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Drivers of Backshoring: An exploration of the applicability of theory.

A qualitative case study analysis of six Swedish companies.

by

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Abstract

Backshoring has been the focus of a growing body of research in recent years, with several different determinants having been postulated through theoretical perspectives in the previous research. This study aims to determine how applicable these perspectives and their reasoning are to cases of backshoring of six Swedish companies. In this context backshoring is defined as the relocation of production from a foreign country back to the home country of the firm. To explore the research question regarding the applicability of these determinants, or drivers as they are referred to in this text, six Swedish companies' annual reports and relevant news articles were analyzed through a qualitative methodology based on thematic analysis. Specifically codes were extracted from previous literature and categorized based on their theoretical significance. The results of the analysis indicate that the current theory based drivers being reported are insufficient to explain why companies choose to backshore production. The research results suggest that more strategy and market based drivers need to be explored within the context of established International Business (IB) theories such as Transaction Cost Economics (TCE), the Resource Based View (RBV), and the eclectic paradigm.

Keywords: offshoring, backshoring, strategy, quality, cost

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1. Introduction

1.1 Background

Offshoring is a major area of interest within the field of International Business due to its widespread use, extensive cost saving benefits, and its place in modern corporate responsibility conversations. The process involves the move of production of goods from a high-income country to a most often low-income location and began to be popularized in the 1970s with the rise of globalization and the global economy. Offshoring is seen as a cost driven decision, focused on keeping prices for the end customer low, maintaining high production, and meeting increased demand for products.

However, in recent years negative aspects and consequences of offshoring have become more apparent. Major concerns have been brought to light exploring the actual cost benefits present from the decision to offshore, as well as how the decision can be antithetical to certain business strategies. Further, the changing global marketplace is continuously evolving, impacting the nature of offshoring in several countries. All of these factors have lessened appeals of offshoring and increased the likelihood of companies moving manufacturing back to their original location. This decision to move production that was offshored back to the high-income home country is, for the purposes of this study, been referred to as backshoring, though many of the articles that are addressed use the term reshoring for the same purpose.

The nature of backshoring has been the subject of several papers in recent years, though the field of study has remained relatively narrow. Due to the field being relatively new, there is a great deal of conjecture and speculation, with large scale studies being difficult to perform (Dachs, Kinkel, Jäger, & Palčič, 2019). Several papers on the subject have suggested theory based explanations for the decision of a company to backshore, and have been able to suggest several drivers based on these theories. Some others have taken on the field by performing survey studies to determine the most common drivers by asking firms that have backshored what their incentives were.

During the course of the research discrepancies were found between suggested theoretical drivers and those actually reported. The aim of this paper is to critically examine the application of theorized drivers to real instances of backshoring. The approach we decided to take emphasizes a new angle on the presence of backshoring drivers as we do not conduct direct interviews or surveys with company representatives but look for evidence of motivation based on public secondary data.

1.2 Aim and Objectives

This study uses a qualitative case study approach to investigate a number of Swedish firms which have backshored within the time period 2016-2018. In order to accomplish this, a literature review is performed extracting the most significant drivers for the production decision which will be applied to the data of official company documents, newspaper articles, and interviews through a qualitative analysis. The methodology is further based on thematic coding analysis, which focuses on the use of previously found theory and assertions in order to be able to test them through application. As the objective of this paper is to understand the applicability of theory motivated drivers to cases of backshoring it was important to be able to systematically analyze the texts with the help of coding. Therefore the choice of thematic analysis seemed most suitable due to the fact that it allows the researcher to connect to the theory and extract knowledge and factors from it, which can be applied to the gathered empirical data through coding.

It is pertinent however to acknowledge that due to practical constraints, this paper cannot provide any concrete results. Instead this case study strives to analyze backshoring through a new perspective and present findings which may be helpful in further research.

1.3 Research Purpose

The case study strives to understand the ability of drivers found from previous research to help in comprehension of and be applicable to actual company decisions to backshore. Specifically, this study aimed to address the following research questions:

- To what extent do theory-based drivers of backshoring apply to real cases of backshoring?

Through this analysis we hope to be able to understand whether real cases of backshoring are consistent with the theoretical suppositions made about the field. We seek to test propositions that other authors have put forth against instances of backshoring.

Our belief is that while not all of the companies are likely to fit into the theoretical framework, they will be largely consistent with the theory-based drivers.

1.4 Outline of Thesis

The overall structure of the study takes the form of six chapters. The first chapter, introduces the main scholarly work in the field, providing background. The second chapter lays out the theoretical dimensions underpinning this study and most of others. In the third chapter methodological considerations are presented as to the theory and technique upon which the methodology and analysis are based. In the fourth chapter the findings of the analysis are shown, divided individually for each company, for the sake of providing the greatest detail possible. The fifth chapter reveals the discussion of the findings in conjunction with the theoretical framework and previous research. Finally the conclusion is given, providing an overall summary of the paper and recommendations for future research.

2. Literature Review

In the following chapter a number of topics will be covered, dealing with the field of offshoring as well as the newer and particularly relevant topic of backshoring, which is the focus of this study. First, an overview of the field of offshoring within International Business (IB) literature is presented in order to have a better understanding of the background upon which the following studies are based. Understanding the literature and ideals behind offshoring also allow a glimpse into the mindset of the theory based justifications for backshoring, which will be presented later. Second, a critical examination of the current literature on the move towards backshoring will be presented. This affords us a better understanding of logistics surrounding the decision of a company to backshore as well as allows us to see the extent of study that has gone into backshoring within the field of IB literature. Third, wrapping up the review are the newer causes of backshoring, and the drivers shaping the strategies of companies in making this decision. In establishing these drivers we hope to be able to determine the most common causes for companies to backshore according to the scientific literature.

2.1 Historical and theoretical overview

Increased globalization, beginning in the 1970s, affected the world economy in a variety of ways, including changing the processes of supply chain management. This has led to the rise of global value chains, which leave production processes spread throughout the world (Kinkel, 2020). Due to the ever increasing demand for new and cheaper products, companies began to relocate their manufacturing to countries with less stringent labor regulations and also access to less expensive raw materials at an increased rate. This type of strategy was later termed offshoring, and has become one of the most popular strategies in more economically developed countries where there is a higher labor cost (Johansson & Olhager, 2018). Offshoring presents a simple solution to many problems associated with globalization, and is widely studied in the international business arena. Offshoring, while originally only done by large companies as a way to gain a competitive advantage through the lower costs and higher production volume, has now become increasingly available to small and medium enterprises (SMEs) as well (Johansson & Olhager, 2017). Due in part to the wider availability of offshoring to companies and the

extensive reach of globalization, the competitive advantage associated with offshoring has been reduced, and companies have begun searching for alternative differentiation tactics.

