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RADICAL CHANGES IN FIRMS' INTERNATIONALIZATION

PROCESSES: IMPACT OF THE COVID-19 PANDEMIC

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I hereby declare that I have compiled the thesis independently and all works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading. The document length is 21953 words from the introduction to the end of conclusion.

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ABSTRACT

Firms' internationalization processes can be affected by internal and external factors, when a firm encounters radical changes in the external environment, as in the case of the ongoing global pandemic Covid-19, which has had a major impact on firms around the world, firms' performance in international markets varies from different country. The aim of this thesis is to explore the impact on the firms' internationalization in the case of radical changes in the external environment caused by Covid-19, and how firms responded to the Covid-19. This thesis uses a qualitative research approach, selecting two Chinese and two Estonian firms for a multi-case study. In-depth interviews were made with decision makers or sales managers of the case firms, in order to understand the four case firms' internationalization processes, how the firms performed in overseas markets during Covid-19 and what measures firms created to respond to the Covid-19.

The results based on the discussions and findings can lead to timely theoretical contributions, as the global pandemic Covid-19 is still ongoing, this research will also provide meaningful value to the business community and decision makers. The results from the four case firms research indicate that external crisis such as Covid-19 not only have a negative impact, but also bring opportunities for some firms to grow. Covid-19 impact on the firms' internationalization processes is short-term and discontinuous. In the current business environment affected by the Covid-19, firms need to manage risk well in advance. When firms encounter radical changes in the external environment, the firms need to formulate timely responses.

Keywords: Internationalization, Internationalization process, Radical changes, Crisis response

INTRODUCTION

Firm's internationalization process is a process by means of the firm entering international markets in different ways, which can be a progressive development process (Johanson and Vahlne 1977), firms gradually develop from domestic market to overseas markets. It can also be a non-progressive process (Cavusgil and Knight 2015), firms do not go through the domestic market, but directly enter the overseas markets. In the process of firms' internationalization, internal factors are important, including the competence of the employees, the firm's financial chain, the management's decision-making ability and so on. But equally important are the external factors, including policies and regulations, the market environment, the industry environment and so on (Kafouros et al 2011). Radical change is the change that occurs relatively quickly and which changes the social environment, political context and firm structure (McAdam 2003). Specifically, this type of change can immediately affect a firm's organization's resources, development strategies and can lead to disruptions and fluctuations in business operations (Chen and Yu; 2008, Zhang and Larimo 2013). As is happening now with the global pandemic of Covid-19, it has long-term effects and is an unpredictable crisis (Nagarajan and Sharma 2021), firms' internationalization processes in turbulent times will inevitably be affected to a large extent (Yayla et al 2018), the radical changes in the external environment such as the Covid-19 global pandemic had a huge effect on the firms' internationalization, OECD surveys have shown that the Covid-19 has impacted on firms in overseas market. 80% of firms in China were disrupted by the Covid-19 in February 2020, but 60% of firms resumed operations in March. In a survey of 6,000 firms in Italy, 72% were directly affected by the Covid-19. A survey in Japan showed that 92.1% of firms whose business was affected by the Covid-19 (OECD 2020). International trade suddenly decreases in 2020 and suddenly rises in 2021 (OECD 2020). Those surveys showed that radical changes in external environment such as the Covid-19 impact on the firms' internationalization processes.

Many scholars have conducted research on the Covid-19 impact on firms' internationalization (Jaklič and Burger 2020; Vissak 2022), and how they reacted to this unexpected crisis (Durst et al 2021; Clauss et al 2022). However, many studies have only selected firms in one country as the

subject of study and it makes the study more homogeneous, so this thesis chooses firms in two countries to compare and contrast. It is well known that China has 1.4 billion consumers in the domestic market, while Estonia has a domestic market of 1.3 million consumers, and that China is a huge domestic market while Estonia has a smaller domestic market, the home market largely different. When firms are affected by external crises in foreign markets, such as Covid-19, the resources they have in their home countries also differ. In addition, China is a Chinese economy and Estonia is an EU economy, China's international trade policy is more restrictive, while Estonia's trade policy is relatively liberal, so there are different ways of developing the Chinese and EU economies. And the different geographical locations of China and Estonia can lead to different market choices in the international development of firms. The author selected two countries allows to find the different firms' performance in different countries in the same crisis, made the research more diverse.

The aim of this thesis is to study the impact on the firms' internationalization in the case of radical changes in the external environment caused by Covid-19. Although the departure of the research is the same as the main streams of current literature which focus on how firms initially become international (Casillas et al 2020; Ruzzier et al 2006), but this thesis more focused on the later stage of firms' internationalization processes such as firms performance in international markets, fluctuating changes in international markets, such as a reduction in exports, withdrawal from an international market, re-entry into an international market, and changed the firms' business strategy etc, especially when radical changes occur, firms have been affected in all overseas markets during the Covid-19, so the thesis aim also to discover how firms react and respond to Covid-19, what measures firms have taken to respond to the Covid-19 crisis, why firms have decided to implement these responses, and explain "how" and "why".

In order to study the topic more systematically, the thesis departures from the main research question: How radical changes of external environment such as Covid-19 impact on firms' internationalization processes?

And two sub-questions are set for gaining deeply understanding of the topic:

- 1.How the Covid-19 impact on the firms' internationalization processes?
- 2.How firms adjust and respond to Covid-19 in their internationalization process?

This thesis will be conducted through a qualitative approach, because it is useful to help the author explore research questions. Given the fact the current pandemic is still ongoing, therefore the

impact of Covid-19 on the international business will continue to happen, due to the unpredictable crisis brought about by Covid-19, which can only be continuously explored and discovered. As the main research question is with the regard to the investigations of “how” and “why” questions, thus, the qualitative research method is more relevant (Aurini et al 2021). The primary data used in this thesis was obtained by the author through in-depth interviews with the firms’ decision makers or sales managers. In addition, some of the supplementary data for firms’ internationalization situation (e.g., import and export data, revenues and profits per foreign market, etc.) will be collected directly from the firm as well as from other secondary data sources.

There are several potential contributions that can be made in this thesis. First, it allows readers to understand the existing phenomenon of internationalization in a novel context of radical change. Second, it adds potential theoretical contributions to the literature, in this context of Covid-19, given the timely theoretical contribution, which does not only play a negative role when firms encounter radical change in an external crisis, but some firms can catch the opportunity to achieve new breakthroughs and growth. And third, given the timing that as pandemic is still ongoing, this research will provide implication values to the business communities as well as to decision makers.

This thesis consists of three chapters, the first chapter is the theoretical background and includes four sub-chapters, the first sub-chapter is a review of past research on the internationalization process, including the definition of internationalization, de-internationalization, re-internationalization, the Uppsala model, innovation-related model, born global, internalization theory, and the eclectic paradigm. The second sub-chapter is a review of past research on radical change, and an introduction to how radical changes can affect firms’ internationalization processes. The third and fourth sub-chapter are introduction Chinese firms’ internationalization and Estonian firms’ internationalization, then presented the similarities and differences between Chinese and Estonian firms’ internationalization. The second chapter is the methodology, including research design, sampling, data collection and analysis. The third chapter is empirical analysis, by studying each of the four case firms, a cross case analysis of how the Covid-19 affected the internationalization process of each firm, and how do firms respond to the Covid-19. The conclusion will present summarise the contribution of the research in this thesis, the limitations of the thesis research, and suggestions for future research.

1. THEORETICAL BACKGROUND

In previous literature, some scholars have considered that the firm's internationalization process is a progressive development process (Johanson and Vahlne 1977), while others have considered that it is a non-progressive process (Cavusgil and Knight 2015). Firms' progressive internationalization mainly refers to the entry of firms into international markets or the internationalization activities development, which generally begins with the gradual opening of local markets to neighbouring national markets and global markets (Johanson and Wiedersheim 1975). On the other hand, the progressive change in the way firms' internationalization on their operations generally starts with independent domestic operations, then indirect exports through cooperation with intermediaries, and grows to direct exports, and finally to the establishment of overseas sales branches and production (Johanson and Vahlne 1977). Many aspects of firms' internationalization can be non-progressive, so a single progressive theory can no longer fully explain the international business development model. Some firms aim for foreign markets right from the start in terms of target market selection, essentially straddling the development of their home market and entering adjacent overseas markets or directly into global markets right from the start (Knight and Liesch 2016).

Internationalization theories contain many theories to explain why firms have international activities and in what ways they are internationalization. When firms face external crises in turbulent times, such as Covid-19, there may be changes in their operations. Firms may withdraw from international markets or re-enter them again, it's all about how firms' performance differently in international markets. In the context of Covid-19, firms from different countries have been affected in the international market. Such as China and Estonia, have different economies, with different market sizes and geographic locations, have similarities and differences in how they perform in international markets.

Hence, this thesis theoretical framework departs from international business literature and it builds on major internationalization theories, theories such as Internationalization, de-internationalization, re-internationalization, Internalization theory and Eclectic paradigm, it used

to explain some of the phenomena in firms' internationalization processes and the factors affecting firms' internationalization, such as firms' operation strategic change and how firms perform in turbulent times. It is mainly about how the firm performs in international markets after internationalization. And internationalization model, such as the Uppsala model and the Innovation-related model, allows for a clearer explanation of concepts and promotes a clear understanding of the development path of the firms' internationalization processes.

1.1 Internationalization process

Internationalization

Over the past few decades, many scholars have studied firms' internationalization processes (e.g., Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977; Madsen and Servais 1997; Johanson and Vahlne 2009; Vissak and Francioni 2020), and give the definitions (See Table 1). Scholars such as Welch and Luostarinen (1988, p.36) give the definition of internationalization is "the process of increasing involvement in international operations." Eroglu (1992, p.19) defined internationalization is "as the process by which a firm gradually increases its participation in the international market". Hitt et al (1997, p.767) defined firms' Internationalization as "firms' expansion across the borders of global regions and countries into different geographic locations, or markets". Therefore, firms' internationalization processes refer to firms start to go in overseas markets, it is the development strategy of the firms' products and services outside the home country. According to the previous definition, Andersen (1997, p.29) defined "Internationalization is the process of adapting exchange transaction modality to international markets". Later, Scholars such as Ruzzier et al (2006, p.477) review the relevant literature in the context of major theories of internationalization, which they argued that "internationalization is understood as the geographic expansion of economic activity across a country's borders".

Scholars such as Javalgi et al (2003, p.186) pointed out "Internationalization is considered to be the process through which a firm moves from operating solely in its domestic marketplace to international markets". The process of internationalization can also be said to be the development strategy of firms' products and services outside the local area. Then, scholars such as Vallone et al (2019, p.202) provided a more specific definition in their research, internationalization is defined "as a firm's strategy to expand the sale of its goods or services in international markets and to develop profitable activities in new national markets and geographic areas". A firm's

internationalization is the process of a firm developing to the world, this development process can be studied from two aspects: the first aspect is the internationalization of products, which explains how to sell products abroad; the second aspect is the firm itself. Internationalization refers to the problem that firms develop in their own countries and then gradually expand to foreign countries, becoming multinational corporations (Liang 1999). When a firm's business activities are linked to international markets, then it has embarked on the path of internationalization. Later on, some scholars have suggested that internationalization can also be divided into two forms, one is inward internationalization based on the domestic market, with a focus on attracting foreign direct investment. The other is outward internationalization based on overseas markets. In short, both the "inward" and "outward" paths are able to learn and accumulate international experience and improve the efficiency of internationalization, and inward internationalization can be transformed into outward internationalization when it reaches a certain level (Tong 2000).

Table 1: Internationalization definition

| Author | Definition | Focuses |
|-----------------------------------|--|--------------------|
| Welch and Luostarinen (1988, p36) | The process of increasing involvement in international operations. | Operation, process |
| Eroglu (1992, p.19) | As the process by which a firm gradually increases its participation in the international market. | Operation, process |
| Hitt et al (1997, p.767) | Firms' expansion across the borders of global regions and countries into different geographic locations, or markets. | Operation |
| Andersen (1997, p.29) | Internationalization is the process of adapting exchange transaction modality to international markets. | Operation, process |
| Javalgi et al (2003, p.186) | Internationalization is considered to be the process through which a firm moves from operating solely in its domestic marketplace to international markets. | Operation, process |
| Ruzzier et al (2006, p.477) | Internationalization is understood as the geographic expansion of economic activity across a country's borders. | Operation |
| Vallone et al (2019, p.202) | As a firm's strategy to expand the sale of its goods or services in international markets and to develop profitable activities in new national markets and geographic areas. | Operation |

Source: compiled by the author

It is obvious that many scholars defined internationalization in a way that is relevant to the firms operating in international markets. At first, a firm will start business activities in the domestic market, increase market share and profit, and then go to the next stage, which is indirect export, cooperate with intermediaries. The final stage is through the direct export of firms' products, that is a process of firms go to overseas markets (Kunday and Şengüler 2015).

In summary, firms' internationalization is a process of firms' operation participation in overseas markets, starting with the domestic market and growing to enter foreign markets. In the context of world economic integration, the countries of the world are now increasingly economically interdependent and interconnected, with goods, services, capital and technology flowing more and more frequently from one country to a different country (Vallone et al 2019). A firm's internationalization means that a firm develops in the international market, participates in the overseas market, and actively seeks opportunities for development and growth. Integrating and optimizing production resources in the international market, making full use of international resources, forming our own competitive advantages, expanding the international market, and developing a domestic firm into an international firm. Firms' internationalization includes the development of the firms' products entering the international market and the firm itself becoming a multinational firm through investment and cooperation. Internationalization is a complex process (Kafouros et al 2022), during the global pandemic Covid-19, the performance of some firms in international markets also varies. Firms are affected to varying degrees in international markets, some firms have been forced by the crisis to abandon international markets, while others firms have had the opportunity to re-enter international markets.

