence by connecting directly with stakeholders thanks to digitalization. Additionally, it enables direct communication with

consumers all over the world giving useful information about various markets. These connections provide a lot of benefits, especially in terms of speed and effectiveness.

By automating business operations, Monaghan, Tippmann & Coviello (2020) further explains that born-digital firms boost productivity and efficiency. Automatic trust procedures also make it possible to communicate with users more quickly which saves time and lowers the costs associated with managing firm operations. Therefore, born-digital firms have the ability to move more quickly toward globalization. Due to the network effect, born-digital firms can also quickly assemble and manage user networks which contributes to their growth. Born-digital firms can simply set up and manage their international operations with minimal physical infrastructure. This adaptability includes managing human resources among other functions. The low cost of obtaining new customers and the simplicity of replicating operations in new markets enable scalability.

## 2.2 The role of the external environment in previous internationalization theories

### 2.2.1 Role of the external environment and relevance of the Uppsala Model

Johansson and Vahlne (2009) describe internationalization as a cumulative process where relationships are continuously established, developed, maintained, and dissolved to achieve the goals of the firm. Born-digital firms tend to skip several stages in traditional internationalization models since they expand into global markets more quickly than before which makes some of the traditional models less applicable (Monaghan, Tippman & Coviello, 2020). As a result, the consequences faced by born-digital firms in their internationalization process during the COVID-19 pandemic are likely to be different compared to other traditional firms.

A suggestion in the internationalization theory is that firms face liabilities of foreignness when expanding into foreign markets, such as cultural differences, legal and regulatory challenges, and lack of local market knowledge. The revisited Uppsala Model by Johanson and Vahlne (2009) is connected to this and is often cited and referred to when it comes to research in internationalization. However, Schaefer and Cabral (2016) suggest that it cannot be applied alone to understand the internationalization of born-digital firms. Risks and challenges still need further exploration as born-digitals are still considered a new phenomenon (Schaefer & Cabral, 2016).

Therefore, the psychic distance is a part of the revisited Uppsala Model that could be used to explain how the COVID-19 pandemic might have affected the international expansion of born-digital firms. The Uppsala model states that internationalization initiatives take place gradually and are impacted by growing market knowledge and commitment (Johanson & Vahlne, 2009). This process is influenced by the psychic distance that refers to the factors that can constitute obstacles to an effective flow of information between companies and the foreign markets they are in contact with .

According to the model, a lack of knowledge and control of the market is a very crucial factor when firms encounter external crises in the course of internationalization (Johansson & Vahlne 2009). Firms can reduce the uncertainty if competing in the international market and increase the probability of success in international business by increasing their engagement and acquiring knowledge through a long-term learning process. The pandemic accelerated the adoption of digital technologies which may have created new opportunities for born-digital firms to acquire knowledge through online channels.

However, as mentioned previously, it is important to understand the limitations within the Uppsala Model as it can not be used to fully answer the research question. The model assumes the market to be stable and homogeneous which means that it may not fully capture the unique challenges and opportunities that born-digitals companies might have faced in expanding to new markets during the pandemic. Another assumption already described in the Uppsala model, is that firms prefer to expand gradually and cautiously into foreign markets (Johanson & Vahlne 2009). Firms base their decision on the level of knowledge they have about the external environment and that the knowledge is gained through a gradual process of experiential learning. For this gradual learning process to occur, the model assumes a certain degree of stability in the external environment.

The internationalization process in the Uppsala model is also purely viewed as an internal capability and external factors such as market potential and competitive forces are ignored (Johanson & Vahlne 2009). These factors have grown more significant in the global economy and in some cases can override the physic distance factor in the management decision making. Furthermore the authors address an important problem in research in international business. Established models of the internationalization process fail to capture some

important aspects of the modern international business world. Johansson and Vahlne argue (2009) that networks play an important role in internationalization.

### 2.2.2 Role of the external environment in the network approach

Johanson and Vahlne (2009) continued research of the internationalization process by using a network perspective based on the Uppsala model that can be used to answer the research question. The Network approach in internationalization theory is a viewpoint that highlights the importance of networks and relationships in shaping international business activities and outcomes (Chetty & Holm 2000). This approach acknowledges that businesses are not independent entities but rather interconnected and interdependent actors within a larger network. Firms operate within a complicated web of interconnected relationships involving a variety of stakeholders including customers, suppliers, partners, competitors, and institutions. The individual firm is therefore considered to be dependent on resources controlled by others. This recognizes the importance of the external environment as a larger context within which organizations operate.

Based on this assumption that was already described, the research question can be approached by considering the impact of the pandemic on born-digital firm's network relationships and growth patterns. As mentioned in the problem discussion, the pandemic has disrupted global supply chains and trade making it more difficult for some businesses to operate (Alicke, Barriball & Trautwein, 2021). The restrictions of movement and social distancing measures might have affected the establishment and maintenance of relationships with stakeholders including customers, suppliers, partners, and institutions.

Additionally, according to Nahapiet and Ghoshal (1998), another key aspect of the network approach is the importance of social capital which refers to the resources embedded in social relationships such as trust, reciprocity, and mutual understanding. Social capital can influence a firm’s capacity to conduct international business activities and can make it easier to acquire opportunities, resources, and information. Therefore, social capital can be relevant in this research since it can provide an understanding of how born-digitals might have differed from other firms in their ability to leverage social capital to overcome barriers to international expansion. However, this assumption does not necessarily give the external environment a central role in the network approach since the focus is primarily on the relationships and interactions between organizations within the network.

Furthermore, the network approach also emphasizes the importance of both formal and informal networks in supporting global company operations (Chetty & Holm, 2000). This also helps in maintaining and developing these relationships to gain access to external resources. This suggests a structure of interdependency that requires coordination of operations and management of ties. A prominent example of the network approach is global value chains which involve firms collaborating across borders in intricate networks of suppliers, producers, and distributors (Gereffi, 2018). Companies that can build and sustain strong bonds with multiple value chain partners are frequently better equipped to compete in the international marketplace.

In addition, Jarosinski, Sekliuckiene and Kozma (2023) suggests that the Network effect enables born-digital firms with the capability to rapidly establish and manage user networks resulting in several advantages. The authors also mean that it allows them to reduce their expenses and operate in international markets from day one. Due to the network effect, born-digital firms can also transform their platform into a large marketplace that allows suppliers to manage the actual exchange of goods with customers (Vadana, Torkkeli, Kuivalainen, Saarenketo, 2019). This can be linked to the research question as it can explain why born-digital firms may have managed to handle the consequences of the pandemic better than other types of firms.

However, even though the network approach can be considered to be more suitable to this research than the Uppsala Model, there are limitations within the model since it does not fully capture the role of the external environment. Factors such as relationships with competitors and intense domestic competition, are neglected (Chetty & Wilson, 2003). Based on the previously mentioned assumptions in the network approach, the external environment is not considered to be faceless, atomistic, or within the firm’s control. It is rather enacted as the business organization's interdependent relationships are created through interactions. Thus already existing theories in internationalization do not consider the external environment's full complexity. To answer the research question, it is crucial to consider the external environment and how it might have impacted born-digital firms during the COVID-19 pandemic.

### 2.2.3 Role of the external environment in the resource-based view

Another theory that is valuable to include in this research is the resource-based view. The framework for the resource-based view was developed by Jay B. Barney in 1991. This view describes four factors that make a firm's resources a competitive advantage. These four are value, rarity, imperfect imitability, and lack of substitutability and they should be fulfilled to create a competitive advantage. This helps analyze the capabilities of a firm. As this is relatively old research, it may not be written about born-digital firms since they hadn't been developed yet. However, some parts may still apply to the situations they're in.

The role of the external environment in the resource-based view is reflected as threats and opportunities to create a sustainable competitive advantage (Barney, 1991). Some threats refer to barriers to entry in some markets. The most frequent way to describe the external environment regards the competitors in the environment and not different crises. However, Barney brings up an argument that claims that even if firms with completely homogenous resources where one does not meet any entry barriers, they obtain a sustained competitive advantage over those firms that are not in the same industry but meet these entry barriers. This will then result in performance measures that are above normal for that firm. Entry barriers were more relevant for production firms and industries relying on human contact whilst industries with high information and technology as well as telework intensity were not as affected during the lockdowns (OECD, 2021).

This model relates to the performance of the firms as it examines the potential to grow by assessing the firm's competitive position (Barney, 1991). Davidsson, Steffens, and Fitzsimmons use the resource-based view in their article about growing profitable or growing from profits (2009). In their interpretation of this theory, having a non-substitutable organization includes having an effective revenue model. Also, firms should strive to achieve growth opportunities that match the advantages of their resources. Their interpretation suggests that growth firms are less likely to achieve profitability.

## 2.3 Changes in the external environment

### 2.3.1 The disruptions in the external environment caused by the COVID-19 pandemic

Based on previous research, it is evident that born-digital firms function effectively in a stable external environment. However, this research seeks to explore the impact of changes in the external environment, the COVID-19 pandemics' impact on born-digital firms. Born-digital literature has emerged due to digitalization and globalization (Vadana, Kuivalainen & Torkkeli, 2021) and it has been observed that the external environment has not posed significant challenges in this context. As mentioned in the previous chapter, most of the theories in internationalization consider the external environment to be stable. Nevertheless, the COVID-19 pandemic has created significant disruptions in the external environment which necessitates research into how born-digital firms have adapted to these changes. Performances of businesses in foreign markets are considered to not only be influenced by their internal capabilities but also heavily influenced by their external environment (Sharma & Blomstermo, 2003). According to Yayla, Yeniyurt, Uslay and Cavusgil (2018), the internationalization strategies of firms change in reaction to the external environment.

### 2.3.2 Turbulence due to the COVID-19 Pandemic

The last few years have been a period of major changes in the business landscape (UNIDO, 2021). The COVID-19 pandemic has brought attention to the concept of turbulence (Ansell, Sorensen & Torfing, 2021) which refers to problems that are complicated, incompatible, and remarkable (Ansell & Trondal, 2018). The primary purpose of turbulence is to capture the unstable environment for problem solving. Burke and Cooper (2004) state that market turbulence introduces a degree of complexity that can prevent the understanding of the business environment. Williams, Gruber, Sutcliffe and Shepherd (2017) explain that disturbed structures, processes and skills are factors that can cause turbulence.

As a consequence of the turbulence experienced in international markets, the United Nations Industrial Development Organization (UNIDO, 2021) explains that the COVID-19 pandemic

has forced companies to adapt to new environmental challenges. Environmental changes such as increased uncertainty, supply chain disruption, changes in consumer behavior, and shifting regulatory frameworks, have impacted businesses worldwide. These changes have created opportunities for some companies while posting challenges for others, leading to a need for increased resilience and flexibility in the business world. According to a report by McKinsey & Company (2020), Bradley et al. describe that the COVID-19 pandemic has accelerated digital adoption and led to a significant change in consumer behavior. With the implementation of social distancing and lockdown measures, consumers have been forced to adapt to a new way of living, working, and consuming. As a result, there has been a significant increase in the use of e-commerce and digital channels for shopping, communication, and entertainment (Gu, Slusarczky, Hajizada, Kovalyova & Sakhbieva, 2021).

### 2.3.3 The acceleration of digitalization

Nambisan (2017) claims that digital acceleration was already emerging before the COVID-19 pandemic. Research conducted by Amankwah-Amoah, Khan, Wood, and Knight (2021) explains that COVID-19 has accelerated digitalization. Based on the findings of Bradley et al. (2020), it can be implied that companies that underwent a substantial strategic transformation in response to the increasing digitalization of the business landscape, performed better compared to their conservative competitors. Thus, the pandemic has played a significant role in accelerating the adaptation of digital technologies in these organizations, resulting in a more widespread acceptance of digitalization. Given that born-digital firms are already digital from inception, it can be hypothesized that they were better equipped to adapt to the accelerated digitalization trend during the pandemic. They may even have been able to leverage their existing digital infrastructure to outperform traditional firms. Hence, it is urgently needed to explore and understand the extent to which born-digital firms might have capitalized on digital acceleration during the pandemic and how this may have affected their competitive advantage.