According to recent reports, companies have begun bringing their production facilities back to the home location either due to home benefits or as an effect of the shifting global marketplace causing issues with offshore manufacturing. (Johansson & Olhager, 2017; Ashby, 2016). Therefore it is necessary to first look at the essential assumption made in the field of location strategy so as to gain an understanding of the theoretical underpinnings of offshoring. These observations will allow for an understanding of what is currently lacking in the decision to offshore that drives companies to backshore their production.

It is necessary here to clarify the terminology adapted for the process of bringing back manufacturing from a foreign location to the home country, as this movement is the central focus of this study. There are multiple terms for this activity, including: backshoring, reshoring, reverse-offshoring and in-shoring (Lampón & González-Benito, 2019; Johansson & Olhager, 2017). The term reshoring was the first to appear in papers on the topic, but more recent articles tend towards the use of backshoring. As Johansson and Olhager specify in their paper, backshoring is better utilized to specify a relocation of manufacturing activities back to the home country while reshoring can refer to a generic change of location to a country near to the home location or to the home (2018, pp. 37). Further, the term ‘nearshoring’ is used when production is brought closer to the focal firm, but not within the home country (Ashby, 2016, pp.76). Both the terms ‘reverse-offshoring’ and ‘in-shoring’ were not prevalent enough in the literature to be considered as the primary descriptor in this study. Therefore, for the purposes of this paper the term which we will use is backshoring, as we believe it relays the specificity more clearly than the other terms.

Interest in the concept of backshoring has risen in recent years, with the first scientific article on the topic being published in 2007 (Cassia, 2020). This signifies that the field is still in its early stages, with only thirteen years of scholarly research on the topic it is difficult for studies to show the long term perspective on the effects or causes of backshoring. Thus far, three theoretical approaches are frequently mentioned in scholarly work on both offshoring and backshoring, which have to do with examining strategic choices in order to perceive what the drivers of these management decisions are.

Examining how these approaches determine drivers allows us to analyze which are the most prevalent reasons for backshoring. The theoretical approaches which are mentioned include Transaction Cost Economics (TCE), first established in the late 1970s with the increase of offshoring decision, followed by the Resource Based View (RBV), and lastly the eclectic paradigm, which looked at a number of factors which contribute to the choice of network (Johansson & Olhager, 2017). Below is a brief look at the underpinnings of these theories, and how offshoring is viewed through them, the theoretical framework in regards to backshoring will be further discussed in chapter three of this thesis. Due to the prevalent use of these theories in previous studies it is important to provide a short summary so that the review will be clear. Furthemore, through examining the factors which would elicit a decision to offshore, some drivers for backshoring can be deduced.

In order to understand the perspective of TCE, one first has to look at the most practical choices made by any company when it comes to location advantages. These have to do with cost advantages and the level of control a company wishes to maintain when it establishes an offshore facility. When looking into strategy a company can either employ a third party manufacturing facility or begin its own in another location (Gatignon & Anderson, 1986; Lampon & González-Benito, 2020). Given the concern TCE establishes in regards to a possible lack of control when outsourcing, control can also be seen as a motivation for backshoring. On the other hand, the resource based view takes into account other factors than purely material and monetary, such as intangible assets contained within the firm structure.

One can then say that RBV takes a holistic view of strategy choices when it comes to manufacturing location choices and considers knowledge gain as part of the strategic choice, looking at both material and immaterial competencies possessed by the corporate entity in order to establish where the competitive advantage they hold is (Brouthers, 2012). Theoretically, RBV is an extension of the pre-existing model proposed in the transaction cost theorem, delving deeper into why companies choose a certain entry mode and location. The proposition that intangible assets such as experience and culture play a role in the supply chain was an important addition to consider for companies making strategic location decisions. Much of previous research has focused on exactly these intangible assets and how they describe the benefits that companies see from backshoring despite the lower labor cost of manufacturing abroad as greater

experience in the home country or a more harmonious culture between different departments may provide further benefits (Stentoft, Mikkelsen, Jensen, & Rajkumar, 2018; Ashby, 2016)

The eclectic paradigm, or OLI model, considers a broader view of when a company should engage in foreign direct investment, which for the purposes of this study would be opening a production facility in the foreign country. This model considers advantages of a facility in terms of the location being considered, which can include labor cost and resource availability. It also considers ownership advantages, such as brand image; and finally internalization advantages which considers the risks of outsourcing (Dunning, 1988). It has been argued in some studies that location and labor cost are linked to both the decision to offshore as well as perils which may induce backshoring (Johansson & Olhager, 2018; Feldmann & Olhager, 2013; Johansson, Olhager, Heikkila & Stentoft, 2019; Theyel, Hofmann & Gregory, 2018; Dachs et al., 2019).

Offshoring itself refers to the transition of manufacturing partially or completely to a location outside of the national boundaries of the firm (Johansson & Olhager, 2017). Increased globalization is positively related to relocation decisions. Feldmann and Olhager (2013) used a small sample survey to assess the competencies which have significance in the choice of site location, which have to do with providing new expertise and production technologies to the firm which helps by adding value to the value chain. These instances are described by them as site competencies to do with production, supply chain, and development. They propose this as a continuation of the Ferdows (1989, 1997 cited in Feldmann & Olhager, 2013) studies performed in the late eighties and early nineties, which focus on strategic reasons for plant establishment, such as low cost production, proximity to market, and acquisition of new skills and knowledge. Although the study is constrained by a small sample size, it nevertheless brings a new perspective to the location advantage determining manufacturing location and therefore aids in establishing why a firm backshores.

2.2 Offshoring and backshoring: opposing views and how the choices differ

As discussed in the previous section, the risks of offshoring are becoming more obvious and therefore companies are increasingly looking at the possibility of partially or fully moving

manufacturing back to the home country. Thus far, several studies focus on drivers of manufacturing decisions. The primary focus has been on the need for innovation in order to be able to meet increased demand for a higher quality of product, as well as the rising turnover caused by the influx of many new players on the market (Stentoft et al., 2018; Cassia, 2020).