De-Internationalization

Many scholars research on internationalization focused on positive aspects, they consider how to entry international markets (Aguzzoli et al 2021; Javalgi et al 2011), but there are also negative aspects in firms' internationalization processes, such as firms exit international markets due to external and internal factors (Kafouros et al 2022). Scholars such as Benito and Welch (1997) mentioned de-internationalization is any voluntary or forced reduction of the firms' business in some international markets. Later, Chung and Beamish (2008) pointed out that de-internationalization can be seen as a firm exiting international markets. Mata and Portugal (2015)

provided the concept of de-internationalization is closing or shut down of firms' operations in international markets. Nowadays, De-internationalization is the response of firms to negative developments in international markets (Tang et al 2021).

Scholars such as Kafouros et al (2022) made a further detailed distinction on the concept of de-internationalization, mainly to illustrate de-internationalization in different situations. De-internationalization can be divided into two aspects, one is partial or complete withdrawal from the international market, and the other is voluntary or forced withdrawal from the international market. Partial de-internationalization means that the firm withdraws from a part of the international market in which it operates, and full de-internationalization means that the firm stops all international business and withdraws from all international markets. Voluntary de-internationalization means that the firm voluntarily abandons the foreign market, which may be due to reduced demand in the international market or increased competition that makes development difficult (Cuervo-Cazurra et al 2020). Forced de-internationalization is the forced withdrawal of firms from overseas markets, which can be caused by changes in economic cooperation development relationships between countries. (Vissak and Francioni 2013).

There are many external and internal reasons for firms to de-internationalization, increased domestic market demand may lead to the withdrawal of some small and inefficient firms from international markets (Bernini and Love 2016). Planned de-internationalization can reduce the risk and cost of a firm's operations, facilitate better management of other businesses and optimise resources. If properly coordinated, de-internationalization can be a strategy for regulating a firm's operations and can be used to improve its performance and efficiency (Kafouros et al 2022).

Re-Internationalization

In order to study re-internationalization, scholars have made efforts to explain the concept of re-internationalization, re-internationalization is a phenomenon in the internationalization process and related to the firms international operations at a particular time, starting with the firms' withdrawal from international markets and then re-entering international markets after a pause for a period of time (Welch and Welch 2009). It is worth noting that re-internationalization refers to a firm return to an oversea market after exiting all previous overseas markets (Ali et al 2021). Thus, re-internationalization refers to the firms' activities after complete withdrawal from international markets. Unlike return a previously withdrew international market, re-entry into a specific

international market may also occur if the firm has not exited the international market completely, although the company has withdrawn partially from particular markets, it may continue to do business in other markets at the same time. (Ali 2019).

Economic globalization has led to firms expanding into international markets, but in the process some firms may withdraw from international markets and later decide to re-enter them (Aguzzoli et al 2021). This is because a permanent exit from international markets is not a good strategy (Javalgi et al 2011), and market conditions can change at any time. Multiple factors, both internal and external, influence a firm's decision to re-enter a market (Aguzzoli et al 2021). Scholars such as Kafouros et al (2022) pointed out that external factors of re-internationalization, such as policy, economy and culture factors. Internal factors, including the firms' founders and managers' decisions, play an important role in determining return to foreign markets. Nowadays, due to the Covid-19 global pandemic still ongoing, this is also an external factor, it also called an external crisis, which has affected individual firms to varying degrees.

Re-internationalization is a diverse process that may go through multiple stages from initial entry to eventual re-entry, and it is an ongoing process, bringing with it a range of impacts that may determine the subsequent direction of a firm's internationalization, both in the context of the impact of past international operations and the current impact on the firms internally and externally. Both de-internationalization and re-internationalization take place during the a firm's internationalization and it could also be described a firm's business strategy in an overseas market. There are two main internationalization process models that explain this international activity well, include Uppsala model and Innovation-related model, the two models are similar in that they both describe a progressive process of internationalazation development (Ruzzier et al 2006).

Uppsala Model

Johanson and Vahlne (1977) developed the Uppsala model, which focuses on knowledge and analyses the evolution of internationalization from a dynamic perspective. They argued that multinational firms entering new markets are often faced with a complex and unfamiliar environment and the dilemma of not knowing the local market, which can hinder the firms' progress. However, if multinational firms can organise themselves to learn about the local market in a timely and proactive manner, accessing information and learning from their operations will help them to realise the opportunities and challenges in the local market and therefore facilitate

the internationalization process (Chetty and Campbell 2004). The Uppsala model focus on analysing the relationship between internationalization and the accumulation of experiential market knowledge (Johanson and Vahlne 1977, 1990). It is also a theory that explains how firms can gradually strengthen their overseas markets. In the author's view, the Nordic school's Uppsala model refers to the systematic and gradual development of firm' activities abroad, and categorises the behaviour of firms abroad into two areas: on one side, the sequence of the expansion of investment markets, and on the other side, the gradual change in the way firms operate internationally.

By taking a close-to-far approach to internationalization, firms can reduce the uncertainty of competing in international markets and increase the probability of success in international business (Johanson and Vahlne 1990). Therefore, psychological distance becomes an important basis for internationalization, firms often choose neighbouring countries that are more familiar and have similar economies to export, and then gradually move to countries with greater psychological distance. Different firms choose different psychological distances depending on their competitiveness, such as Chinese firms start internationalization from Asian area and Estonian firms start internationalization from Baltic States and other European countries. Johanson and Vahlne (2009) revisited the Uppsala internationalization model and it is considered that the business environment is a network now. They consider the business network has two aspects, a network of market relationships and a network of human relationships. Firms' relationships and network determined their internationalization, a partner with a strong foreign market is a very good start in the firms' internationalization processes. The absence of a strong partner may result in the firm needing to find a middleman. So, it is said that if the firm bypasses the middleman when it establishes contact with the end customer, it accelerates firms' internationalization.

Lack of knowledge and control of the market is a very crucial factor when firms encounter external crises in the course of internationalization (Johanson and Vahlne 2009). With the development and advancement of global information platforms, managers need to make decisions based on timely market information, risk management through the Uppsala model can help managers to adjust the firms' risk level by understanding different aspects of the market and thus provide strategic support for the internationalization of the firms' country (Figueira et al 2011). The combination of internal and external environmental networks makes international development more manageable (Axinn and Matthyssens 2002).

Scholars have also been criticisms of Uppsala model, such as Tunbull (1987) questioned the Uppsala model, arguing that differences between countries and industries can have an impact on the mode of entry into overseas markets chosen by firms. That means this model places too much focus on the progressive aspect of firms' internationalization and is not entirely consistent with the modern practice of firm internationalization, which numerous studies have shown is not only gradual. Scholars such as Axinn and Matthyssens (2002) mentioned the way in which firms operate internationally is influenced by differences in political, economic and cultural factors in the home country, thus highlighting the importance of the operator's accumulated experience and knowledge, but is only applicable to the manufacturing industry and is not universally applicable.

Innovation-related Model

Scholars Bilkey and Tesar (1997) developed innovation-related model, they divide the process of exporting into six steps, associated with the firms' management, where sufficient experience can determine the behaviour of the firm and where exporting behaves differently at each stage. Innovation-related model is more applicable to the study of small firms' internationalization (Yan et al 2018). Any international activity that occurs after a firm has internationalized can be considered as innovation (Gankema et al 2000), they specialize in export development process, the Uppsala model are often used to analyse medium and large firms and the analysis focused on description the internationalization development and international business operations (Ruzzier et al 2006). Radical innovation can lead to radical internationalization (Chetty and Stangl 2010), firms innovates by generating products based on some of the opportunities identified in the domestic market. As demand for the product may appear in international markets, companies can internationalize by exporting the product to international market markets with similar needs.

On the question of whether innovation and internationalization are linked, scholars such as Filippetti et al (2011) according to previous research, innovation and internationalization promote each other, Innovation makes the firms more successful in international operations. In the international business, the firms are exposed to the new business environment, which enables the firms to continue to innovate and become competitive in the international market. Many scholars believed that different innovation environments can help firms achieve better internationalization (Khasawneh and Dasouqi 2017; Hurtado-Torres et al 2018), the two key factors that promote the growth of the firms are innovation and internationalization, through innovation to gain an advantage in the international market (Halilem et al 2014) .Whether export firms are more

innovative, the extent of internationalization of a firm is closely linked to innovation (Shearmur et al 2015).

Some scholars have also criticised innovation-related model, such as Andersen (1993) pointed out that innovation-related model does not explain each step clearly enough, the factors influencing each step are not clear enough. It is also very vague what impact by the different variables. The shortcomings of the models in terms of the export process of firms are that they only describe how the export process varies, but not the different methods used by firms in carrying out certain business activities (Ruzzier et al 2006).

The Uppsala model and Innovation-related model focused on progressive firms' internationalization processes, the best way for firms' internationalization is not always through incremental internationalization. Rapid internationalization can also lead to relatively more experience, therefore some firms' internationalization processes is not a progressive, rapid entry into international markets soon after the firm was founded, these firms are called Born Global.

Born global

Born global means that the company has targeted its growth in international markets from its inception and has entered international markets in a very short period of time (Cavusgil and Knight 2015). Generally, emerging start-ups actively seek access to international markets soon after their founded (Knight and Cavusgil 2004), a common kind of firm that is born global is the small high-technology kind of firm, born global occurs mainly in the early stages of a firm, and because of the firm is small, the firm wants to rely on foreign markets to bring growth to the firm and be able to find more resources in foreign markets (Chetty and Campbell-Hunt 2004). Born Global's international development route differs from the traditional development route of the Uppsala model in that some companies may operate directly in international markets without having gone through the export stage, so it is said to be a non-progressive development route that skips some of the international development stages and expands directly overseas (Knight and Liesch 2016).

Both Born Global and the Uppsala model believed that firms must have sufficient market knowledge and experience to better enter international markets, the difference is that Born Global believed that market knowledge and experience can be acquired at an early stage and do not need to be built up slowly, while the Uppsala model believed that knowledge and experience should be

acquired incrementally (Knight and Liesch 2016). While the traditional model of internationalization requires the help of a large domestic market and then access to international markets, Born Global is usually based on a small domestic market. Both the Born Global and the Uppsala models refer to the importance of business networks, so that regardless of the speed of internationalization, firms need to build their own business networks (Chetty and Campbell-Hunt 2004). Born Global mentioned the founders and policy makers were important in the firms' internationalization processes, and the innovation-related model mentioned managers, which the Uppsala model does not mention about it (Oviatt and McDougall 1997). So the founders and decision makers of born global firms need to have strong market knowledge and experience to lead their firms in international market expansion. Rapid foreign direct investment also leads to rapid internationalization, and the establishment of branches abroad is an advanced stage of firms' internationalization, so relevant to the development of multinational companies are internalization theory and the eclectic paradigm.

Internalization theory and Eclectic paradigm

The internalization theory was mentioned by Coase (1937), who argued that in some cases it is more profitable for firms to create internal markets than to access foreign markets. Later, scholars Buckley and Mark (1976) explain how the advantages possessed by multinational firms can be appropriately deployed in the background of internationalization when firms faced market incompleteness and market failure. On the one hand, the advantages of internationalization firms can be met by their own internal resources such as expertise and management skills, but these internal resources are generally not traded on the market due to the difficulty of negotiating prices and deals. In such cases, multinational companies choose to transfer their internal resources to overseas markets, thus avoiding the high costs of external transactions and increasing their profits in the future, thus promoting their internationalization development. Internalizing resources within a firm not only reduces costs, but also helps the firm to gain a foothold in overseas markets. Buckley and Casson (1976) 's internalization theory focused on the strengths of multinational companies, which, when firms internationalization, can create a competitive advantage and can be used more effectively.

Internalization theory, perhaps the most impactful theory for studying the motivations of multinational companies to internationalize and why they are likely to perform well in international markets (Kirca et al 2016). Internalization theory can help companies develop sound

strategies by matching resources to needs and allowing companies to reorganize resources internally for practice matching (Verbeke and Kano 2016). Effective resource reorganization practices can drive the success of multinational companies outside their region. Rugman and Verbeke (2008) mentioned Internalization theory describes the presence and operation of multinational firms, useful for knowing the limits of a multinational firm, its connection with the external environment and internal organizational design.

Scholar Dunning (1980) was first proposed eclectic paradigm, it is based on internalization theory. After the ownership advantage, the internalization advantage, the eclectic paradigm adds the locational advantage. These three advantages are essential for multinational companies when operating and producing in overseas markets. Ownership advantage is a characteristic of a business, locational advantage is a characteristic specific to a country and internalization advantage is a transactional attribute (Buckley and Hashai 2009). Dunning assumes that the firms' ownership advantage stems based on host country and that its drive to internationalization is to find markets and search for resources. The eclectic paradigm considers the specific factors that influence a firm's ability to internationalization (Cole et al 2007), The essence of location advantage refers to whether a firm has a comparative advantage in surviving and developing in a particular country, usually considering resources and benefits. When the future market of the firm's products is not determined, in this case, the firm should first develop locally and become familiar with the firm's production and operation activities. When the firm enters the international market, if the development prospects are good, it may choose to establish a local production factory. When the firm's product scale, the firm will set up factories in developing countries and labor costs, this is taking advantage of the location advantage.

It provides a framework for the international business activities of multinational firms (Mudambi 2004). In the research on (O) ownership advantage, (L) locational advantage and (I) internalization advantage, three advantages combined to explain the influences and options for international business activities (Rahman et al 2018). Luo (2021) pointed out potentially generate new O (open resource advantage), L (linkage advantage), and I (integration advantage) advantages in digital globalization, Dunning's OLI advantages still important, but digitalization is particularly important now that many of people's activities have shifted online due to the ongoing impact by the Covid-19, International business is becoming digital and old and new OLI should be integrated with each other.

The choice of a firm's development strategy is according to some factors, both internal and external, and is constantly changing in the course of internationalization, this change can be called reactive change (Francioni et al 2013). Internal and external environment changes may also lead to changes in the firms' organization. Management is key to the firms' development strategy and firms' implementation plans, so management can change during turbulent times. In the context of Covid-19, changes in firms can be the cessation of exports, the cessation of operations, the restructuring of the firm, etc.

