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Backshoring and how it affects innovation

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Abstract

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Abstract

The thesis work studied the effects backshoring has on innovation. The thesis explained the phenomena of backshoring and innovation, critically examined its drivers and barriers, and determined whether there is a link between backshoring and innovation. Another objective of the thesis was to conduct empirical research using four semi-structured interviews to derive which effects or changes the reshoring process had on an organization's innovation. The businesses were selected according to their home country, industry, and knowledge with location choices such as backshoring. Based on similar themes, the obtained data was summarized, examined, and evaluated.

After studying a large quantity of sources regarding the thesis' topic, the effects backshoring has on innovation became a lot clearer. In total eight effects were analyzed, as shown in Table 6. This thesis and framework allow companies to see which benefit a reshoring decision could have.

Keywords

Backshoring, Reshoring, Innovation, Effects backshoring on innovation

Contents

1 Introduction

1.1 Background

The topic of offshoring is a vital focus area discussed in the sphere of international business because of its extensive application of operations, significant cost-saving advantage, and role in current corporate responsibility discussions (Hristozova & Rabiolo 2021, 1). Offshoring occurs mainly in the manufacturing industry, and there are several arguments to explain this practice. It is seen as a cost-cutting measure for businesses to preserve end-customer prices to a minimum while maintaining high production and satisfying rising product demand. Moreover, rising economies have proven to be competitive in labor expenses due to relatively unskilled labor. Organizations, therefore, gained a competitive advantage in hosting labor-intensive operations. As a result of offshoring, enterprises' competitiveness, efficiency, and profitability have increased while the nations' economies have grown. (Martínez-Mora & Merino 2020, 1374; Hristozova & Rabiolo 2021, 1.)

Nevertheless, offshoring revealed various negative consequences and elements over the last few years. Considerable problems have been raised if offshoring is efficient in cost-saving, but more importantly, how the decision might oppose specific corporate goals. The constant change in the global market also influences the decision to offshore in numerous nations additionally. All these matters have reduced the allure of offshore and raised the chance of enterprises returning to their original site to produce. (Hristozova & Rabiolo 2021, 1.)

Consequently, a new trend and an inverse process has emerged during the past years, particularly in Europe and the United States. There has been an increase of examples where manufacturers brought manufacturing back to their home country. The decision to return offshored manufacturing to the home country is described as backshoring, though the term reshore/reshoring will be used correspondingly in the study. (Martínez-Mora & Merino 2020, 1374.)

Since backshoring is still a new phenomenon, the number of studies has remained quite restricted. Several studies have suggested reasons and drivers to reshore based on interviews, surveys, or theory-based approaches (Barnette et al. 2020, 6-8; Hristozova & Rabiolo 2021, 1-2). One of the incentives to perform the process of backshoring is innovation. Being innovative is crucial for companies nowadays to survive in the competitive market, gain more customers, increase their market share, and differentiate themselves from their competition. (Purcell 2019.) Innovation is critical in business as it provides

organizations with a competitive advantage in entering and penetrating new markets quicker and grants a more vital linkage to expanding markets, leading to more considerable prospects, especially in developed nations (Henderson 2017).

Innovation and its connection to backshoring arouse interest as it concerns people from the business sector as well as the regular consumer. Offshoring, for instance, may have caused an employee to lose their job; hence bringing the production back to the home country could create new job opportunities (Corbet 2012, 5). Every consumer bought at least once in their lifetime a product signed with “Made in China” or a different country from Asia for instance. Therefore, if corporations modify their manufacturing processes and leave Asia, everyone will be concerned about the ramifications of their decision. Managers and stakeholders of organizations however should be interested in this topic because the more innovative a company is, the likelier it is to succeed in the market.

1.2 Objective and research questions

The thesis objective is to examine whether and how backshoring affects the innovation of a business. The study furthermore aims to understand the phenomenon of backshoring and innovation, to critically examine its drivers, and to analyze if there is a connection between backshoring and innovation. Another aim of the thesis is conducting empirical research with interviews to show if firms that finished the backshoring process noticed changes or effects on their innovation activities. As a result, the conducted research will contribute to the existing literature by expanding on innovation and reshoring and adding further depth to the significance of this correlation.

In particular, the thesis will answer the following main research question and two sub-questions. The main research question will be answered through the analysis of empirical research, while the sub-question will already be answered in the theoretical framework, as they need to be answered beforehand to gain an understanding of the thesis topic.

- How does backshoring affect a company’s innovation?
    - What are the main drivers of businesses which perform backshoring?
    - How is innovation linked to the performance of a company?

1.3 Delimitations

Backshoring and innovation are both broad and diverse topics. Unfortunately, not many studies have been published yet on how backshoring affects innovation. For that reason, the research will primarily concentrate on what effects the reshoring process generated

within a firm regarding its innovation. To understand this research question, it is crucial to define backshoring, to examine its drivers and barriers, and to look at the development of this trend. Interviews about the research topic will be conducted during the thesis process to prove the research question if reshoring affects innovation. This empirical study will question several companies and experts from different industries to gain a broad range of insights.

The innovation part will first focus on the definition of innovation. Therefore, the importance and the barriers to innovation must be looked at as well. Furthermore, the two main benefits of innovation are presented in the thesis, namely the link of innovation to the performance of a business and the linkage between innovation and competitiveness.

No numbers will be used to answer the research questions since innovation will not be measured in this thesis. The research answer will focus on the outcome and how or if backshoring affects innovation.

1.4 Theoretical framework

In the theoretical framework, innovation and backshoring will be explained in detail. Figure 1 provides an overview of the theory.

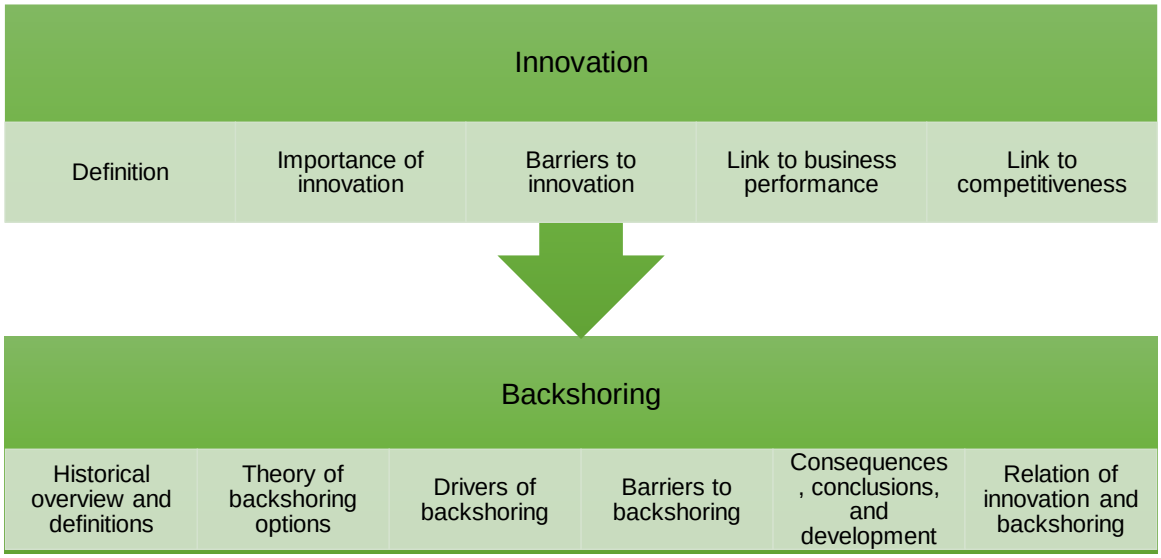

Figure 1. Overview theoretical framework

The theoretical framework starts with the topic of innovation. First, the term will be defined. Then the thesis will continue with why innovation is essential and the barriers to innovation.

The link between innovation and competitiveness will be explained furthermore, as well as the connection between innovation and business performance. Some of the sources that will be used to describe those topics are based on the studies by Hii and Neely (1998), Hobcraft (2016), and Duarte et al. (2017).

The framework continues with the subject of reshoring. A historical overview will be given, including a statistic by the Reshoring Initiative Data Report from 2020 on how the phenomenon developed during the past years. This will be followed by definitions of offshoring and reshoring defined by Kinkel and Maloca (2009), Nodoushani and McKnight (2012), and Fratocchi et al. (2016). For a more profound comprehension and expertise of backshoring, its theory will be elucidated, focusing on different reshoring options like in-house reshoring, reshoring for outsourcing, reshoring for insourcing, and outsourced reshoring based on the idea by Gray et al. (2013). In addition, for a better understanding of why to reshore at all the drivers of the phenomenon will be presented in a derived form by Bailey and De Propris (2014), Fratocchi et al. (2016), and Benstead et al. (2017). The drivers are put into four categories, namely:

- risk, uncertainty, and ease of doing business
- cost-related drivers
- infrastructure-related drivers
- competitive priorities.

Not only the drivers of backshoring but also its barriers are highlighted in the thesis (Canham & Hamilton 2013; Bailey & De Propris 2014). Those barriers are divided into internal and external factors.

The last part of the theoretical framework will consist of reshoring consequences, conclusions, and the development of the trend (Kinkel 2014; Tate 2014).

1.5 Research methodology

There are two primary research methods to choose from: quantitative and qualitative research methods. Numbers and graphs are used to express quantitative research. It is used to validate or test hypotheses and assumptions. This research method can develop generalizable facts about a subject with techniques like experiments, observations, or surveys. On the other hand, qualitative research is expressed in words, for instance via interviews. It is utilized to comprehend ideas, thoughts, or experiences. This study allows

the researcher to gain in-depth knowledge about issues that are not generally known yet. (Streefkerk 2022.)

The method used for this bachelor thesis is a qualitative research method for the reason that in-depth information is required to answer the research questions. Therefore, the results are needed descriptively. Descriptive research is an approach that outlines the features of a phenomenon examined. This technique is based on the “what” of the research topic rather than the “why”. Descriptive research describes thus the subject of the study without explaining why it occurred. In this case, qualitative research methods are employed to get a result that supports the research question under consideration. (QuestionPro.)

One-on-one interviews will be conducted during the thesis process. The rationale for this is that if the appropriate questions are asked, the researcher can obtain accurate and valuable data required to test the research question. An interview is a conversational strategy for gathering in-depth data based on where the discussion leads. (QuestionPro.)

The one-on-one interviews will be conducted with companies that have reshored. The interviews will mainly be about the research question “How does backshoring affect a company’s innovation?”. An expert from this area of this company will be asked to conduct the interview for instance CEOs or the head of innovation management. From their expertise, they will answer the questions in a semi-structured interview, which refers to structured, controlled, and directed interviews but with the possibility to answer add or delete questions. In the semi-structured interview, the predetermined questions will be asked in a set order, to ensure consistency in generalizations. (iEduNote.)

A deductive approach is used in the thesis to analyze data generated by the interviews. This approach requires the theoretical framework predetermined by the researcher. With the help of this framework, the data generated by the interviews can be analyzed, and the pre-existing research question can be tested (QuestionPro). Figure 2 illustrates the deductive approach which is used for the analysis.