The interest in the topic of backshoring comes from its direct opposition to offshoring. While the latter is related to material concerns and adding value while decreasing cost, the former is more involved with quality concerns and spending in order to gain a better standing in the market. It may be less obviously profitable when a firm makes the decision to backshore, as unlike offshoring, the motives are often more nuanced and relate to intangible benefits.

According to one survey study of Swedish companies, it was found that companies who move manufacturing away from home do so to gain cost advantages (Johansson & Olhager, 2018). This comes in the form of lower cost of labor and resources. Conversely, the decision to bring back production has to do with development competencies and innovating manufacturing in order to gain higher quality (Johansson & Olhager, 2018). So, while the offshoring decision has to do with cost saving mechanisms, backshoring is much more complex and involves consideration of innovation and improving the supply value chain by improved productivity and higher coordination. These benefits may not show immediate results, but are often parts of long term planning and objectives, as mentioned above.

In terms of primary drivers for offshoring, there is a clear consensus that the most important is lower labor cost (Johansson & Olhager, 2018). This is likely because the most commonly offshored projects are in the labor intensive aspects of manufacturing as it relates to a higher cost if kept in, or taken back to, the home country (Johansson & Olhager, 2017). Other factors can contribute to an offshoring decision, such as proximity to markets and cheaper materials or supply chains, but labor cost is notable as the most significant factor in regards to offshoring. Despite the risks of offshoring, some case studies demonstrate that labor cost comparison has been the sole driver to cause some managers to offshore (Kinkel, 2020).

Johansson & Olhager (2018) focus on studying the differences and similarities between the two localization strategies through the theoretical perspective of both TCE and RBV and taking into account findings of previous studies. While they also perform a survey, they do so on a much

higher scale and within a wider set of countries, compared to previous studies where the sample of companies was less extensive (Feldmann & Olhager, 2013; Johansson & Olhager, 2017; Johansson & Olhager, 2018), thereby gaining a better understanding of the factors driving both offshoring and backshoring. Their findings suggest that cost considerations, thought to be only connected to offshoring, are actually found within backshoring as well. Furthermore, resource based considerations are found to a lesser extent in offshoring decisions as they do not always seek to better the product but rather to gain an advantage. Ultimately, the authors suggest that when the decision to locate a facility arises, both sides of the debate must be considered (Johansson & Olhager, 2019).

2.3 The current view of backshoring: new and old drivers

There are a wide variety of factors listed in the literature reviewed as possible incentives for backshoring, and there seems to be a considerable amount of disagreement over which factors are taken into consideration by companies. Unforeseen costs in offshoring, closing wage gaps in developing countries, and increased transportation costs can all contribute to making backshoring a more appealing alternative (Ashby, 2016). Johansson and Olhager (2017) further mention that there are hidden costs associated with offshoring including "...low quality, increased inventory, long lead-times or coordination issues" (2017, pp. 641).

Due to the increased complexity of supply chains such issues are becoming more and more present within the current manufacturing strategy environment. These hidden costs can be considered drivers in the decision of some companies to backshore, as the decision to offshore becomes less profitable and more complicated. Supply chain transparency and control are further benefits to having a localized operation (Ashby, 2016). The increased proximity to R&D caused by backshoring can also allow for quicker design implementation and improved coordination within the firm (Johansson & Olhager, 2018).

Quality is often named as a driver for backshoring, which can be due to a decrease in the offshoring site's quality or a desire to change the strategy to be more quality focused. Often there is a lack of precise knowledge and skills in less developed countries, where a company could desire an increase of quality which requires more advanced knowledge. Quality issues could also originate from supply chain issues, which can be difficult to navigate from afar (Ashby, 2016).

Another aspect of the quality is how it is perceived by the consumers, as the domestic country bias is known to increase perceived quality of a product in some cases (Cassia, 2020). It was found by Cassia that persons who know of the decision to backshore and have a high level of affective ethnocentrism perceive the quality of a good as higher when production is returned to the home country (Cassia, 2020). The control gained by backshoring also allows for firms to avoid many scandals regarding ethical violations that have occurred more frequently along company supply lines in recent years (Ashby, 2016).

In the decision to offshore, the primary consideration, as stated before, is the labor cost, which relates to the value added per employee. Lampón and González-Benito (2019) determined in their paper that this was the only consideration for low-technology manufacturing, and that with the implementation of further technology in a home country could reduce the number of employees necessary, thereby raising the value added per employee enough to consider backshoring. Several works have discussed the influence that the introduction of Industry 4.0 (I4.0) technologies will have on the manufacturing process (Ancarani, Di Mauro, & Mascali, 2019; Kinkel, 2020). The idea behind I4.0 technologies being a benefit to the companies in their home countries involve an easier access to the technology and more control directly available when utilized in the home country.

A study by Dachs et al (2019) interviewed companies which had backshored, about their reasons for doing so. They found that the most common reasons cited by the firms were flexibility and poor quality, which over half of those interviewed mentioned (Dachs et al., 2019). Flexibility in this case can refer to the inability to change or adapt processes, offer customization, or be able to respond quickly to changes. The next most cited reason was unemployed capacity in the home country, which over 40% of the companies cited. Unemployed capacity at home would here refer to a large amount of qualified personnel in the home country who would be ideal candidates being currently unemployed. Further, less than a quarter of companies reported transportation costs, coordination costs, and labor costs as deciding factors. This would indicate that costs were not a primary concern in the decision to backshore production. Finally, lack of infrastructure, lack of knowledge and proximity to R&D were cited in less than 15% of the cases. These were the least frequently mentioned in the study, which would indicate that the areas they offshored

too had few issues with implementation of R&D developments and enough skilled personnel and infrastructure to support their operations.

In classifying the drivers of backshoring laid out by the previous literature, two primary approaches to classifying drivers have been formed. These approaches are either dividing the drivers into groups based on their similarities, and classifying based off of theory-related frameworks such as the ones in the next section (Barbieri et al., 2018 cited in Boffelli, Golini, Orzes & Dotti, 2020). Some of the categorizations drivers, as discussed below, consist of both approaches, where the drivers are divided by theory, and then grouped in subsections by similarity.

The phenomenon of offshoring is broken down into two distinctive categories in a 2019 paper by Lampón and González-Benito. They distinguish between backshoring as a reactionary measure and backshoring as a strategic management choice. They believe that these two different categories of backshoring are motivated by different drivers. Further, they believe there are two separate environments that drivers appear from, internal environments and external environments, meaning originating from inside or outside of the firm. The internal and external environments are based on considerations one has to take when discussing location advantage for manufacturing. The internal environment deals with, “the firm’s strategic drift, the complexity of its supply chain, firm network restructuring or the orientation of its innovation” while the external environment is concerned with, “costs and the endowment of relevant production or institutional factors” (Lampón & González-Benito, 2019, pp. 6270).