1.2. Radical change

Firms' performances in overseas markets are not only depend on their capabilities (Coviello and Munro 1995; Sharma and Blomstermo 2003; Mascherpa and Zucchella 2011) but also rely largely on external environment. Under the light of the ongoing pandemic, due to the impact of Covid-19 on the external and internal environment (Nagarajan and Sharma 2021), such as de-internationalization and re-internationalization, it can be understood as changes in the firms' internationalization processes. Due to radical changes in the external market environment, firms may suddenly abandon international markets, or they may re-enter them again. So, the internationalization of firms' strategy is said to change in response to the external environment (Yayla et al 2018). When firms encounter radical changes in the external environment in the internationalization process, some changes will also occur within the firms. In the process of internationalization, firms may repeatedly enter the international market (Jiang et al. 2020), or a fluctuating change in the firm operations.

Radical change, it can be seen as a crisis (Yong and Laing 2021; Nagarajan and Sharma 2021). The crisis is a radical environmental change, its impact is not only national but worldwide. In the event of radical changes such as Covid-19 in the external environment, the firms' internationalization may fluctuate irregularly. A radical business environment has the potential to open up new opportunities for firms or to create crises for them (Ma et al 2014). The positive side of a crisis is that a firm can seize the opportunity to grow in a crisis, while the negative side can be harmful to a firm or individual. The current Covid-19, which is a global pandemic, is seen as a crisis of uncertainty (Durst et al 2021), which has both internal and external effects. Firms' internationalization in turbulent times will inevitably be affected to a large extent. Compared with

the financial crisis, the impact of the international public health crisis is more far-reaching. In the context of the development of an increasing trend toward world economic cooperation, the Chinese firms' internationalization has been developing relatively steadily in the past ten years. Covid-19 has affected the global economy and has also had varying degrees of impact on the firms' internationalization processes, scholars such as Yong and Laing (2021) argued that the Covid-19 crisis is different from the financial crisis and that the global pandemic Covid-19 has had a more impressive impact on the world economy. In the manufacturing sector, for example, many firms produce products for export only and the impact on their exports during the pandemic was very significant.

Covid-19 has hit the world hard and that different industries have performed differently during this period. The medical devices, pharmaceuticals and food retail sectors performed relatively well across markets, but the automotive, real estate and fuel sectors performed less well. They focused on the long-term effects of the global pandemic Covid-19 on firm internationalization and find that changes in firm internationalization in the aftermath of the global pandemic varied considerably across industries (Nagarajan and Sharma 2021). Initially, when firms chose internationalization, exporters preferred to let contractors take on such risks. Scholars such as Jaklič and Burger (2020) based on the cases of Slovenian firms during the Covid-19 pandemic, it was noted that in the face of a changing external environment, firms in many small countries become increasingly vulnerable in terms of exports. Non-linear internationalization is a model of change that has become increasingly accepted in both developed and developing countries over the last few decades (Schweizer and Vahlne 2022) and may also be a remedy for firms to address economic downturns. This does not only apply to large and established exporters, it can equally apply to SMEs in times of turbulent crisis. Scholar such as Vissak (2022) examined the performance of three Estonian firms during the Covid-19, pointed out that the case firms experienced large fluctuations in exports during the Covid-19. Serial non-linear internationalization is a normal phenomenon, which may be a symptom of the economic crisis, but not a sign of corporate failure.

In summary, the radical changes in the internationalization process of firms are how they behave in international markets when faced with external crises and how they react in international markets. Radical change is a change that occurs relatively quickly and changes the nature of the social structure, external environment or organisational practices to some extent (McAdam 2003). In particular, this type of change can immediately affect the resources, actions or ideas of groups and individuals and may cause disruptions and fluctuations in firms' operations (Chen and Yu,

2008, Zhang and Larimo 2013). Covid-19 has a tremendous amount of impact on firms' activities in their overseas market. There is evidence indicate that there are firms which voluntarily and involuntarily exit from foreign markets, partially or fully (Cuervo-Cazurra et al 2020). There are also firms which innovated their business models and operationalization and continue to compete in the foreign markets (Hu and Kee 2021), and capture potential growth during this turbulent time (Juergensen et al. 2020).

Hence, it is urgently needed to explore and understand firms' internationalization processes during this challenging time (Niittymies and Pajunen 2020), particularly from the perspective of how radical change impact on firms' internationalization processes and how firms are handling their overseas activities, and furthermore to illustrate why firms make those decisions and have such behaviours. Because firms' performance in the international market affects the firms' internationalization processes. During the Covid-19, many firms may completely or incompletely withdraw from the international market, and some firms may re-enter the international market (Aguzzoli et al 2021), this is how firms behave differently in international markets.

In the case of China and Estonia firms' internationalization processes during the Covid-19, due to the external and internal factors, different firms from the different counties performance will be different in the overseas market. China has huge domestic market and Estonia has small domestic, China and Estonia are also geographically different, and China and Estonia come from different economies, as well as different cultures.

1.3 Chinese Firms' Internationalization

Since China reform and opening up, China has maintained the opening up to the world as a basic national policy. The "Go globally" strategy is is a big decision made by the Chinese government in line with the trend of economic globalization. The "Go globally" strategy can be divided into three stages, the first being the opening-up policy implemented in 1978 which facilitated the opening of China's markets to the world. The second stage was in 1992, when the government proposed to make good use of both domestic and overseas markets, raising the level of firms' internationalization. The third stage was in 2003 when the government proposed to participate in globalisation and regional economic integration, which accelerated the development of

internationalization of firms. In 2001, China officially joined the World Trade Organization. Later, the Chinese government proposed “the Belt and Road” initiative. The world is now highly open and world economic cooperation is highly developed, which has brought about progress in different areas for all countries. China considered that in order to achieve its national development goals, only through opening up can it find opportunities, catch opportunities and take the initiative to create opportunities. "The Belt and Road” proposal is to transform the world's cooperation into China's cooperation, and China's cooperation into the world's cooperation. In 2015, Chinese firms made direct investments in 49 countries related to the "Belt and Road" (Ministry of Commerce, PRC, 2016).

The internationalization development of Chinese firms has reached a new level and many Chinese scholars have studied the internationalization process of Chinese firms. Scholars such as Prange and Bruyaka (2016) using primary data from 30 Chinese firms and two depth case studies on Chinese firms, explained the internationalization of firms from both inward and outward internationalization perspectives. They pointed out that the development of firms' inward internationalization is the basis for outward internationalization and influences to some extent the depth and breadth of their inward internationalization. Xie (2007) studied of international market data from 288 Chinese domestic listed industrial manufacturing firms found that the experience of international firms positively influenced the choice of overseas markets and market entry modes, particularly the international operating experience of the decision-making team. Firms with comparative advantages in terms of size and technology tend to choose foreign market entry with a greater investment of resources. Chinese private firms first accumulate experience through original equipment manufacture (OEM) projects in the domestic market or by establishing cooperation with foreign companies, then start the process of internationalization by exporting, etc., and then adopt internationalization strategies such as foreign investment.

Wang and Mao (2007) analyses the FDI data of ASEAN countries, the G7 countries and Hong Kong, and concludes that the Chinese firms’ internationalization processes are in line with the Uppsala model, in which Chinese firms promote internationalization through four stages: indirect export, direct export, trade branch establishment and overseas new construction. Dai (2013) studied results also indicate that the evolutionary path of Chinese firms' internationalization follows the sequence of "export first and then investment". Wang et al (2008) through a case study of Grandis, and proposed a gradual evolutionary path of independent innovation internationalization for emerging economy firms, there are three steps, the first step being OEM,

the second being ODM (original design manufacturing) and the third being OBM (own brand manufacturing). Deng (2009) took 500 top Chinese firms as study objects and analyse deeply the behaviour of their FDI, and he mentioned that Chinese firms are very varied in their international operations objectives, and they enter overseas markets approaches are flexible and varied, with most actively experimenting with diverse and more adaptable entry methods, and the rapid growth of corporate FDI indicates that Chinese firms prefer to enhance their competitive advantage by purchasing new business assets across borders.

The studies mentioned above have followed a gradual development path in the Chinese firms' internationalization. However, there are also has rapid development in the Chinese firms' internationalization. Scholar such as Rui (2013) used a case study of three representative firms from three different industries, and concludes that Chinese private firms are prone to internationalization by rapidly into international markets, which may be related to the context of China's unique policy resource support. In China, the politically connected private enterprises are to some extent well placed and advantaged to adopt a higher stage of overseas market entry and are better suited to the leapfrog route of internationalization. However, non-politically connected private enterprises are more suited to a gradual internationalization development route (Deng et al 2014).

Differences in resources and the environment in which a firm operates, especially in the institutional environment, it can have an impact on the progressive or non-progressive route of internationalization that a firm takes. For the internationalization of Chinese firms, it is important to try out various entry modes for different international environments, taking into account their own strengths and strategic objectives. Current research on the Chinese firms' internationalization finds that firms mainly concentrated on two modes of export and FDI. The Chinese firms' internationalization processes development is determined by the national policies, industry regulations, type of the industry, population size and the international experience of the firms at the stage they are in. At the same time, the different motivations for firms to invest across borders also affect the form of entry into international markets they choose. Wong et al (2022) mentioned during Covid-19, China's OFDI's remained challenging and risky. Against the backdrop of the Covid-19, there are also business environment risks, political risks, and crises from unexpected public events that hinder the Chinese firms' internationalization development and seriously hampered Chinese firms expansion in the international market. But the macro-economy impact of Covid-19 is temporary and limited, and the government plays important role in macro-regulation

to provide precise assistance in the context of the specific industry and development of firms (OECD 2020).

1.4 Estonian Firms' Internationalization

Estonia joined the World Trade Organisation in 1999 and joined the European Union in 2004. The main factors affecting Estonia's ability to expand its market are its geographical location, latitude and longitude, economic strength, historical factors, political relations, language and ethnic characteristics. Finland and Sweden, as strong Nordic countries, they have a strong influence on the Estonian economy and their developed industries and advanced technology have a transfer and transmission effect on Estonia. After Estonia joined the EU and the Eurozone, Estonia's economic ties with the European countries became even stronger (Chinese Embassy in Estonia 2021).

Estonia has always been very competitive in attracting foreign investments, which has accelerated the process of business transformation and increased the competitive advantage of local businesses (Reiljan 2003). Due to the limited local market, internationalization is inevitable for further development, the internationalization of Estonian firms began in the 1990s and there are several main reasons that have affected the speed of the internationalization process. 1) The local market is limited, due to the lack of purchasing power caused by the size of the population, and therefore has an impact on the expansion of the domestic market. 2) Estonia's foreign trade policy is relatively liberal, so local firms have to introduce new products to improve their competitiveness in order to survive and grow. 3) The Estonian government attaches great importance to attracting foreign direct investment and Estonia is constantly introducing new initiatives to facilitate foreign investment (Reiljan 2003; Caputo et al 2016). Since independence, Estonia has continued to introduce new initiatives to facilitate foreign investment, and for many years it is consistently been the largest recipient of foreign direct investment in the Baltic States.

Roolaht (2002) examines the relationship options for the internationalization of Estonian firms and mentioned two main directions for the internationalization of Estonian firms. The first direction is that they intend to continue their eastward international activities in Russia and other Baltic countries, while the other direction is westward international, especially exporting to EU member states. This internationalization strategy creates a two-way development pattern. The mode of entry of Estonian companies into foreign markets is diversified, with mainly sales-oriented

investments and exports in nearby markets. The competitiveness of Estonian companies in overseas markets depends on their capability to adapt and on market demand, rather than on material resources or ground-breaking innovations within the firm.

In general, as an externally oriented small economy, the majority of businesses within Estonia are foreign-owned and Estonia has always treated foreign-owned businesses in the same way as local businesses. Estonia's Covid-19 prevention and control measures do not differentiate between foreign investors and foreign-owned firms, and the border control policy has been implemented with the goods transport corridor still retained. Compare to Chinese firms with Estonian firms' internationalization processes (see Table2), due to various factors in different countries, there have similarities and differences.

Table 2: Summary of Chinese firms and Estonian firms' internationalization processes

| Internationalization process | Chinese firms | Estonian firms |
|------------------------------|---|--|
| Development route | The majority of Chinese firms follow a progressive route to internationalization, while a small number follow a non-progressive route | The majority of Estonia firms follow a non-progressive route to internationalization, while a small number follow a progressive route |
| Geographic location | China is located in the Asian region and most firms give priority to Asian countries for their international trade. | Estonia is in the European region and is one of the three Baltic States, so firms developing international trade give priority to the nearby European countries. |
| Different economies | China is a Chinese economy and has a more restrictive trade policy. | Estonia is an EU economy and is relatively liberal in trade policy. |

| | | |
|----------------------|---|--|
| Domestic market size | China has huge domestic market, but Estonia has small domestic market. This can affect the speed of firms' internationalization processes, as China can start by slowly moving from the domestic market to foreign markets. | Estonia has small domestic market, given the resources available in the domestic market are limited. Estonian firms probably need to internationalization quickly. |
|----------------------|---|--|

Source: Compiled by the author

In my view, the traditional international development route, which is progressive (Johanson and Vahlne 1977), and the rapid development route, which is not progressive (Cavusgil and Knight 2015), both are applicable to Chinese and Estonian companies, but Chinese and Estonian firm companies consider both internal and external factors in their choice of route for the internationalization. At different stages of growth, the international market is unpredictable and the economy of the place of investment may also change. Therefore, it is more important for firms to choose an internationalization path that not only is suitable for their own development based on their own capabilities, but also due to external and internal factors. Therefore, internationalization is a continuous process, some firms' internationalization processes no longer follow the progressive development path of internationalization, but rather cross certain stages to engage in internationalization at an advanced stage of international operations, that is a non-progressive path of firms' internationalization. The non-progressive path of firms' internationalization means that this process of development across discontinuities is instead engaged in internationalization across certain stages at an advanced stage of international operations. Based on the literature review, previous studies of firms' internationalization processes have been in a normal business environment, without the impact of a major public health and safety crisis. So, there is still a lack of research on firms' internationalization processes in the context of Covid-19, firms on different internationalization development routes may have been affected differently during the Covid-19 and the measures taken in response to the crisis may have been different.