### 2.3.4 The necessity of crisis management

According to the Institute for PR (2007) careful planning is necessary to handle a crisis effectively. Failure to effectively manage crises could cause serious harm to stakeholders, financial losses for the firm, or possibly lead to the company's insolvency (Institute for PR, 2007). Previous research on crisis management offers two research streams that could be valuable in the context of the pandemic (Cowling, Liu & Ledger, 2012). The first stream, denoted as entrepreneurial crisis management, explores how businesses respond to crises with a particular focus on resilience (Krishnan, Ganesh and Rajendran, 2022). Krishnan, Ganesh and Rajendran (2022) further explains that research on organizational resilience emphasizes some critical aspects. One aspect is that resilience in organizations is not limited to the restoration of pre-crisis operations but also encompasses the cultivation of new capabilities and a heightened ability to keep up with and create emerging opportunities. Moreover, resilience entails the development of both proactive and reactive capabilities to enhance readiness and response to disruptions across different phases of a crisis. Since it can allow a company to reduce negative consequences of a crisis and swiftly restore functioning to the business, resilience is considered as an important concept in crisis management for entrepreneurs (OECD Conference Center, 2019) .

Additionally, the second stream provides insights into the policies that could facilitate firms' survival during a crisis and identifies potential barriers to implementing such policies (Krishnan, Ganesh and Rajendran, 2022). Consequently, the streams identified in the passage could serve as a framework to examine the problems and opportunities encountered by born-digital firms in their international expansion during the COVID-19 pandemic. This can also help to explain how born-digital firms responded to the challenges posed by the COVID-19 pandemic in terms of their growth and international expansion. By examining the different capabilities that contributed to born-digital firms' resilience, one can identify the factors that might have enabled some born-digitals to adapt and even thrive in the face of the pandemic.

In conclusion, the COVID-19 pandemic has brought significant disruptions to the external environment, creating challenges and opportunities for born-digital firms. Being digital from inception, born digitals might have been better equipped to adapt to the accelerated

digitalization trend during the pandemic. Understanding how born-digital companies have handled the effects of the pandemic is crucial for identifying the factors that might have affected their performance.

## 2.4 Conceptual model

To develop the theoretical framework even further, a conceptual model will be created to describe how the contextual changes of born-digitals' growth patterns can affect their performance. The growth patterns of the born-digital firms will be seen as the independent variable as it is the cause that will be moderated and affect the performance of the firm. Secondly, the contextual changes will be used as moderating variables as they can affect the relation between the growth patterns and the born-digitals' performance. Lastly, the dependent variable will be the performance of the firm as it will reflect the changes that have been caused.

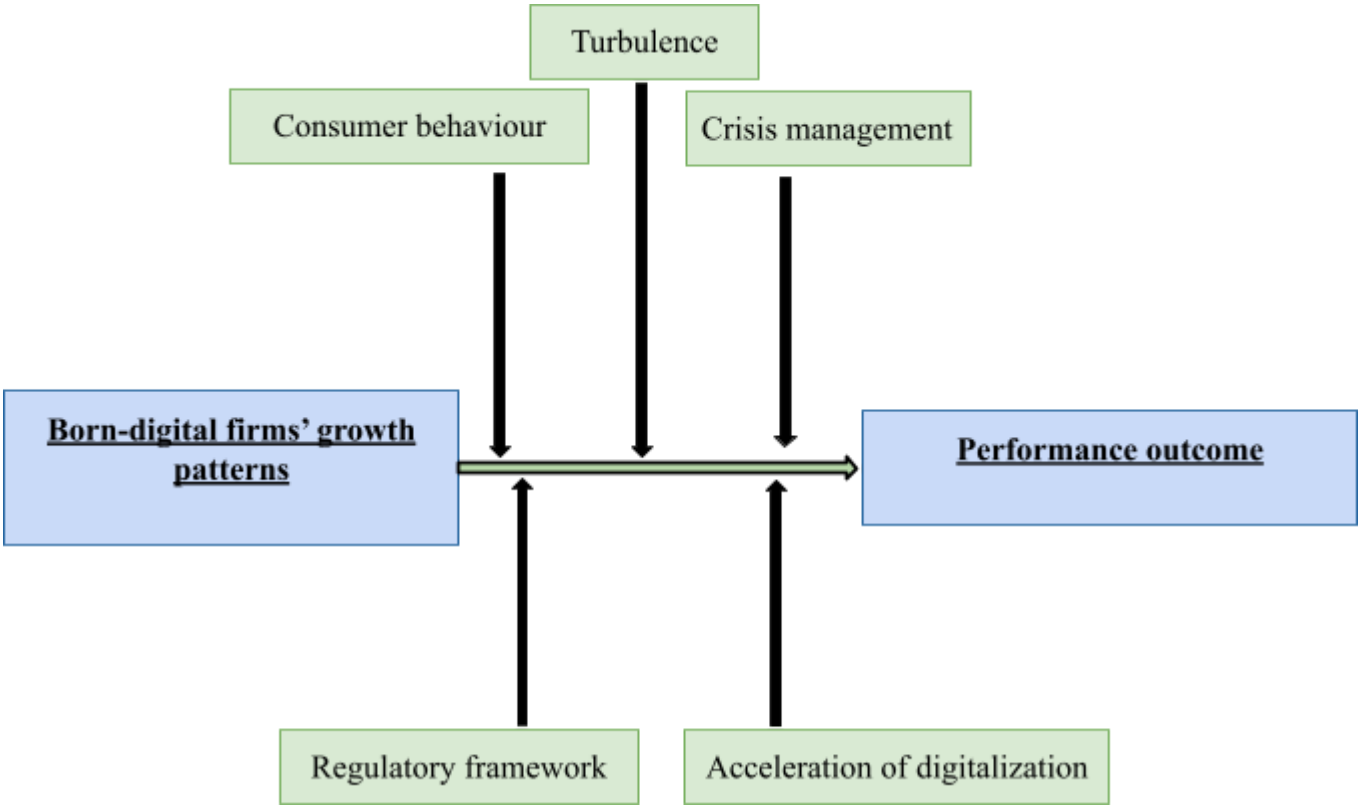


*Figure 1: Conceptual model. Compiled by the authors.*

The born-digitals' growth patterns consist mainly of quick scalability due to their immediate access to the global market (Monaghan, Tippmann & Coviello, 2020). International growth

can be seen as early as just two or three years after the inception of the firm. Their digital communication makes it easier and less costly to grow on an international basis. Furthermore, networks and relations are of big use in international growth with the use of minimal physical infrastructure (Johanson & Vahlne, 2009). Growth patterns tend to differ from other firms as they skip several stages in the traditional internationalization models. Entry barriers regarding internationalization aren't as relevant for born-digital firms as they do not rely on human contact to the same extent as production firms (OECD, 2021).

The contextual changes affect the association between the growth patterns mentioned above and the performance outcome. This would explain the arrows pointing the contextual changes towards the relation between the growth patterns and the performance. Previous research regarding the external environment during internationalization has assumed this to be stable when digital firms internationalize. However, during the COVID-19 pandemic, the environment was rather unstable as it created significant disruptions (UNIDO, 2021). Additional changes were in consumer behavior during the pandemic as the demand for certain products and services shifted majorly. Thirdly, regulatory frameworks were imposed such as entry barriers, lockdowns which disrupted supply chains. However, an acceleration of digitalization took place due to the COVID-19 pandemic which led to a more active acceptance of digitalization (Bradley et.al 2020). As the COVID-19 pandemic was seen as a world crisis, it could be assumed that there was a need for crisis management by the different businesses as developing resilience is highly valuable (Krishnan, Ganesh & Rajendran, 2022).

All of these contextual changes affect the outcome in the form of the born-digitals' performance as they alter the growth patterns of the firms. This reflects the dependent variable of this conceptual model. The turbulent environment of the pandemic has seeked further need of problem-solving for the firms as problems are unpredictable and complex (Ansell, Sorensen & Torfing, 2021) . Not being able to solve the problems of the turbulent environment can lead to negative performance outcomes and vice versa. Secondly, if the demand for the value of the born-digital firm is increased, it can lead to increased growth in the form of sales overseas and potentially lead to profitability. Equivalently, decreased demand would lead to the opposite performance as consumer demand varied drastically during the COVID-19 pandemic (UNIDO, 2021).

Furthermore, the lockdowns, policy changes and disruptions to value chains lead to unemployment in many companies as they were to be resigned which could limit the growth of the firm (BLS, 2021). During the COVID-19 pandemic, there were many temporary mass layoffs but these also turned into permanent layoffs in some cases. Entry barriers aren't that relevant for born-digitals as they don't rely on production industries which could create a sustained competitive advantage towards those who face these barriers (Barney 1991;OECD, 2021). A sustained competitive advantage would mean better performance measures. The increased acceptance and acceleration of digitalization in firms resulted in superior performance in the more digitized firms as well (Bradley et.al. 2020). Lastly, the ability of crisis management could decide what opportunities the firm was able to capture, which in turn could affect the performance of the born-digital (Krishnan, Ganesh and Rajendran, 2022). What will be explored is how the COVID-19 pandemic's influence on these contextual changes will alter the growth patterns and result in different performance outcomes.

# 3. Method

In the following chapter, the method for this research is explained and described. This is done by introducing the research approach, research design, selection of cases and informants, data collection, data analysis, quality of research as well as the ethics of the research. The purpose of this chapter is to convey the transparency of the approach for the readers.

## 3.1 Research approach

There are three approaches when doing business research; inductive, deductive and abductive approaches (Bell, Bryman & Harley, 2019). In this exploratory research, an approach inspired by abductive reasoning is used. Abductive strategy is a mix of both inductive and deductive reasoning as it should overcome the limitations of both. Through this strategy, it is seeked to explain an issue since existing theory cannot always account for the empirical phenomena. Related to hermeneutics, which revolves around the research of interpretation, lets the researcher select the most rational explanations when reasoning, building theory and exploring the conditions that would trigger this issue of research. The interrelatedness of this multiple case research will benefit from abduction as it's not always suitable to have a linear process (Dubois & Gadde, 2002).

Abduction is chosen for this research as it's a more integrated approach by going back and forth between different segments of this research (Dubois & Gadde, 2002). As a result, this will expand the understanding of both empirical phenomena and theory. The role of theory in this research illustrates significant variables and potential interpretations of findings. This research is done by partly using the deductive method of letting theories drive the data collection as the final interview guide is constructed through the lens of the conceptual model in the theoretical framework. However, as a hypothesis is not made, and theory is developed as an outcome of this research to fill in the gap in previous models, there is also use of an inductive approach.

In the literature *Business Research Methods*, distinctions between qualitative and quantitative studies are made (Bell, Bryman & Harley, 2019). The quantitative research strategy involves the collection of numerical data to answer the research question. This is used in deductive research where one shall start off with a theory that brings forward a hypothesis that should be tested. When interviewing according to a quantitative research method, structured interviews or self-completion questionnaires should be used. The answers that have been collected from the interviews must be transformed into quantified data. For this research having fixed-choice answers would not give enough information to answer the research question.

On the other hand, the qualitative research approach is different from the quantitative approach as it lays more focus on words than numbers (Bell, Bryman & Harley, 2019). This research approach possesses a more inductive view where the theory is generated out of the research done. The use of semi-structured interviews is essential where there are predetermined questions with room for follow up questions if found suitable. For this research , a qualitative research approach is chosen as a collection of numerical data is not relevant to answer the research questions about the COVID-19 pandemic's effect on international expansions and performance. The reasoning behind this is that there may not be an obvious correlation between the causes that answers the research question. Instead, interpretations of interviews with multiple firms' has given a more nuanced reasoning and discussions regarding the topic.

## 3.2 Research design

The research design of this research is inspired by a cross-sectional case study research design since there are more than one cases to deal with (Bell, Bryman & Harley, 2019). The cases represent the different firms that have been interviewed. Furthermore, the idea of having multiple cases in this research was to find patterns or variation in their observations of how the pandemic affected their firms in their expansions and performance. More or less, the interviews were made in the same time period which lead to comparable perspectives of the pandemic that already occurred. To simplify the comparisons and clarify the outcomes of the interviews, a table has been constructed at the end of the empirical chapter that portrays the different cases and their outcomes derived from themes and theories. The advantage of this variant of research design is that the outcome is more accepted and that people are more tolerant of these results from a variation of cases than just one case research (Yin, 1981).

## 3.3 Selection of cases and informants

To contact relevant firms, the method that was used was mailing and calling their company lines. The chosen firms were sampled purposely because of their likely ability to contribute to the research question connected to the theories (Bell, Bryman & Harley, 2019). The person that was going to be interviewed had to have a good overview over the firm which would mean favorably a chief executive officer (CEO). A good overview was important since the interview guide includes questions about the firms' international expansions, influences of the COVID-19 pandemic and the performance outcome. These areas are of high importance to be able to answer the research question. Some firms were smaller which meant that the CEO was more available. If the CEO was not available, other roles such as regional managers and chief operations officers (COO) were also appropriate. When approaching the company line by telephone of the bigger firms contacted, the research area was described to the receptionist who then forwarded the call to a relevant employee. An adequate number of interviews for this research was between 5 and 8 firms depending on their availability. Having fewer interviews allowed one to go more into depth of different cases with the limited time that was given. On the other hand, having fewer than 5 interviews was not desirable in this research as that could increase the risk of a more biased conclusion.