McIvor and Bals (2021) suggest a theory-related approach which classifies drivers into three categories: correction of a managerial mistake, a change in the external environment, and a shift in company strategy. While Barbieri et al. (2018) suggest a branched approach wherein the categorization becomes narrower and more specific (cited in Boffelli et al., 2020). They suggest that drivers are initially divided into the categories of managerial mistakes and strategic decisions. Strategic decisions are broken down into causation from internal and external environments and then finally by heterogeneous groupings (Boffelli et al., 2020).

This section analysed a number of different perspectives on the topic of backshoring, beginning with the historical origins of the strategy and proceeding to delve into the modern perspectives

driving the field currently. In the following section, the theoretical perspective mentioned briefly above will be further elaborated on so that they can be utilized in the discussion section of the paper.

3. Theoretical framework

Mentioned above were a number of different theoretical perspectives usually taken by researchers, all to a certain extent related to cost consideration within the strategic decision both material and immaterial. These theories being TCE, RBV, and the eclectic paradigm (Lampón & González-Benito, 2020), in the following section these perspectives will be discussed as to their contribution to the current study. These three frameworks are the basis for 90% of 57 articles on backshoring reviewed by Barbieri et al. (2018 cited in Lampón & González-Benito, 2020). In this work all three of these frameworks were used to examine the data, in accordance with the multi-theory framework laid out by McIvor and Bals (2021).

Transaction-Cost Economics (TCE) is a theory based on the cost perspective, and the financial make-or-buy decision that companies make (McIvor, 2013; Mihalache and Mihalache, 2016 cited in Johansson & Olhager, 2017). Primarily, this theory strives to examine where cost advantages lay in the decision to manufacture in house or outsource the decision. Due to this the theory has been related to the process of offshoring as a cost cutting exercise. Alternatively, in connection to backshoring TCE can be related to the minimization of transaction costs (McIvor, 2009 cited in Johansson et al, 2019).

In more recent years transaction costs associated with offshoring production have become more apparent. Transaction costs can arise as an issue with offshoring due to third party agents, governments, transportation costs, and other unexpected costs that arise, which can cause backshoring to be a more appealing alternative. Viewing this development through a TCE lens would give reason to the rise in backshoring if the cost factors become lower in the home country than the offshoring location (Johansson et al., 2019).

Similarly to TCE, the Resource Based View (RBV) is based on a make-or-buy decision to determine which location would be best to house production; however, RBV further takes into account a search for a competitive advantage as a driver in addition to the costs (McIvor, 2013; Mihalache & Mihalache, 2016 cited in Johansson & Olhager, 2017, McIvor, 2009 cited in Johansson et al., 2019). The added consideration of a competitive advantage can make the decision to backshore more complex. Originally, the decision to offshore production was seen as

a competitive advantage as it gave the ability to provide inexpensive goods while the company made the same profits, but due to the increased accessibility of offshoring this advantage is diminished. Presently, firms are starting to consider alternative advantage such as being made in the home country, or having fast deliveries, customizability or simply higher quality as differentiation tools to give a competitive advantage, thus incentivizing backshoring. The RBV is also important to the concept of backshoring as the resources available and accessible to certain locations is an important part of company strategy, with the development of the firm's competitive performance being core (Lampón & González-Benito, 2020).

Having looked at TCE and RBV, it is now pertinent to move to a discussion of the eclectic paradigm, which may also be referred to as OLI in reference to the three types of advantages it describes: ownership, location, and internalization, is a popular theory created by Dunning (1988). When referencing the issues of offshoring and backshoring, the primary factor that is concerning is that of location (Ellram et al., 2013, Gray et al., 2013 cited in Johansson et al, 2019). This is due to the fact that the decision to backshore is the decision to move the production location. The location advantage aspect of the model is divided further into four categories: resource-seeking, market-seeking, efficiency-seeking, and strategic asset-seeking advantages (Dunning, 2015, as cited in Johansson et al., 2019).

This paradigm supports the idea that the advantages a company receives from manufacturing in a certain location is fluid, and may be subject to change (Dunning, 2015 cited in Johansson & Olhager, 2017). Meaning that the advantages present in the home country may grow or the advantages in the offshoring location may decrease, leading to the decision to reevaluate the benefits of the production location. When a firm decides to backshore, they can be seen as shifting a focus from efficiency-seeking advantages to strategic asset-seeking advantages (Dunning, 2015 cited in Johansson & Olhager, 2017).

In this case strategic asset-seeking advantages can be seen as assets that will help with the company's long term growth, such as skilled and knowledgeable workers. Ownership advantages can also play a role when there is a concern for the loyalty and regulations regarding their business plans or copyrighted intellectual property. In the case that there is a growing concern in the offshoring location that there would be no accountability for a former employee to release company sensitive information, that may be an incentive to move locations. Whenever copyright

protection is not strict in the country, it may also be detrimental to the company brand. Internalization advantages play a role given that this is directly related to the amount of control a company has over the production and distribution process. Insufficient control would be damaging to the company and could influence a decision to backshore to the home country, where proximity allows for greater control to be exercised.

These three frameworks provide background and theoretical justification for many of the drivers discussed in the previous literature. The general concern regarding cost and advantage can explain the concern behind several of the drivers discussed in this paper. In observing the literature already present and deriving some gaps in the knowledge available, it was decided that the drivers commonly present in the literature observed should be compared to drivers that caused real companies to make the decision to backshore. The methodology that was used for this examination is laid out in the following section.

4. Methodology

In the following chapter the methodological approach taken in the design of this study will be discussed. Clarifying the choice of qualitative techniques taken in the analysis of the cases, how theories found in previous studies were applied through the use of thematic coding analysis. The coding technique adopted will be defined in detail and the limitations of the chosen type of data and also methodology will also be discussed.

4.1 Research design and approach

Various qualitative methods have been applied, within previous studies on the topic of location decision making, specifically concerning backshoring (Johansson et al., 2019; Johansson & Olhager, 2017; Feldmann & Olhager, 2013). Qualitative research is best suited to the understanding of these kinds of processes as it lends itself to the study of strategy and decision making, which is best understood through techniques investigating data such as interviews, surveys or documents. The aim of this report is to understand the extent to which drivers mentioned in previous research can be found in current cases of backshoring. Particularly, a case study approach is employed due to its ability to apply a research question to a real life case in order to understand its implications and or applicability.