2. METHODOLOGY

This chapter indicates the research approach, the author describes the characteristics of three research approaches, in order to draw an explanation of methodological choices. Followed by research design, sampling, data collection and analysis, with an in depth-discussion on choices of research methods in associate with the objectives of the overall study.

2.1 Research approach

In social sciences research, three common research are quantitative research, qualitative research and mixed methods research (Bryman 2016). Quantitative research is the use of mathematical tools to analyse things quantitatively, test them and to explain them (Taylor 2005). Qualitative research is the collection and analysis of non-digital data such as text, audio, etc and deep understanding of social phenomena in the natural environment. Qualitative research is also a way of exploring and understanding the perspectives of individuals or groups on social issues, qualitative research is exploratory and descriptive in nature (Taylor 2005). Mixed methods research is a type of research that combines qualitative and quantitative forms of data together (Creswell 2014), and mixed methods research uses both in order to achieve more robust results than either research method alone (Malina et al. 2011). Three common research have their own advantages and disadvantages (Malina et al 2011), quantitative research can achieve higher sample sizes, it can collect information quickly, and be efficient (Taylor 2005), but it lacks of details, and the conclusions are drawn from a large amount of data feedback, with no insight into people's thoughts and behaviours to verify the authenticity of the choices made by the respondents (Malina et al 2011). Qualitative research can provide depth and detail, allowing for in-depth exploration and understanding of interviewees' experiences through their thinking, perceptions and behaviours, it is more flexible, but the sample size is relatively small, and in-depth research would take a lot of time and take up too many resources. For some questions, interviewees are not always willing to communicate and may not always say what they really think. As for mixed research methods is more comprehensive, but this research is relatively complex, expensive and requires a lot of time (Malina et al 2011).

2.2. Research design

Research design is the step of designing the collection of data and analysis of data, in order to better answer the research questions (Bryman 2016). To gain deeply studying of the research questions in the IB field, scholars have researched in this field mainly rely on quantitative research (Doz 2011; López-Duarte et al 2016), but qualitative research also has contributed to study in the IB field (Sinkovics et al 2008; Doz 2011). In this thesis, the author took a qualitative approach as it serves well the purpose of research, as the main research question is with the regard to the investigations of “how” and “why” questions, thus, the qualitative research is more relevant (Aurini et al 2021), it allows researchers better understand the research object of what are the radical changes in firms’ internationalization processes impact by the Covid-19 through interviews and observations, etc, in order to explain a phenomenon such as firms perform in overseas market during the Covid-19 (Creswell 2014). This thesis research involves a relatively unexplored area, it focused on exploring how the Covid-19 impact on the firms’ internationalization processes, how firms adjust and respond to Covid-19 in their internationalization processes, and why firms are making these responses. Thus, qualitative research is suitable for exploring the how and why of individual or organization action over the timeline, and qualitative research has also been used to study how SMEs are coping in the Covid-19 situation (Durst et al 2021). Qualitative research meets the needs of this thesis well. Given the fact the current pandemic is still ongoing, it is yet too early to measure and forecast the total impact of Covid-19 on internationalization business and global economy in general, thus instead of developing an instrument for measuring the impact quantitatively, this thesis applies a qualitative approach to explore and understand the how firms react and respond to these impacts.

In this thesis, research questions are more focused on how and why questions, such as how Covid-19 impact on the firms’ internationalization processes. And in order to explore this thesis research questions in more depth and detail, four case firms were selected from China and Estonia, because it helps researchers to analyse the different performances and responses of different firms from different countries during the Covid-19, to understand the similarities and differences between case firms by studying multiple cases, and to make the evidence from multi-case studies more convincing. (Gustafsson 2017). When it comes to how and why questions, the research method of choice are often case study, the case study approach allows for more information to be obtained to explain the how, what and why of the questions (Yin 1994). Case studies can be used to explore, describe or explain phenomena that occur in a particular context, it also used in international

business research (Yin 2009). In case study, some scholars use multi- case study, while others use single case study, scholars such as Marinova et al (2011) used case study to research Chinese firm internationalization, and used multi-case study to gain a deeper understanding of the changes in the internationalization process of Chinese firms. Scholars such as Fletcher et al (2021) has been used single case to study the internationalization process of the firm, although single case study is suitable method under certain conditions, but comparing single cases with multiple cases, they have their own strengths and weaknesses, a single case has certain limitations, lack of generalizability, because studied single firm done or performed for a while may not apply to other firms (Gustafsson 2017). Multi-case study provides rich and in-depth empirical insights which construct the core value of the thesis. (Voss et al. 2002). Because there is a degree of complexity in many of the phenomena studied, so the use of multi-case studies can enrich the results of the research and provide more extensive insights into the research (Beverland and Lindgreen 2007). This thesis study on the different firm's internationalization process in the context of the Covid-19, it is also in a complex environment, thus, the Multi-case study is more relevant (Yin 2009).

To summarize, the qualitative research, particularly multi-case studies is a relevant method for achieving research goals, that is to gain a deeply understanding of firms' internationalization motivations, patterns and choices of foreign markets. The qualitative research shall also allow the author to find out several cases in various contexts in order to present the richness of the data and insights, and stimulate further discussions and research on given topics.

This thesis mainly focused on the impact on the internationalization process of firms in China and Estonia during the Covid-19, so the selected of case firms should be within the scope of China and Estonia. And the case firms must have started to internationalize and still be doing business during the Covid-19. The author decided to select four case firms, two from China and two from Estonia, to find out what similarities and differences between firms from the same country and different countries have been affected by the Covid-19 in their internationalization process. Due to the sample population is too large, the author uses a non-probability sampling method to selected case firms.

After selected the case firm, the author used the in-depth interview to collected primary data on the decision makers or managers of the case firms, because the decision makers or managers of the firm were directly involved in the firms' strategic decision-making, including the firms' response during the Covid-19. At the same time, they also understand the international

development of the firm, how the firm is performing in the international market during the Covid-19, and how it has been affected. Supplementary data were collected from the case firms' websites and social media platforms to obtain information relevant to the research questions. In order to obtain the reliability and validity of the data, the interviewee must first have a clear understanding of your research questions, followed by the need to build trust with the interviewee and the need to maintain uniform standards in the interview process (Brink 1993). The four case firms interviewed were selected from the list of international firms' organization in China and Estonia, the author personally contacted the interviewee through email or chat software to determine the interview time and format, and prepared interview questions in advance. Interviewees received the interview questions at least three days before the interview time, and informed the interviewee of the length of the interview. With the permission of the interviewee, the whole interview process was recorded. Since the data in this thesis are almost all in the form of text, the author used qualitative content analysis to analyse the collected data and based on analysis answer the research questions of the thesis.

2.3 Sampling

This thesis used purposive sampling, it is a kind of non-probability sampling method, purposive sampling is the sample that most useful for the research question (Etikan et al 2016). As an exploratory study of the radical changes in firms' internationalization processes impacted by the Covid-19, the case firm of the study are Chinese and Estonian companies, and the companies are already internationalized, which have already entered the international market and the interviewees should be the type of decision maker (e.g., founder, sales manager, etc.) in case firms, because they know the most about the development of the company.

Four case firms of which two from emerging economy of China and two from developed economy of Estonia will be selected (see table 3). All of these four case firms are selected based on their internationalization profiles, meaning firms have performed certain period of time in overseas markets and are recently hit by the ongoing pandemic of Covid-19. Four cases firms are from different industrial sectors and with similar numbers of employees and revenue volumes, in order to conduct relevant comparative studies. The case firms selected from the firms' profile list of Enterprises Estonia (EAS) and Anhui Chamber of Commerce for Import and Export (ACCIE). To

have four cases, it allows the study to compare different reactions and responses firms may have towards the impact by the Covid-19. Also, known the fact of having extremely different home market environment (1.4 billion consumers domestic market of China vs. 1.3 million consumers domestic market of Estonia), China is a huge domestic market, while Estonia has a smaller domestic market. When firms are affected by external crises in foreign markets, the situation of firms returning to the domestic market will also be different. Four case firms will give readers more in-depth and more flavourful insights about the subject. Secondly, Cultural differences bring about different economies, there is a different way of development between China and EU economies. In addition, four case firms have been internationalised. Selected Chinese firms is that the author is Chinese and the use of Chinese in the interviews makes it easier for the author to understand, and the author also have easier access to data from Chinese case firms.

Table 3: Interview firms

| Firm | Product/Service | Founded | Country | Interviewee |
|--------|--|---------|---------|-------------------|
| Firm A | Textile products, hats, scarves and gloves etc. | 2014 | China | Founder |
| Firm B | Provides protection against identity fraud and identity theft. | 2015 | Estonia | Sales Manager |
| Firm C | Machine building related components, such as generators, etc. | 2005 | China | Founder |
| Firm D | ICT services, solutions and products. | 1994 | Estonia | Operation Manager |

Source: Compiled by the author

2.4 Data collection

In this thesis, the author chose semi-structured interview to collect data. It is a type of in-depth interview (Kallio et al 2016). In-depth interviews, it is a general method of data collection for qualitative research in the social sciences (Guion et al 2001), and in-depth interviews aim to gain insight into interviewees' experiences and their descriptions of certain behaviours, processes or activities, as well as their insights (Bryman 2016). The advantage of in-depth interviews is that the author and the interviewee communicate in a face-to-face format, and the author is able to explore more deeply into the inner activities and views of the interviewee, and is able to observe the interviewee's mannerisms and expressions to achieve a deeper understanding (Wright 1996). Also, because the interview is one-to-one, the interviewee is in a relatively relaxed environment without having to consider the views and pressures of others, and the interviewee may be able to share more information (Guion et al 2001). The semi-structured interviews are more flexible and open-ended, and although there is a basic list of questions (Kallio et al 2016), the interview questions are more developed and give the interviewee freedom of expression. The research questions in this thesis are exploratory in nature and the semi-structured interview approach is appropriate. In-depth interviews will be organized with firms' major decision makers, sales managers and operation managers, the author has designed a questionnaire (see appendix 1) based on the research questions to be studied in this thesis and in connection with the theoretical part.

The interview questions consisted of 36 questions in four parts, interviews with two Chinese firms and two Estonian firms from February 2022 to March 2022. After asking the permission of the interviewee, the whole interview was recorded. As for Chinese firms, the author got in touch with the founder of firm A and firm C. The interview was conducted online, using a video call in WeChat, the interviews average length was between 40-60 minutes and the language used in the interviews was Chinese. As for Estonian firms, interview also was conducted online due to the Covid-19 situation. The author got in touch with the sales manager of Firm B and operation manager of Firm D, and the language used in the interviews was English. The author will present the interview content in English in chapter 3. Decision makers, operations and sales managers in firms are more aware of the firms' growth strategy and are more knowledgeable about the firms' overseas market development, so the author chose to interview people in these positions to gain more useful information. The interview process can be divided into the following steps (Turner III 2010):

1. Prepared the interview questions based on the research questions.
2. Selected the interviewee candidates, inform them of the purpose and length of the interview, and confirm the interviewees.
3. Send email to the interviewees at the case firms to arrange an interview time.
4. Interviews were conducted via WeChat video call and Messenger video call and recorded.
5. Transformed recorded to text.

The primary data shall add value to the overall thesis, it is from in-depth interview. Because primary data allows the author to made new findings about the research questions, provides evidence for the author's opinion, allows access to timely information relevant to the research topic, and ensures originality of the research (Kallio et al 2016). In addition, the supplementary data of the firms' internationalization profiles (e.g., import and export data, revenue and profit from each foreign markets, etc) will be collected from firms directly, as well as from other secondary data sources, because internationalization profiles can show the dynamics of the firms' development in overseas markets and can demonstrate the fluctuations of the firms' overseas markets. At the same time, it can show the allocation of the firms' resources in overseas markets.

Supplementary data can help the author to obtained some information that could not be obtained from the interviews (Pawar 2004), such as detailed firms' turnover in each international markets, which can help the author to better identify the impact of the Covid-19 on the firms' overseas markets. The supplementary data collected channels include firms' websites, social platforms (e.g., Facebook, LinkedIn) and scorestorybook.ee., this is for Estonian firms. As for Chinese firms, supplementary data collected from the firms' websites and Chinese social platforms, these channels can collect a lot of information and find out useful information. On the firms' websites, basic information about the firm and its internationalization development can be found (e.g, import and export data, revenue and profit from each foreign markets, etc). On social platforms, recent activities of the firm can be found (e.g, new international markets, new products and international development related activities, etc). The author first searched for the firm's name, opened the firm websites and searched for keywords such as internationalization, international markets, Covid-19, information relevant to the research question can be found, for social platforms as well. Then classified records of obtained useful information. The supplementary data divided into three categories: Firms' internationalization development line; the radical change in the firms' internationalization during Covid-19 (e.g. changed in import and export data, changed in overseas

market, etc); the firms' responded. The supplementary data collect process can be divided into the following steps:

1. Identified of websites and social media platforms based on case firms.
2. Prepared search keywords based on the author's research questions.
3. Keywords searched on firms' websites or social media platforms, found relevant information.
4. Classified text recorded of relevant information.

2.5 Data analysis

The author used content analysis to analyse the data, qualitative content analysis is the explanation and understanding of the gained text data (Krippendorff 2018), and content analysis can obtain data relevant to the research questions. Qualitative content analysis is the possibility of analysing person-to-person communication (Kohlbacher 2006), for example in in-depth interviews to find out how the firms' managers have developed their responses to the crisis, their views on the crisis and their insights into the development of the firms. In this thesis, the primary data from in-depth interview and supplementary data from firms' websites and social platforms, qualitative content analysis methods used are relevant due to most of the data is text. The research questions are explored by largely rely on primary data, so the supplementary data has to ensure that it is relevant to the primary data. The text of the primary data is divided into several categories, so the supplementary data is combined with the primary data according to the categories. According to Green (2007), the analysis process can be divided into three steps, the first step is data transformed, the second step is data code, the third step is data display and write empirical analysis.