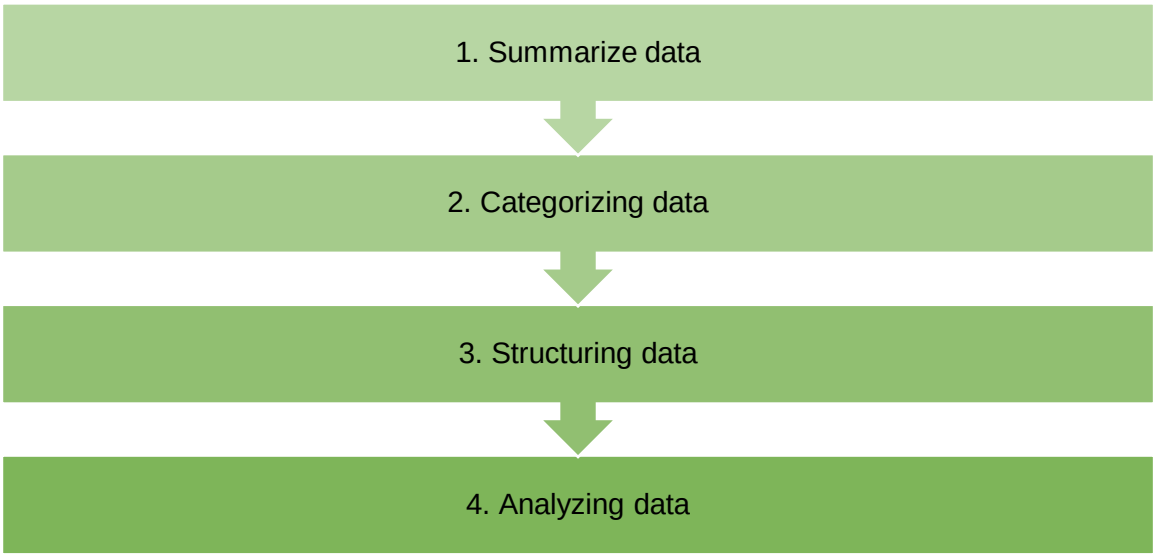

Figure 2. Approach for analysis (adapted from Lewis et al. 2012)

After collecting the data that is described in chapter 4.4.1, the first step is to summarize and transcribe the data. Through this action, the researcher can include the actual words and the context in which they were uttered in the transcript. Going over the transcripts several times allows the researcher to focus on critical discoveries and find more evidence to answer the research question. In the second step, the data is put into categories which helps to answer the main research question and describe the relationships of the categories. The data is structured in the third step, and only relevant information is kept. In this analysis step, a data visualization summarizes the research results. The final step is to draw conclusions, verify theories, and answer the research questions. (Lewis et al. 2012; Canary 2019.)

1.6 Thesis structure

The thesis follows a coherent structure, clarified in Figure 3. It is divided into five main chapters. Each section discusses the key points that support this research paper.

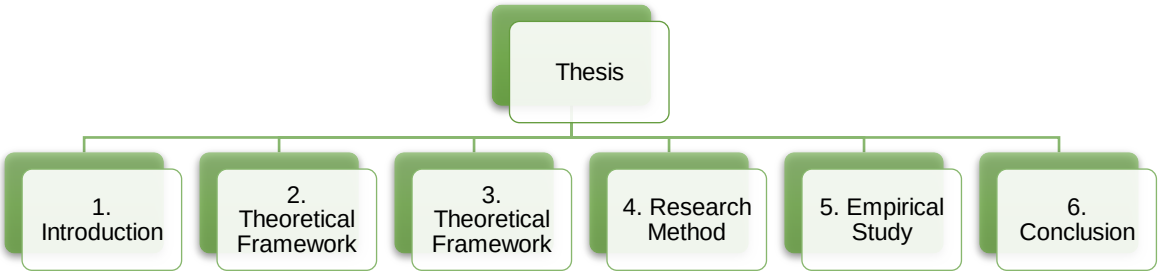

Figure 3. Thesis structure

The first chapter introduces the topic of the thesis and provides the reader with adequate background information about backshoring and innovation. Furthermore, this part presents the objective, the research questions, delimitations of the thesis, and its structure.

In the second and third chapter, the theoretical framework of the thesis is explained. This framework includes the definition of innovation, its importance, barriers, and links to business performance and competitiveness. Afterwards, a historical overview of backshoring is given, and the terms of offshoring and backshoring are defined. Then, the theory of the reshoring option is explained, followed by the main drivers and barriers of the phenomenon. Next, the trend's backshoring consequences, conclusions, and development are presented.

The fourth chapter continues with a more precise explanation of the research approach and methodology. The research philosophy, approach, design, techniques and procedures, and the research will be stated.

The research approach results in the fifth chapter of the thesis, namely the empirical study. In this section, the interviews are analyzed and evaluated according to the methodology of chapter four.

Finally, the conclusions are drawn in the sixth chapter, and more importantly, it answers the primary research question and concludes the study's findings. Additionally, an outlook will be given on the linkage between backshoring and innovation in industries.

2 Innovation

2.1 Definition

A primary issue in innovation management is the lack of a unified definition among researchers and policymakers. The term innovation refers to producing new things, as opposed to the act of innovating (Afuah 1998; Jabbari & Tohidi 2011, 536). In the literature, there are numerous definitions of innovation. This section aims to name and compare some of the most important definitions and approaches to innovation.

Historically, innovation has played a more prominent role in the economy than creation, but Austrian economist Joseph Schumpeter recognized the importance of innovation and developed a theory for economic growth (Jabbari & Tohidi 2011, 536). He is widely regarded as the first economist to emphasize the significance of innovation. His approach's three main components are investment innovation, credit, and profit maximization. Schumpeter furthermore contrasts the terms innovate and innovator and creation and creator. Even if no one creates, there will be innovation because creation is not always a catalyst of innovation and will produce economic benefits. In the 1930s, he identified five types of innovation (OECD 2005, 29; Jabbari & Tohidi 2011, 536; Jabbari & Tohidi 2012, 517-520):

- the launch of a new product or a significant improvement to an old product
- an industry's first process innovation
- the establishment of a new market
- the creation of new sources of raw materials or other inputs
- alterations in industrial organization.

The Oslo manual by OECD (OECD 2005, 29) strives to provide innovation surveys and research standards. It also focuses on the first two categories defined by Schumpeter. The definitions of the two groups are clarified in the manual as follows: on the one hand, technological product innovation might entail either a new or enhanced product with substantial differences from the previous product. Differences can occur because of new technologies, resources, or expertise. On the other hand, technological process innovation entails considerably enhanced manufacturing methods, including product distribution and delivery. In each instance, the terms *new* or *improved* refer to a company. For instance, even if a firm introduces a technique used by others, this still represents an innovation for that firm. As a result, innovation can include developing wholly new knowledge and disseminating existing information. The key message from the substantial effort in the Oslo Manual is that defining “innovation” accurately is difficult.

Paul Hobcraft (2016) uses a moderately broad definition, namely:

Innovation is the fundamental way the company brings constant value to their customers, business, or life and consequently their shareholders and stakeholders.

It is essential to keep in mind that this definition defines innovation as something that adds value. The development of theoretical understanding, or the invention of new goods or processes, is not typically deemed innovation until it has been productively incorporated into the firm's activities. This indicates that creative activity cannot occur independently of the primary operations of a firm. Instead, it requires synchronizing multiple inventive, learning, and implementation abilities. (Rogers 1998, 7-8.)

Innovation is described as creating something new that adds value at its most basic. It is critical to understand nevertheless the several approaches to innovation to evaluate which ones generate the most significant benefit. Figure 4 provides an overview of the four approaches to innovation, how those result in different outcomes, and why specific methods are more effective.

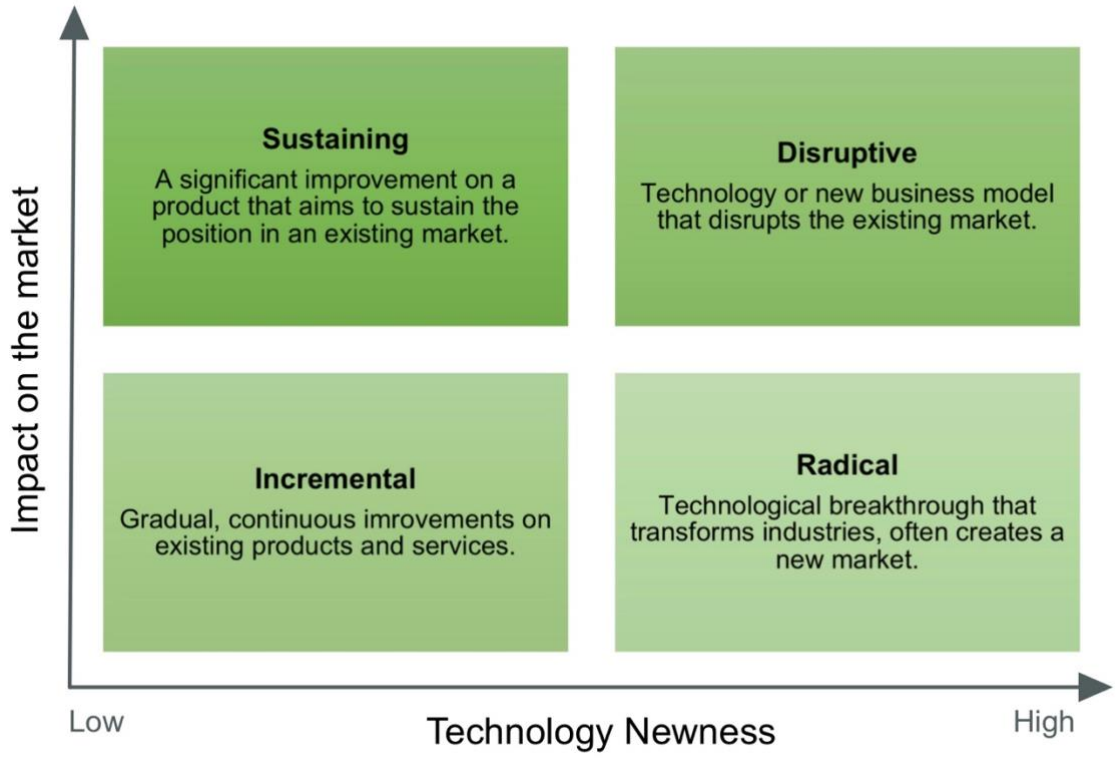

Figure 4. Types of Innovation (adapted from Ottinger 2021)

The most well-known innovation is disruptive, characterized by the successful use of modern technologies and high-impact outcomes. Although disruptive innovation is eye-

catching and makes headlines, it is fraught with complexities and obstacles. The most typical businesses showing disruptive innovation traits are startups that target underserved parts of the market to produce a more economical, convenient, or easier solution than what the established competitors can offer. (Ottinger 2021; Twin 2022.)

Incremental innovation refers to the progressive and continuing enhancement of current products and services. While it is the least appealing of the approaches, it provides the most obvious benefit to an existing bottom line. Businesses may prevent stagnation and constantly expand market share by continuously upgrading their goods, services, and business procedures. (Carleton 2019; Ottinger 2021.)

The third approach to innovation is called sustaining innovation. It is the most effective approach to protect an organization's market position and focuses on making minor changes to current products and services to boost their value or consumer satisfaction. Sustaining innovation emphasizes more significant improvements to acquire or keep a market-leading position. Hence, this category relies on developing new features or services that differentiate a product from its competition. (Ottinger 2021; Cote 2022.)

A technical breakthrough that alters industries and generates new markets is generally used in radical innovation. This sort of innovation significantly varies how a company interacts with its customers. The performance of the underlying technology change that drives this form of innovation is frequently tied to the company's organizational behaviors and competencies that create the ideal conditions for new ideas to be effectively marketed in the first place. (McDermott & O'Connor 2001, 425; Ottinger 2021.)

Every approach has worth, and a system that integrates all four generates strong and successful innovation while revealing blind spots to prospective markets or consumer adjustments. Goods and services might lag if incremental innovation is not implemented, as customer experience and retention suffer. A firm must work harder without sustaining innovation and achieve a majority market share. Lastly, in the absence of disruptive or radical innovation, an organization misses out on tremendous potential value while fearing disruption from new technologies or methods. By adopting all four, a firm achieves success by optimizing and distinguishing its present goods from rivals. When used correctly, innovation may be a strategy for current and future success. (Ottinger 2021.)

2.2 Importance of innovation

Successful innovation should be part of a company's strategy, fostering a culture of creativity and innovation. It may also raise the chance of a company's success and generate more efficient operations, resulting in higher production and performance. Resulting, being

creative is critical for a company's success. Figure 5 outlines six main reasons why innovation is essential.