Eight Swedish companies were originally selected as the focus of the project, but later narrowed down to six,F all having backshored within the time frame 2016-2019. As will be discussed further below, the empirical data analyzed is largely secondary in origin due to time and resource limitations of the project. The sources of information consisted of both annual reports for the firms and newspaper articles from reputable sources. Case studies can be more accurate and rich if more than a single source of empirical data is taken into consideration and both sources are cross checked against each other in order to provide a mutli-faceted picture of the activity or strategy being analyzed. Case studies are interpreted in many different ways as puzzle solving exercises (Eriksson & Kovalainen, 2011), or according to Myers (2013), when a large body of literature exists on the subject, the studies can be useful to:

"… test theory to develop causal explanations or even to compare theories … multiple cases can be seen as being like a series of experiments that replicate, contrast or extend an existing theory."

(Myers, 2013, p.118)

The perspective of Maxwell (2013) was taken into account, where the design of the study is adaptable to the conditions of the field. Looking at the topic of offshoring and backshoring there are a number of issues when it comes to access to data and due to time and practicality constraints, in this study it was quite important to have flexibility in the research and analysis design. Therefore, the model shown below was adopted, formed as a diamond, taking into account the purpose, context, methods, and validity of and within the field (Maxwell, 2013, p.5).

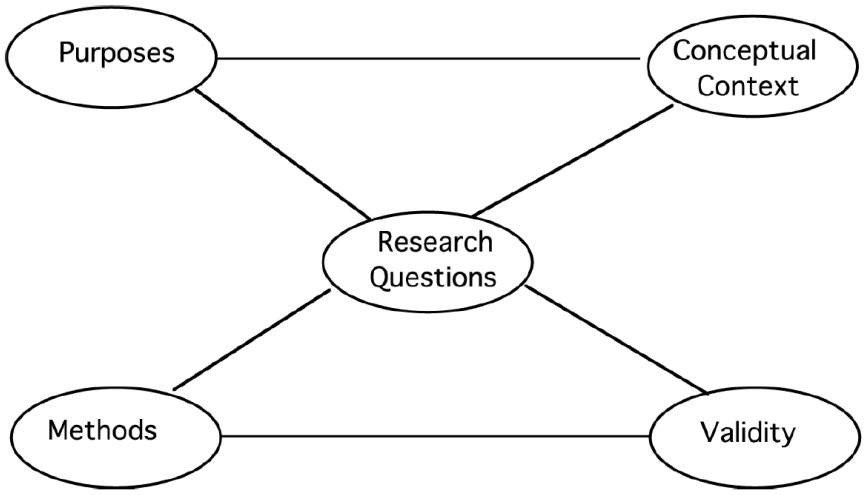


Figure. 1 The interactive model of Research design (Maxwell, 2013, p.5)

Mentioned previously, the aim of the analysis is to apply purported drivers of backshoring to reported instances of backshoring of the eight Swedish companies in order to understand the extent to which they are applicable or can be found there in. Consequently, the drivers which were brought up in the literature review and this section had to be established in order to perform the analysis. Papers were chosen due to their focus on backshoring the case of Sweden or Scandinavian companies and indeed a few were focused on a more international scale. The combined focus of all studies was however on the increased importance of immaterial factors in the strategic decisions of major international companies. These drivers are outlined in the table below, with corresponding references to articles and the number of times they were mentioned.

As can be seen, the most mentioned are to do with quality, flexibility in production, knowledge, research & development and cost considerations. Due to there being such a wide number of drivers, it was decided that in order to streamline the analytical process and clarify the drivers for the reader they would be separated into three categories based on an article written by McIvor and Bals (2021) as further defined below.

Table 1: Drivers focused on in previous studies

Drivers	**Articles mentioned**	**#**
Quality	Johansson & Olhager (2018), Johansson & Olhager (2017), Feldmann & Olhager (2013), Leisner & Nielsen (2019), Johansson et al. (2019), Lampón & González-Benito (2020), Ancarani et al. (2019), Sayem et al. (2019), Theyel et al.(2018), Cassia (2020), Dachs et al. (2019), Stentoft et al. (2018), McIvor & Bals (2021)	13
Flexibility	Johansson & Olhager (2017), Leisner & Nielsen (2019), Johansson et al. (2019), Lampón & González-Benito (2020), Ancarani et al. (2019), Sayem et al (2019), Ashby (2016), Dachs et al. (2019), Stentoft et al. (2018), McIvor & Bals (2021)	10
Access to skills /knowledge	Johansson &Olhager (2018), Johansson &Olhager (2017), Feldmann & Olhager (2013), Leisner & Nielsen (2019), Johansson et al. (2019), Lampón & González-Benito (2020), Ashby (2016), Dachs et al. (2019), Stentoft et al. (2018), McIvor & Bals (2021)	10
Rising cost offshore	Leisner & Nielsen (2019), Lampón & González-Benito (2020), Ancarani et al. (2019), Sayem et al. (2019), Cassia (2020), Boffelli et al. (2020), Stentoft et al. (2018), McIvor & Bals (2021)	8
Access to tech/ automation	Johansson & Olhager (2017), Leisner & Nielsen (2019), Ancarani et al. (2019), Sayem et al. (2019), Theyel et al. (2018), Boffelli et al. (2020), Stentoft et al. (2018), McIvor & Bals (2021)	8
Control/ reaction time	Leisner & Nielsen (2019), Ancaran et al. (2019), Theyel et al. (2018), Boffelli et al. (2020), Ashby (2016), Stentoft et al. (2018)	6
Proximity to R&D	Johansson & Ohager (2018), Johansson & Olhager (2017), Leisner & Nielsen (2019), Sayem et al. (2019), Dachs et al. (2019), McIvor & Bals (2021)	6
Proximity to market/ time-to-market	Johansson & Olhager (2017), Feldmann & Olhager (2013), Leisner & Nielsen (2019), Johansson et al. (2019), Theyel et al. (2018), McIvor & Bals (2021)	6
Risk/ failure of offshoring	Johansson & Olhager (2017), Lampón & González-Benito (2020), Leisner & Nielsen (2019), Boffelli et al. (2020), McIvor & Bals (2021)	5