IBM, a firm that works with IT and cloud services, claims that the digital transformation of the automotive industry has been at big focus as customers have great expectations (Berman & Gyimesi, 2011). This involves reshaping the value proposition, reshaping the operating model, connecting vehicles and mobility services. This has led to automotive companies embracing innovation to advance in such areas with the help of other firms. Amongst these firms are multiple born-digital firms that work with development of software for example which became relevant for this research. As many of these automotive firms are located in Gothenburg, it became relevant and interesting to revolve this research around them. Although, some of the firms that were interviewed also work within other industries simultaneously.

Having randomly selected firms would not be beneficial for this certain research as there is a demand for strategic sampling in order to receive well informed answers (Kvale, 1996). The criteria that were written in the emails were that the firms should be born-digital firms as well as being founded before or during the pandemic. This is because this research is about how born-digitals firms managed during the pandemic. Not being a born-digital firm or being a start up from after the pandemic would therefore not give the dimensions that are seeked from this research. Many firms were busy and could not find the time for an interview. Six of these firms were willing to participate in interviews of 30 minutes over video call. The interviewees were then mailed their cases in order to achieve member validation which would contribute to the credibility of this research. Further details on the interviews are showed below.

| **Firm** | **Job title** | **Date** | **Duration ≈** |
|---|---|---|---|
| 1 | Managing director | 18/4 -2023 | 30 min |
| 2 | COO | 18/4 -2023 | 30 min |
| 3 | CEO | 19/4 - 2023 | 30 min |
| 4 | Regional manager | 28/4 - 2023 | 30 min |
| 5 | CEO | 1/ 5 - 2023 | 30 min |
| 6 | Team leader | 8/5 - 2023 | 30 min |

*Table 1: Interview details. Compiled by the authors.*

## 3.4 Data collection

For the data collection of this research, semi-structured interviews with six digital firms were held individually with planned interview questions (Bell, Bryman & Harley, 2019). Although all firms got the same questions, follow up questions were made if needed to collect more information and increase understanding of the situation. There are both advantages and disadvantages with this choice of interview structure. When having a less structured interview approach, it makes it more difficult to compare the answers of the respondents as well as creating interviewing bias which can affect the reliability of the interview. However, this research is explorative and in-depth answers are necessary to get the respondents perspective on how their firm managed during and after the pandemic. This created an emphasis on explorative questions instead of using hypothesis testing (Kvale, 1996).

Due to scheduling problems with the firms, three firms were interviewed when the research lacked a fully developed theoretical segment. This caused the interview guide to not be as developed as wanted. Furthermore, the three interviewees were later contacted by mail for a follow up interview by mail to get the full interview when the questions were done. The remaining three firms were interviewed with the last version of the interview guide which eased the process. Also, all of the original interviews were done via video call or telephone to be able to ask follow-up questions directly as well as having direct discussions.

Moreover, when preparing the interview guide, it was essential to be concise since the interviews were not to be as long (Bell, Bryman & Harley, 2019). Questions were derived from themes, theories and the research question to create explorative and open questions that could be easy to analyze further. This included questions derived from the conceptual model which covered areas such as the contextual changes, performance outcome and how the firms usually expand internationally. The guide started with some introducing questions, both to the firm and the interviewee for the interviewer to get some understanding of the firm. Thereafter, came the thematic questions about born-digital firms and the pandemic to receive answers that can be organized into different themes (Kvale, 1996). These were asked to be able to connect the setting to the circumstances. Later on, profitability and growth were

described to the interviewee to be comprehensible and understood so they were prepared for the next questions regarding their performance. A clear interview guide is attached at the end of this research.

### 3.5 Data analysis

To analyze the data of this research, qualitative content analysis was used which is described further in this section (Bell, Bryman & Harley, 2019). Through moving back and forth between theories, interpretations and data collection, an analysis was created. This choice of analysis created a more nuanced analysis where there were constant comparisons of different settings and situations. Through the finding of different themes, a table was created at the end of the empirical chapter to vividly showcase the findings from the interviews related to the different themes and theories.

The analysis was structured into three parts which are the following; the COVID-19 pandemic's influence on born-digitals international expansions, influence on contextual changes and the influence it has had on the performance outcome. Naturally, this order is derived from the conceptual model that starts with the growth patterns of the born-digitals and the relation to the performance outcome under the influence of the contextual changes. This order was also reflected in the interview guide.

To specifically describe the course of action, the research was started by finding relevant theories within the area (Bell, Bryman & Harley, 2019) . Thereafter, collection of empirical data was made by asking general questions connected to the research question as well questions relevant to the theories. To then conduct the analysis, the answers of the interviews were reflected upon from different theoretical perspectives. Secondary data on the performance measures during 2020 and 2021 from AllaBolag (n.d) was then used to support or contradict the answers of the interviewees. The con of this is that it could be a bit messy as it included going back and forth between different parts of this research. On the other hand, it didn't leave as much space for missing out on relevant points of the analysis.

The data analysis was also inspired by a cross-case analysis (Yin, 1981). Firstly, there is within-case descriptions in the empirical chapter to achieve a more clear structure. Thereafter, through case comparisons and overviews of the answers, conclusions were drawn to answer the research question. This was to give a more nuanced analysis of the research subject. The case comparisons were done under each heading in the analysis where the areas were international expansions, contextual changes and performance outcome. As well as case comparisons, they were also analyzed through the lens of the theoretical framework.

## 3.6 Quality of research

There are three main criterias for quality when conducting business research. They are reliability, replicability and validity (Bell, Bryman & Harley, 2019). Firstly, reliability means that the results of the research should be repeatable and produce similar outcomes. For a qualitative research like this one, it would mean that the interviews were to produce the same answers when done under the same conditions again. This is difficult to certify but since questions are asked about previous events such as the COVID-19 pandemic, the answers are not likely to be changed when asked again. However, the data from the secondary sources do produce the same outcomes regarding the firms' performance measures during previous years.

Secondly, replicability is closely related to reliability meaning that if other researchers were to replicate this research, they should be able to draw the same conclusions (Bell, Bryman & Harley, 2019). This was reflected upon in this research by asking the interviewees clear questions which will produce clear answers. With the help of these answers as well as trustworthy secondary data, other researchers would be able to produce the same findings by following the same course of action as used in this research.

Thirdly, the internal validity of the qualitative research becomes relevant as there should be a good match between the observations and theoretical ideas (Bell, Bryman & Harley, 2019). By carefully selecting the most relevant theories and asking questions originated from these theories creates a good match between these. Although difficult to achieve in qualitative research, external validity is achieved when the findings can be applicable in social settings occurring in everyday life. This can be particularly useful when receiving the interviewees' view on crisis management as crises can happen all the time. Although these criterions are

more commonly used for quantitative studies but can still be considered when conducting qualitative research.

The criterias above can be relevant for a qualitative research but additionally, there are four main criterion of trustworthiness when conducting a qualitative business research (Bell, Bryman & Harley, 2019). These are credibility, transferability, dependability and confirmability . These four together make up the trustworthiness of the business research and are more relevant for qualitative studies. The credibility of the research determines the acceptability of the findings to others and believability from the participant of the research. Credibility is achieved through good practice and understanding the social world correctly. In this research, this was done by carefully researching the social world to achieve the right understanding. Also, by being reassured by the interviewees and the peers reviewing the research. Secondly, the transferability regards if the findings are able to be transferred and applied to other contexts. This was done in this research by giving detailed descriptions of the social settings in order to create statements about the culture that affects people in their order.

Thirdly, dependability is followed through having detailed problem formulation, selection of research participants and analysis decisions which was described throughout this text in order to give the reader transparency (Bell, Bryman & Harley, 2019). Peers were also used in this research process to give feedback and comment on any faults or unclearness of the method. Lastly, the confirmability of this research regards that the researcher has acted in good faith and hasn't let any personal values change the path of research. Being two researchers in this case created differences in opinion and humbled each other of not swaying the research as well as receiving constant reviews from peers.

## 3.7 Ethics

It’s important to look at ethical principles when striving to conduct a business research in good faith  (Bell, Bryman & Harley, 2019). One of the four main guidelines is to avoid harm to any participants. The participants of this research agreed to contribute to this research and were in no way bound to be harmed by this research which includes both physical and mental harm. All interviewees agreed to having their answers mentioned in this research. This also goes into the second area of ethics which is informed consent. The interviewees were given detailed information about this research and what was asked from them before agreeing to be interviewed. Thirdly, the privacy of the interviewee is of high importance. Therefore,

relatively private questions about the firm were not asked in the interview and the interviewee was informed that they didn't have to answer the questions if they weren't comfortable. They were also to be anonymous in this research to prevent any uncomfortability according to ethical practice. Lastly, this research was done by preventing deception in any way as it's not desirable in a research and it could affect the image of the research. This was done in this research by being transparent with what this research would include and what the participants could expect.

# 4 Empirical chapter

The following segment includes the empirical framework where six born-digital firms have been interviewed according to a semi-structured interview with a planned interview guide. Most of these firms mainly work with digital solutions for mobility and transportation but also have customers in other industries. The firms were to be anonymous and will therefore be named firm 1, firm 2 and so on.

## 4.1 Firm 1

The managing director of the engineering and software company that specializes in the creation of computer-aided engineering (CAE) software solutions stated in the interview that the company has a customer-centric approach and places a strong emphasis on meeting their needs. The firm was established as a branch office of the mother company, which has 60 branches globally. The goal of the Swedish firm is to improve the customer experience for CAE engineers in the Nordic region and to aid in the expansion of the mother company's range of CAE systems into one of the most competitive and quickly expanding markets.

### 4.1.1 COVID-19's influence on international expansions

As the firm has business-to-business sales, they expand by mainly taking part of the network that the mother firm has built and adding value to that company. However, the firm's managing director clarified that the pandemic did not present a chance or an obstacle for the firm to expand internationally. The company has subsidiaries all over the world and has, therefore, already expanded internationally. The managing director also noted that other firms in the industry were probably indirectly impacted by the pandemic. Additionally, it was

clarified that the COVID-19 pandemic did not affect international relationships. Their digital capabilities contributed to maintaining good relations with their customers and co-workers around the world.

### 4.1.2 COVID-19's influence on contextual changes

The firm's business model involves offering technical services and software for simulation activities, emphasizing the automotive industry. Regarding the COVID-19 pandemic on the firm and changes in regulations, the managing director stated that the pandemic indirectly affected the firm as customer output was affected due to less work being done to build product illustrations. Due to the pandemic's detrimental effects on the automotive industry, there was a lower demand for their expertise during that time. However, the managing director claims , "The pandemic provided us with opportunities to rethink, reflect and reinvest in the firm to prepare for a more competitive market after the pandemic." The managing director considers the firm to operate in a very competitive sector. Therefore, the pandemic aided the firm's ability to respond quickly and get up in speed faster than usual.

Additionally, the firms' digital skills have been an enormous asset with the acceleration of digitalization, allowing them to continue offering their services to clients remotely. But due to their customers not being firms with digital products, their value chain was affected, which caused a chain reaction to Firm 1 as well.

### 4.1.3 COVID-19's influence on the performance outcome

When asked about the firm's growth and profitability, the managing director stressed the importance of focusing on customer needs and achieving sustainable growth. " We want to grow enough to keep going, without compromising our commitment to customer satisfaction, rather than just seeking rapid growth," the managing director continues. Overall, the interview demonstrated that the firm prioritizes customer satisfaction while working to maintain sustainable growth. They also did not have to let anyone go, but some projects were put on standby as the demand for work was lower. As a result, the pandemic indirectly affected the firm but also presented an opportunity for reflection and preparation for a more competitive market in the future.

To support the responses provided by Firm 1, AllaBolag (n.d) is used to examine their performance metrics during and after the pandemic. Therefore, the focus is mainly on revenue and profit results for each year.  Firm 1's revenue and profits somewhat declined during the pandemic in 2020. However, compared to 2020, revenue declined somewhat again in 2021, while the result improved. It is crucial to remember that Firm 1's financial performance in 2021 was still positive.

### 4.1.4 Firm 1 summary

- Business-to-business sales through networking. Amongst 60 subsidiaries across the world. The COVID-19 pandemic had low influence on the international expansions. International relations were not affected.
- Decrease in demand due to changes in legislation that affected the firm’s customers. Gave an opportunity to rethink, reflect and reinvest. Digital capabilities were a significant advantage during remote sales and for maintaining relations.
- Sustainable growth instead of rapid growth is preferred. Customer satisfaction and demand are determinants of their growth. No change in employees but projects are on standby.
- A slight decrease in revenue and results in 2020 from the year before. There was a slight decrease in revenue in 2021 but an increase in results compared to the previous year.