Through in-depth interview, the author has interviewed four firms, so the first step is reading the interview transcript repeatedly and listening to the recorded interview this also means a detailed examination of the records of interviews (Green 2007), because the author needs to translate the recorded interviews into text. And the author also needs to translation language, as for two Chinese interviews, the interview language is in Chinese. As for two Estonian interviews, all in English. Language is also very important in interviews and language skills can enhance trust between the interviewer and the interviewee and contribute to a relaxed atmosphere of conversation. This is because the author, as the interviewer, was personally involved in the whole process of the

interview, including learning the details of the context, the tone of the interviewee's answers to the questions and his attitude. So, the author is more aware of the details of the interviews and this forms part of the data. Supplementary data collected from the firms' websites and social media platforms are presented in text form.

The second step in data code, it is about judging and marking the information obtained and the data generated throughout the interviews (Elliott 2018), as well as supplementary data, the author needs to classify the codes, based on the questions from the interviews, it is classified into four types: 1) General information of the case firms; 2) Internationalization process of the case firms; 3) Changes in firms' internationalization during Covid-19; 4) Implications and future plan. Combined primary and supplementary data into one record based on codes.

The third step is data display and write empirical analysis, it is extraction of useful data and the interviews will be turned into transcript and through coding to filter out the useful data for empirical analysis (Kohlbacher 2006). The display of the empirical materials is achieved through the extraction of useful information from the primary data, supplementary data is based on the addition of primary data to form more complete empirical materials. Through analysis of each case firm, and then a cross case analysis base on four case firms. Compare the data of the four firms to see how their internationalization process has developed and whether it correlates with the internationalization theory mentioned in the first chapter. Summarising the similarities and differences in the four case firms' internationalization, and impact of Covid-19 on firms' internationalization processes, then summarise how each firm was affected and what adjustments and changes the firm made before and during Covid-19. Discussion based on empirical analysis and connected with this thesis research questions.

3. EMPIRICAL ANALYSIS

According to the primary data and the supplementary data collected, this chapter discusses major insights, as well as comparative aspects of four case firms, first studied each case firm, then used cross-case analysis. Analysis is focused on case firms' internationalization patterns, foreign market choices, and especially their changes during their operations in foreign markets because these can reflect the impact on firms by the Covid-19. Case firms' internationalization behaviours during the ongoing pandemic of Covid-19 are compared, discussed, and with major novel findings presented in the chapter.

3.1 Case study

3.1.1 Case 1: Firm A

Introduction

Firm A was established in 2018, but the firm's factory was founded in 2014. The firm is an export trading company specialising in textile products, hats, scarves and gloves etc. The factory is located in Zhangjiagang, Jiangsu Province, China, which has a well-developed industrial chain, which was an important factor in the choice of location. The factory covers an area of 1,000 square metres and is relatively well known in the area. Firms' main business strategy is to focus on long-term relationships with clients, and firms' main international markets are the USA, developed European countries with large exports, followed by the Japanese market with relatively small exports. Firm A is committed to improving its sustainability, exploring new overseas markets and strengthening its international operations.

Firm A' s internationalization process

The firm first developed its business in the domestic market, because of the relative saturation of the domestic market, the founder said “ Our factory is well known in the region, the supporting

industry chain is also complete, it is well developed in the domestic market”. Then firm began to look at international markets, the firm was initially established to export indirectly, in cooperation with other trading companies, exporting mainly by intermediaries, the firm from 2018 onwards has the right to export independently, for the first time with foreign end customers, while entering the United States, the United Kingdom and some European countries. In the interview, the founder said that “we felt it was a bit late to have his own export rights only in 2018.” The firm's main export countries are in developed regions in Europe and the United States, because the price of the products is acceptable, and will enter the Japanese market in the first half of 2019. The founder said “ There is no such thing as a first or second international market; several international markets are entered almost at the same time, Japanese customers are more loyal but very strict about the products they need, exporting around US\$200,000 a year. And the price of our own products is not accepted in the South African market, but we still have a small percentage of orders from South Africa.” The firm A has developed relatively steadily since its establishment, the founder said “Our company does not have periods of particularly rapid growth or bad growth.” In 2020-2022, the firm has not entered any new international markets, because the founder said “We are now focusing on exports, so we will not give up on foreign markets”.

Thus, firm A’s internationalization process is divided into two main stages (see figure 1): the first stage is to achieve indirect exports to international markets through intermediaries, which leads to limited profitability due to the existence of undercutting prices. The second stage is direct export, in which the firm cooperates directly with foreign end customers and enters several international markets.

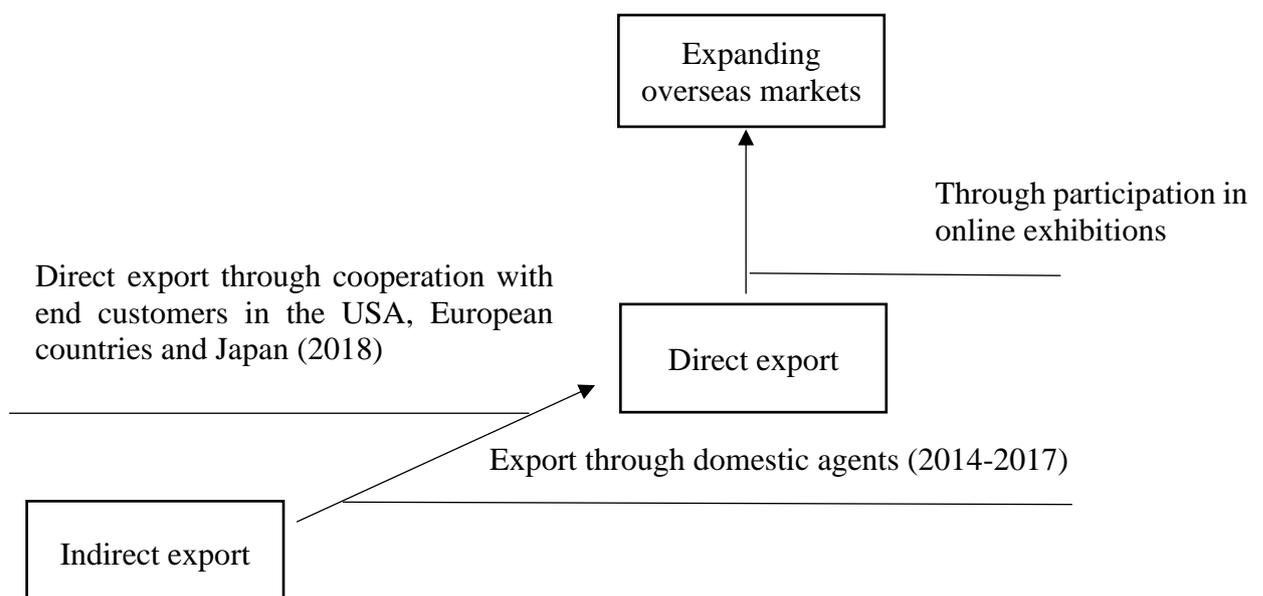


Figure 1: Firm A's internationalization process

Source: Compiled by the author (Based on Uppsala Model, Johanson and Vahlne 1977)

According to an in-depth interview with the firm's founder, the founder said “When exporting through intermediaries, the price of the product is kept very low, resulting in very small profits for the company”. So, the main motivation for internationalization can be divided two aspects: on the one hand, the desire to take the initiative in terms of price, which would be suppressed if they worked with intermediaries. On the other hand, they want to develop their own international market and work directly with foreign end customers.

In 2021, firm A has established a new factory, improved its production line, formed its own unique production technology, and the factory qualification is recognized and trusted by foreign customers. The founder said that “the advantage of the new factory is that good geographical location, and china has an abundance of chemical fibre raw materials, and that the supply of raw materials is sufficient to provide for the factory's production capacity. In addition, foreign customers are very focused on factory qualifications.” This will enable them to meet the demand for large orders from foreign customers. Then, the factory is located in Jiangsu Province, China, where there is a complete series of industrial chains for textile accessories with high production efficiency and good production quality. As it stands, China has an abundance of labor resources, which keeps the cost of factory labor low. This allows firms to be competitive in terms of labor costs per unit of product. The founder said “ government introduction and implementation of ‘One Belt, One Road’ has brought many opportunities to the development of Chinese textile and garment firms, it is good for our firm. Thus, these advantages make firms’ products more competitive in international markets.

Changes in firm A's internationalization process during the Covid-19

The founder said “at the beginning of the Covid-19, due to the seriousness of the Covid-19 in China, it was impossible to open factories due to the Covid-19 control. The normal opening of the factory was after the Chinese Lantern Festival, which was delayed by two months after the Covid-19. there are basically no orders for the first half of 2020 and the factory cannot be opened. But the impact is not significant, the company's product high season is in summer”. So the Covid-19 was a direct result of the factory shut down and no orders. However, the founder said “orders

increased in the second half of the year to compensate for the shutdown in the first half of the year, so the firm's total export volume did not change much in 2020. First half of the year in 2020, our firm withdrawn from the South African market. Orders were very high in the first half of 2021 and export volume increased, then due to the serious overseas Covid-19, export volume decreased in the second half of the year and many orders were lost elsewhere, resulting in a decrease in overall export volume in 2021".

The factory launched a new business during the Covid-19, the founder said "as the factory production line is relatively similar to that used for mask production, switching lines is easier, when the Covid-19 first started, the factory set up an production line for the produce of masks". The new business has also brought significant benefits, the founder said "High output, one assembly line can produce 200,000 masks a day. High profit, over 200% profit. High demand, masks are urgently needed all over the country. The two months after starting production of masks were mainly for domestic sales in China, as government control policies required workers to wear masks in factories, so demand was very high. Then, after the national production of masks increased, the profits became progressively smaller. Because of the saturation of the domestic market, began export of masks to the US and roughly one million were exported".

The founder said "sea freight rates have been rising since 2021, this is an important factor for the firms' development in the overseas markets, the Covid-19 is serious abroad and the process has become longer after the cargo arrives at the port of destination. Before the Covid-19 it was normally one week, but after the Covid-19 it has become longer. Especially in the US, there is a shortage of containers, which has lasted until now". Because higher transport costs lead to higher direct costs for firm. The founder said "our firm does the FOB model, firm do not have to consider the freight costs, so that it does not affect our firm much". The impact on those companies that export and have to pay for freight is significant, and losses may be incurred, this is the impact of the Covid-19 on freight rates.

Overall, there was still some impact on the firms' orders during Covid-19, the founder said "it had a significant impact on the expansion of overseas markets. As the main way to expand overseas markets is to attend overseas exhibitions, we used to go to the United States, Germany, France and other places to exhibit, but after Covid-19 firm staff could not participate in overseas exhibitions. Then we decided to use the online exhibition participation format, finding a local matchmaker and sending the products to the matchmaker who would be responsible for helping with product show,

the product presentation which was also done through the online, the results are not as good as going on our own because we know the product better. The founder also said “during the Covid-19, some customers are more negative in their forecasts for the market and thus choose a more conservative strategy of reducing inventory. Especially in the US market, for the reduction in orders from their firm, because the means of distribution in the US market is mainly offline, concentrated in some superstores such as Wal-Mart, the control of the Covid-19 has led to a blow to the offline sales model. Europe market is relatively good, depending mainly on the sales model”. Issues regarding employees during the Covid-19, the founder said “factory workers are harder to recruit, whether during Covid-19 or not, because of the high cost of labor, young people in China are reluctant to go to factories in manual-type industries. That's why recruitment is also a very big issue, the factory labor market is still relatively negative”. In addition, the factory was well prepared for control during the Covid-19, preventing cases leading to factory shutdowns. Thus, firm A generally exported less during the outbreak, but the impact was not particularly significant.

Future plan

The founder said “ we will focus on the US market in the future, because of its large market, large population base and high consumption levels, and we will also consider the countries along the Belt and Road, but the price has yet to be negotiated, price is more difficult for them to accept. We advice would be not to do a very large type of start-up during the Covid-19, but to do cross-border e-commerce. This is because the online model is less affected by the Covid-19 and online sales channels can be utilised, with e-commerce being used as one of the important sales channels during Covid-19. We also focus on regular customer, maintaining a good relationship with our customers”. Firm A will have to strengthen their competitiveness in the future and hope to build their own brands. Firm A is actively following the control measures designated for Covid-19 in overseas markets and expanding overseas markets.

3.1.2 Case 2: Firm B

Introduction

Firm B was founded in 2015, located in Tallinn, Estonia. the company focuses on providing protection against identity fraud and identity theft, using technological means including facial

recognition artificial intelligence to automatically verify the identity of customers, serves global internet businesses, entered international markets including the US, Europe and the rest of the world. The firm's goal is not only to help companies connect with people of integrity, but also to provide legal protection of data to people around the world. In the future, the identity verification process for people can effectively control online fraud.

Firm B's internationalization process

Initially, firm B started its business in the domestic market. In 2016, firm B had its first customers, online retailers in Estonia, used to protect the integrity of personal data. At first, firm received investments from U.S. companies. The sales manager said “over the past few years, we have continued to receive foreign investment, allowing it to further accelerate its international growth. The firm has increased its customer engagement and has successfully entered several overseas markets by taking advantage of accelerated global datafication”. The firm’s first international market was the US market, and firm best overseas market is also the US. Next are Spain, Germany, Austria and other EU countries as well as the UK. The firm’s sales manager said “in 2019, our company acquired another company in Estonia. The acquisition was primarily interested in the data capabilities of the acquiring company's equipment, which could be updated and upgraded with its own company's products. In the same year, the company signed an agreement with a German company to enter the German market internationally. In November of the same year, the company opened its first foreign office in New York City, next the firm will open an office in Barcelona, Spain when companies expand into international markets, it attracts many foreign investments. Currently, the firm has served more than 190 countries and regions.

The sales manager said “we want to get more revenue, so we want to keep entering foreign markets. Because of the type of products in our company, we are not just interested in domestic development, we need to work with big company, we need to constantly update our technology and to work quickly with countries that are technologically advanced.” Thus, it follows that firm B's internationalization is a non-progressive route (see figure 2), from the firm was founded, the firm development strategy was aimed at overseas markets, as the company had a greater potential to grow and internationalization faster than the average company. The sales manager said “ we continuously attracting foreign investment, establishing offices abroad and using itself advantages to quickly enter international markets”. Thus, firm B pursues rapid internationalization to drive company growth.