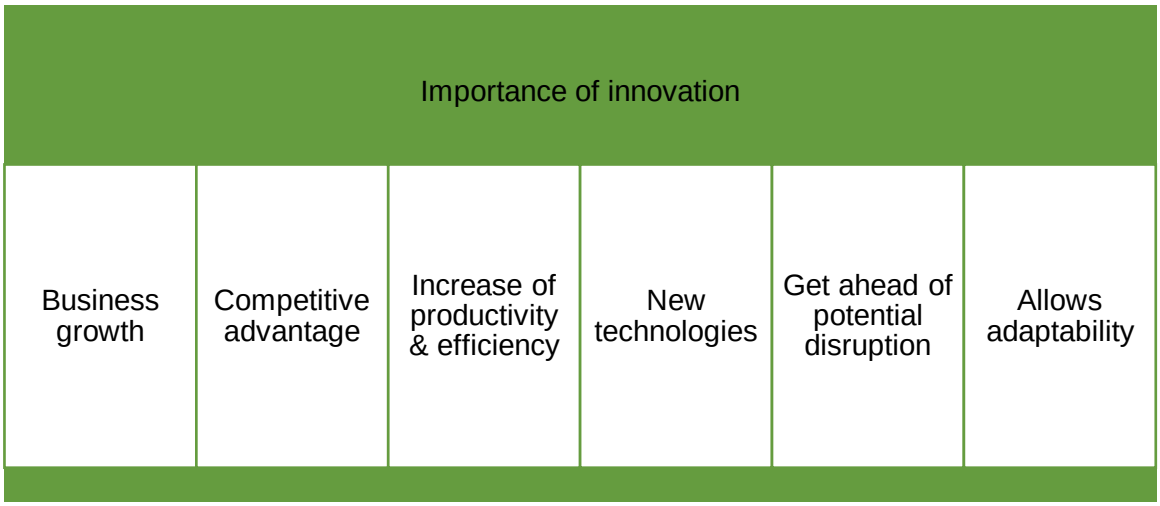

Figure 5. Importance of innovation

First, innovation helps a business to grow. Stagnation may be incredibly damaging to a business. In today's highly competitive world, staying afloat requires achieving organizational and economic growth via innovation. Growing a business moreover implies boosting the revenues and profits of a company. Successful innovation enables one to add value to a firm and improve profits. Therefore, if one cannot innovate properly, their business will stagnate. (Schultz 2021; Boyles 2022.)

Further, innovation enables firms to differentiate themselves from their competitors and to stay ahead of them. Most sectors have a plethora of rivals providing comparable products or services. Due to globalization and a highly dynamic and continuously changing market there are even more competing firms. Innovative thinking thus may help a firm foresee the need, meet its customer's expectations, and differ from competitors. As a result of a non-innovative company, innovative firms will offer new services and goods to the market, compelling non-innovative companies to work harder to remain competitive. (Startupr Hong Kong Limited 2018; Schultz 2021; Boyles 2022.)

Many business innovations occur when established business processes are made less expensive, less time-consuming to perform, and more sustainable. These modifications reduce time and make it easier for a business to adjust to industry movements with agility, which mitigates volatility and risk. As a result, innovation increases efficiency and

productivity in a business. A company's operations and programs can be enhanced via innovation to increase efficiency. (Green; Startupr Hong Kong Limited 2018.)

Innovation furthermore helps an organization leverage new technology. In recent years, technology has been advancing quicker than ever before, implying new and more efficient solutions to produce better goods, provide services, sell a business, or measure a company's success with analytics. By utilizing these process innovation technologies, innovative companies will be able to optimize the industry in general and obtain the previously stated competitive advantage over their opponents. (Schultz 2021.)

When done correctly, innovation considers where the market is headed because of possible disruptors or changing customer expectations. Businesses utilize this data to make strategic adjustments and encourage internal staff to be entrepreneurial. Building a product or service comparable to what new startups are creating, buying it from others in the sector, or working with the upstarts are examples of these shifts. Taken as a whole, innovation aids in getting ahead of potential disruption. (Green 2022.)

Lastly, innovation enables adaptability. The recent COVID-19 outbreak has impacted the business world on a massive scale. Over the course of a few months, routine operations were rendered obsolete. Due to the global transition, many firms are still suffering severe consequences because they have maintained the status quo. Innovation is frequently required for a business to adapt to and overcome the obstacles of change. (Boyles 2022.)

2.3 Value creation

Value creation is, as previously stated, an important factor of innovation. Satell (2015) argues that innovation generates considerable new value that did not exist before. It can be defined as giving something valuable in exchange for something more practical. This is a broad term that includes both costs and benefits. It also applies to business owners, consumers, and staff. However, creating value is not all about profitability. It may be true for prominent company stakeholders, but it has less importance for small business owners. Profits may be all that matters to a significant corporation’s shareholders because it is part of their investment portfolio, and its sole purpose is to increase their wealth. Some investors have progressed beyond that state of mind to impact investing, seeking more than just a return on their investment. As a result, numerous corporations are now motivated by a sense of mission, a desire to make money and provide a public benefit. (Kim & Mauborgne 2000, 130-133; Satell 2015; CFO Perspective 2020.)

If a business provides value, it automatically receives a value. A company can only flourish if it delivers exceptional value to consumers and employees (Figure 6).

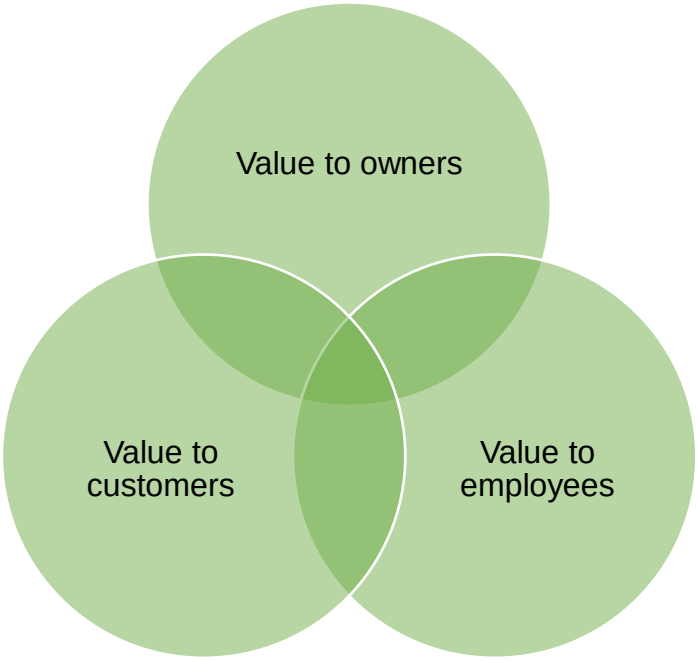

Figure 6. Value creation for business success (adapted from CFO Perspective 2020)

Business success lies within the intersection of all three value approaches. Businesses collapse when they cannot provide value to their employees or customers. At one extreme, an organization may produce a product that has tremendous value to itself but not to the buyers. Hence, the organization does not make sales and is not creating any value. The opposite extreme delivers value to customers while not providing any benefit to owners. Owners do this when they provide their service or products at prices close to or less than their costs. The firm is crammed, with little profit or cash flow. (Miller & Floricel 2016, 3; CFO Perspective 2020.)

2.4 Barriers to innovation

Given the importance of innovation, what are some of the obstacles that prevent businesses from being able to innovate? How well a company performs in its innovativeness depends not only on the firm itself but also on internal and external variables that substantially impact the design, execution, and diffusion of innovation (Amara et al. 2016; Duarte et al. 2017, 5-7). Hence, it helps define the barriers to innovation so that businesses pay attention to these factors. This chapter describes the barriers to innovation as internal or external factors to a firm that reduce or even prevent the proclivity of a company to innovate (Figure 7). These issues furthermore diminish the capacity of a company to launch a new or better product,

hinder innovative activities, and have an impact on corporate success, as addressed in the next chapter. (Duarte et al. 2017, 5-7.)

Figure 7. Barriers to innovation (adapted from Duarte et al. 2017)

There are several critical components in any regional economy that promote innovation:

- a shortage of skilled labor
- robust regional technology infrastructure
- widespread public support for innovation
- significance of commercial ties.

Recognizing the fundamental ingredients is not enough to transform any area into an innovative one. (Hii & Neely 1998, 4-5.)

2.5 Link to business performance

In this chapter the linkage between innovation and business performance will be discussed, omitting the measurement or study of business performance. There are two opposing viewpoints. The first theory says that developing new goods or processes improves a company's competitive position over its competitors. Earnings and growth nevertheless will be transitory, lasting only if the innovative business can protect its position against competitors. The second school of thought claims that the process of innovation fundamentally alters an organization by improving its internal capacities, making it more

flexible and adaptive to market demands than non-innovating enterprises. Consequently, innovation improves business performance since the output of innovative activities increases a company's competitiveness, and the process of innovation modifies the internal capacities of an organization. (Hii & Neely 1998, 28-29; Bouwman et al. 2021, 2-3.)

It has also been demonstrated that more innovative firms expand twice as quickly in terms of employment and revenue than organizations that do not innovate. It is projected that a one percent rise in the number of innovative enterprises leads to an increase in Gross Value Added (GVA) per person of 749 pounds per year on average across United Kingdom regions. (Richmond et al. 2019, 1)

For corporate performance, innovation is essential but not necessary. Considering that innovation may help firms, it appears reasonable to argue that innovation equals business performance. According to Hii and Neely (1998, 4-5), such an argument is erroneous. It should be emphasized that business performance is not entirely the result of innovation. Innovation success or failure should be seen as a required but not a sufficient cause of corporate performance and survival. A firm's performance is determined by various aspects and not only by innovation.

To conclude, innovation is not necessary to improve business performance, but it definitely has a positive impact on the performance of a business. (Hii & Neely 1998, 28-29.)

2.6 Link to competitiveness

In a highly volatile world, innovation is the key to gaining a competitive advantage. It is a primary driving force behind nation-state economic progress. The ability to innovate directly impacts the ability to compete at individual, corporate, regional, and national levels. The values generated by innovations are frequently manifested in new ways of doing things and unique goods and processes that add to prosperity. When we regard a business as a collection of resources, skills, and competencies, the effect of innovation is to modify the inner capacities, making it more adaptable, more able to learn, and more capable of exploiting new ideas. This increased adaptability is critical in the face of shifting market conditions. As a result, the competitiveness of an organization improves because of innovation. (Hii & Neely 1998, 4-5; Urbancová 2013, 83.)

There are various items within the same marketing from each quite similar supplier in this competitive environment, making it difficult for clients to distinguish between them. Therefore, the capacity to innovate is critical since it generates a competitive advantage by recognizing or inventing a new or better method to compete in an industry and launching it into the market. One of the success factors is the relative advantage of innovation.

Innovation has become the essential asset that offers the needed competitive edge as well as the first-mover advantage when it comes to market acceptability. In the long term, continuing product innovation is the best approach to preserve the competitive advantage and promote productivity growth for the company's future competitiveness. (MBA Knowledge Base 2021.)

This link becomes tangible when looking at an example from the United Kingdom (UK). Rising awareness and concern about the need for efficient innovation are taking place there in the UK. According to an assessment by the department of trade and industry (DTI) from 1994, the UK's manufacturing productivity improved faster than any other major industrialized country throughout the 1980s. According to the DTI's latest competitiveness report, however, the UK's gross domestic product (GDP) per capita is ten percent lower than the OECD average. GDP is a standard measure of the value-added generated by a country's production of goods and services over a certain period. It also assesses the money generated by that output or the total amount spent on finished products and services. (OECD Data 2022, 29.) Worryingly, this figure is approximately the same as 25 years ago. While other nations have increased their GDP per capita mainly Hong Kong and Singapore, which have greater GDP per capita and are known for their innovativeness, the UK has not. (Hii & Neely 1998, 4-5.)

3 Backshoring

3.1 Historical overview and definitions

Since the 1990s, several multinational enterprises (MNEs) from Western Europe and North America have opted to relocate their manufacturing to lower-wage nations in Asia or Eastern Europe to gain a competitive advantage. A form of doing so is a foreign direct investment (FDI) in a new or existing facility, referred to as offshoring. The offshoring business retains control of the output. Aside from the low labor or energy costs, firms justify their decisions to go offshore by locating their manufacturing process closer to new booming markets they want to enter, like China or South-East Asia. This results in some companies deciding to locate their production in low-wage countries. Furthermore, the labor in these offshore locations has grown highly trained and specialized, making it profitable for certain firms to move portions of their operations to these places. (Gielens 2021, 3-4.)

So overall, offshoring can be defined as the movement of an entire plant or part of the plant to another nation (Nodoushani & McKnight 2012, 165). This indicates that the job and function are still done in-house although in different countries with logistical or economic advantages, like lower labor costs or tax breaks. Thus, offshore is the execution of a job or work other than where the company’s premises are situated. It must be added that control and ownership are retained in-house. (Grossman & Rossi-Hansberg 2008, 1979.)

However, in recent years an inverse trend has been happening, where companies that used to offshore are now taking the offshored manufacturing back to the home country This process is referred to as backshoring or reshoring. Fratocchi et al. (2016, 99) define reshoring as, *a company's decision to bring production or sourcing back to their home country*. The backshoring choice is intended to represent a business's decision to reverse earlier offshore by returning production to the place of origin. It is defined that the choice does not necessarily imply that the entire offshored operation gets returned. (Fratocchi et al. 2016, 99.)