## 4.2 Firm 2

Firm 2 was founded in 2009 by innovators who developed the concept . In an interview with the COO of Firm 2, the firm was described as a product-focused firm specializing in producing automotive software. The firm specializes in active safety features for vehicles and provides software solutions that enhance the driving experience and create safer roads. Their solutions help drivers by providing a smoother driving experience and assisting them when encountering potentially dangerous incidents. Firm 2 collaborates with new companies to showcase the functionality of their software product.

### 4.2.1 COVID-19's influence on international expansions

The firm works by doing business-to-business sales. However, they collaborate with production firms to showcase their software visually. This creates expansions through the creation of relationships outside of the digital world. Regarding its international expansion, Firm 2 has established a presence in China, Europe and the USA. They have a subsidiary in China with engineers on site, and the rest of their products are sold online. Expanding further was limited because of the close work with the automotive industry, which was negatively affected during the pandemic due to value chain disruptions. "Due to travel restrictions, we had difficulties maintaining the desired relations with China, although we still have engineers on-site," the COO says. The firm has also maintained its relationships through virtual meetings and online communications.

### 4.2.2 COVID-19's influence on contextual changes

The COO claims that the pandemic has positively and negatively affected their businesses because the firm worked on projects to be done in 2023 when in 2020, so the COVID-19 pandemic did not slow their software development. Due to this, they felt that this was not as big of a crisis for them since they could carry on further. Instead, they wanted to take advantage of the instability of the external environment by recruiting well-educated developers from other firms that were laid off in the midst of the crisis. Negatively in the way that the automotive industry faced a hard hit due to the lockdowns and lack of production which caused a chain reaction to this firm as well as they faced travel restrictions to China since the country was hit the hardest during the pandemic which slowed down their operations. Thanks to their digital capabilities , they have been able to continue working remotely and providing online demonstrations of their products.

### 4.2.3 COVID-19's influence on the performance outcome

Furthermore, firm 2 was asked about their growth and profitability to which the COO responded that they believe both factors are interrelated , with one leading to the other. The COO continues by stating "We have a "tipping point" in our growth where we can increase profitability without expanding our existing resources due to the employees' knowledge

development.” Also, the firm has not utilized any investors or risk capitalists due to their steady and sustainable growth. In addition , the COO said that they were able to recruit 8-9 new employees in Sweden during the pandemic when Volvo laid off staff.

As previously done with the first interview, AllaBolag (n.d) is used to find out their performance measures during and after the COVID-19 pandemic. The data on Allabolag (n.d) shows a decrease in revenue and results in 2020 from the year before when the pandemic wasn’t relevant. Thereafter in 2021, there is an increase in revenue but a decrease in results. In 2020, the revenue level is smaller than the results but the opposite is displayed during 2021. However, the result is still positive in both years.

### 4.2.4 Firm 2 summary

- Business-to-business sales. Have expanded to many parts of the world but mainly Europe. COVID-19 slowed down expansions, especially in China. Difficulties due to the effects of the automotive industry and travel restrictions, worsened international relations.
- The automotive industry was negatively affected due to changes in legislation, but there was still demand for the firm’s work as they worked with future projects. Took advantage of the unstable external environment as crisis management. Digitalization allowed them to maintain relationships through virtual meetings and showcasing their software through online demonstrations.
- Profitability and growth are interrelated. They have sustainable growth and can increase profitability without expanding existing resources. This is due to the employees’ knowledge development. Recruited 8-9 more employees to the office in Sweden during 2020.
- Decrease in revenue and result in 2020 from the year before. Increase in revenue and decrease in results in 2021 from the year before.

## 4.3 Firm 3

In the interview with firm 3, the CEO was interviewed. Answering the introductory questions, the CEO explained that they are a 7 year old remote consult firm that specializes within system development and UX design. The CEO also has a background in system

development. Firm 3 works with other firms to create new functions and algorithms for them. Customer firms involve e-commerce firms as well as firms within the automotive industry.

### 4.3.1 COVID-19's influence on international expansions

Firm 3 has not expanded internationally and became enlightened during the COVID-19 pandemic that they do not want to expand internationally and instead keep it local as they saw the instability in the environment. They saw the enormous effect that the pandemic had on the automotive industry due to the lockdowns and value chain disruptions. Still, they were not directly affected as they had more significant customers within other industries. As firm 3 doesn't work with international firms and instead has very local networks, their networks were held stable as they were always nearby.

### 4.3.2 COVID-19's influence on contextual changes

As firm 3 already was a remote firm working online, they felt that their digital ability was a big asset during the COVID-19 pandemic as there was an  increased need for digital solutions for all firms. This resulted in higher demand for the firm during the COVID-19 pandemic. Also, many of their customers were digital firms working with e-commerce. They reflected very good performance rates, which resulted in better performance for firm 3 as it led to higher demand for their expertise.

Within the firm, the situation was relatively stable. They didn't find it necessary to fire anybody during the COVID-19 pandemic  and instead focused on educating their consultants further to uphold the firm's resilience. "As we were already working remotely, the lockdowns didn't affect our way of working as much as it did to other industries," the CEO continues. This means that when Sweden introduced their variants of lockdowns, it didn't affect the firm any further as the consultants were already working as the lockdowns were desiring them to do. But, they claimed that their automotive clients were affected quite aggressively as they had to fire their employees. As firm 3 doesn't work with international firms and has very local networks, their networks were held stable as they were always nearby.

### 4.3.3 COVID- 19's influence on the performance outcome

"We see ourselves as a growth firm as we work closely with the growth of the firm constantly", the CEO says. They see an evident connection between growth and profitability as they grow when they hire new consultants, which brings in more profits to the firm. Therefore, they believe that growth leads to profitability. However, it isn't only the increase of employees that leads to profitability, as the CEO claims that the consultants become one year smarter every year, which leads to fewer hours for more work and higher debiting. Firm 3 reasons for that 80% of the growth is due to increased employees and 20% is due to higher price per hour. Further investment in overhead employees has also been made during these years to meet management requirements to handle the increased demand for their service. The CEO claims that this reflects in the firm's performance rates as, 2021 and 2022 were their best years.

To support the answers of firm 3, AllaBolag (n.d) is used to determine their performance measures during and after the COVID-19 pandemic. The revenue and profit results per year can be investigated here. In 2020, both revenue and results increased from the year before. This pattern follows for 2021 and 2022, making them their best performance years. Evidently, the results increase together with the revenue simultaneously each year and have remained positive.

### 4.3.4 Firm 3 summary

- Business to business sales. No international expansions. COVID-19 steered them in the direction where they didn't want to expand internationally. Local sales. No international relations. Stable networks due to nearby relations.
- Higher demand for their expertise due to higher demand of their customers. Digital ability was a big asset since there was increased need for digital solutions. The Swedish version of lockdowns had no effect on the firm. Further education of their employees was vital for crisis management.
- A growth firm. Evidently for the firm, growth leads to profitability. Factors behind their growth include an increase of employees and increasing the price per hour for their work. Recruitment of new overhead employees during COVID-19 pandemic.

- Increase in revenues and results in 2020 from the year before. Increase in revenues and results in 2021 from the year before.

## 4.4 Firm 4

Firm 4 works with digital solutions and softwares for the industrial sector and automotive industry. During an interview with the regional manager, the firm was said to be a business to business firm. With over 4000 employees, the firm has broadened over three continents in the world during their years in the industry.

### 4.4.1 COVID-19's influence on international expansions

When asked about international expansion, firm 4 says they expand internationally constantly through business-to-business sales. They are localized in many parts of the world where they feel that there is the most demand which includes three different continents. This includes before, during and after the COVID-19 pandemic. Although, the pandemic was off to a rough start since they felt that many businesses were quite conservative and did not dare to introduce new investments. This caused their expansions to slow down at the first beginning of the crisis. But as digitalization was of bigger demand, the need for this firm was also increasing. Therefore, the expansions could shortly carry on as per usual. Their customers saw a stronger need to uphold good relations with firm 4 and consequently, they earned stronger relations. Due to digital solutions that Firm 4 already was very comfortable with, they were able to maintain good networks.

### 4.4.2 COVID-19's influence on contextual changes

The regional manager claims that the firm had an increase of demand during the pandemic. An observation of the regional manager was that many started to see digitalization as a necessity when the COVID-19 pandemic started. The regional manager of firm 4 felt the turbulence quite clearly, both in the external environment as well as within the firm itself. This was due to the lack of stability that everyone felt. Also, this led to a more passive attitude in the firm where they were very careful with their investments and what they would decide to fund in. The regional manager claims that "Due to the lockdown and change in legislation, all the business processes were slow. What usually didn't take a lot of time all of a sudden was a very long process which affected the effectiveness of the firm". However, the relations with the stakeholders were still claimed to have become better.

### 4.4.3 COVID-19's influence on the performance outcome

The regional manager of firm 4 doesn't think that growth leads to profitability in regards to the performance of the firm. They are growing at a fast pace and the COVID-19 pandemic supported this even more. A factor contributing to this is mainly the insecurities of other firms which led to a need for firm 4's help. "We started seeing a more open minded view of our firm's concept which resulted in a faster growth for the firm as well," the regional manager continues. This is, once again, due to the increased acceptance and demand for digital solutions. Additionally, this resulted in further employment in the firm instead of having to scale it down.

When reviewing AllaBolag (n.d) there is an evident stability in the profit results that is maintained throughout the recent years. This level is very low in contrast to the revenues which are growing at a faster pace. However, the results are not developing in the same pattern as the revenues which was claimed by the regional manager as well. What can be seen is that both results and revenues were increasing in both 2020 and 2021 with the results being positive.

### 4.4.4 Firm 4 Summary

- Business-to-business sales and constant international expansions on three different continents. Expanded continuously throughout the pandemic but with a rough start. Limitations include the conservatism of businesses at the beginning of the pandemic. Able to withhold strong international relations.
- Increase in demand. Many saw digitalization as a necessity. Clear turbulence created a passive attitude in the firm. Lockdowns and changes in legislation delayed their business processes.
- Not a clear connection between growth and profitability. The COVID-19 pandemic accelerated rapid growth as their customers were insecure and needed help. Further employment.
- Increase in revenues and results in 2020 from the year before. Increase in revenues and results in 2021 from the year before.

## 4.5 Firm 5

During an interview with the CEO of firm 5, it is claimed that the firm is a digital solutions firm where they work with program development and system integration. This is a business to business type of sales where firm 5 has worked with different projects within transport and the industrial sector during their active years. Projects are based in Sweden as well as in the rest of the nordics.

### 4.5.1 COVID-19's influence on international expansions

Firm 5 has expanded to the nordics where they work with different projects by doing business to business sales. So far they haven't been able to expand further than the nordic countries but hope to do so by showing their expertise in their current projects. Expansions were made prior to the COVID-19 pandemic and have carried on throughout. They expand by communication on their own website where businesses contact them when finding them compatible. The CEO felt that the industrial and transport sector that they worked with weren't as negatively affected as the car production and sales.

Some projects in the nordics were put on pause due to the COVID-19 pandemic since there were various different recommendations for working on site. The firm works with digital solutions for projects that are to be executed in real life which was affected negatively due to recommendations of not working close to other people. However, the projects were still to be fulfilled and the expertise of this firm was important to be developed in advance which left the firm with continuous work over international borders. "We found it necessary to be on site for some projects to explain the value of our expertise but this was negatively affected by the nordics' strict entry restrictions," the CEO claims. However, as the firm were very comfortable with digital solutions, video calls were not an issue in this matter.

### 4.5.2 COVID-19's influence on contextual changes

Although some projects were put on pause, other projects saw the extra need for digitalization which came in favor for this firm as they work with system integration. The COVID-19 pandemic didn't affect this widely as the demand still remained for them since the demand for their customer industries was still relevant throughout. Obstacles created were the difficulty of traveling to the project site due to restrictions.

Within the firm, they didn't want to reflect the turbulence that was current in the external environment. They saw the need for their expertise as digital solutions were still necessary and therefore they focused on remaining stable. With constant communication and following the news, they were able to keep track of the ongoing situation with their projects. " We often got notified in advance when to start developing programs for a project and therefore we were able to work with future projects in the meanwhile", the CEO claims.