Innovation	Johansson & Olhager (2018), Feldmann & Olhager (2013), Theyel et al. (2018), Stentoft et al. (2018), McIvor & Bals (2021)	5
Cost reduction (by backshoring)	Johansson & Olhager (2018), Feldmann & Olhager (2012), Johansson et al. (2019), Theyel et al. (2018), Dachs, Kinkel, Jäger, & Palčič (2019)	5
"Made -in" effect	Cassia (2020), Leisner & Nielsen (2019), Johansson et al. (2019), Stentoft et al. (2018), McIvor & Bals (2021)	5
Infrastructure	Johansson et al. (2019), Sayem et al. (2019), Dachs et al. (2019), McIvor & Bals (2021)	4
Supply chain	Sayem et al.(2019), Ashby (2016), Stentoft et al. (2018),	3
Customization	Theyel et al. (2018), Sayem et al.(2019)	2
Unemployed Capacity	Dachs et al. (2019)	1

In classifying the drivers into broader categories, the classification system laid out by McIvor and Bals (2021) was utilized due to its clarity. This system defines three categories for the drivers to be placed into: managerial mistake recognition, change in external environment, and strategic shift. Managerial mistake recognition is considered the result of firms making poor decisions in regards to offshoring, leading to the decision to backshore to attempt to fix the mistake. Change in the external environment includes deterioration of suppliers' work as well as changes from the countries the firm operates from. Strategic shift can be considered any decision to backshore coming from a shift of company focus or in order to gain better resources from the home country (McIvor & Bals, 2021).

Due to the complex nature of the decision to backshore, several of the factors can be interpreted in different ways and therefore fit in multiple categories. The following drivers are part of complex decision making and so are impossible to place in a single category. 'Quality' was found to fit into either change in external environment if quality was found to have dropped in the offshoring location or as a strategic shift if the firm backshored to try to pursue a high quality, high value strategy. 'Flexibility' could be classified as either a correction of a managerial

mistake if flexibility was an issue with the location when production began or as a strategic shift if the goal is to be able to offer greater flexibility. ‘Proximity to market/time-to-market’ can be categorized as either a change in external environment if there has been something to disrupt shipping abilities or as a strategic shift if the firm is looking for faster service or production. ‘Infrastructure’ can be considered a managerial mistake if the needed infrastructure was not present when the firm established production or a strategy shift if more developed infrastructure would help facilitate a more developed product.

Under the category of strategic shift, are the following drivers which were compiled from previous research. ‘Access to skills and/or knowledge’ is classified as so because of the choice of the firm to have a greater focus on higher skilled workers. ‘Access to technology/automation’ is the decision to change the product by using faster or more advanced technology that can be considered a company strategy. ‘Proximity to R&D’ is a shift in strategy as it is trying to gain or better utilize the resources, R&D, from the home location. ‘Innovation’ because it is used to make the firm or product more competitive. The ‘made in effect’ due to a desire to market the products as produced in the home country, and therefore increase perceived quality. ‘Customization’ wherein the firm wishes to have more specific options available to consumers. Finally, ‘unemployed capacity’ where a firm may choose to utilize the higher unemployment rate in their home country.

The following drivers were classified as to do with changes in the external environment. ‘Rising cost offshore’ because the regional shift in cost is not a product of the firm’s doing. And the ‘supply chain’ as whether it is a fault in the supply chain or the desire to expedite or shorten it, these are all external issues.

The category of managerial mistake, has these drivers falling under it. ‘Control and/or reaction time’ because an inability to react quickly or a lack of control due to the production location are factors that should be considered when choosing an offshore location. ‘Risk/failure of offshoring’ is a correction of a managerial mistake as these are simply cases of the offshoring location being unsuitable. ‘Cost reduction’ (by backshoring) is a managerial mistake when costs are not properly calculated or larger than anticipated.

These categorizations are summarized in the table below, they are further color coded in order to ease in understanding. This system outlined above aids the analysis by creating a linear and easy to comprehend discussion of findings.

Table 2: Categorization scheme of backshoring drivers

4.2 Case selection

In regards to the chosen sample, taking into account the work of Patton (1990 cited in Eriksson and Kovalainen, 2008), critical case sampling was chosen as suited to this study where units representing a critical or relevant case were chosen so that they could most effectively be analysed in comparison and contrast to previous research. Selection of companies was done through Eurofounds Database of Reshoring Cases (2018), a reliable source of information as the database was created by the European Union. The database was utilized in part due ease of access, as it has the ability to choose the country of backshoring and moreover allowing the sample of cases to be narrowed efficiently.

Sweden was chosen as the case country due to the fact that it is a mature manufacturing location, with a variety of plant roles that are differentiated both in terms of site competence and location (Feldmann & Olhager, 2013). A further factor is that in the case of Sweden, backshoring accounts for a large percentage of new projects leading to an increase of labor force and manufacturing locations (Jan & Olhager, 2017).

Moreover, companies which offshore are more likely to do so due to the higher costs of manufacturing in western countries. The opposite is true of backshoring, shown in table 1 above, where the drivers are quality and innovation and production is returned to the higher cost country even though a larger investment is then required. So in combination with the fact that a large number of Swedish companies are backshoring, partially or entirely, the country seemed to be a suitable choice to analyse the extent to which drivers of backshoring can be seen and applied to real life reported cases.

Additionally, the companies to be analyzed were further focused on by industry, manufacturing was chosen as the most suitable for answering the research question, as it is an industry with the highest labour costs and therefore the most common to be offshored. This move is also known as a smiling curve, where the knowledge intensive part of production remains in the developed country while the labour intensive part is moved to a developing country (Bettiol, Burlina, Chiarvesio & Di Maria, 2017). Yet, when it comes to backshoring, companies often take the strategy due to a need for higher quality in production or an increased reliance and adoption of new technologies (Boffelli et al., 2020). The process of backshoring is a significant decision for firms and one that should be analyzed in order to better understand how the decision is made and the extent to which it can be connected to globalization. By globalization, here one refers to the increased connectivity in the world both between companies and people but also the highered consumer knowledge and innovation within production.