Kinkel and Maloca (2009, 155.) broaden the concept of backshoring to include the reconcentration of production elements from own international sites and from foreign suppliers to the local production site of the firm. Those authors complement a more significant dimension by claiming that reshoring choices are a short-term correction to past placement misjudgments rather than a long-term reaction to slowly forming local growth patterns. Important to mention is that this casts doubt on the definition proposed by Fratocchi et al. (2016), who regard backshoring as an ultimate decision to return manufacturing to the home nation. According to Holz (2009, 156), backshoring is *the*

geographic relocation of a functional, value-creating operation from a location abroad back to the domestic country of the company. This confirms the claim of Fratocchi et al. (2016) because it is a return to the home nation rather than a relocation to another country overseas.

Regardless of the chosen terminology, it must be emphasize that there is mutual understanding for all definitions: reshoring or backshoring is a location choice affecting production activities that reverse an earlier executed offshore judgment. Businesses do so by relocating manufacturing back to their original site while maintaining ownership and control. (Eiler & Schwarz 2017, 5.)

One bright spot in the pandemic, which started at the end of 2019, is widespread public and business recognition of the need to cut supply chains and create products locally. Due to COVID-19 reshoring cases increased in 2020 and 2021. Also of note: reshoring nearly doubled FDI; the first-time reshoring has surpassed FDI since 2013. Reshoring will be critical to numerous countries' industrial and economic revival, especially Western Europe and the United States (US), in 2021 and beyond. This positive effect on the economy can be illustrated in an example from the US regarding its yearly job announcements, as shown in Figure 8. The year 2020 was the first time since 2013 that backshoring has outpaced FDI in employment creation by over one hundred percent. Reshoring reached a new high with the announcement of 109,000 jobs in the US in 2020. This strength of the reshoring trend can be drawn back to a combination of an increased US competitiveness because of corporate tax and regulation cuts, higher recognition of the total cost of offshoring, and a growing concern about the competitiveness of China and preference for Chinese state-owned businesses. The decrease from the maximum in 2017 is attributable to business uncertainties generated by President Trump's tariffs. Import shortages reported during the pandemic drove the 2020 buildup into reshoring. (Reshoring Initiative 2020.)

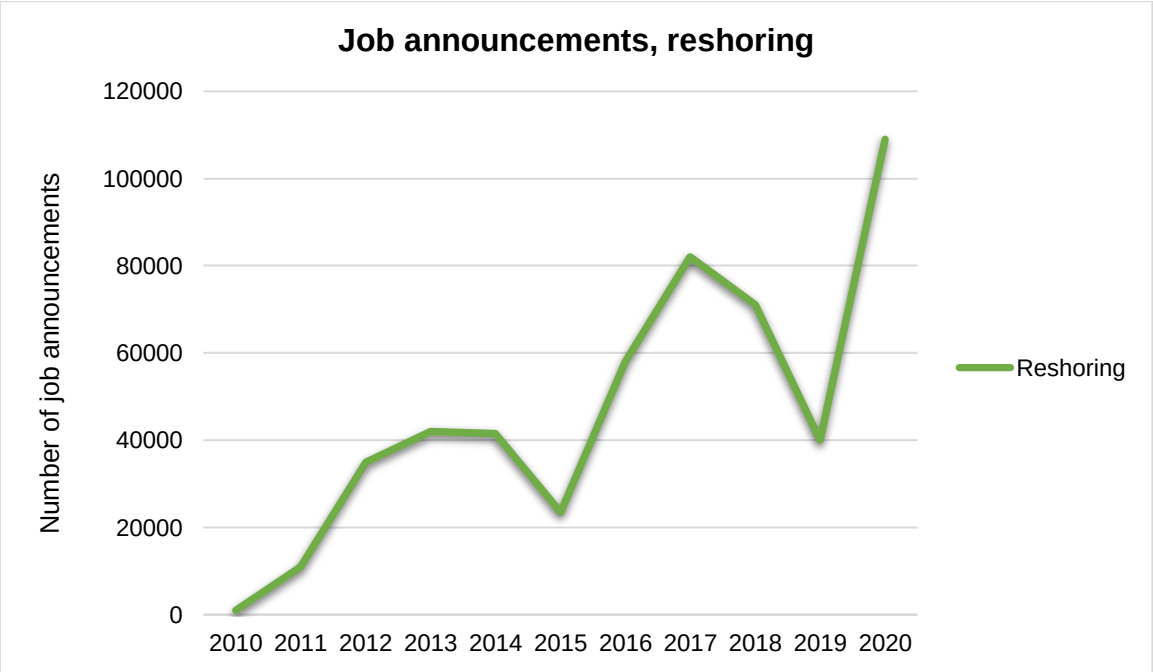

Figure 8. Job announcements, reshoring from 2010-2020 (adapted from Reshoring Initiative 2020)

The high rate of reshoring in 2020 also implies that US-based firms are beginning to see the same benefits and drivers to domestic production that foreign companies have already recognized over the previous decade.

3.2 Theory of backshoring options

Backshoring can originate and be shifted to the organization's entirely held production facilities, called captive mode, or from foreign and domestic suppliers, referred to as outsourced. Thereby, multiple ownership models of manufacturing in the offshore and reshore countries are covered. To get an overview of these critical ownership types, Gray et al. (2013) differentiated between four different reshoring options illustrated in Figure 9.

1. In **in-house reshoring**, a company meets demand in its home market by transferring manufacturing operations formerly conducted in totally owned offshore facilities to wholly-owned facilities.
2. In **reshoring for outsourcing**, a company meets demand in its home market by shifting manufacturing tasks formerly conducted in wholly-owned offshore facilities back to home-based suppliers.

3. In **reshoring for insourcing**, a company meets demand in its home market by transferring manufacturing operations formerly conducted by offshore suppliers to wholly-owned home-based facilities.
4. In **outsourced reshoring**, a company meets demand in its home market by transferring manufacturing tasks formerly undertaken by offshore suppliers to home-based suppliers.

The authors classify all these varied alternatives of reshoring as location decisions only, which is what all different reshoring options have in common. (Gray et al. 2013, 28, Di Mauro et al. 2019.)

	To Onshore	
	In-House	Outsourced
From Offshore In-House	In-House Reshoring	Reshoring for Outsourcing
From Offshore Outsourced	Reshoring for Insourcing	Outsourced Reshoring

Figure 9. Reshoring options (adapted from Gray et al. 2013, 28)

In other words, reshoring occurs when the trade-offs between cost benefits, market and knowledge seeking, transaction expenses, and keeping control are no longer favorable to the organization. These are just some of the drivers for businesses to perform reshoring.

3.3 Drivers of backshoring

A driver is an element that motivates a company to pursue a particular plan (Fratocchi et al. 2016; Di Mauro et al. 2018, 110). The choice of which location and strategy a business is working in is influenced by the sites that differ in the value they provide to a company. (Bailey & De Propris 2014, 379). Regarding backshoring, drivers can contain hurdles and unanticipated concerns that develop when operating in an offshore country, the benefits

that may be maximized by running in the home nation, and the necessity to reverse a previous location choice (Benstead et al. 2017, 88).

In the reviewed literature, there are several ways to categorize the drivers of backshoring. However, the four categories of Benstead et al. (2017) will be analyzed in the following because they are the most relevant for this thesis:

- Risk, uncertainty, and ease of doing business (Section 3.3.1): backshoring reduces exposure to risk or uncertainty and allows for more efficient activities on the domestic site.
- Cost-related (Section 3.3.2): backshoring cuts expenses, including when the costs of operating offshore were unforeseen, concealed, or more than projected.
- Infrastructure-related (Section 3.3.3): backshoring to solve or prevent infrastructure difficulties (location, workforce, materials, and machinery) or access to superior infrastructure in the domestic site.
- Competitive priorities (Section 3.3.4): backshoring to support the organization's operations strategy and competitive initiatives, specifically those not cost-related. (Benstead et al. 2017, 88.)

3.3.1 Risk, uncertainty, and ease of doing business

Drivers are included in this first category if they inspire a company to relocate onshore to decrease risk and uncertainty and enable more efficient operations in the domestic location. There may be a driver to backshore to decrease the risk of supply chain interruption that comes with scattered and extended global networks (Simchi-Levi et al. 2012; Bailey & De Propris 2014, 386-388; Tate 2014, 66-68). The cultural gap between offshore and home-based locations, for example, language or communication problems, makes operating offshore challenging and incentivizes backshoring (Gray et al. 2013; Tate 2014, 66-68). For the time being, backshoring has been connected to offshore regulations that complicate corporate transactions and operations (Martínez-Mora & Merino 2014). What impacts reshoring as well are unforeseeable global economic conditions. For instance, if the global economy is unstable, corporations are more inclined to reconcentrate manufacturing domestically (Kinkel 2012). Other factors are currency exchange rates and their volatility. The strengthening of the Chinese currency has raised the cost of imports for example, whereas the danger of currency volatility has boosted the attraction of domestic destinations (Martínez-Mora & Merino 2014; Tate et al. 2014). A motivation for reshoring can also be a desire to decrease the risk of environmental and social concerns affecting a business's

reputation (Gray et al. 2013; Tate et al. 2014). Few writers have identified and highlighted these problems, but they will gain importance soon, as customers start to value a firm's reputation more and more. Hence, the green motives for backshoring, such as carbon footprint reduction and the reputational risk of environmental or human rights breaches, have been highlighted. (Gray et al. 2013; Tate et al. 2014.)

3.3.2 Cost-related drivers

Even though various factors influence the choice to backshore, expenses that are unanticipated, concealed, or higher than planned might make a domestic location more appealing. First, labor costs are a significant concern, regarding that the salary disparity between domestic and offshore sites is decreasing (Simchi-Levi et al. 2012; Pearce 2014, 27-28). Increases in labor productivity may be attainable in the home-based location, setting of any residual overseas pay differentials (Pearce 2014, 27-28; Tate 2014, 66-68; Hartman et al. 2017). Besides that, domestic manufacturing reduces transportation costs (Bailey & De Propris 2014, 386-388; Tate et al. 2014), and attractive energy prices (in the US) have been emphasized as decreasing transportation and production costs (Pearce 2014, 34). An example discovered by Gylling et al. (2015) will be given to point this fact out more in detail. Gylling et al. (2015) found that manufacturing cost reductions enabled a Finnish bicycle business to compete against its offshore contract manufacturer, enabling operations to be moved backshore.

There are also high coordination and monitoring costs of offshore locations, which raise overheads, such as travel expenses, particularly for capital-intensive offshore enterprises (Kinkel 2012). Martínez-Mora and Merino (2014) demonstrated how moving domestic suppliers might cause smaller, more frequent orders, resulting in lower inventory costs. Finally, backshoring enhances domestic capacity utilization, leading to cheaper overheads (Kinkel & Zanker 2013, 7-12). This is especially important for organizations that have maintained a home presence while operating offshore.

3.3.3 Infrastructure-related drivers

Companies are encouraged to backshore if there are concerns with the offshore infrastructure. This can include the site, workforce, materials, or machines. Another motivation factor to reshore is better access made available to the infrastructure in the home country. For offshored enterprises, it might be challenging to create a stable raw material supply network overseas. (Kinkel & Maloca 2009.)

Meanwhile, worries about the availability of competent human resources can impact reshoring. Bailey & De Propris (2014) examined a lack of offshore availability and concerns about the deskilling of the home-based workforce because of substantial offshoring. Increasing domestic unemployment and union pressure also promote backshoring decisions (Tate 2014, 66-68; Fratocchi et al. 2016).

3.3.4 Competitive priorities

Corporations are compelled to backshore to pursue non-cost-related competitive goals. According to survey results, reshoring can increase a company's flexibility and dependability, lowering the risk of delayed delivery fines and increasing customer satisfaction (Kinkel & Maloca 2009; Fratocchi et al. 2016). Further, because of closer customer proximity, backshoring can increase responsiveness (Pearce 2014; Tate et al. 2014; Fratocchi et al. 2016). Another driver of reshoring is the improved speed to market new goods (Pearce 2014). Domestic production aids in retaining know-how and promotes intellectual property protection, which may be especially important for enterprises that have outsourced production (Kinkel 2014 63-65; Tate 2014, 66-68). Quality may also benefit from reshoring (Kinkel & Maloca 2009). A survey by Canham and Hamilton (2013) revealed that cheaper wages offshore were offset by quality issues, while Uluskan et al. (2016) discovered that local US suppliers attained superior quality over certain international rivals. Besides, businesses can capitalize on *made in effect* benefits by producing locally, which offers value for local customers, such as perceived quality advantages (Martínez-Mora & Merino 2014; Tate et al. 2014). For instance, Bagozzi et al. (2015) studied customer reactions to backshoring and discovered that reshoring could help organizations to improve their image.