### 4.5.3 COVID-19's influence on the performance outcome

Firm 5 did not have to scale down their employees during the COVID-19 pandemic but instead decided to hire more as they have offices all around Sweden. This was due to the increase of demand for their digital solutions. They do not see a vivid connection between their growth and profitability. They focus more on increasing their growth as they want to become a bigger firm. The CEO believes that they have been able to increase their sales through constant work with different projects where they have been able to show off their footprints as well as the continuous need for digital solutions in today's society. However, they haven't been as focused on reaching higher profitability as they have recently invested in more employees as well as their comfortability and learning.

When reviewing AllaBolag (n.d), there is an increase of sales and results in 2020 when the COVID-19 pandemic started, compared to the year before. The year after, the sales continue to increase. However, the results decreased in 2021 compared to 2020. This would indicate that their results don't grow along with their sales which firm 5 mentioned as well but that they still maintain a positive result.

### 4.5.4 Firm 5 summary

- Business to business sales. Have expanded to the nordics. Expansions through help with system integration in projects on different sites. Have expanded continuously throughout the pandemic. Recommendations put projects on pause. Travel restrictions had a negative effect on international relations.
- Increase in demand due to the need for digitalization with their customers. Focus on remaining stable with constant communication with their networks since there wasn't always a possibility to be on site because of change in legislation.

- They do not see a vivid connection between growth and profitability. Factors behind increase in sales is through footprints and performance in various projects and the demand for digitalization. Recruited more employees. Focusing on growth.
- Increase in revenues and results in 2020 from the year before. Increase in revenues and decrease in results in 2021 from the year before.

## 4.6 Firm 6

The interviewed firm offers technical information manuals for industries such as transport and installations, interactive visualizations such as animation, as well as e-learning within these different areas. The firm's customers range primarily from small and medium-sized companies to public authorities and global industries. The interviewee is a team leader with many years of experience at the firm.

### 4.6.1 COVID-19's influence on international expansions

The firm has successfully expanded internationally, attracting a customer base of mainly European firms. The firm has expanded internationally by partnering with various firms in Europe, but its headquarters are still in Sweden, meaning that the sales are conducted business- to business. They also expand internationally by collaborating with Swedish companies that work actively with international firms.

However, the firm has discovered that it can function well and efficiently through remote means and primarily focuses on working with Swedish companies. As a result, the pandemic did not offer the firm any precious advantageous opportunities for further expansion. Instead, it gave them more reason to be more stable in the Swedish business environment. "The most significant difference we experienced in the firm has been internal, with increased digital meetings and remote working," the team leader claims. Due to the firm already having such developed systems online where they are in close contact with their customers, international relations were not negatively affected. Regarding networks, the firm stated that the pandemic did not affect its network since it is already operating digitally with customers.

### 4.6.2 COVID-19's influence on contextual changes

The COVID-19 pandemic initially caused a decline in demand due to concerns and unpredictabilities in the external environment. Many companies and government agencies needed to be faster to explore solutions, and they wanted to hold back their financial resources. However, the firm claimed that it began to detect a slow rise in demand for its services as the pandemic grew after roughly six months. Despite the pandemic's challenges, the firm's digital capabilities allowed it to adapt to the increased acceleration of digitalization. The team leader at the firm continues by saying "One example of this was the transition from in-person training of the employees to digital training sessions which required the adaptation to digital solutions." Also, the transition to remote work was accomplished with relative ease, thereby facilitating the continuity of operations.

### 4.6.3 COVID-19's influence on the performance outcome

Regarding growth and profitability, the firm stated that it prioritizes profitability, which it considers to be an essential part of its success. The firm sees a correlation between growth and profitability because it relies heavily on the volume of customer queries and jobs. The demand initially dropped during the start of the pandemic, which significantly impacted the firm's growth. After six to twelve months, the demand began to increase again. In response to the firms diminishing demand, it decided to furlough certain employees and reduce the working hours of other employees. However, when the demand rose again, the firm restored everything to its original state.

Overall, the COVID-19 pandemic significantly impacted the firm's operations, but its digital capabilities allowed it to adapt to the changing circumstances. Although the pandemic initially caused a decline in demand, the demand began to increase a few months later. The firm's growth and profitability are closely linked.

To review the result of the interview, AllaBolag (n.d) is used to observe this. The performance outcome of firm 6 shows that the revenues and results increased in 2020 from the year before. However, compared to 2020, the revenues and results were lower in 2021. This would not indicate that the demand decreased at the beginning of the pandemic in 2020 and then increased in 2021 but instead the opposite. The result was maintained positive

throughout.

### 4.6.4 Firm 6 summary

- Business- to business sales. Have expanded to European countries but headquarters remain in Sweden. Has international customers but focuses mainly on Swedish customers. Continuous international networking.
  The pandemic did not create opportunity for further expansion.
- Decrease in demand in the beginning of pandemic due to uncertainty during turbulent time as firms and government agencies held back financial resources. The crisis was managed by transitioning many employee elements to digital elements due to the lockdowns and the acceleration of digitalization. Increase in digital meetings and remote working.
- Prioritize profitability over growth. Suggest that the relationship between growth and profitability is a balancing act since it cannot function without high customer inquiries. Furloughed employees and reduced staff working hours but later restored this.
- Increase in revenues and results in 2020 from the year before. Decrease in revenues and results in 2021 from the year before.

## 4.7 Table of case summaries

| | **International expansions during COVID-19** | **Contextual changes** | **View of performance** | **Performance measures** |
|---|---|---|---|---|
| **Firm 1** | No further expansions. COVID-19 did not present an opportunity for this. | Decrease in demand. Legislation changes affected their customers. “Rethink, reflect and reinvest”. Digital capabilities were an advantage. Maintained good relations. | Sustainable growth. Customer satisfaction and demand are determinants for their growth. No change of employees. | 2020: Decrease in revenue and results.<br>2021: Decrease in revenue but increase in results. |
| **Firm 2** | No further expansions but still present in other parts of the | Continuous demand. Legislation changes affected their | Sustainable growth. Increase in profitability | 2020: Decrease in revenue and results. |

| | | | | |
|---|---|---|---|---|
| | world. | customers. Took advantage of an unstable environment. digitalization led to maintained relations and showcases of software. | without expanding existing resources through employee knowledge development. Recruited 8-9 employees in 2020. | 2021: Increase in revenue but decrease in results. |
| **Firm 3** | No international expansions. | Increased demand. Digital ability was a big asset. Swedish lockdowns had no effect on the firm. Crisis management through further education of employees. Stable networks due to nearby relations. | Growth firm. Growth leads to profitability. Increase in employees and price leads to growth. Recruitment of employees during COVID-19. | 2020: Increase in revenue and results.<br>2021: Increase in revenues and results. |
| **Firm 4** | Continuous expansions with rough start. | Increase in demand. digitalization became a necessity. Passive attitude in firm. Lockdowns and legislation changes delayed their business processes. Stronger need to uphold relations with customers. | Not a clear connection between growth and profitability. Rapid growth. Accelerated by insecure customers in a digital environment. Continuous employment. | 2020: Increase in revenue and results.<br>2021: Increase in revenue and results. |
| **Firm 5** | Continuous expansions. | Increase in demand due to the need for digitalization. Focus on constant communication with networks. Legislation didn't allow them to be on site. | Not a clear connection between growth and profitability. Focus on growth Footprints and performance in projects and demand for digitalization lead to increase in sales. Recruitment of new employees. | 2020: Increase in revenues and results.<br>2021: Increase in revenues but decrease in results. |
| **Firm 6** | Did not create further opportunities for international expansions. | Decrease in demand in the first months due to turbulence followed by increase | Profitability firm. Perceives the relationship between growth | 2020: Increase in revenues and results.<br>2021: Decrease in |

| | | | | |
|---|---|---|---|---|
| | | in demand due to need for digital capabilities. Good relations were maintained through remote channels due to change in legislation. | and profitability as a balancing act powered by high customer inquiries. Furloughed employees in the beginning of the pandemic. | revenues and results. . |

*Table 2: Case summaries. Compiled by the authors.*

## 5 Analysis

In the following chapter, the results from the empirical chapter will be discussed and analyzed with the help of the theoretical framework and the conceptual model. This will be done by dividing the chapter in three different parts. These three parts are the expansion processes, contextual changes as well as the performance outcome. The influence of the COVID-19 pandemic on these three parts will be in focus in this analysis.

### 5.1 Born-digital firms' expansion process under the influence of COVID-19

#### 5.1.1 Expansion Process and its limitations and opportunities during the COVID-19 Pandemic

The researched firms included in the empirical chapter experienced different effects of the COVID-19 pandemic on international activities. Firm 1 stated that it did not expand internationally during the pandemic and had no plans to do so. Firm 3 also decided not to expand internationally during the pandemic since they became aware of the environmental instability caused by the pandemic and chose to prioritize local operations. Furthermore, firm 2 engaged in business-to-business sales, and had already established an international presence in China, Europe, and the USA before the pandemic. Likewise, firm 6 had already expanded internationally before the pandemic. Due to the decrease in demand and the impact of the pandemic on the firm, the crisis did not create an opportunity for further expansion. Firms 2, 3 and 6 can be analyzed from the perspective of the resource based view (Barney, 1991), to explain why these firms were unable to internationalize during the pandemic. Most of the

firms found it difficult to pursue additional international expansion due to the challenging market conditions and reduced demand in the industry. This situation indicates that the firm's resource capability may not have aligned well with the changing market dynamics and demand during the crisis. They may have lacked the necessary resources and encountered industry-specific challenges. When analyzing through the lens of the conceptual model, this would show how the typical growth patterns of born-digital firms were altered as born-digital firms usually scale up quickly but these firms were not able to do so during the pandemic.

Firm 2's prior international presence in China, Europe, and the USA before the pandemic, is consistent with the gradual and experiential learning process approach by the Uppsala Model (Johansson & Vahlne, 2009). By establishing relationships and networks in these markets before the crisis, Firm 2 had already overcome some of the liabilities of foreignness. However, the pandemic's overall effects and decrease in demand might have limited the firm's ability to expand internationally. This emphasizes the importance of considering the external environment since the internationalization theories can not fully explain why the studied firms did not want or could not expand internationally during the pandemic.

In contrast to other firms, Firm 4 continued to expand internationally through business-to-business sales even during the pandemic. The firm had localized its operations in regions with high demand, spanning across three continents. Thus, it successfully carried on with the international expansion plans throughout the crisis. Similarly, firm 5 expanded to the nordic countries before the pandemic and despite the challenging circumstances, the expansion efforts remained steady during the crisis. Communication through their website allowed businesses to reach out and establish compatibility. Taking the resource-based view (Barney, 1991) into consideration again, these firms possessed unique resources that aligned well with the changing market dynamics and allowed them to overcome the challenges posed by the pandemic.

Additionally, the conceptual model outlined in the theory chapter can also be used to understand the factors that influenced the firm's expansion decision and their subsequent performance outcomes. According to the conceptual model, increased demand can result in growth in international sales, which would consequently enhance the performance of the firm. Despite the initial slowdown, Firm 4 successfully resumed its international expansion plans, taking advantage of the opportunities created by the rising demand for digitalization.

Moreover, the conceptual model can explain Firm 5's expansion during the pandemic. The model indicates that the impact of contextual changes, such as the pandemic, can vary across industries. In this case, the industrial and transport sector in which Firm 5 operated was not as severely affected as the car production and sales industry. This favorable industry environment allowed Firm 5 to continue expanding internationally.

As previously mentioned, born-digital firms operating in the digital business landscape have unique advantages in terms of scalability, flexibility, and quick internationalization due to their utilization of digital infrastructure from the beginning (Monaghan, Tippmann & Coviello, 2020). However, one can argue that the success of these firms in internationalization depends on their ability to adapt their business model and value proposition to meet the changing needs and demands of the market during the pandemic. The firms that could leverage their digital capabilities and operated in an industry that was not directly affected by the pandemic and could offer innovative solutions in response to the crisis were more likely to succeed in their international expansion efforts.

**Summary**

- External environmental changes made the firms not focus initially on internationalization.
- The majority of the firms stated that the COVID-19 pandemic did not allow them to expand further than they would have been able to do before.
- The resource-based view (Barney, 1991) and the conceptual model can be applied to explain the limitations and challenges posed by the pandemic to the interviewed firms.
- Increased demand for digitalization was beneficial for all firms**.**

### 5.1.2 Change of international relations regarding the expansion process

The COVID-19 pandemic had no impact on the international relationships of forms 1 and 6, as their use of digital technology contributed to maintaining good relations with their customers and co-workers across the world. The firm's ability to communicate easily made networking much easier. According to the conceptual model, the regulatory framework can

impact the performance outcome. An assumption is that business networks are essential to maintain their customer base. As the network effect suggests, born-digitals' explosive growth can be attributed to the networks. These networks then play a vital role in internationalization (Johanson & Vahlne, 2009). One can assume that these born-digital firms may have leveraged their social capital to overcome barriers to international expansion during the pandemic. Their strong digital capabilities helped these firms to maintain communication internally within the firm, with customers and stakeholders worldwide.