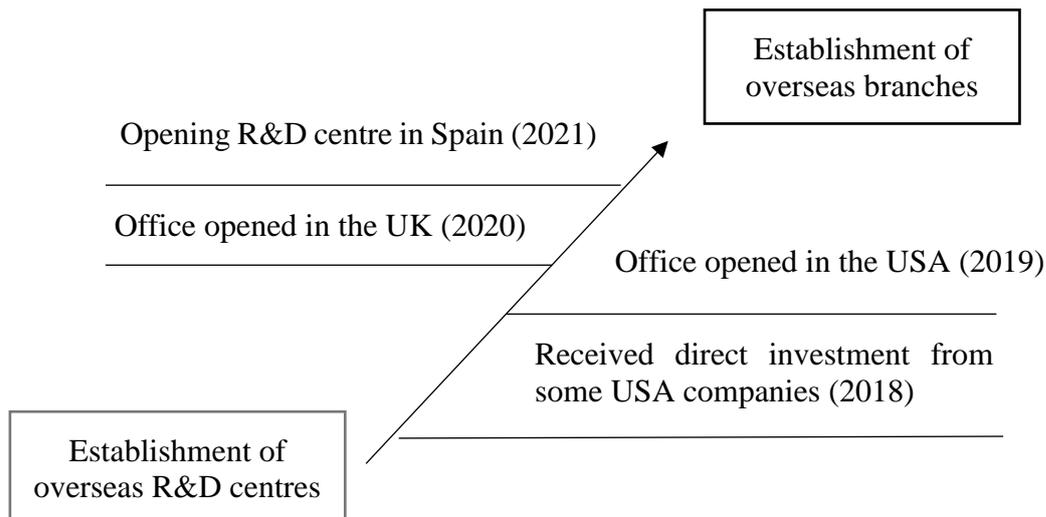


Figure 2: Firm B’s internationalization process

Source: Compiled by the author (Chetty and Campbell-Hunt 2004; Cavusgil and Knight 2015)

Changes in firm B’s internationalization process during the Covid-19

The sales manager said “In the two years prior to Covid-19 the company made a loss, but the total turnover was satisfactory and most of the turnover came from the international market outside Estonia, so our company is doing well in the international market. Our company has not withdrawn from international markets, but we will consider not entering some countries and we will not make some countries as our first choice, such as Iran, because of the legal and business environment. During the Covid-19, we had the best market development in the US, which was also the largest market”. According to the sales in different countries, the company's turnover in the US and Spain market is on the increase, while the turnover in Germany and Latvia market is decreasing during the Covid-19.

The sales manager said “according to founder’s decision, in early May 2020, the company announced that it would be laying off more than 60 employees. Because of the impact of the global pandemic Covid-19, the European and US markets have increased the business volume of fully automated services offered by the company. But we were doing well, they are restructuring the company because automation has done its job and we are investing more money in sales now”. While the firm’s sales volume grew at a monthly rate of around 20% until February of 2021, the difference in volume between February and April has doubled. However, this has also brought the liquidity issue to the fore, as the economic situation under Covid-19 has put the firms’ current financing plans on hold. Previously, the company mainly served fintech companies and e-shops,

but now it is not only notaries and the education sector, but also telemedicine, entertainment companies and a number of other large companies who need help moving home from work while receiving sensitive information from their computers that need to be protected. Firm B is also negotiating with a number of countries to establish solutions for unemployment benefits. The sales manager said “Covid-19 is still having a significant impact on our lives, with many face-to-face businesses unable to operate and people moving their work online. Many businesses have closed due to government policies to prevent and control the Covid-19 or the loss of customers, and the Covid-19 has hit the economy hard in all markets. This is certainly an advantage for our company as it continues to explore new markets around the world, the aftermath of the Covid-19 has brought a number of changes to the financial industry. Of course, many industries to go digital will be a trend in the future.”

When the Covid-19 occurred, all industries were affected to varying degrees, while showing that there is a lot of space for improvement in digital services. With much of the work moving to a remote mode, it is important to build trust online. But with many firms and organisations scrambling to be more competitive with digital solutions, it also provided opportunities for many fraudsters during the Covid-19. The sales manager said “So, this is also an opportunity for our company, where many companies around the world are experiencing the need for fraud prevention in terms of company data protection and verification of customer information. In 2020, the company tripled its global customer base. At the same time, the company has completed a series of financing rounds to further boost its growth”. Thus, firm B's international development during the Covid-19 was positive.

Future plan

The sales manager said “Our company will definitely focus on the US market, and the company's future development goal is product innovation based on market demand, the company's management discusses which countries there is room for growth and the changing regional patterns that will help the company's products to deliver growth in different sectors in the coming years. Examples include gaming and online gambling, how to identify consumers, what the ecosystem will look like, and what bespoke approach we should take for each consumer segment”. The firm B has to continue to create growth opportunities and consolidate resources to strengthen the firm's earnings. After the Covid-19, the firm has to continue to focus on our customers' experience with the product, to improve it and to increase our research and development efforts, which is why we continue to look for investments. The sales manager said “ we want to recommend that the

company consider the Chinese market, However, due to Chinese laws and regulations, entry into the Chinese market is still subject to further investigation, and the network system in China is also different. But China is a very big market and large population, so we should look for opportunities”. Therefore, firm B chooses overseas markets due to the size of the market and the degree of economic and technological development.

3.1.3 Case 3: Firm C

Introduction

Firm C was founded in 2005 in Hefei, Anhui Province, China. And it has since established a branch in Shanghai. The firms’ main products are machine building related components, such as generators, etc. The firm has advanced domestic production technology and equipment, scientific management system, complete testing means and perfect after-sales service quality tracking system. The company is engaged in import and export trade, but more focus imports. For imports, it mainly imports from Japan and then sells to some well-known domestic machinery manufacturers in China. For exports, the firm produces product motors for export to South Korea and Middle East.

Firm C’s internationalization process

The founder said “In the beginning, our firm operated mainly in the domestic market. As a basic industry for China's economic development, the machinery manufacturing industry has been further enhanced through continuous accumulation, and the development of the machinery manufacturing industry is now more stable in the domestic market. On the import side, in 2006, we imported engines from Japan and then sold them to a number of companies in domestic. In terms of export, the motors produced by our firm itself are exported to Europe and the United States through some domestic agents. In 2010, the firm C cooperated with end-customers in South Korea and the Middle East to achieve direct export of its own products”. It is clear that firm C’s internationalization has been through imports and indirect exports, followed by the realisation of direct exports, this is a progressive route of development (see figure 3).

The founder said “we definitely want to make more profit, another motivation for internationalization is that at present China's machinery manufacturing industry is gradually

moving towards globalisation, so whether it is production, innovation or marketing is constantly reforming and innovating to enhance the level of China's machinery manufacturing industry in the international arena". So, firm C's internationalization is an essential step.

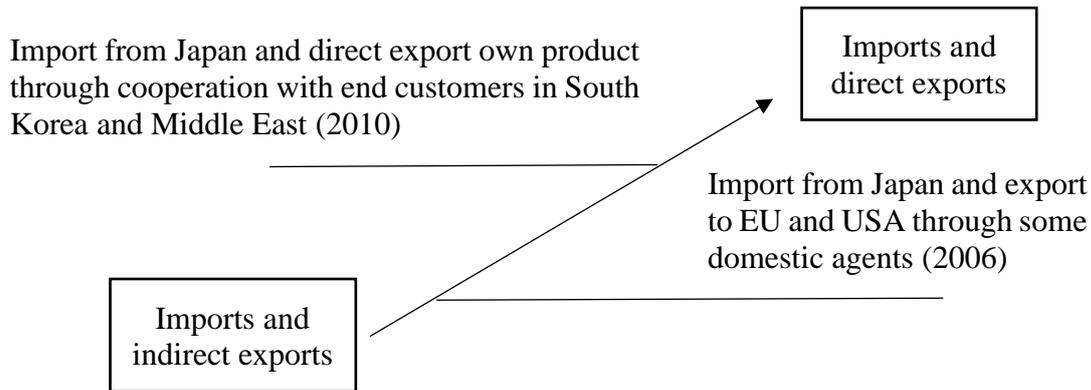


Figure 3: Firm C's internationalization process

Source: Compiled by the author ((Based on Uppsala Model, Johanson and Vahlne 1977)

Changes in firm C's internationalization process during the Covid-19

The founder said "Before the Covid-19, our firm was growing relatively steadily, with an annual growth rate of 10% for imports and exports, but more imports than exports. There was an upward trend in the firms' import and export volumes during the Covid-19. As for overseas markets, imports in 2021 are up 50% compared to 2020 and exports are up 30%. During the Covid-19, Some European countries began to order products from the firm, which allowed the firm to enter new international markets. According to the analysis, Europe was affected by the Covid-19 and the chain of some industries was hit hard and most of the products needed to be imported from China. Firm C has not voluntarily withdrawn from international markets. Although sea freight costs have been increasing during the Covid-19, the value of the company's imports and exports is still on an increasing trend. So, it is still good for the firm C's current situation.

The founder said that "we work with end customers in the South Korean and the Middle East market, but work with domestic intermediaries in Europe, North America market. During the

Covid-19, the demand for domestic orders is also relatively high, Because of the high demand in the domestic market itself, the market in Europe and North America has seen an increase in orders from intermediaries, resulting in a higher volume of orders from them. Direct exports are most numerous in the South Korean market and relatively few in the Middle East. In 2020-2021, the firm has not entered any international market. At beginning of the Covid-19, the firm's management considered manufacturing masks, but decided to stay in its main business due to the complexity of switching production lines.

The founder said that “risk control is a necessary measure for firms in the event of radical changes in the external environment, such as the Covid-19. The firms' sales channels are mainly visits from regular customers, so the firm did a good job of customer service during the Covid-19 and prepared a large amount of stock in advance, considering that the Covid-19 would affect the security of supply chain. Strict Covid-19 control was carried out in the factory, so the number of workers in the factory was sufficient and productivity remained stable during the Covid-19. In the event of a bad export situation, companies need to manage risk well, for example by controlling inventory flexibly and reducing labor costs. But the machinery manufacturing industry usually has a development bottleneck, when the business encounters a bottleneck, it is both a crisis and a turning point”. Firm C needs to make appropriate strategic adjustments, not only for the immediate future, but also for a three or five-year development strategy, and the more detailed the goals are in the present, the goals going forward mainly establish the precise direction of the firm. Overall, founder advises firms to prepare in advance for various situations that may happen, taking into account the general business environment.

Future plan

The founder said “ we will continue to expand internationally in the future, with Japan and some European countries as target export markets. If the Covid-19 is brought under control and Europe has gradually relaxed its policies and opened up its markets to recover its economy, this could be an opportunity for companies, but it could also have an impact on the company's exports. So, our firm has to allocate its resources wisely to enhance its competitiveness in the international market”. Thus, firm C is focusing more on risk management in its international development.

3.1.4 Case 4: Firm D

Introduction

Firm D was founded in 1992, the firm focuses on providing a wide range of ICT services, solutions and products to support the digital transformation of its customers. At the beginning the company was divided into two parts, a software development part and a computer systems part, operating together in Estonia. In 2008, two parts operating together. The firm first developed its business from within Estonia. In Estonia, the firm operates from 4 locations, two in Tallinn, one in Tartu and one in Pärnu. Many of the firms' customers are located in Finland, Sweden and other Nordic countries. These include large retail chains, banks and manufacturing companies. The firm's first international market was Finland, the second was Sweden, followed by other EU countries. The firm imports products from China and Japan and then exports them to other countries.

Firm D's internationalization process

The operation manager said "our firm first started its business domestic market, working with many companies and institutions in Estonia. After operating in the domestic market for some time, the firm considered entering the international market, due to its close to Finland and Sweden, our firm entered the Finnish and Swedish markets successively. Our firm went to operate in other European countries as well. Thus, Firm D entered to international market through direct exports in cooperation with foreign end-customers, and because the firm itself is a foreign-invested firm, it has a high degree of internationalization. Some of the firms' products will be imported from China and Japan. So, firm D's internationalization process is almost a progressive route (see figure 4).The operation manager said "Our first consideration in choosing an international market is distance, proximity to Finland and Sweden, small cultural differences and ease of development. But there is a lot of competition. we have also considered countries that are further away, such as Moldova. But we didn't know the local culture and it would have cost the company a lot of time and money." Thus, firm D focuses on proximity to countries when selecting international markets.

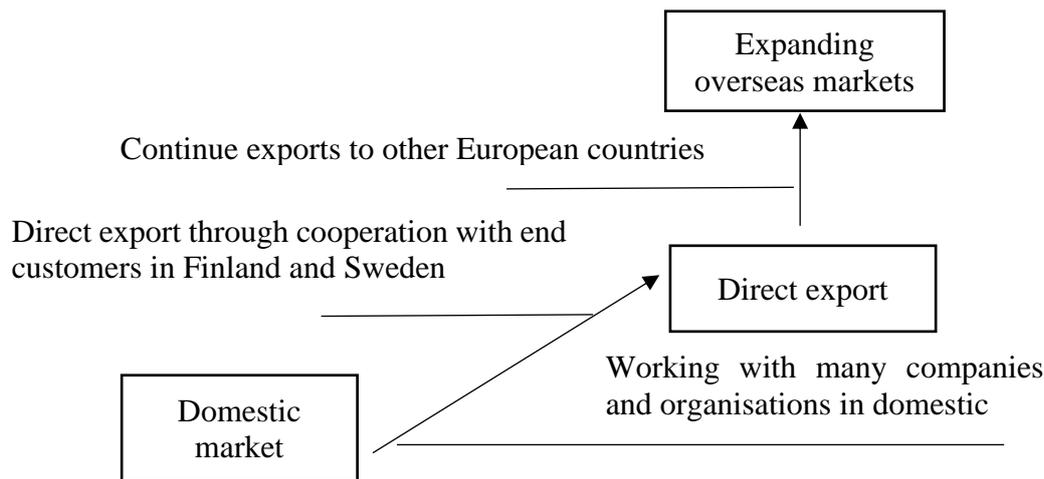


Figure 4: Firm D's internationalization process

Source: Compiled by the author (Based on Uppsala Model, Johanson and Vahlne 1977)

Changes in firm D's internationalization process during the Covid-19

The operation manager said “ before to Covid-19, our firm development had been relatively smooth”. The firms’ exports accounted for 82% of the firms’ turnover in 2019, the firms’ largest sales were in Finland, where merchandise sales for the year amounted to €10.88 million, accounting for 77.7% of the firms’ export turnover. Following the shock and disruption of Covid-19, the retail sector is transforming to meet increasing competition and new challenges. The operation manager said “In 2020, the firms’ turnover in Sweden, Latvia, Lithuania, the Netherlands and Denmark was reduced due to Covid-19, while only the Finnish market grew, but there has been no abandonment of any international market. Significant impact of Covid-19 pandemic leading to project delays and extensions, the reduction in turnover in the Swedish market has had the greatest impact on the company. Because of the large customer base in Sweden, there were relatively reduced few customers and orders were held up due to Covid-19”. In 2021, the firms’ performance in each overseas market began to turn in a positive direction.