Finally, this thesis's most critical competitive driver is innovation. The possibility for innovation to become better is higher if production is home-based, for instance, from co-locating R&D as well as production and investing in technology (Pearce 2014). The need for innovation, or the adoption of the most advanced digital technologies, such as the Internet of Things, blockchain, robotics, artificial intelligence, big data, etc., which are frequently available in many countries of origin, are also linked to the reasons for backshoring (Krenz et al. 2021). Moreover, corporations employ reshoring techniques to compensate for the absence of skills or the loss of efficiency of the supply base in offshore sites, frequently implementing some of these innovative technologies (Cosimato & Vona 2021, 9). This is attributable to the easier access to in-house innovation and new technologies instead of relying on offshore suppliers' limited innovative and technological capabilities (Hasan 2018). Businesses prefer to deploy innovative digital solutions in-house

rather than seek external suppliers with mechanized facilities (Ancarani et al. 2021). Industry 4.0 also plays a role in the innovation driver for reshoring. According to studies, digital advances, such as those pushed by Industry 4.0, are a significant driver for backshoring, mainly design and product innovation (Cosimato & Vona 2021, 10).

3.4 Barriers to backshoring

Backshoring comes with some disadvantages and challenges as well. After years of offshore, the country could lack a competent workforce since some competencies have been lost and the knowledge base of suppliers has shrunk (Reichert & Tvedt 2018, 7-9; Albachiara & Malin 2020, 53-69). Employees in the reshored countries furthermore seek higher wages than those in offshore locations, making it preferable to offshore production (Bailey & De Propris 2014, 382). For instance, the hurdle of economic disparities and changes in taxation regulations between two nations could lead to one country being more inexpensive to produce in than another (Bailey & De Propris 2014, 390-392).

Backshoring barriers connected to the host country's restrictions are difficult to assess. Still, they can significantly influence day-to-day corporate operations, which are the actions that a company and its workers participate in daily to generate a profit and increase the intrinsic worth of the firm (Grimsley 2015). Several impediments originate from the hazards associated with relocating from the offshored site. There is a danger of losing critical information and know-how, in particular, if the corporation is not in control of the offshored site (Ellram et al. 2013). Even if the corporation owns the plant, it is difficult to ensure that expertise is not lost and in addition to that, implementing ways to retain knowledge can be expensive and time-intensive. (Engström et al. 2018.)

From the standpoint of the domestic country, it is crucial to emphasize that when analyzing the possible capacity to reshore, the first move is to confirm that the home country and company can maintain the present host country’s quality. Also, the home country and enterprise must address the challenges that arise resulting offshore. One common barrier businesses mention is labor, so the access to competent workers, and workforce flexibility. (Canham & Hamilton 2013; Bailey & De Propris 2014, 389.)

According to studies, many offshored firms are dissatisfied with the outcome. Nonetheless, most believe it is too late to alter and reshore (Canham & Hamilton 2013; Bailey & De Propris 2014, 392-393). This is partly due to corporations assuming that the expenses of reshoring are prohibitively expensive (Canham & Hamilton 2013). Similarly, organizations are concerned about not having the required expertise to enable a reshoring project's efficient and successful leadership (Arlbjørn & Mikkelsen 2014, 60-62).

3.5 Consequences, conclusions, and development

Authors reached various conclusions on the backshoring phenomenon based on their analysis of backshoring. Martínez-Mora and Merino (2014) estimate two causes for the dearth of available data on reshoring. On the one hand, backshoring is usually not subject to any duty to report to official data sources. On the other hand, corporations may be reluctant to report on unsuccessful offshore initiatives to expose their miscalculations to the public.

Regarding the consequences of backshoring, Bailey and De Propris (2014), Kinkel (2014), and Tate (2014) conclude that production will never fully return since greater-cost countries with a highly qualified and skilled workforce market cannot compete in manufacturing with low-cost markets. According to Bailey and De Propris (2014), only high-value-added items may be produced in economies like Germany, the UK, the US, or Scandinavian nations. The rebalancing of economies will only happen if politicians are more engaged and will not be sustainable if free-market forces prevail. Hence, backshore production requires an increased number of higher-skilled workers and does not occur quickly without changes in regulations and politics. Some nations, like the U.S, might be better suited for backshoring because they have a smaller wage gap than China and many Western European countries. In those European nations, salaries are still much higher and thus uncompetitive with Chinese wages. Kinkel (2014) underlines that backshoring would not restore manufacturing competitiveness in numerous high workforce-cost nations. In particular, it is difficult (and often impossible) to re-establish product and process competencies lost during previous outsourcing operations. In addition to that, Kinkel (2014) advises enterprises to focus their resources on developing new capabilities for future product and technology generations rather than struggling to keep up with the past.

Recent study findings by Kinkel (2014) show a tendency toward increased internationalization of businesses' commercial operations, especially in developing countries, while companies concentrate on their key competencies and prospects. As a result, he predicts the start of a new strategic priority of home-based production in crucial markets, with a significant emphasis on local concentration and specialization of the needed technical and manufacturing skills. Kinkel (2014) further claims that the amount of global, complicated, and thus more susceptible supply chains will be reduced to a bare minimum as comprehensive solution-provider capabilities will be presented in all key markets. Bailey and De Propris (2014) agree with Kinkel in a similar vein, seeing the drivers for offshoring shifting from a resource-seeking to an economy-seeking focus.

Fine (2013, 6-7) does not advocate for either backshoring or offshoring, instead of giving a comprehensive approach to the backshoring topic. He suggests that intellisourcing is what lies ahead. Intellisourcing entails companies making their sourcing and shoring procedures adaptable so that those processes can be altered if necessary. Additionally, he takes a stand on ethical supply chain concerns, where he criticizes the low-bid mentality or corporations' exploitation of inexpensive labor in their sourcing and shoring objectives. (Fine 2013, 6-7.)

As mentioned before, numerous companies decided to reshore during the pandemic, but is there an effect on the development of the backshoring trend? Regarding this development, in terms of the Covid-19 pandemic, Gielens's (2021) study concluded that a significant reshoring movement should not be expected. Various companies may elect to retain things as they were, but a few changes could help them become more resilient in future disasters. Other industries may be reconfigured to become more regional or incorporate backshoring operations. (Gielens 2021, 43-45.)

3.6 Effects of backshoring

The location decisions of backshoring and offshoring affect company stakeholders, such as employees (Ellram et al. 2013, 14-16; Gray et al. 2013, 27-30). A study by Bagozzi et al. (2019) investigated the effects of these decisions on employees.

The consequences of offshore have previously been researched, both on people who lose their employment, called victims, and on those who keep their positions after offshoring, called survivors. Offshoring has detrimental effects on its victims. Job loss has an economically severe, physical, cognitive, and emotional impact on individuals and the general society (Collins 1989, 2-9; Jones 1991, 391). Job displacement leads to personal financial troubles and a loss of emotional control, leading to despair, poor physical health, and decreased personal functioning (Mencl & May 2016; Price et al. 2002, 302-312). Hence, offshoring can severely impact survivor work results throughout the post-offshoring phase. Because survivors have gone through the layoff process alongside victims under offshoring, it appears acceptable to claim that from an ethical point of view, they may have experienced bad sentiments because of their coworkers' mistreatment directly or indirectly. Therefore, people may regard the corporation as willfully causing harm to its employees, breaking moral norms, instilling righteous wrath, and causing unfavorable responses against itself. (Bagozzi et al. 2019, 5.)

On the other hand, there are also effects of reshoring for current employees. Backshoring raises ethical and moral concerns. These include those related to the relocation of

operations, and therefore jobs, to the home nation, as well as those related to the necessity to end labor abuse in developing countries or to stop benefiting from low environmental standards overseas (Gray et al. 2013; Ashby 2016, 77-82, Bagozzi et al. 2015, 30-32). Employees may see this action favorably due to such positive moral factors. Notably, while offshoring is mainly regarded as harming employees, reshoring is predicted to indirectly assist employees (Bagozzi et al. 2019, 6). Such indirect assistance is represented by the fact that backshoring is perceived as confirming and supporting important morals and ethics of employees concerning collaboration, fairness, and obligations. Employees may think that the company supports ethical principles rather than breaching them, that it benefits rather than damages stakeholders, and that it is deserving of praise and appreciation rather than moral scorn. Therefore, while employees may not immediately gain from backshoring, they may regard it as an excellent ethical decision to sympathize with. Employees' reactions to backshoring are thus more in favor. (Bagozzi et al. 2019, 6.)

Backshoring also shows effects on the purchasing behavior of consumers. A study by Maronde (2014) showed that in the US, the ecological footprint of a backshored product influences the customers' willingness to pay a more significant premium, which is around 15-20 percent. Looking at this positive association between a product's environmental effect and the desire to pay a substantial premium, it may be deducted that backshoring can pay off in terms of better ecological status in the U.S (Maronde 2014, 32).

3.7 The link between backshoring and innovation

For this thesis, it is essential to discuss the linkage between backshoring and innovation since it will aid in answering the research question. Research by Aamlid (2017, 1) studied backshoring manufacturing in Norwegian companies and found out that innovation also impacts reshoring. To attain their goal of a successful reshoring operation, reshoring manufacturing enterprises are adopting technical innovations. Some have limited expertise in developing a modern industry 4.0 factory and face technological hurdles and logistical issues. Nevertheless, those companies can access the know-how through open research and development.

Because a good functioning technology is mainly needed for successful manufacturing innovation, Industry 4.0 plays an important part (Aamlid 2017, 1; Kamp & Wilson 2021). Industry 4.0 is a phrase that has spread to designate high-tech innovation initiatives in manufacturing, related to innovation. It is about ushering in a new era of productivity through flexible mass manufacturing. (Raveling 2020.)

Overall, the entrepreneur or manager makes the location or sourcing decision. Uncertainty is subjectively perceived. Various entrepreneurs, therefore, have different opinions on future markets, each with their own set of experiences and cognitive behaviors (Won 2015). In line with this argument, Won argues that entrepreneurs choose to outsource when their subjective impression of market uncertainty is significant, and asset specify is low. However, divergent knowledge and real experiences generate contributing possibilities, whereas divergent knowledge and abstract conceptions generate innovative opportunities. Possibilities that arise from firsthand experiences consequently seem to be more likely to contribute to improving a product. (Aamlid 2017, 8.)

To conclude the study of Aamlid (2017, 52), when backshoring, a company must have the right expertise and competencies to do so. Moreover, reshoring to a high-wage economy entailed achieving a specific level of productivity or constructing a 4.0 factory to achieve this productivity and needed innovation. Aamlid further concludes that innovation, research, and development offer many advantages when backshoring.

A study by Martínez-Mora and Merino (2020) examined the case of Jeanologia, which promoted backshoring by technological innovation. This new technique was a significant innovation in the textile industry sector, causing companies like Levi's to reshore to the US. With this technology, manufacturing processes were much more efficient and sustainable, driving a complete transformation of the production of jeans. This technology innovation might be expanded to other sectors and used to motivate reshoring procedures in other businesses. However, for the time being, it has only been used in the textile industry, notably in the manufacture of jeans. This example of Jeanologia is technology development in a traditional sector to boost sustainability and impact many of the previously stated drivers of backshoring. Additionally, while all the criteria might explain this, technical innovation is the ultimate determinant of reshoring, according to Martínez-Mora and Merino. (Martínez-Mora & Merino 2020, 1378-1381.)

4 Research approach and methodology

4.1 Research philosophy

The interpretative philosophy is a study philosophy that examines the entire complexity of a topic. Researchers in this branch of philosophy attempt to comprehend the subject's complete complexities and socially produced concepts (Bristow et al. 2019, 130-131). According to Walsham (2006, 322-325), interpretative techniques imply that reality is a social creation by human characters, which further pertains to this study. Each of the examined scenarios characterizes a different setup with a distinct context. As a result, to properly comprehend the consequences of backshoring in these circumstances, the data is interpreted while also the natural environment and context are considered. This includes the motives of the company to reshore, the expert interviewed, and the company itself. Like in the interpretative philosophy, the researcher concludes that every case is unique, and there are no definitive and universal rules that apply to the situations examined. The interviews about how backshoring affects a company's innovation consequently are a generic collection of several elements impacting a production location choice.