On the other hand, Firms 2 and 5 had difficulties maintaining desired relations at the early start of the pandemic due to travel restrictions since they wanted to be on-site to be able to provide more value to the situation. In particular, restrictions imposed by China and the Nordic countries were an issue here. This would indicate that the restrictions could create a barrier for the growth of the firm. However, both were able to quickly switch to virtual meetings and online communications as an effective way to withhold their relations. The unique characteristics of born-digital firms can be used to explain why Firms 2 and 5 firms were able to retain a good relationship with their international relations. As mentioned in the theory chapter, born-digital affirms are based on a digital business model which gives them inherent flexibility and scalability (Monaghan, Tippmann & Coviello, 2020) . This would also reflect the acceleration of digitalization that was explained as a contextual change in the conceptual model.

It is noted how Firms 2 and 5's resilience and adaptation were crucial factors in their ability to manage the consequences of the pandemic on their international relations. Born-digital firms can use their digital infrastructure to maintain relationships despite travel limitations and other interruptions, in contrast to traditional businesses that mainly rely on physical presence and face-to-face contact (Monaghan, Tippmann & Coviello, 2020). Additionally, Jarosinski, Sekliuckiene and Kozma (2023), highlighted that the capacity of born-digital firms to quickly develop and manage user networks gave them a considerable advantage throughout the pandemic.

Furthermore,  despite not having international networks, Firm 3 had no issues holding their relationships stable as their customers were always nearby. Also, firm 4 observed a stronger need to uphold good relations as a consequence of the increased digitalization and therefore rise in demand for the firm's product. Thus, they were able to maintain strong networks because the firm was already comfortable with digital solutions. Considering the network

approach in the case of Firm 3, the focus on local customers allowed them to maintain stable relationships. This means that their performance is less impacted by the disruptions in global networks. Firm 4 was able to navigate the increased demand and maintain good relationships thanks to its comfort with digital solutions. This highlights the advantage of digital networks and the ability to leverage them effectively, as emphasized in the network approach (Chetty & Holm 2000).

### Summary

- Born-digital firms thrived in maintaining international relationships during the pandemic.
- Digital capabilities facilitate global networking for the interviewed firms.
- Adaptability and digitalization ensured stable international relations.

## 5.2 COVID-19s influence on the contextual changes

### 5.2.1 Change in consumer behavior

The pandemic indirectly affected Firm 1 due to reduced demand from customers in the automotive industry. The output from customers was affected, leading to a decrease in demand for the firm. Consequently, the firm had to put some projects on standby due to lower demand. Similarly, concerns and uncertainties in the external environment initially led to a decrease in demand for firms 4 and 6. Firm 3 mentioned that they faced challenges since the firm's growth depended on hiring new consultants, which required stability in consumer demand. Thus, the conceptual model discussed in the theory chapter can be related to this. As mentioned, contextual changes affect the association between growth patterns and performance outcomes. The empirical results align with these contextual changes, as the analysis above shows. A shift in consumer behavior, and fluctuating demand resulting from the contextual changes, directly impacted performance outcomes. The firms that experienced a decrease in demand also experienced a corresponding decline in their performance.

On the other hand, Firm 4 experienced increased demand as a result of the increased need for digital solutions during the pandemic. The firm's expertise was in higher demand due to other

companies' insecurities. Also, firm 5's digital solutions remained relevant during the pandemic, which resulted in stable demand. The firm could work on current and future projects displaying their proficiency. This means that the fluctuations in demand resulting from the COVID-19 pandemic provided an opportunity for certain firms while presenting a challenge for others. Once again, the conceptual model helps to explain why the shift in consumer behavior was an advantage for firms 4 and 5. Due to the insecurities of competing businesses and the demand for digital solutions, Firms 4 and 5 were given the opportunity to experience increased demand. This supports the suggestion that contextual changes such as the increased need for digital solutions during the pandemic affected the association between the growth patterns of born-digital firms and their performance.

Furthermore, one can suggest that the reason why each firm was affected differently can be related to the industry they are working in and their business model. Firms 1 and 2 faced a chain reaction to the negative impact that the COVID-19 pandemic had on the automotive industry as they worked closely with this industry which caused the demand to decrease. Although firms 3,4,5 and 6 work with the automotive industry, they only rely on this industry partially. They sensed the need for the digital solutions that they would offer , indicating that their demand was rising. Firms 1 and 2 still saw the increased demand for digital solutions in general, but since they were strongly dependent on the automotive industry, they were off to a rough start.

### Summary

- COVID-19 pandemic changed consumer behavior, and affected firms differently.
- Fluctuating demand as an effect of shifted consumer behavior affected the firm's performance outcomes.
- The ability to meet evolving consumer needs and preferences determined the success of the interviewed firms during the pandemic.
- Industry dependency influenced the effect of consumer behavior. .

## 5.2.2 Turbulence and crisis management within the firm

The interviewed born-digital firms had to develop crisis management strategies to handle the challenging effects of the pandemic. Firm 1 said they took the opportunity to rethink, reflect

and reinvest in the firm to prepare for a more competitive market in the future. The theory of crisis management and resilience (Krishnan, Ganesh, and Rajendran, 2022) can provide an understanding of Firm 1's response during the pandemic. By rethinking, reflecting, and reinvesting in the firm , Firm 1 developed an effective crisis management strategy that aligned with the concept of resilience.

In addition, the ability of Firm 2 to alter its strategy and recruit new employees throughout the pandemic is another factor that contributed to its resilience. The company displayed a proactive ability to handle the crisis by embracing change and adapting its business model. The decision made by Firm 3 to retain operations locally rather than expand internationally in response to rising local firm demand for their services is also consistent with the concept of resilience. Similarly, Firm 4 decided to be more careful with investments and business when the external environment was turbulent. In contrast, Firms 5 and 6 decided to invest further in new employees and the learning of those. These born-digital firms' diverse skills, including adaptation, market focus, risk management and human capital development, strengthened their resilience and helped them effectively manage the crisis.

Resilience, as discussed above, is an important concept that firms should strive for by developing new capabilities to minimize negative effects. What can be seen in the interviews is that firms 1, 2, 5, and 6 decided to have more active crisis management where they invest further in the firm to meet the turbulence in the external environment. Firms 3 and 4 on the other hand decided to adopt a more passive strategy where they hold back further investments. This is connected to the conceptual model that was described in the theory chapter since crisis management is considered to decide what opportunities the firm was able to take advantage of, which in turn could affect the performance of the born-digital (Krishnan, Ganesh and Rajendran, 2022).

## Summary

- Born-digital firms showed proactive crisis management strategies during the pandemic.
- The ability of the interviewed firms to modify and adjust their strategy in the face of turbulence was significantly influenced by resilience.

- Different crisis managment approached were observed, with some firms investing further while others adopted a more cautious approach.

### 5.2.3 Lockdowns and change of Legislation

The legislation change had a negative impact on most of the firms' relations with their customers. This was mainly due to the lockdowns that kept people from working in the production. With firms 1 and 2, the lockdowns affected their customers as they disrupted their customers' value chains. Travel restrictions affected some of the companies' networks since they could not travel. Firm 2 claimed that travel restrictions limited their relationship with China, and Firms 5 and 6 both mentioned they faced difficulties in traveling to project locations. However, digital capabilities allowed affected firms to rapidly adjust to digital meetings and remote work, which helped to maintain good relations with customers and coworkers worldwide (Monaghan, Tippmann & Coviello, 2020).

Additionally, the COVID-19 pandemic brought changes in the regulatory framework that required solutions (UNIDO, 2021). . This can be perceived through the conceptual model where legislation can affect the growth patterns of the born-digitals, which in turn then affects the performance measures. For the born-digital firms being interviewed, their digital capabilities were crucial to facing the travel restrictions. However, it was more difficult for the production firms that many of them have as customers to overcome shifts in the regulatory framework as lockdowns affected their value chains. Additionally, their firm's transition to digital meetings was facilitated by their prior experience with the digital environment, making the adoption of virtual communication a seamless and easily manageable step for the firm.

On the contrary, as firm 3 only works locally, they had no issues with customer relations due to change in legislation. Firm 3 saw a stronger will with customers to uphold good relations through digital solutions. With limited international dependencies, Firm 3 quickly adjusted to the changing business environment by utilizing their strong digital capabilities, which can be seen as a crucial factor that enabled them to sustain positive customer relations despite the disruptions caused by lockdowns and legislation changes.

**Summary**

- Travel restrictions limited some international relations for few of the firms.
- Digital capabilities allowed firms to adjust to digital meetings and remote work which helped to maintain international relations (Monaghan, Tippmann & Coviello, 2020).

### 5.2.4 Acceleration of digitalization

The empirical findings show that each firm emphasized the importance of digital capabilities throughout the pandemic, allowing them to continue providing their services to customers remotely. As mentioned in the theory section, Bradley et al. (2020) found that companies that proactively responded to the increasing digitalization of the business landscape by undergoing significant strategic transformations, outperformed their traditional competitors. This suggests that companies willing to adapt and evolve their strategies in response to changing market conditions are more likely to succeed than those that are resistant to change (Bradley et al., 2020). This was the result for all the firms. It benefited Firm 1, which specializes in CAE software solutions for the automotive industry, and Firm 3, a remote consulting firm specializing in system development and UX design.

Similarly, Firm 2, was also able to continue working remotely and providing online demonstrations of its products. Firm 4, which works with digital solutions for the industrial sector and automotive industry and firm 5, specializing in program development and system integration for transport and industries, saw an increased demand for their digital solutions. In the turbulent beginning, Firm 6 observed a decline in demand, but discovered that their customers later recognized the need for digital solutions, leading to an increase in demand. Regarding the shift in the external environment described in the theory chapter, one of the most significant opportunities presented by the pandemic is the acceleration of digitalization, which can be linked to the described empirical results. The born-digital firms already had an advantage in this area and the pandemic has further increased the demand for their service. In light of the empirical findings, it can be assumed that the COVID-19 pandemic accelerated the digitalization which was visualized in the conceptual model. The increased focus on digital capabilities allowed the interviewed firms to keep working remotely to satisfy the customers needs. This change emphasizes the importance of adaptability and strategic transformation in response to change in the external environment.

In conclusion, Firms 4,5 and 6 saw digitalization as an important factor in their success which can be linked to the increased acceptance of digitalization during the COVID-19 pandemic (Bradley et. al 2020). However, as all these firms are born-digital firms, digitalization should seemingly be in favor of all the firms involved. This can indicate that other factors are important as well as not only having the ability to perform digital services or products.

### Summary

- All of the born-digitals that were interviewed noticed the acceleration of digitalization during the COVID-19 pandemic. This was described in the conceptual model as well.
- Other factors can affect the firms' performance as all of the firms saw the acceleration as beneficial but still had different outcomes.

## 5.3 Performance

### 5.3.1 Firms' view on profitability and growth

Firstly, firm 1 sees the importance of focusing on customer needs to ensure sustainable growth, rather than rapid growth. Firm 2 believes that profitability and growth are interrelated with one leading to the other but that they have grown enough to increase profitability without expanding existing resources. Similarly, Firm 1 also sees a clear connection between growth and profitability but focuses initially on sustainable growth rather than rapid growth. . The firm aims to ensure sustainable growth while prioritizing customer satisfaction. Unlike many of the other firms, firm 6 decides to focus on profitability instead of growth but still sees a correlation between the growth and profitability. In the theory, it is stated that born-digital firms have growth patterns characterized by quick scalability and early internationalization (Monaghan, Tippmann & Coviello, 2020) . These firms have immediate access to the global market and can experience international growth within a few years of inception.

Contextual changes can impact the link between growth patterns and firm performance, as previously discussed in the theory chapter. This is reflected in the analysis by highlighting the disruptions brought on by the pandemic. While rapid growth can be advantageous and is a unique characteristic for born-digital firms, it is important to consider the sustainability of this growth in the long term. One can suggest that the shift in the external environment made Firm 1 and 2 realize that it is more advantageous for them to ensure profitability rather than

seeking rapid growth. This clearly highlights the limitation of previous research, which assumes that born-digital firms operate within a stable external environment, whereas the empirical findings indicate the opposite.