The sample was representative with respect to the country of origin being Sweden and the country of backshoring being Sweden as well. This being a classic case of backshoring where the firm comes back to the home country, due to the fact that the database counted all reshoring cases, the location of backshoring had to be specified. Through a search of the previously cited European Reshoring Database, fifteen companies were found that match the aforementioned criteria (Eurofound, 2018). Of those companies eight were selected due to the fact that there

were official reports available for these eight companies, and in order to narrow the field of analysis to a manageable set of data. As the companies backshored in different time periods, no set time range could be employed, instead the years before backshoring, during, and after were looked at to attempt to gain the widest array of data in order to perform a thorough analysis. In the table below the firms chosen are shown along with the country to which they originally offshored to and the years which were analysed for each company. There are then 3 groups, companies that backshored in 2016, 2017, and 2018 where the year before and after the decision were chosen for analysis.

Table 3: Original selection of companies

Company	Offshoring country	Years analysed
Volvo	US	2015-2017
SWEP AB	Switzerland	2015-2017
BillerudKorsnäs	Finland	2015-2017
Orkla Foods AB	Denmark	2016-2018
Ymer Technology AB	China	2016-2018
Volvo Car	China	2017-2019
Stille AB	US	2017-2019
Woods TES Sweden AB	Canada	2017-2019

Analyzing documents within this time range allows for a deeper look into why the companies actually made the decision to backshore and the extent to which it can be matched with drivers mentioned in previous research. Furthermore, in order to be able to better understand the situation surrounding the decision making process of these companies, articles relating to both them and the international and national business environments were examined.

Likewise, the data from the official and public documents is analyzed separately and together in order to perceive the topic from different angles and therefore gain a better understanding and more accurate picture of the subject (Myers, 2013). This type of technique is known as cross-cut, aiding to develop a clearer understanding of the data and to help in gaining a more holistic view of it. It is enforced here due to the fact that official documents made by the companies are innately biased and the use of newspapers articles is deemed as a better manner through which to gain a neutral view of the actions of the company. Furthermore, as the process of analyzing backshoring through company provided annual reports is a sensitive and time consuming process, it was necessary to consult articles and interviews in order to gain a more direct insight into the background of the decision.

4.3 Data collection

Although eight companies were chosen from the Reshoring database (2018) during the process of data collection, and following correction for the amount of secondary data available for each case company, the sample was reduced to six. The two companies taken off the sample list were SWEP AB and Ymer Technologies AB, due to shortness of the reports available and a lack of newspaper coverage.

Also as mentioned above, due to the fact that the data on firms that have taken this strategy from the Eurofounds database only extends up to 2018. The total time range turned out to be from 2015-2019, this also decided based on the fact that the COVID-19 pandemic affected much of major production around the world in the year 2020 and would therefore be an unknown variable that can have an impact on the empirical data that would take away from the objectivity and aim of this study.

In order to supplement the official reports, article databases were searched with keywords related to backshoring, Sweden, company names and also the international business environment. The terms were used either in combination or separately within the time parameters set above. The articles were selected from well established and accredited news sources, in order to bring about a better validity and reliability to the analysis even though they are another source of secondary data.

The annual reports for the firms were then chosen based on the years of backshoring as seen in table 2. The time range is the year before the decision, the year of, and one year after. This varies from firm to firm, as backshoring occurred at different times. The specific time period was chosen as it is believed that strategic decisions that have to do specifically with location take some time to manage and therefore it is important to take into account the time before, during and after the decision is made.

The data sample itself consists of annual reports, three for each of the companies adding up to eighteen in total and a number of news articles selected with the previously outlined search parameters. All articles are referenced at the end of this paper, as this was deemed a reliable manner through which any passages and quotations could be clearly identified.

4.4 Data Analysis

During the beginning of this research project it was decided that a case study approach would be the best possible manner through which to analyse the research puzzle. As Eriksson and Kovalainen (2008) speak on the case study it is useful in analyzing a case and understanding a complex business strategy and being able to present the results in an accessible manner. Originally, the focus of the study was to understand why certain companies are proceeding with a manufacturing location strategy that is opposed to the practical and material considerations of International Business dealings. Therefore, by focusing on a case of companies which had taken this strategy, one could better understand and see the extent to which previous theorizations about the strategies in question were correct.

Due to the focus of the research project, an intensive case study approach (Eriksson & Kovalainen, 2008), was chosen that would allow the analysis to explore the specific companies in order to better understand the extent to which their strategies match up to previous studies' perceptions of the drivers of backshoring. Hence, the study is not aimed at being generalized but rather at an exploration of the case in order to be able to understand how it works. Furthermore, by performing this type of intensive analysis the study can help others to understand the strategy of the companies better and be able to gain their own insights into the case and form their own conclusions (Eriksson & Kovalainen, 2008).

The analytical technique of coding was chosen for the study as it is one of the structured methods of data analysis within qualitative research. Due to the fact that this study is grounded in previous research in the scholarly field, the specific type of coding chosen is thematic analysis. There are of course many other approaches to coding focused on the steps through which the data set is analyzed. Ranging from open, substantive, selective, thematic, and focused coding, among others (Bryant & Charmaz, 2019). However, thematic analysis was chosen as suitable technique for this research because of its ability to create value based codes in order to gain insight into the data and afterwards be able to discuss the findings with a narrative in mind. The codes were organised and systematized according to the classification of drivers shown above in table 2.

The below coding scheme shown in figure 2, was created with the help of a template outline by Eriksson and Kovalainen (2008). As this is a thematic analysis there are two levels to the coding process from the 1st level of general descriptives based on the drivers shown in Table 1 and following is the coding where the classification theme specific codes are shown. The last part of the scheme is to show in which theme or group these codes fit. Mentioned further above is the categorization of drivers, therein a number of drivers fit into two categories, however for the purposes of the analysis drivers were added to the theme most fitting.

Coding analysis was performed utilizing the Maxqda software through which the researcher has the ability to analyze large data sets easily and also perform lexical analysis of the document. Furthermore through the use of the software it is possible to gain a sense of textual data in numerical values such as repetition of superlatives or significant terms related to the aim of the study. Coding of the data was performed using a two phase analysis, first looking at the data with the descriptives in mind and in the following second phase reviewing these and applying the codes where significant.