4.2 Research approach

The two most general research approaches are deductive and inductive. On the one hand, a researcher using an inductive method to perform a study begins by gathering data relevant to the areas of interest. After collecting a large amount of data, the researcher will stop gathering data and start to analyze it. At this point, the researcher is looking for patterns in the data and developing a theory to explain those trends. Inductive researchers begin with a collection of observations and then progress from those specific experiences to a more general set of propositions about those experiences. In other words, they go from evidence to theory or from particular to the universal. (Sailor Academy 2012; Gabriel 2013.) Figure 10 depicts the processes involved in an inductive research technique.

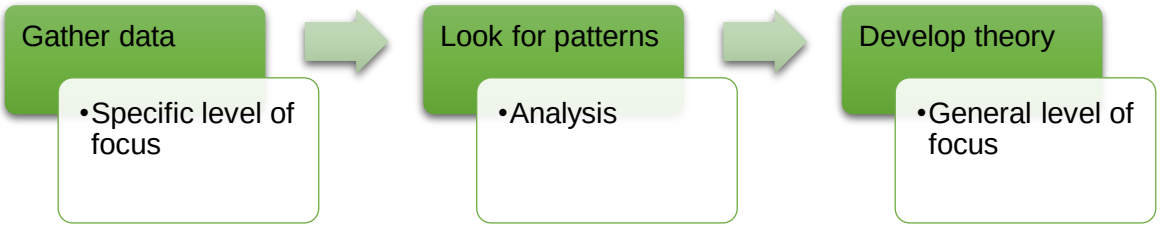

Figure 10. Inductive research (adapted from Saylor Academy 2012)

On the other hand, the researchers who use a deductive method reverse the procedures stated before for inductive research. They begin with a convincing social theory and then evaluate its implications using facts. That is, they progress from a broader to a more specialized level. People often identify scientific inquiry with a logical approach to research. The researcher analyzes a theory of whatever phenomena is examined and then tests the hypotheses from those ideas. Moreover, deductive approaches are frequently connected with quantitative research. (Sailor Academy 2012; Gabriel 2013.) Figure 11 shows the processes required in a deductive research technique.

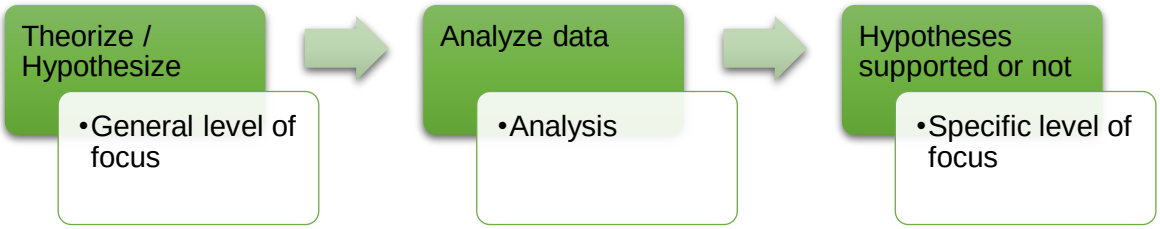

Figure 11. Deductive research (adapted from Saylor Academy 2012)

Because the deductive approach is used to test a theory predetermined by the researcher, this approach will be used in this thesis to analyze the data and test the research questions. Interviews will be conducted to gather the data. Further, deductive research requires a theoretical framework, and with its help, the data can then be understood and analyzed (QuestionPro). Therefore, the author scanned literature, including books, articles, websites, theses, and other online sources. Within the theoretical framework, the subjects of innovation and backshoring were introduced and discussed in detail, preparing the reader for the empirical part of the study. After creating the research questions and the theoretical framework, semi-structured interviews were conducted. Then, the data of the interviews was collected and studied. Thereby, the author gained more profound insight into the research topic of how backshoring affects innovation.

4.3 Research design

The research design explains by what means the study was performed to answer the research questions. This section assists the reader in understanding the thesis's choices and allows the study to be repeated using the same concepts. The methodology choice and the study plan are all part of the research design (Lewis et al. 2010, 136).

4.3.1 Methodological choice

Under the chapter on methodological choice, the differentiation and choice to use a quantitative or qualitative research design is made.

In general, the method taken is determined by the issue and the objective of the study. The character of the corporate concern in this thesis is highly intricate and versatile. To grasp it, one must evaluate the entire context and all-natural situations (Lewis et al. 2010, 141-143). Every company is unique. A standardized questionnaire thus cannot be used to examine the effects of a location decision. Another feature indicating qualitative research is that the data gathering was not standardized (Lewis et al. 2010, 480; Eiler & Schwarz 2017, 21-22). Qualitative research provides a better knowledge of all aspects impacting the topic (Gelling 2015, 43-47).

Baraldi et al. (2016, 116) moreover remark that this methodological choice benefits from describing complicated linkages between events and their context. As a result, qualitative research is used to investigate real-world facts. Another reason for using a qualitative research method is that in-depth information about the research topic is required to answer the research questions (QuestionPro).

4.3.2 Research strategy

The thesis' objective is to examine how backshoring affects the innovation of a business and create a new theory in the form of these effects. Like qualitative research methodologies, exploratory studies are concerned with developing such new approaches (Barratt et al. 2010, 330-333; Baraldi et al. 2016). This thesis obtained more insight into the nature of the issue, as in exploratory investigations, which helped bridge the research gap (Bristow et al. 2019).

One form of the qualitative research strategy is the case study exploring a real-life situation within its setting. Case studies are distinct occurrences that scholars examine to understand the subject matter better. Further, they can offer answers while also considering the context and natural surroundings of the topic (Keen & Packwood 1995, 444-446; Eiler & Schwarz 2017, 22) and allow for developing new theories, ideas, or the demonstration of new concepts (Barrat et al. 2010; Easterby-Smith et al. 2015). In addition to that, case studies also allow the utilization of various sources to add credibility to research (Lewis et al. 2010, 151-153). Using different sources enables the researcher to demonstrate that the findings are not biased and deliver unbiased outcomes. Chapter 4.4.1 discusses the data gathering process and the sorts of sources used.

Next, it had to be decided whether to concentrate on a single case or multiple cases. Easterby-Smith et al. (2015) classified the above approaches as either instrumental or expressive research. On the one hand, multiple cases are instrumental studies examining individual situations to discover general principles. On the other hand, as single cases, expressive studies concentrate on a single case owing to its unique characteristics.

A single case would not give enough accurate data because of the setting in which each company operates, and the tactics and solutions that differ. The effects of backshoring on innovation can change depending on the type of firm, and notably, covering this element is critical for a general decision framework. According to Yin (2009), several instances are chosen because of the anticipation of finding common or comparable findings. Furthermore, replicating across cases arises only in studies involving several (Lewis et al. 2012, 156-158).

Aside from the benefits of case studies, Easterby-Smith et al. (2015) examine this research technique critically. They state that the amount of data gathered in case studies allow for any interpretation (Easterby-Smith et al. 2015). Hence, the researcher made sure that an explicit study design was kept, that only relevant cases were chosen, and that an approach for collecting and analyzing reliable data had been defined.

4.4 Techniques and procedures

4.4.1 Data collection

In this part of the thesis, more depth on how the data collection was pursued will be given through interviews. The nature of this study issue necessitates a thorough understanding of the manufacturing site selection. As a result, purposive sampling was used by concentrating on a limited number of carefully chosen cases (Lewis et al. 2012, 320).

A typical data collection method of qualitative case studies is a semi-structured interview, where one strives to comprehend the meaning while taking the context into account. Furthermore, because these interviews are unstructured, the researcher is free to ask closed-ended and open-ended questions, requiring the interviewee to provide a thorough response. Most questions are provided in the same sequence to all responders, but they may vary sometimes. The real benefit of a semi-structured interview is that it ensures consistency in generalizations. (Lewis et al. 2012, 320-322.) The semi-structured interview and interview guide with several key questions were prepared (see appendix). The researcher added or eliminated questions depending on the interview to better understand the issue and the interviewee’s experiences.

In preparation for the data gathering, specific criteria were established that the interviewees must meet to contribute to the research.

- The interviewee must have prior expertise with location decisions, such as reshoring.
- The company must be located in Europe or the US.

Several businesses were discovered through an intensive database search and an examination of media articles regarding the location decision of a company's manufacturing facilities and experiences with manufacturing site decisions. Before contacting any of these organizations, it was ensured that they met the requirements mentioned above. The initial contact was via email or the official website of the business, depending on the contact information supplied.

In total 63 companies from Europe and the US were contacted, resulting in a response rate of four businesses. There exist no particular rules on how many interviews are required to answer a research question. Lewis et al. (2012) recommend 5-25 samples depending on the study. Given the nature of the thesis' theory and the response rate, it was decided that five interviews would give sufficient data to conclude. Unfortunately, only four companies offered to participate in the interview. Nonetheless, the study sample will still provide sufficient data to answer the research question. Table 1 summarizes the interview details.

Number and location	**Position of the interviewee**	**Interview type**
C1: US	President	E-mail
C2: US	President of innovation	Zoom
C3: Europe	CEO	Zoom
C4: US	President & CEO	Microsoft Teams

Table 1. Interview details

Before the interview was conducted, the goal of the research topic was explained to help the interviewee comprehend the issue. This allowed them to prepare for the interview while also allowing for questions from their side. Then, it was mentioned that the interview will be conducted anonymously.

The actual interview outline was broken into four different sections (see appendix):

- introductory questions
- opening questions
- questions around the key topic
- closing questions.

Before asking the first question, the interviewee was asked to introduce themselves and their business, which aided both parties in becoming acquainted with the issue and the interview environment. The interview findings may be found in chapter five, the empirical study. If the interviewees did not have time to interview via Zoom or Microsoft Teams, they also had the opportunity to answer the interview questions via email. Regardless of the method chosen by the interviewee, the answers were always detailed and precise.

4.4.2 Data analysis

According to Lewis et al. (2012), when using a qualitative strategy for data collecting, a qualitative approach should also be employed for data analysis to capture and deal with the data correctly. Data that is obtained from words, as in the case with qualitative research, is more confusing and harder to interpret than quantitative data. Maintaining good research quality and defining the aim of the acquired data necessitates close collaboration between data collection and data analysis. To accomplish this, the steps given by Lewis et al. (2012) were followed, as illustrated in Figure 12.

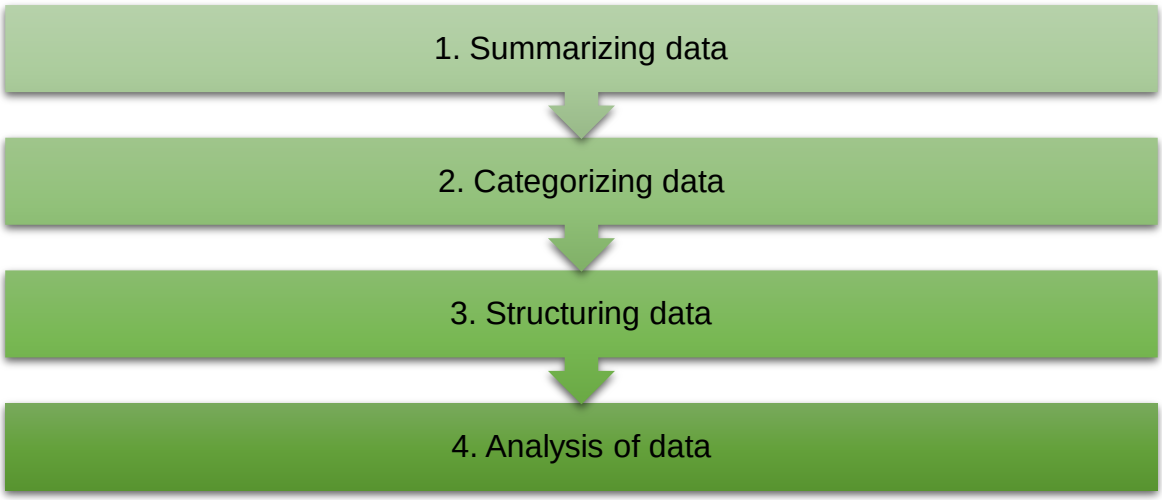

Figure 12. Data analysis (adapted from Lewis et al. 2012)

By summarizing and transcribing the entire interview, it is ensured that all mentioned topics are addressed in the empirical analysis. When transcribing, the researcher included both the actual words and the context in which they were uttered in the transcript (Brinkmann & Kvale 2009; Lewis et al. 2012, 485). Because the transcripts of the interviews were sometimes lengthy, they were summarized to provide a more precise overview of the content in the form of groupings of components.