On the contrary, firm 4 does not believe that growth leads to profitability as they are growing at a fast pace but not together with their profitability. Firm 5 does not perceive a strong connection either as they also focus on growth. The same as the previous two firms, Firm 3 focuses on growth but the difference is that they see a clear connection between growth and profitability as more consultants lead to more profits for the firm. According to the conceptual model, the growth pattern of the born-digitals can consist of quick scalability which is connected to the high growth pace (Monaghan, Tippmann & Coviello, 2020). These firms focus on the growth of the firm rather than the profitability. Davidsson, Steffens and Fitzsimmons (2009) suggest that growth firms are less likely to achieve profitability and should strive to achieve growth opportunities that are achievable with their resources. Therefore, one can assume that there is a distinction in the choice that the born-digital firms have chosen to prioritize. This introduces the reasoning of whether growth implies profitability and if other factors affect the firm's choice of focusing on growth or profitability.

**Summary**

- The born-digitals had varied opinions on the link between growth and profitability.
- Majority of the firms that were interviewed chose to focus on growth rather than profitability.
- Davidsson, Steffens and Fitzsimmons (2009) suggest that growth firms are less likely to achieve profitability.

### 5.3.2 Factors behind the change of growth and profitability

Firm 5 claim to have contributing factors behind their growth such as the high demand for digital solutions, increased sales and footprint from different projects. Firm 6 believes that the pandemic had an impact on their growth as the demand initially decreased and then increased again. Contributing factors are the number of customer inquiries and jobs received. According to the conceptual model, the consumer behavior in terms of demand could impact the growth of the firms. This is something that both firms 5 and 6 have reflected upon as the COVID-19 pandemic led to a shift in demand for them. The pandemic caused a shift in

demand for both firms, which forced them to adapt their strategies and offerings accordingly to meet the changing needs of customers and capitalize on emerging opportunities. One can argue that both firms were able to sustain growth and achieve positive performance outcomes by understanding and responding to the evolving demand.

Moreover, as firm 2, firm 3 also sees a connection between profitability and growth and believe that their growth leads to profitability. Additional factors behind profitability are the development of the consultants, and higher payments for less hours. As firm 1 focuses on sustainable growth, they perceive that a contributing factor is to not compromise customer satisfaction as it is a big priority. Firm 1 considers consumer behavior of high importance. It was stated by UNIDO (2021) that the consumer demand varied dramatically during the COVID-19 pandemic. Considering the significant variations in consumer demand during the COVID-19 pandemic, Firm 1 recognized that prioritizing customer satisfaction and adapting to changing consumer behavior would be essential for long term success. Firm 1 aimed to develop customer loyalty and create a strong foundation for continued growth and profitability even in an environment of volatile market conditions. This was done by focusing on sustainable growth and maintaining customer satisfaction.

Firm 4 believes that factors behind their rapid growth are opportunities that COVID-19 pandemic gave them, such as, making other firms more insecure and increasing the acceptance and demand for digital solutions. This means that Firm 4 took advantage of the turbulence in other firms which led to them holding their investments in their firms. Turbulent environment is said to cause negative performance outcomes (Ansell, Sorensen & Torfing, 2021) which is conveyed in the conceptual model of this research. However, firm 4's crisis management could be seen as highly valuable as they found a way to go around the turbulent environment (Krishnan, Ganesh & Rajendran, 2022). While a turbulent environment is generally associated with negative performance outcomes, one can suggest that Firm 4's effective crisis management allowed them to navigate the challenges posed by the pandemic and thrive despite the circumstances. This suggests that Firm 4's ability to adapt and take advantage of the opportunities, played an important role in their rapid growth during the pandemic.

**Summary**

- Results show that demand is the most evident factor for growth and profitability for the born-digital firms that were interviewed.
- Crisis management was relevant for the firms during the COVID-19 pandemic to keep growing.

### 5.3.3 Change of number of employees

Firm 1 did not have to let employees go during the COVID-19 pandemic. Although, some projects were put on standby as the demand for their work wasn't as high. On the contrary, firm 2 was able to recruit 8-9 new employees in Sweden. This was due to other firms laying off staff which created an opportunity for the firm itself. For firm 3, it was important to recruit overhead employees as the demand for their firm was growing during the pandemic and investments had to be made in the management. Likewise, firms 4 and 5 also had further employment in their firm. Meaning none of these firms had to let any employees go. Instead, some of them recruited new employees. However, firm 1 also had some projects on standby. As written in the conceptual model, the turbulent environment of the pandemic required problem-solving (Ansell, Sorensen & Torfing, 2021) . One can therefore assume that acts regarding the firm's employees are impacted by the turbulence and crisis management within the firm. Also, many of these firms work with customers that are production firms that were affected by the lockdowns and such which could cause a chain reaction where the demand is decreased for the born-digital firm which would imply that the contextual changes in the conceptual model affect each other as well. However, firm 2 decided to take advantage of the production firm's turbulent environment to recruit their skilled workers when laid off.

Firm 6 decided to furlough some employees and decrease working hours instead of laying them off as they later went back to their normal state shortly after the start of the pandemic. Layoffs were highly frequent during the COVID-19 pandemic and could limit the firm's growth (BLS, 2021). This was the only firm amongst the interviewees that had a temporary layoff during the COVID-19 pandemic due to the decrease in demand from the customers.

**Summary**

- Five of six firms did not fire or furlough any employees during the COVID-19 pandemic. Instead many chose to recruit new employees.

- Recruitment of new employees can be seen as a problem-solving technique in the turbulent environment.
- Layoffs could limit the growth of the firm (BLS, 2021). Firm 6 furloughed employees when the demand was decreased.

### 5.3.4 Comparison of the Firms' performance outcomes

Firm 1's revenues and profits were slightly decreased in 2020 and in 2021, the revenues were decreased once again but with a slight increase in results. Firm 2 also had a decrease in revenues and results in 2020 but in 2021, the revenues increased and their results decreased. With the input of the theoretical framework, born-digital firms should be better off regarding their performance measures and sustainable competitive advantage as they do not rely on production (Barney 1991; OECD, 2021). However, many of these born-digital firms work with production firms which become their customers. As the production faced value chain disruptions and lockdowns, this could affect the performance of the born-digital firms as well since their sales are reliant on them. This is displayed through the conceptual model where consumer behavior can affect the performance outcome.

Firms 3 and 4 had  different patterns as their revenues and results increased in 2020 and 2021. However, the revenues for firm 4 are growing at a much faster pace than the result. Likewise for firm 5, the revenues are growing at a faster pace in 2020 and 2021 as the results instead decrease in 2021. For firm 6, the revenues and results increased in 2020 but decreased in 2021. According to theory, growth firms are less likely to achieve profitability according to Davidsson, Steffens and Fitzsimmons (2009). It can be seen that the firms focusing on explosive growth,  such as firms 4 and 5 have fast pace growth in sales but lower change in results which can indicate that they're growing but not becoming more profitable. However, the born-digital firms display different patterns in their performance which would not indicate a general pattern for all. This can depend on different factors such as their investments in the firm, demand and such. All of the firms above were able to maintain a positive result throughout.

### Summary

- All of the born-digital firms that were interviewed showed positive results during the years 2020 and 2021.

- Variation in performance measures as some had increase in revenues and results whilst some showed a decrease.
- Some of the firms showed that explosive growth did not lead to similar increases in profitability which is in line with Davidsson, Steffens and Fitzsimmon's findings (2009).

# 6 Conclusion

## 6.1 Answer to research question and contribution to existing literature

To answer the question of how the COVID-19 pandemic influenced the international expansions and performance for the born-digital firms, conclusions are drawn with the help of the theoretical framework, interviews with six born-digital firms and secondary data. Furthermore, the conceptual model that has been developed in this research has been very beneficial.

The conclusion that can be drawn is that the COVID-19 pandemic had a variation of effects on the born-digital firms. When it comes to the international expansions, some of the firms were able to have continuous expansions whilst some decided to wait with further expansions due to the turbulent external environment. However, none of the firms felt that the COVID-19 pandemic gave them the opportunity to expand further than they would have been able to do before.

On the other hand, many of the firms felt that the demand was increased at times which can be due to what was explained in the conceptual model as the acceleration of digitalization. Consumer behavior was altered and the COVID-19 pandemic increased the need for digital solutions which created a higher acceptance for digitalization. This was noticed by many of the firms. However, as many of the interviewee firms work closely with automotive firms, there was a chain reaction where the value chain had disruptions which led to less production and less demand for the born-digital firm. Their value chains had disruptions due to lockdowns and change in legislation which some firms also felt influenced them directly as they were not able to fly out to their customers but had to have only digital relations. Through their digital solutions for communications as well as crisis management, this was often not a problem.

Furthermore, there was a variation in the performance of the born-digital firms that were interviewed. To face the crisis, most of the firms chose to recruit more employees during the COVID-19 pandemic which is to differ from many other industries where employees were temporarily or permanently laid off. Overall, the born-digital firms were able to produce a positive result during 2020 and 2021 and many were able to increase their revenues and results during these two years when the crisis occurred. Contributing factors were the contextual changes mentioned in the conceptual model that was constructed. These were changes of legislation, consumer behavior, turbulence, crisis management as well as the acceleration of digitalization.

These conclusions can contribute to the already existing literature where there have been studies regarding how different industries managed the COVID-19 crisis. However, what's missing is a more profound research on how the born-digital firms were affected which is being covered in this research. As there was a vivid and clear influence on the production firms during the crisis, one should now be able to view the born-digital firms' management of the crisis. Furthermore, many reports were released on the COVID-19 pandemic's influence on the automotive industry and firms such as Volvo AB and Volvo Cars. But to develop this research further, the digital firms that work with such firms are examined as they were indirectly influenced.

## 6.2 Limitations and future research

In this research, born-digital firms in the city of Gothenburg were interviewed and examined. This can indicate that the research question was answered from a certain perspective as the situation might differ in different cities and countries. Therefore, it might be interesting to perform the same research in the future where each born-digital originated in a different country. This can potentially showcase that different countries had different changes of legislation during the covid-19 pandemic which influenced the firms' international expansions and performance. Also, as the covid-19 pandemic still is a quite recent event, it can be possible that some performance effects are still not shown. Therefore, this could limit the results and the conclusions drawn in this research.

Furthermore, the firms that were interviewed work with similar industries such as the automotive and transport industry. This could influence the success rate of the born-digital firms' during the COVID-19 pandemic as all industries reacted in unique ways. Although all

firms weren't totally dependent on customers in these industries, they still influenced their way of working. For future research, it can be relevant to examine born-digital firms that work within other industries such as clothing. This is to see if the conclusions drawn are applicable within other industries as well.

Additionally, only six firms were interviewed in this research which may not have given the full view when answering the research question. What becomes a limitation is if one is able to sense a valid enough pattern in the interview answers from only six interviews where the firms do not have completely similar or identical business models. Therefore, it can be relevant to include more firms for future research where the firms offer similar products or services and work with the same industries. This would create clearer conclusions. Different conclusions could also be drawn if the choice of theories were to differ from the ones found relevant in this research.

## 6.3 Implications for practitioners

The findings from this research suggests that the born-digital firms took a different route during such a crisis as the COVID-19 pandemic. This is seen in how most of them decided to invest further in the firm and their employees instead of furloughing people and holding their investments. For managers of born digital firms, it can be beneficial to evaluate the importance of different factors such as crisis management, choice of customers as well as countries for internationalization. Furthermore, an implication for the employees of these firms is to evaluate the potential of the firm that they work for and analyze if investments are made in them in times of crisis. But also to understand the connection between demand for their work in relation to a crisis like this. The implications regarding crisis management doesn't only become relevant during the time of pandemics, but also during other types of crises. For example, it can be used in these times where there is a war going on between Russia and Ukraine as well as there is an economic inflation.

What can be relevant from our findings is what kind of contracts one shares with customers and employees. Reviewing securities of contracts for both managers and employees can be beneficial in times like the COVID-19 pandemic when the external environment was turbulent and it was difficult to predict the next day. This could minimize the negative influence that turbulence brings to some firms. Crisis management also plays an important role in this.

Additionally, the results of this research prevails the surge of digitalization during the COVID-19 pandemic. This can be a useful implication for the firms as well as the whole of society as the need for digital solutions are increasing. Especially during a health crisis such as COVID-19 where human contact was limited which boosted many of the born-digital firms. This can be relevant for non-digital firms as well as they could further implement digital functions to their firms to not risk falling behind in the digital progress of the world.

## 7 References


Alicke, K., Barriball, E., Trautwein, V. (2021). How COVID-19 is reshaping supply chains. McKinsey & Company. Available at: https://www.mckinsey.com/capabilities/operations/our-insights/how-covid-19-is-reshaping-supply-chains .