The operations manager said that “our company continued to provide products and services to its customers during the Covid-19 and that it was actively working on a corporate policy to address social issues arising from the spread of the virus and to ensure the safety of customers, employees and suppliers. Employees were encouraged to work remotely at work and meetings were took place online. As Covid-19 hit the supply chain, almost disrupting the global supply and distribution network, shortages of raw materials caused production lines stop. Our company therefore proposed an intelligent supply chain solution that provides data analysis for the company to make the best decisions, monitor the entire supply chain, prioritise productivity in all situations and achieve

openness within the company and customers. The firm is implementing measures for its business continuity plan, along with infection prevention measures in line with government policies and recommendations. The firm completed restructuring measures, including the suspension of some product production factories, the withdrawal from less profitable locations, and the reduction of the firms' fixed expenses".

Future plan

The operation manager said " our future growth strategy is focused on the Finnish and Swedish markets, largely due to geographical location. Firms' new technologies and services can help some companies and organisations to operate more rationally, to be strategic partners to their customers and to build a trusting customer relationship. Customers who are willing to share their problems and experiences also help companies to understand their customers' needs'. For firm D, another development objective is innovation, constantly updating the firm's products and equipment to help the firm's customers overcome challenges and achieve their goals.

3.2 Cross case analysis

3.2.1 Firms' internationalization processes

Entry mode

In the development of the internationalization process, almost all four case firms have gone through the stage of exporting their products, which shows that exporting is the most common way of firms' internationalization. All four firms started their operations in the domestic market, and firm A, C and D followed a progressive internationalization process (Johanson and Vahlne 1977), in line with the Uppsala model. The internationalization path of firm B is somewhat faster than that of firm A, C and D. Although it started its operations in the domestic market, it later accelerated its internationalization by choosing to establish R&D centres and offices directly in overseas markets (Cavusgil and Knight 2015). Firm B has been focused on international markets from the time of its founded. Unlike traditional trading products, the firm B's products are new and have great potential for development, attracting large amounts of foreign direct investment and therefore

showing a faster than average pace of internationalization in the development of the firm. Firm A is now mainly focus on direct export and Firm C is currently mainly focus on import, indirect export to some countries and direct export to some countries. Firm B more focus on overseas R&D centres development and Firm D mainly focus on direct export at now.

Market choices

In terms of the international market choices of the two Chinese case firms, firm A has chosen developed countries in Europe and the USA because the prices of the products are acceptable in developed countries. Firm A chose a country farther away because the firm understood the situation of the international market and made a decision because the Middle East and South African countries generally do not accept the price of the firms' products, and the labor cost in Southeast Asian markets is lower than China (Dunning 1980), So firm A has little advantage in the Southeast Asian market. The overseas market chosen by firm C, first of all the closer East Asian countries, Because of the similarity of the regions, there are few cultural differences, which can reduce the business operation risks (Johanson and Wiedersheim 1975). According to the founder, Japan is well developed in mechanical engineering, so firm C chooses to import products from Japan and learn market experience. The products produced by their own firm are exported directly to South Korea to develop the firms' international business. As for the two Estonian case firms, firm B chose the technologically advanced developed country of the United States, where the firm itself is located in Europe, so the rest of the European market is also a target market. Firm D chose a market that was mainly European, but focused more on Finland and Sweden, which are close by, as they have fewer cultural differences and are conducive to international development, this is the same situation as firm C.

Firm A and firm C have relatively large domestic markets, so when they first started, they both started operating in the domestic market to gain market experience and then moved on to overseas markets. In terms of China's domestic market development, market demand is an important factor for firms growth. Chinese textiles account for 80 per cent of domestic consumption (Ministry of Commerce of PRC 2021), with the stable development of the domestic economy, the increase in the income and consumption level of domestic residents, the demand in the domestic market has further increased. Machinery manufacturing in recent years, driven by market demand, the overall development to maintain growth, but from the industry structure, most of China's machinery manufacturing firms are still in the middle and low level, which is also the reason why firm C imported from Japan. In terms of Estonia's domestic, the domestic market is small and many firms

are aiming at overseas markets. Estonia is an EU leader in the area of IT, with advanced e-government. Firm B and firm D want to accelerate the pace of internationalization.

Firm A and Firm C from Chinese economies, Firm B and Firm D from Estonian economies. In terms of product market access, the EU advocates full freedom and all EU countries receive significant facilitation in terms of economic exchange and cooperation. China is in a phase of gradual expansion of imports and exports, but there are relatively more regulations on trade policy. So, the country's trade policy is also a factor that influence the international development of firms in various countries (Kafouros et al 2022). In addition, management decision-makers have a large effect in the internationalization process of the firm. With the gradual saturation of the domestic market, the founder of firm C was very interested in the international market and launched international operations to increase the firms' profitability, and the first country chosen as an exporting country was a country that was close to home country, which is in line with the Innovation-related model (Bilkey and Tesar 1997).

Compare four case firms, they have similarities and differences of internationalization process (see Table 4). One thing that all four firms have in common in their drive to internationalization is the desire to make the firm more profitable.

Table 4: Similarities and differences of case firms' internationalization processes

| Internationalization process | Firm A (China) | Firm B (Estonia) | Firm C (China) | Firm D (Estonia) |
|---|----------------|------------------|----------------|------------------|
| A progressive route to internationalization | ✓ | | ✓ | ✓ |
| Based on exports for internationalization | ✓ | | ✓ | ✓ |
| International markets choice depends on geographical location | | | ✓ | ✓ |
| International markets choice depends on economic development | ✓ | ✓ | | |
| Overseas R&D centres established | | ✓ | | |

| | | | | |
|---|---|---|---|---|
| Overseas branches established | | ✓ | | |
| Own factory manufacture products | ✓ | | ✓ | |
| Cooperation with end customers in international markets | ✓ | ✓ | ✓ | ✓ |

Source: Compiled by the author

Therefore, the impact on the four case firms' internationalization development are both internal and external factors, firm A and C with its own factory and its own production line, coupled with low domestic labor costs and excellent supporting facilities, it has the advantage of location and ownership. firm B is a high-tech product with its own brand and high potential for development, which is an ownership advantage for the firm (Dunning 1980). Government policy support and trade policies are also important (Rui 2013), China's foreign trade policy is gradually being reformed, with policy support corresponding to SME in the middle of the Covid-19. Estonia's foreign trade policy is highly developed and trade relative freedom, a liberal trade policy gives firms a lot of scope for internationalization (Axinn and Matthyssens 2002). All firms focus on gaining experience in international markets and keeping abreast of market dynamics, so knowledge of international market is also important (Johanson and Vahlne 1977). Market demand is also a very important factor, during the Covid-19 there will be a reduction in customer demand, but there may also be customer demand for new products.

3.2.2 Changes in firms' internationalization processes impact of the Covid-19

In this thesis, the four case firms were all affected to varying degrees during the Covid-19. Firm A and C belong to Chinese firm, before the Covid-19, firm A was relatively stable and little change occurred in terms of exports as it relied mainly on domestic agents for indirect exports. Firm A has grown best in the US market because of its developed economy, good market resources and many customers (Chetty and Stangl 2010). Firm C shows an annual growth rate of 10% in overall import and export volume per year, with exports developing best in the South Korean market due to low freight costs (Jiang et al 2020). But firm A entered the South African market in the second half of 2019 and stopped in the second half of 2020, it has two reasons: firstly, because the Covid-19 led to an increase in shipping costs. Secondly, because the South African market could not accept the

price of the product, which is in line with the de-internationalization phenomenon (Chung and Beamish 2008). During the Covid-19, firm C has not withdrawn from the international markets in which it operates, it has not re-entered any international market either. After Covid-19, the opening of firm A and C's factories was delayed by two months due to the severity of the Covid-19 in China and strict government control policies, leading to almost no orders for firm A in the first half of 2020, but firm A received an increased volume of orders in the second half of the year, the reason is that the demand for orders from the first half of the year shifted to the second half. Firm C's import and export volumes both show an increase pattern in 2020, mainly due to increased customer demand in overseas markets. However, firm A's order intake in the US market was lower in the first half of 2021, mainly due to the severe Covid-19 in the US, where customers are mostly operating on an offline model. The negative market environment (Yayla et al 2018) has led to a reduction in inventory by US customers. In 2021, the import and export volume of firm B still showed a growth mode, and the export in the European market increased, mainly due to the damage to the supply chain caused by the overseas Covid-19 so the import demand in the European market increased. Overall, firm A was more affected than firm C during the Covid-19. The overall export volume of firm A decreased, while that of firm C increased.

Firm B and D belong to Estonian firms, both of which were developing relatively smoothly before the Covid-19. Firm B developed best in the US market, where technology is well developed and resources are plentiful, which facilitates product enhancement. Firm D has the best development in Finland and Sweden, because of small cultural differences and close distance, it has many sales channels, large market demand and low freight cost. During the Covid-19, it has a good impact on the firm B's international development, as its products are online services, the demand for its products increased during the Covid-19. The opening of an office in the UK and the forthcoming opening of an R&D centre in Spain have accelerated the firms' internationalization to some extent. In 2021, firm B completed a Series B financing round, indicating that its company is doing better and needs to further expand into new products and business. However, firm D has not only technical services but also product exports. During the Covid-19, the total export volume in overseas markets is down and the export volume in each overseas market is down. In comparison, the markets in Finland and Sweden are the best performers during the Covid-19, mainly due to the trust of regular customers (Johanson and Vahlne 2009). Overall, firm D is more affected than firm B, firm B's FDI increased and firm D's total exports are decreased. During the Covid-19, firm B and D has not withdrawn from the international markets in which it operates, it has not re-entered any international market either.

In summary, the firms' internationalization processes is affected by radical external changes, the operation and development of firms will be affected and their performance in the international market will be different (see table 5).

Table 5: Impact of Covid-19 on firms' internationalization processes

| Firm | Before Covid-19 | During Covid-19 |
|------|--|---|
| A | Relatively stable and little change occurred in terms of exports as it relied mainly on domestic agents for indirect exports. With independent export rights in 2018, increased exports to the US and EU market, a small number of orders from the South Africa and Japan. | In 2020, withdrawn from the South African market, a small number of orders from South Africa were received anew in the second half of 2021. Orders from US market decreased in the first half of 2020 and increased in the second half. Orders for the first half of 2021 are particularly high until September from EU and US market, after that, orders were heavily reduced. |
| B | Continued access to foreign investment and cooperation opportunities with US companies, lower fluctuation market sales in other EU countries. | In 2021, firm B completed a Series B financing round. Firms' sales volume grew at a monthly rate of around 20% until February of 2021. The largest increase in the US market, little change in sales in other European countries. |
| C | Annual growth rate of 10% in overall import and export volume per year, continued increased exports to South Korea and Middle East. | 2021 is a 50% increase in total imports and a 30% increase in total exports compared to 2020. Largely increased exports to EU countries and US. |
| D | Sales in the Finnish and Swedish markets have been on the increased, highly fluctuation market sales in other EU countries. | 2020-2021, total exports are decreased in other EU countries, but the Finnish markets are still increased. |

Source: Compiled by the author (Based on interviews, Nagarajan and Sharma 2021)

3.2.3 Firms' responses to the Covid-19

At the beginning of the Covid-19, when the Covid-19 was serious in China, the first thing firm A did when it resumed work was to manage its own factory, adopting strict controls over the factory, making it compulsory for workers to wear masks on duty and disinfecting machines on all sides to ensure the safety of workers and avoid infection. At the same time, firm A opened a new factory in 2021 and upgraded its product lines, improving the quality and productivity of its products and gaining the trust of its foreign customers. Because the outbreak had just started, the demand for domestic masks was relatively high and the factory switched several mask production lines, this is due to the new demand for products as a result of the Covid-19. At that time, the production of

masks was very profitable for domestic sales and later the masks were exported to the United States, but the production was stopped after only two months because after the production of masks in many factories was brought up, the production of masks was no longer profitable for firm A. Firm A's main sales channel was to expand overseas by attending exhibitions in overseas markets. Due to the Covid-19, sales staff were unable to travel abroad, so firm A decided to participate in an online exhibition, sending samples of their products to the exhibition location and having their sales staff explain them online, which changed the firms' sales channel and facilitated the firms' expansion into international markets during the Covid-19. Firm C's main response was to stabilise regular customers, as the firm's previous sales channel was also customer visits, and the firm believes that long-term customer relationships are very important. Firm C believes that firms need to manage risk well (Figueira et al 2011), and respond to the risks brought by Covid-19, the factory has made significant inventory preparations in advance, considering that it will affect the security of supply chain. Because there will be a bottleneck in the machinery manufacturing industry, firms must do a good job of risk management and forecasting. During the Covid-19, China controlled the situation relatively well, so the firms' supply chain was not affected much. At the same time firm B had to do a good job of customer service and follow up with customers in a timely manner. During the Covid-19, firm C considered manufacturing masks, but because of a number of factors, including the cost of switching production lines and labor costs, finally it chose to stay in its main business.