In the next step of the data analysis, the presentation of the empirical results, the data is grouped according to the interviewee's statement, whether backshoring had effects on innovation, and which effects it had. This enables the creation of an organized summary of the interview outcomes. The groups used were partially offered by considering the research and interview questions. In this step, a data visualization summarizes and presents the research results. Lastly, the researcher draws conclusions, verifies theories, and answers the research question. (Canary 2019.)

4.5 Research quality

4.5.1 Reliability

The degree to which data analysis methodologies can provide correct findings and consistent outcomes is reliability. The validity of a study may be assessed and tested by another individual who conducts the same research under different conditions and still obtains the same results (Lewis et al. 2012, 148–150). To achieve this, the procedures and methodology are described in detail. Moreover, the potential challenges to reliability were looked at. These challenges suggest that the researcher must be methodologically rigorous, which means that the execution is carried out so that the trustworthiness of the results and conclusions is not jeopardized (Lewis et al. 2012, 148-150). Consequently, the research approach and methodology are described in detail so that others may assess or reproduce the study for themselves.

Lewis et al. (2012) identify four risks to reliability: participant error, participation bias, researcher error, and researcher bias. Participant error may be an element that alters how a participant performs. It was avoided by arranging the interviews at non-risky hours. Participant bias is closely related to participant mistakes since it is any factor that causes the participant to respond incorrectly. Prevented was this by creating a pleasant interview setting. A research mistake is an element that alters the researcher's interpretation, whereas researcher bias is defined as any factor that induces bias in the researchers' recording of replies. Those two threats were avoided by constantly seeking a second opinion, evaluating the findings many times, and meticulously documenting the interviews.

4.5.2 Validity

To ensure the validity of the thesis, an extensive literature review was conducted to capture relevant factors and establish the theoretical framework. Only information that was relevant to the research was included. A neutral and comprehensive view of recent discussions in the literature was assured by critically comparing the findings of the different papers. Besides that, the empirical section of the study is based on the theoretical framework's research findings, which increases the study's validity.

5 Empirical study

5.1 Company one

Company one aims to bring decent, well-paying manufacturing jobs back to the US by supporting firms in more precisely calculating their total cost offshore and shifting a collective mindset from offshoring is cheaper to the local minimizing the total cost of ownership. It is a non-profit company that provides a variety of free resources to advance its mission. Interviewed was the president, who brings tremendous knowledge and expertise to the interview.

The business promotes the linkage between backshoring and innovation as one of the advantages and drivers of reshoring. Seeing innovation as a clear driver of reshoring can help a company to become more successful, develop better products, and gain a wider customer range. The interviewee had no data if the innovation process of a company changed after it was reshored, but he believes that businesses know that they must improve and automate their processes to justify higher US labor costs. Innovating then in this sector helps to improve these processes and less labor is needed. Doing so makes reshoring more feasible.

The answer to the interview question “Is it more challenging to develop a product and be innovative when the manufacturer is placed offshore compared to having them in your home country?” provided a new perspective on the topic. The president of the company stated that it is most challenging to innovate when manufacturing is offshore but engineering in the home market. He mentions that it gets easier to have both functions offshore serving a worldwide market, but he believes that innovation works best if the manufacturing, engineering, and development of a product work best onshore.

Regarding the main research question on how backshoring affects innovation, the interviewee identified several effects, which are summarized in Table 2. Having engineering and design close together enables better process and product optimization, directly linked to innovation. Furthermore, through the proximity to local markets, customizations to this market can be done better. Thus, innovating on the products and service features to suit the customer’s needs best is an important effect on how reshoring affects innovation. The more a product appeals to and is customized to customers the more they buy it. Another effect is that for some companies innovation only works if they have manufacturing, engineering, and development in-house or onshore. This becomes clear from the data that he provided during the interview. A factor for companies to reshore is that they have

difficulties innovating and differentiating their product in offshore countries. Therefore, an effect of reshoring is that innovation occurs at all.

Effect 1	Improve and automate manufacturing processes to justify higher labor costs
Effect 2	Ideal framework conditions to be innovative
Effect 3	Innovate to customizations
Effect 4	Only way to be innovative

Table 2. Findings company one

5.2 Company two

The second company is also located in the US. It is a private company and operates in the hair care industry. Their general strategy is to expand in their home-based facility and bring production back to the home country. The company's reason for reshore was the high cost of combating offshore counterfeit components and that these risks were increasing manufacturing and production costs. Since the company has backshored, it has more control over its production and distribution processes as its US businesses have grown. Interviewed was the president of innovation.

One reason for the company to bring the production back to the home country also was innovation. Due to innovation, the business could increase workplace productivity by innovating and improving its processes. The interviewee said by constantly innovating their processes they could improve their productivity by a lot. Thus, the efficiency of the American workforce considerably offsets their somewhat higher labor costs. In the interview, it became clear that reshoring had to do a lot with their company's innovation process.

The interviewee stated that from his experience he can derive that backshoring affects innovation. The reason he mentions is to enhance manufacturing or innovative goods, the entire organization must be involved. The distance and disunion impair the effectiveness of R&D, buying, engineering, product innovation, and improvement when production is separated from the management. Therefore, the business decided to move production back to the US because the distance between manufacturing and design was affecting product innovation.

Company two noticed further changes in its innovation process once reshored. The interviewee referred to their initial decision to offshore production. During this process, the technique and processes were initially well known, but when product designs began to evolve, significant challenges arose when it came to producing these new items. Reasons for these challenges were mainly connection and communication issues. Since the company reshored these issues do not hinder innovation anymore.

His main conclusions on how backshoring affects innovation were that backshoring allows a business to return to a time when product design and production were not separated by large distances, allowing for faster product creation and innovation. However, the interviewee said, the location of the suppliers is essential for making backshoring simpler. Being connected to innovative suppliers and consumers is critical for an organization like his seeking an innovative leadership strategy. The effects of how backshoring affected the innovation of company two are summarized in Table 3.

Effect 1	Process innovations to increase workforce efficiency and productivity
Effect 2	No communication issues and therefore better innovation possible because entire organization is involved
Effect 3	Changes in processes can be adapted more easily if there are new innovations
Effect 4	Faster product creation and innovation

Table 3. Findings company two

5.3 Company three

The third company is located in Europe and operates in the automobile industry. The business decided to backshore and brought hundreds of jobs back to their home country. Its strategy is to build innovation centers and invest more in innovation from the money saved on outsourced IT staff. The interviewee is the CEO of the company.

Company three has been dealing with the linkage of innovation and backshoring before, as mentioned by the interviewee. It was one of the reasons why the company decided to reshore. According to the interviewee, backshoring has effects on the innovation of a

company. In their case, innovation improved after they moved the production back to their home country in Europe. This had also to do with the fact that they cut costs which allowed for investments in innovation and R&D. The interviewee mentioned moreover that due to the possibility to look over all functions of the company he could identify possibilities to make processes more efficient and products more innovative. Through backshoring, the company had the opportunity to get a higher-skilled workforce that was more experienced and worked on innovations. Thus, in the past years, the firm can record several innovations in its industry sector.

The interviewee said that reshoring affects a company's innovation positively. He explains when manufacturing is placed offshore, and not onshore developing a product and being innovative is harder compared to having all the functions in the home country. Factors like communication issues complicate innovation processes. He concludes the interview with a positive correlation between backshoring and innovation and implicates that being innovative is facilitated when having everything onshore. Table 4 summarized the effects backshoring has on innovation according to the interview with company three.

Effect 1	Innovation processes improved after reshored
Effect 2	Due to overlooking all functions, possibilities for improving and innovating were identified
Effect 3	The higher-skilled workforce is able to be more innovative
Effect 4	Best way to be innovative

Table 4. Findings company three

5.4 Company four

The fourth company operates in the manufacturing industry in the appliance sector. The American company serves a worldwide market and is a subsidiary. The business owns several manufacturing sites in the US, but its strategy is to invest even more in US facilities into Appliance parks and new distribution centers. Company four can record a long list of innovations and is still very innovative in their sector. Interviewed was the president, who is also the CEO of the company.

The interviewee has been dealing with the linkage between reshoring and innovation before for a couple of years. The interviewee reported that they use a zero-distance concept, where there is no distance between manufacturing, engineering, and the customer. Innovation is difficult if manufacturing and engineering are apart, he said, because the engineer needs to know the machinery to design an efficient product. Reshoring and innovation create a system, which can be very effective if done correctly. The first step of the system is that a company needs to understand the customer value and their needs. In the next step, the manufacturing process must meet those needs. But having manufacturing removed from engineering complicated this system for them. Their innovation slowed down and products became less competitive.

Thus, when company four reshored, they changed their whole innovation process and took reshoring to the extreme by working with their local customers and flipping the innovation process. The interviewee said that they flipped their innovation process over and put their customers upfront. This provided the business with the possibility to go to the customer, ask about their problems and innovate around those problems. Moreover, they started to focus on a diverse innovation process, involving employees from different kinds of fields, backgrounds, and ages.

The effects backshoring had on their innovation were mainly that innovation worked a lot faster and more efficiently. From the interviewee's perspective, reshoring helps innovation because for innovation to be successful it needs an integrated system. However, reshoring was not the only answer to their innovation success because if a company just brings manufacturing back to the home country it mainly drives productivity and not innovation. The step company four took is to be very customer-centric in their innovative approach and give freedom to innovation. This becomes clear when further looking at the leadership style of the business, which allows vulnerability to the public and freedom to the employees. Another effect is that local engineers who work with their customers can be more innovative because they know the customer's needs and their culture. Especially in the appliance industry, culture plays an important role, since appliances differ from country to country.

Overall, the innovation success of company four was to bring manufacturing, engineering, and the customer all in one place. The interviewee stated that for him, this is the only way to be truly innovative. Reinventing how to innovate better must be done as well if an organization seeks successful innovation. The interviewee mentioned that without bringing the production back to the home country innovation would not be possible Therefore, reshoring is one of the key factors to innovation, but just to reshore is not enough. Experimenting with innovation, working on better processes, involving the customer in the

innovation process, and being open to failure need to be worked on from company four's perspective if a company desires to be more innovative. The effects backshoring had on company four are summarized in Table 5.

Effect 1	Zero-distance concept
Effect 2	Changes in their innovation process (involvement of customer, customer-centric, more diverse)
Effect 3	Innovation was faster, more efficient
Effect 4	Reshoring is one of the key factors to be innovative
Effect 5	Local engineers can innovate better as they know the consumer's needs and culture.

Table 5. Findings company four

5.5 Summary of the empirical study

In the following, the findings of the case studies are summarized. All relevant findings were then reported in tables and the effects that occurred more than once were put into one category. The findings varied greatly depending on the organization, as each organization approaches innovation and reshoring from a somewhat different angle. Even though the nature of the sectors differs greatly, the broad effects that the businesses are all tied to is an improvement in their innovation.

In the analysis of the empirical research, eight effects that reshoring had on innovation will be considered, derived from the four interviews. In Table 6 the effects are summarized and put into categories.

Effect 1	Reshoring offers ideal framework conditions to be innovative and is one of the key factors to being innovative.

Effect 2	There are no communication issues and therefore better innovation is possible as the entire business is involved.
Effect 3	Zero-distance concept to customers, or innovation to local customizations can be done by reshoring.
Effect 4	Changes in manufacturing processes can be adapted more easily if there are new innovations.
Effect 5	Innovation happens faster, more efficiently, and products get created faster.
Effect 6	Positive changes in a company's innovation process, like the involvement of the customer, a customer-centric innovation approach, and a more diverse innovation process.
Effect 7	Due to overlooking manufacturing, engineering, and innovation the possibilities for improving and innovating can be identified better.
Effect 8	The higher-skilled workforce and local engineers who know their consumers can be more innovative.

Table 6. Summary of effects of backshoring on innovation

The wide definition of the categories of effects aided in the allocation of the findings while assembling the findings of the interviews. As a result, practically all outcomes could be included in the different effects without editing them drastically.