AllaBolag (n.d.). Företagsinformation om alla Sveriges bolag. Available at: https://www.allabolag.se.

Amankwah-Amoah, J., Khan, Z., Wood, G., Knight, G., (2021). COVID-19 and digitalization: The great acceleration. Journal of Business Research, Volume 136, 602-611. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8437806/

Ansell, C., & Trondal, J. (2018) Governing Turbulence: An Organizational- Institutional Agenda. Perspectives on Public Management and Governance, 1(1), 43-57. https://www.researchgate.net/publication/321014084_Governing_Turbulence_An_Organizational-_Institutional_Agenda

Ansell, C., Sorensen, E., & Torfing, J. (2021). The COVID-19 pandemic as a game changer for public administration and leadership? The need for robust governance responses to turbulent problems. Public Management Review, 23(7), 949-960. https://rucforsk.ruc.dk/ws/portalfiles/portal/78671525/PMR_COVID_19_master_revised_JT_CA_ES.pdf

Armantier, O., Koşar, G., Pomerantz, R., Skandalis, D., Smith, K., Topa, G., Klaauw, W. (2021). How economic crises affect inflation beliefs: Evidence from the COVID-19 pandemic. Journal of Economic Behavior & Organization, Volume 189. p. 443-469.

https://doi.org/10.1016/j.jebo.2021.04.036.

Barklie, G. (2023). Which countries have the highest levels of inflation in 2023? *Investment Monitor*, 21 February.

https://www.investmentmonitor.ai/insights/which-countries-have-the-highest-level-of-inflation-in-2023/

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99–120.

https://doi.org/10.1177/014920639101700108

Bell, E., Bryman, A., Harley, B (2019). Business research methods. 5th ed. Oxford University Press, UK.

Berman, S., Gyimesi, K. (2011). Digital transformation in the automotive industry. IBM. Available at: https://www.ibm.com/downloads/cas/LVDZDXOA .

Bradley C., Hirt M., Hudson S., Northcote N., Smit S, (2020). The great acceleration. McKinsey Quarterly. 2020:1–7. https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-great-acceleration

Burke, R.J. and Cooper, C.L. (2004). Leading in turbulent times : managing in the new world of work. Malden, Ma: Blackwell Pub.

Cavusgil, S.T., Knight, G. and Riesenberger, J.R. (2020). International Business: The new realities. 5th ed. Pearson Education Limited, UK.

Chetty, S., Holm, D.B. (2000). Internationalisation of small to medium-sized manufacturing firms: A network approach. International Business Review, 9(1), 77-93 https://www.researchgate.net/publication/223789933_Internationalization_of_Small_to_Medium-Sized_Manufacturing_Firms_A_Network_Approach

Chetty, S., Wilson, H. (2003). Collaborating with Competitors to Acquire Resources, International Business Review, 12 (1), 61-81. https://www.sciencedirect.com/science/article/abs/pii/S0969593102000884#preview-section-cited-by

Cowling, M., Liu, W., Ledger, A., (2012). Small business financing in the UK before and during the current financial crisis. International small Business Journal 30(7), 778-800. https://www.researchgate.net/publication/258142869_Small_business_financing_in_the_UK_before_and_during_the_current_financial_crisis

Davidsson, P., Recker, J., & von Briel, F. (2021). COVID-19 as External Enabler of entrepreneurship practice and research. BRQ Business Research Quarterly, 24(3), 214–223. https://doi.org/10.1177/23409444211008902

Davidsson, P., Steffens, P., Fitzsimmons, J. (2009). Growing profitable or growing from profits: Putting the horse in front of the cart?Journal of Business Venturing, Volume 24, Issue 4, Pages 388-406.

https://doi.org/10.1016/j.jbusvent.2008.04.003.

Dey-Chowdhury, S., Khaliq, M., Okoye, G., Abrahams, L. (2022). Effects of the coronavirus (COVID-19) pandemic on "high-contact" industries - Office for national statistics.

https://www.ons.gov.uk/economy/grossvalueaddedgva/articles/effectsofthecoronaviruscovid19pandemiconhighcontactindustries/2022-05-06

Domurath, A., Coviello, N., Patzelt, H., Ganal, B. (2020). New venture adaptation in international markets: A goal orientation theory perspective. Journal of World Business, 55(1). https://www.sciencedirect.com/science/article/abs/pii/S1090951617308647

Dubois, A., Gadde, L.-E. and Dubois, A. (2002). Systematic combining: an abductive approach to case research. Journal of Business Research, [online] 55, pp.553–560. Available at: https://www.pm.lth.se/fileadmin/_migrated/content_uploads/6._Dubois_Gadde_Systematic_Combining.pdf .

Galvin, J., LaBerge, L., Williams, E., 2021. The new digital edge: Rethinking strategy for the postpandemic era. McKinsey & Company. Available at:

https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-new-digital-edge-rethinking-strategy-for-the-postpandemic-era.

Gereffi, G. (2018). Global value chains and development: Redefining the contours of 21st century capitalism. Cambridge University Press.

Gu, S., Ślusarczyk, B., Hajizada, S., Kovalyova, I. and Sakhbieva, A. (2021). Impact of the COVID-19 Pandemic on Online Consumer Purchasing Behavior. Journal of Theoretical and Applied Electronic Commerce Research, 16(6), pp.2263–2281. doi:https://doi.org/10.3390/jtaer16060125 .

Harapko, S. (2023). How COVID-19 impacted supply chains and what comes next. Ernst & Young. Available at: https://www.ey.com/en_gl/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next

Institute for PR (2007). Crisis management and communications. Available at: https://instituteforpr.org/crisis-management-and-communications/

Jarosiński, M., Sekliuckiene, J., Kozma, M. (2023). Born Digitals: Understanding the Sustainable Competitive Advantage Across Different Markets. In: Adams, R., Grichnik, D., https://link.springer.com/chapter/10.1007/978-3-031-11371-0_3

Johansson, J., Vahlne, J. (2009). The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership. Journal of International Business Studies 40(9). https://www.researchgate.net/publication/227470275_The_Uppsala_Internationalization_Process_Model_Revisited_From_Liability_of_Foreignness_to_Liability_of_Outsidership

Krishnan, C., Ganesh, L., Rajendran, C., (2022). Entrepreneurial Interventions for crisis management: Lessons from the Covid-19 Pandemic's impact on entrepreneurial ventures. International Journal of DIsaster Risk Reduction. Volume 72. https://www.sciencedirect.com/science/article/pii/S2212420922000498

Kvale, Steinar. (1996). Interviews: An introduction to qualitative research interviewing. London: SAGE, chapter 7: The Interview Situation, pp 124-135; chapter 8: The Quality of the Interview, pp 144-159.

https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxlZGY2NDc1fGd4OjFiOTVkYTU2NGM4NjMxOTU

Larsson, M., Nordevik, A. (2022). Halvledarbristen ger Volvo Cars försäljningsras på 25 procent. *Ny Teknik*, 30 April.

https://www.nyteknik.se/fordon/halvledarbristen-ger-volvo-cars-forsaljningsras-pa-25-procent/976919

Manyika, J., Lund, S., Bughin, J., Woetzel, J., Stamenov, K. and Dhingra, D. (2016). Digital globalization: The new era of global flows | McKinsey. [online] www.mckinsey.com. Available at: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/digital-globalization-the-new-era-of-global-flows .

Mihailova, I. (2023). Business model adaptation for realized international scaling of born-digitals. Journal of World Business. 58 (2). https://www.sciencedirect.com/science/article/pii/S1090951622001080

Monaghan, S., Tippmann, E. & Coviello, N. (2020). Born digitals: Thoughts on their internationalization and a research agenda. J Int Bus Stud 51, 11–22 . https://doi.org/10.1057/s41267-019-00290-0

Nahapiet, J., Ghosal, S. (1998) . Social Capital, Intellectual Capital, and the Organizational Advantage. Volume 23 Issue 2 The Academy of Management Review . Available at: https://www.researchgate.net/publication/228314367_Social_Capital_Intellectual_Capital_and_the_Organizational_Advantage

Nambisan, S. (2017). Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. Entrepreneurship: Theory and Practice, 41(6). https://www.researchgate.net/publication/306254629_Digital_Entrepreneurship_Toward_a_Digital_Technology_Perspective_of_Entrepreneurship

OECD (2021). Business dynamism during the COVID-19 pandemic: Which policies for an inclusive recovery? Available at:

https://www.oecd.org/coronavirus/policy-responses/business-dynamism-during-the-covid-19-pandemic-which-policies-for-an-inclusive-recovery-f08af011/

OECD (2020). E-commerce in the time of COVID-19. Available at: https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/

OECD Conference Center (2019). Resilience Strategies And Approaches To Contain Systematic Threats. Available at: https://www.oecd.org/naec/averting-systemic-collapse/SG-NAEC(2019)5_Resilience_strategies.pdf

Parkinson, Cody (n.d.). Are temporary layoffs becoming permanent during COVID-19? : Monthly Labor Review: U.S. Bureau of Labor Statistics. [online] www.bls.gov. Available at: https://www.bls.gov/opub/mlr/2021/beyond-bls/are-temporary-layoffs-becoming-permanent-during-covic-19.htm .

Pisani, N. (2021). The changing landscape of international business post-COVID-19. [online] Industrial Analytics Platform. Available at: https://iap.unido.org/articles/changing-landscape-international-business-post-covid-19.

Schaefer, T., Cabral, J.E. (2016). Born globals and Internationalization Theories - A comparative study. Brazilian Agriculture Research Approach. Volume 1. https://www.researchgate.net/publication/304576044_Born_globals_and_internationalization_theories_A_comparative_study

Sharma, D.D. and Blomstermo, A. (2003), The internationalization process of Born Globals: A network view. International Business Review, 12 (6), 739–753. https://www.researchgate.net/publication/223121950_The_Internationalization_Process_of_Born_Globals_A_Network_View

Tippmann, E., Ambos, T. C., Giudice, M. D., Monaghan, S., Ringov, D. (2022). Scale-ups and scaling in an international business context. Journal of World Business, Volume 58, Issue 1, 101397. https://doi.org/10.1016/j.jwb.2022.101397.

Vadana, I., Kuivalainen, O., Torkkeli, L. (2021) The Role of Digitalization on the Internationalization Strategy of Born-Digital Companies. Sustainability 13(24):14002

https://doi/10.3390/su132414002

Vadana II., Torkkeli L., Kuivalainen O., Saarenketo S. (2019). The Internationalization of Born- Digital Companies. In: Chidlow A., Ghauri P., Buckley T., Gardner E., Qamar A., Pickering E. (eds) The Changing Strategies of International Business. The Academy of International Business. Palgrave Macmillan, Cham https://lutpub.lut.fi/bitstream/handle/10024/159404/vadana_et_al_the_internationalization.pdf;jsessionid=29A2A89BE8671628FB639F691697C449?sequence=1

Williams, T., Gruber, D., Sutcliffe, K, Shepherd, D. (2017). Organizational Response to Adversity: Fusing Crisis Management and Resilience Research Streams. The academy of Management Annals, 11(2). https://www.researchgate.net/publication/314119574_Organizational_Response_to_Adversity_Fusing_Crisis_Management_and_Resilience_Research_Streams

Yayla, S., Yeniyurt, S., Uslay, C., and Cavusgil, E. (2018). The role of market orientation, relational capital, and internationalization speed in foreign market exit and re-entry decisions under turbulent conditions. International Business Review, 27(6), 1105-1115 https://www.sciencedirect.com/science/article/abs/pii/S0969593117307175#preview-section-references

Yin, R.K. (1981). The Case Study Crisis: Some Answers. *Administrative Science Quarterly*, [online] 26(1), p.58. doi:https://doi.org/10.2307/2392599.

## 8 Appendix ; Interview guide

- What is your role in the firm?
- What do you offer as a firm?
- When was your firm founded and how?
- Has your firm expanded internationally or had plans to do so? Before and during the COVID-19 pandemic?
- What is your firm's expansion approach when expanding internationally?
- Did the pandemic affect your international expansions in any way? Opportunities? Obstacles?
- Have you seen any increased or decreased demand during the COVID-19 pandemic and why?
- How has your firm handled the turbulence and crisis within the firm?
- Have lockdowns and change of legislation affected your firm in any way?
- Has your firm experienced any acceleration of digitization during the COVID-19 pandemic and how has this impacted your firm?
- How has the pandemic influenced your networks and international relations between customers, partners and investors?
- Would you claim that your firm’s growth leads to profitability? Or do you not see a coherent effect between these?
- What factors have contributed to your firm’s increase/decrease in growth and profitability?
- Have you had to let anyone go during the COVID-19 pandemic?