During the Covid-19, firm B decided to lay off more than sixty employees, mainly because the impact of Covid-19 led to a reduced need for manual services for firm B's products. firm B has made changes to its product pricing and plans to provide customers with a diversity of options with the primary aim of attracting customers. Firm B has increased its investment in product development, improving products and creating new products to provide a safer experience for our customers. Also, during the Covid-19, firm B maintained close contact with its international customers, increasing sales. firm B was also active in the community, donating free product experiences to companies in need, including non-profit organisations, universities and the medical sector, helping to build a positive image of firm B. So, firm B relies on product innovation and continuous technological upgrading, and despite the Covid-19 crisis, the business is still profitable and has completed its Series B investment round. In addition, firm B encourages employees to work remotely and company meetings are moved online. For firm D, the focus is on customer service, understanding customer needs and priorities and providing the best solutions for customers. Firm D is also responding to the Covid-19 crisis by constantly improving its technology

and updating its products, in which it can only grow by increasing its competitiveness. Firm D also places great emphasis on training its employees, either online or face-to-face, to enhance their skills and bring them closer to the users, to ensure their personal well-being during Covid-19, and to help them continue to learn to ensure they can do their jobs better. Based on the responses made by the four case companies, it can see similarities and differences (see table 6).

Table 6: Firms' responses to the Covid-19

| Firms' responses | Firm A (China) | Firm B (Estonia) | Firm C (China) | Firm D (Estonia) |
|---|-------------------|---------------------|-------------------|---------------------|
| Focused on customer service | ✓ | ✓ | ✓ | ✓ |
| Changed sales channels | ✓ | | | |
| Improved management of Covid-19 prevention and control in factories | ✓ | | ✓ | |
| Training and protection of employees | ✓ | ✓ | ✓ | ✓ |
| Developed new business and updated products | ✓ | ✓ | | ✓ |
| Reduced product prices | | ✓ | | |
| Doing good crisis management | ✓ | ✓ | ✓ | ✓ |
| Employees working mode changed to remote work | | ✓ | | ✓ |
| Withdrawal from some international markets | ✓ | | | |
| Re-entering some international markets | | | | |
| Manage inventory well in advance | ✓ | | ✓ | |
| Product innovation and technological upgrading | ✓ | ✓ | | ✓ |
| Lay off employees | | ✓ | | |

Source: Compiled by the author (Based on interviews, Durst et al 2021; Vissak 2022; Gu et al 2020)

3.3 Discussion

The four case firms showed similar patterns at the beginning of their internationalization process. although case firm B experienced a more rapid early stage of internationalization. Previous literature, particularly on international new ventures, has examined this type of internationalization in a similar way. In terms of motivation for internationalization, the four case firms were driven by market expansion, particularly targeting high-growth, high-margin markets in order to achieve higher profits for the firm. Three of the four cases followed the Uppsala model (Johanson and Vahlne 1977), gradually obtaining knowledge of international markets and increasing their share of exports. One of them followed the "born global" model (Cavusgil and Knight 2015), benefiting from its intangible technical service offerings, which are much easier in terms of logistics and delivery than the tangible ones.

How radical changes of external environment such as Covid-19 impact on firms' internationalization processes?

The differences between the four case firms can be seen in the changes in the external environment that led to changes in the four case firms' internationalization processes. This clearly shown that firms with much more experience and information about overseas markets led to be more competitive in overseas markets (Welch and Luostarinen 1988), and that higher competitiveness for foreign markets also led to less volatility during the Covid-19 pandemic. The author found that the two case firms experienced healthy growth during the pandemic and were able to adopt some of their foreign market experiential knowledge to enter new markets and new businesses, one firm from China and other from Estonia. Thus, whether the domestic market is large or small, firms can find opportunities in a crisis if they can use their resources well. The author therefore argue that these firms that experienced growth during the global pandemic created a positive synergy mechanism, while only one Chinese case firm experienced de-internationalization, none of the other case companies have happened to de-internationalization or re-internationalization. So the company is still very positive in realising overseas markets. The changes in firms are mainly a sudden increase or sudden decrease in orders, which means that the export volume fluctuates very much, but the overall export volume is unaffected and even increases very quickly. Moreover, the sales channels of firms have been forced to change, from offline sales models to online sales models.

In addition, Chinese firms belong to the manufacturing industry, the impact of the Covid-19 on the Chinese manufacturing industry is mainly in the short term, which is related to the layout of the factories, which are located in areas where the industrial chain is relatively complete. As long as the factories can be opened, production can quickly meet the needs of the companies in the international market in the short term. The two Estonian case companies belong to technology service companies, and Covid-19 has caused a serious blow to the offline business, so the online digital industry welcomes a good opportunity for development, and the digital industry has a better development prospect. In terms of digital technology applications, the Covid-19 is a clear example of digital technology being used in response to public health and safety emergencies, which has promoted the development of digital technology in society and will further increase the digitalisation of various industries.

How the Covid-19 impact on the firms' internationalization processes?

In the case of the impact by the Covid-19, firm B and C are less affected and have a positive effect on the internationalization. Firm A and D have been affected relatively more, mainly because of low demand in foreign markets and serious customer losses. The author thought that in the case of an external crisis, the impact on the firm depends on type of business, if the firms' products and services are online, the impact on the firm is less, if the firms' products are offline and need to be exported by means of transport, the impact on the firm is greater in the case of increased transport costs (Jiang et al 2020). Firm B and Firm C's total revenue are increased, Firm A and D's total revenue are on decreased. However, the overall impact on all four companies was not serious.

The severity of the Covid-19 in China has led to factory shutdowns, an internal impact of the external crisis that has prevented the factories from operating normally. The Covid-19 regulations have affected the movement of people and activities, which has led to an impact on logistics and has hit production in the manufacturing sector, especially in labor-intensive industries, due to the availability of raw materials and labor shortages. This also affects the competitiveness of companies in the international market and reduces firms' development advantages (Dunning 1980).

How firms adjust and respond to Covid-19 in their internationalization process?

Both Chinese and Estonian firms have responded mainly by focusing on customer service, following up with customers and understanding their needs in a timely manner, managing relationships with customers.. In addition, the Chinese firms is influenced by the strict Covid-19 control implemented by the policy to avoid intensive infections in the factory, and changing sales channels and inventory management. Estonian firms are focused on product renewal and upgrading, product innovation as well as technological upgrading (Filippetti et al 2011), adjusting product plans and prices. Therefore, it is extremely important for companies to be up to date with market information, the business environment and policy regulations in order to develop timely measures in response to Covid-19. Due to firms in a changing business environment, firms need to have crisis management well in advance, the training and protection of employees are also valued (Durst et al 2021).

Positive synergy mechanisms enabled the firms in several cases to explore new growth opportunities and optimise their resources in foreign operations. The RBV theory illustrates that firms need to make decisions about market selection and resource allocation due to the limited amount of resources they may hold. Therefore, the author argue that when an external crisis occurs and the external environment changes suddenly, firms with good management resource capabilities and those with more internal resources, as well as those with competitive positions in specific international markets in order to focus on growth in key strategic markets, are those that are likely to experience long-term growth in their internationalization process (Knight and Cavusgil 2004).

CONCLUSION

The main aim of this thesis is to study the impact on the internationalization process of firms in the case of radical changes in the external environment caused by Covid-19. The main impacts of Covid-19 on the internationalization of firms are changes in export volume, overseas market demand, factory production efficiency, transportation costs, and restrictions on Covid-19 prevention and control policies. During the Covid-19, a period of time when the firms' orders stop and a period of time when the firms' orders suddenly increase. Although the demand in overseas markets fluctuated greatly during the Covid-19, the impact on overall demand was not great. Due to the strict prevention and control measures of the Covid-19, the factory cannot start operation, which seriously affects the production efficiency of the factory. The increase in transportation costs also increases the direct cost of the company. However, some companies have also tried to develop new businesses and build new factories according to market demand, which has improved the production efficiency of the assembly line, made up for the negative impact of the Covid-19 on the company, and increased the company's turnover during the Covid-19. The export mode of some firms is FOB, so the increase in transportation cost has no effect on the firms. If the firm is covering the shipping costs, it will affect the firm during the Covid-19.

This thesis enables readers to understand the phenomenon of internationalization in the new context of radical change such as Covid-19, like other crises, is a shock to the world's economy. Due to the ongoing Covid-19 pandemic, this study can provide timely theoretical contributions, first, the author argued that the impact of Covid-19 on the internationalization process of firms is short-term and discontinuous. Second, When the internationalization process of firms are affected by radical changes in the external environment caused by Covid-19, the changes brought to the firms are not necessarily negative, but are likely to be positive (Vissak 2022). During the Covid-19, de-internationalization and re-internationalization do not necessarily mean failure, and do not necessarily appear, it is as a normal phenomenon in firms' internationalization processes. Third, through understanding the measures the firms have formulated in response to the Covid-19 crisis, the firms need to manage risk well in advance in the current large business environment. When firms encounter radical changes in the external environment, the firms need to formulate timely

responses (Durst et al 2021). firms respond to the impact of the crisis by capturing new customer needs and using firms own resources to develop new business (Klein and Todesco 2021).

The thesis also provides the following suggestions for firms decision makers, first, in the early stage of internationalization, firms should decide the internationalization route according to their own internal resources and the size of the domestic market. If the domestic market is large, the company's products have advantages in domestic sales, and the company's own internal resource competitiveness is small, it can choose a gradual internationalization route, and by accumulating market experience and increasing corporate competitiveness, gradually develop from the domestic market to the foreign market has developed from domestic sales to export. If the domestic market is small and domestic sales resources are limited, firms can consider rapid internationalization and seek international cooperation faster to strengthen their competitiveness.

Second, when the firms' internationalization processes encounter radical changes in the external environment, such as the worldwide crisis of Covid-19. Establish a decision-making body for emergencies, set up an emergency response team, conduct a comprehensive analysis and assessment of the risks that the firm may face as soon as possible, and start an emergency plan. For example, in response to the shutdown of a company's factories caused by the Covid-19, companies should do a good job in inventory management in advance to cope with fluctuations in demand. The company's sales model should be flexible. Due to the impact of the Covid-19, offline sales cannot be carried out, and the online sales model should be used to complement each other. E-commerce has emerged as the most promising business model during the Covid-19 pandemic, and online sales are the trend of the future as the online form of offering goods and services helps reduce virus infection rates.

Third, focus on customer service, follow up with customers in a timely manner and understand their needs, and manage the relationship with customers. Establish an information communication mechanism between customers and suppliers to stabilize the supply chain. Pay attention to the physical and mental health of employees, and adopt suitable work plans according to the nature of different businesses and jobs. Ensure a safe working environment and implement a combined online and offline work mode to reduce the risk of infection.

Limitations of thesis

The first is that the author has limited access to literature and limited personal research experience, and the thesis has many shortcomings. Second, there are the limitations of the data, based on the conclusion that the analysis of four case companies cannot be generalized, two Chinese companies and two Estonian companies, the sample size is too small. The four case companies are from different industries, and the differences between industries are not considered. All data collection and analysis were done independently by the author. Third, the results of the study are subjective and the interpretation of the data may vary greatly. However, through the analysis of four case companies, this thesis has found that the impact of the radical changes in the external environment caused by Covid-19 on the internationalization of firms is an important discovery and an exploratory for the phenomenon of internationalization process.

Suggestions for future research

As the global pandemic Covid-19 continues to occur, the impact on countries around the world is still ongoing, and the impact on international business is still an uncertain crisis. Future research can select a larger sample size and can select different countries. For multiple case companies, to subdivide the industry, it is necessary to conduct long-term follow-up investigations on the case companies. Future research can choose those companies that have a greater impact on the Covid-19, such as those that cannot conduct business during the Covid-19. In the future, mixed method research can be used for the impact of Covid-19 on the internationalization process of firms, which makes the research results more comprehensive, the research results are more convincing, and the generalizability of the research results is improved.

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APPENDICES

Appendix 1. Case Study Interview questions

Part1: General information of the case firms

1. What is the name of your company?
2. What are the main services/products in your company?
3. When was your company established?
4. What is your role in your company?
5. What is your primary responsibility in company operation?
6. What is the main operational strategy in your company?
7. What are the primary markets of your company?
8. Anything else you would like to share with the regard to the company profile?

Part 2: Internationalization process of the case firms

9. When did your company first enter a foreign market?
10. What are the major motivations for internationalization?
11. What are the major obstacles when expanding to an overseas market?
12. What was the second foreign market you entered? And how and when did you enter this market?
13. What was the third foreign market you entered? And how and when did you enter this market?
14. Were there any different opinions regarding the firm's internationalization (location choice, entry modes, resource allocation)?
15. Could you please illustrate major milestones of the firm's internationalization process?
16. Were there any fluctuations during the firm's internationalization process?
17. Did the company ever exit from any international market?
18. Did the company ever re-enter any international market?
19. How and why such a decision was made such as exit or re-enter?

Part 3: Changes in firms' internationalization during Covid-19

20. Besides the Covid-19, was there any radical changes that occurred in the overseas market in the past? And how did the firm deal with it?
21. How was the company's development in overseas markets before Covid-19?
22. Which overseas market did the company develop best before Covid-19?
23. What was the impact on the company's overseas market in the early stage of Covid-19?
24. Which overseas market was most affected in the early stage of Covid-19?
25. Did the company initiate response measures in the early stage of Covid-19?
26. What changes have occurred in various overseas markets during Covid-19?
27. Did the company ever exit from the overseas market during Covid-19?
28. Did the company re-enter the overseas market during Covid-19?
29. What is the impact on the company's overseas market in the later stage of Covid-19?
30. What is the company's strategy in overseas markets in the later stage of Covid-19?
31. What are the major changes occurred in the firm's overseas markets compare to the initial stage and later stage of Covid-19?
32. Did the company experienced growth in any of the markets during the Covid-19? And how and why this growth occurred?

Part 4: Implications and future plan

33. What the company has learned during the Covid-19?
34. Which markets will be the focus in the next five years? And what will be the company future development plan?
35. What advises you would like to give to entrepreneurs and companies with the regard of dealing with radical changes in their internationalization processes?
36. Any other information and/or thoughts you would like to share with us?

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