5.6 Analysis

The findings of each company were compared to each other, and the effects differed from company to company. Some effects were named more than once, therefore, the effects were summarized.

The first effect of the summary is that reshoring offers the ideal framework conditions and is one of the key factors for a business to be more innovative. Three out of four companies named this as one of the most important effects of how backshoring affects innovation. Being innovative depends greatly on the distance each function of the company has towards one another. If manufacturing and engineering are apart, innovation slows down

immediately. One firm said that without reshoring a company is not able to be innovative, at least for physical products. The reason for this circumstance is to be innovative, a business must try out several designs or functions of a product. Some companies often need several attempts until the innovation of a product works and is approved by the consumers. However, this means that one has to experiment, meaning manufacturing, design, and engineering have to work closely together and be in the same location to make this process work. Comparing this to the theoretical framework, Tate et al. (2014) stated that physical distance often hinders innovation.

Effect one is directly linked to the second one. Due to reshoring, there is no miscommunication between the separate locations. As soon as the entire business is involved, processes (including the innovation process) work more efficiently and faster. In today's competitive world it is crucial to be quicker than the competition, develop products faster and innovate better. Gray et al. (2013) agree with this and mentioned that cultural gaps between offshore and home-based locations (like communication problems) hinder innovation and incentivize reshoring. Backshoring thus has a positive effect on the communication in a company between the different business functions and facilitates day-to-day operations, such as innovation.

The third effect describes the zero-distance concept to customers. Innovators must be excellent observers of customer behavior and ask the consumers the right questions Companies must produce these new ideas since innovation is becoming quicker, better, daily, and everywhere. This process is facilitated by the zero-distance idea. Because of the zero distance, businesses may exploit their proximity to consumers to develop empathy to the point that they can define problems that customers have not yet identified. After asking the appropriate questions and identifying the correct challenges, it is time to discover the proper answer. If a company would now be offshore, zero-distance to customers would not be possible, their values and needs would not be identified and therefore, innovation would be hindered. In other words, customizations of innovations to local markets can be done. Kumar (2022) agrees with this standpoint of the need to get closer to the customer, at zero-distance really, to be innovative and develop the innovative products for the identified problems.

As mentioned before, innovations can take time and more than one try to be successful. Therefore, manufacturing and design processes can be changed within weeks and adjustments need to be made. Offshoring complicates this need to be easily adjustable. If a company decides to reshore, changes in manufacturing processes can be adapted more easily if there are new innovations (effect four).

Effect five describes the pace of innovation. Once the businesses were reshored, two of the interviewed companies reported a faster, more efficient innovation process, including a faster creation of products. This is truly beneficial for a business because the more a company can experiment and create products the likelier it is to be successful with one of the innovations. The reason for this is that product design and manufacturing are not separated by a significant distance, thus not hindered by communication issues, cultural gaps, or technical problems. The fast pace of innovation processes increases the competitiveness of an organization, according to Hii and Neely (1998, 4-5), as market conditions shift rapidly and there must be increased adaptability from companies in forms of innovation.

Another effect that reshoring had on the innovation of a business is the recognition of positive changes in the manufacturing and innovation process. Effect six was mentioned by two companies, for instance, a more customer-centric innovation approach, a more diverse innovation process, or the involvement of the customer. Companies need to improve their processes to become more efficient. Martínez-Mora and Merino (2020) studied the same effect and found out that new technological innovations were the main reason for businesses to reshore manufacturing. Thus, companies changed their processes. Overlooking all functions also helps to identify possibilities to make innovation processes more efficient. This becomes clear when looking at a more diverse, customer-centric approach. If a business function is offshored, it can be difficult to assess the problem and find possibilities with together with manufacturing and engineering to improve these processes. In a reshored scenario, these functions work together and interact more with each other, which facilitates deriving problems and solving them. This effect is directly linked to effect seven because possibilities for innovating can be identified better with this approach. Overall, constantly innovating on processes and the products themselves is simpler if all business functions are located in one place.

The last effect backshoring has on innovation is the access to a higher-skilled workforce and local engineers who know their consumers can be more innovative than those who are located in a different country and do not know the target customer that well. A study by Eiler & Schwarz (2017, 51), shows that innovation is tied to the availability of competent personnel. In other words, a company must access if they have the know-how present at the reshored site, because otherwise employees must be requalified.

Overall, all of the effects analyzed above describe rather the short-term effects reshoring has on innovation. The reason for this is the fact that reshoring is still a rather new phenomenon in today’s business world. As previously said, working with a local supplier

makes it easier to innovate. This is demonstrated by the example company's empirical data, which is supported by literature (Tate 2014).

The most important effects backshoring has on innovation are shown in Figure 13. The three main effects lead to a zero-distance concept, keeping manufacturing, engineering, and customers close together and linked. If a company follows this effect, it most likely will have a successful innovation.

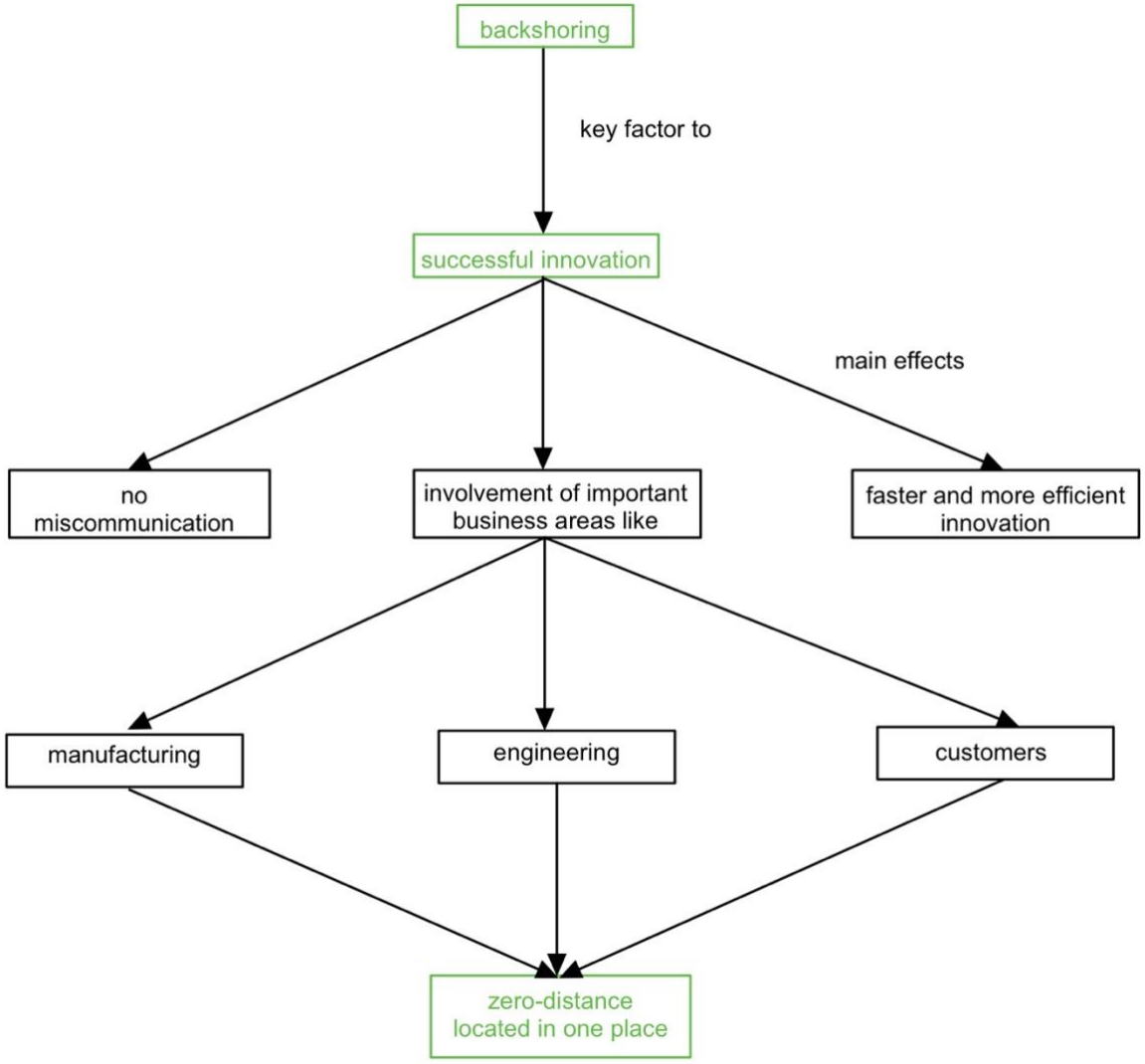

Figure 13. Important effects and analysis

6 Conclusion

6.1 Answer to the research question

The thesis objective, formulated at the beginning of the thesis, was to examine whether and how backshoring affects the innovation of a business. The thesis furthermore aimed to understand the phenomenon of backshoring and innovation, the examination of their drivers, and the analysis of the linkage between backshoring and innovation. The facts derived from the theoretical framework should be compared with the results of the empirical research to see their validity. This objective is achieved by a thorough theoretical framework, which gave the required context to understand reshoring, innovation, and their connection. In addition to that, the empirical research derived the linkage between those two phenomena and analyzed the effects backshoring has on innovation. The findings from the empirical research and the theoretical framework were finally contrasted within the analysis and new information was added.

After stating the objective, the main research question will be answered:

- How does backshoring affect a company's innovation?

Backshoring affects a company's innovation in eight different effects, as mentioned in Table 6. It becomes clear when looking at the interviewed companies that effects differ from business to business. The effect that was mentioned most was that without reshoring, or without having manufacturing, engineering, design, and customers close together, a firm cannot be innovative. Reshoring is one of the key factors to successful innovation.

In general, reshore and the link to innovation are quite complex. Only when looking at the final effects in Table 6, which includes all recognized effects, does this intricacy become clear. To conclude, all the effects that backshoring has on innovation positively influence a business's innovation. Therefore, a company can see from these effects the benefits it could have when deciding to reshore.

6.2 Limitations of this study

The fundamental limitation of this study is its lack of validity. This is due to a variety of factors. To begin with, the amount of empirical data collected was small. However, the researcher still had a good level of saturation, so this is not the primary issue. Innovation is difficult to measure. For this reason, only each company's perspective and opinion could be analyzed.

6.3 Outlook and suggestions for future research

In the future, it will become more and more important to be innovative. Companies therefore must consider all factors which could facilitate being innovative, and as this thesis concluded, reshoring is a key element of this factor. Interviewing those four companies made clear that without reshoring their products would have become uncompetitive in a foreseeable period of time. Therefore, companies should consider reshoring, if manufacturing is placed offshore, to stay competitive in the market. Possible effects which companies can experience if they decide to reshore can be concluded from this thesis. Reshoring furthermore records an increase in cases reshored; therefore, it will be interesting to see if companies still decide to manufacture abroad or if they continue to backshore.

Based on the delimitations set at the beginning of the thesis process, the researcher discovered possibilities for future research. Depending on the size of the company, different options for innovation are possible. It would be worthwhile to examine if the effects backshoring has on innovation would differ in such cases.

Moreover, studies about the linkage between reshoring and innovation are limited because it is still quite a new phenomenon and long-term studies cannot be conducted yet. As a second suggestion, it would be interesting to see the long-term effects of how backshoring affects innovation because this study focused more on short-term effects.

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Appendix 1. Interview guide

1. Opening the interview

The interviewer introduces the bachelor thesis topic and offers to conduct an anonymous interview.

Asking for approval to record the interview or to use the transcript in the thesis.

2. Opening questions

- Have the interviewees ever been dealing with the linkage between reshoring and innovation? (What is the reason behind it? How do they see innovation? What are those innovations? Have they developed anything, that has created value for their company?)
- For how long have they been dealing with this topic?

3. Questions around the key topic

Questions will be adapted to the company and the ongoing interview. Therefore, questions can slightly change, be removed, or be added.

- What were the drivers of your backshoring choice? Was innovation a decision factor?
- Out of your expertise with reshoring, how do you think reshoring affects innovation? Or do you even believe that there is a linkage between those two?
- Did you notice any changes in your innovation process after you reshored the production or parts of the product?
- If you have dealt with the effect of reshoring on innovation before, what were your main conclusions?
- Is it more challenging to develop a product and be innovative when the manufacturer is placed offshore compared to having them in your home country?
- What were the effects of backshoring on your innovation?