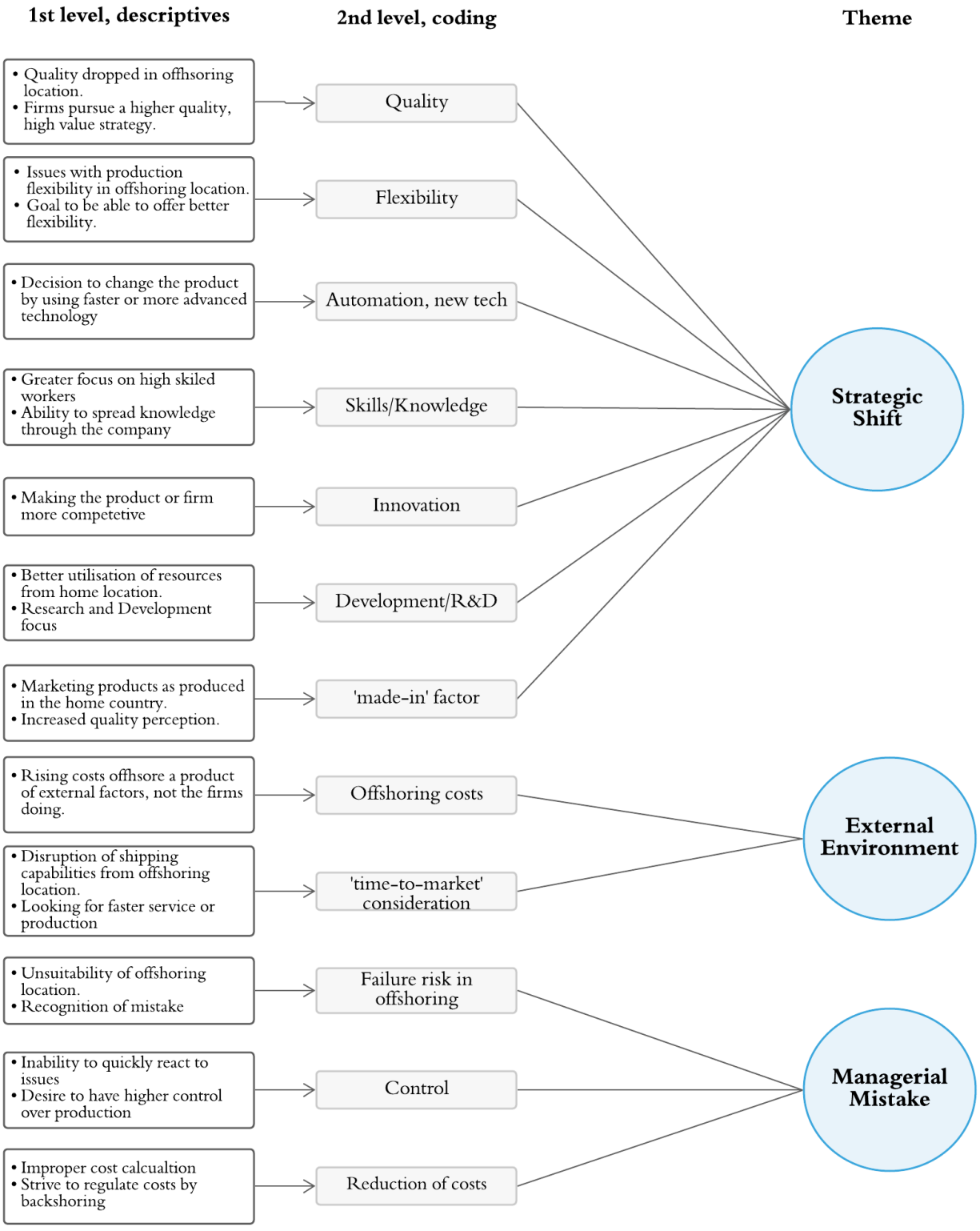


Figure 2: Coding Scheme

4.5 Reliability and validity considerations

In this investigation there are several possible sources of error. First of all, the chosen methodology which as it is qualitative implies a lack of quantifiable results. Quantitative results are unlike studies utilizing quantitative methodologies, where the results can be shown in clear and easy to understand numerical tables allowing for a higher level of reliability and accuracy when it comes to the final results of the analysis.

Despite these possible shortcomings, due to an overwhelming number of previous studies using a qualitative bases approach, it was deemed to be the best choice for this particular study as it related best to the choice of variable to be studied. Qualitative methods lend themselves well to the analysis of empirical textual data due to the fact that it provides the researcher with the ability to perform an in depth study even with a relatively small sample size. Through the use of this method one can study the most significant details of the data and gain valuable insight.

Furthermore the choice of analytical technique, coding is a reliable and valid method which decreases bias in the analysis as it lets the researcher be aware of such possibilities due to the systematic nature of the process. Through coding the researcher is able to evaluate if the analysis also is representative of the entire sample, and just a particular person. Moreover, through coding the researcher enables transparency in the research, allowing other scholars the ability to systematically review the analysis.

A further source of issue can be found in the choice of data, as secondary data is not the most reliable source for analysis due to inherent limitations. The fact that the data is not collected from the source itself means that it can be lacking in substantive information and it can also be somewhat skewed towards a specific perspective that the original publisher wanted to be put forward. However due to the time constraints of the project and issues to do with the availability of data it was chosen as the best possible source of information for this particular study. Additionally, this type of data had been unexamined in previous research and was therefore seen as an innovative approach that had potential to provide a fresh viewpoint.

The small size of the data set meant that it was not possible to make generalizations about the results; instead the findings of the case study are presented only as they are. They can then be

useful for further research as more data collection is required in order to establish whether or not previously researched drivers of backshoring can be applied to real life cases of the phenomenon. Additionally, a small sample case study allows for a deeper exploration of the data and so the capability to better analyze it.

This section of the paper provided a thorough description of the analytical approach taken in the study. Expounding on the case selection and collection processes and the specific coding technique utilized in the methodology. Furthermore, the reliability and validity issues that could perhaps be found in the choice of methodology and type of data were referenced.

5. Reports of findings

In the following section the findings of the analysis will be discussed, the results of the study will be shown on an individual basis. This is done as findings are thought to be case specific and therefore it is beneficial to review them on a case by case basis with necessary quotes and passages from the reports as evidential to the findings. Furthermore, with the help of the MaxQda software a lexical analysis was performed on the annual reports, searching for certain words which have significant relationships with the drivers at the center of this study. These words are: technology, skills, innovation, quality, logistics, knowledge, investment, flexibility, cost, and development. It is also important to make the distinction between two of the companies explored below. The Volvo Group and Volvo Cars are seen in this paper as two separate entities, with the trademark name of 'Volvo' being jointly owned between the two companies. Therefore while certain similarities are expected due to the nature of the automotive industry, they will not have the same findings nor reports.

5.1 Volvo Car

In analyzing Volvo Car group, another subsidiary of Volvo a number of the drivers which are the focus of the paper were found. These are expanded on below, as to how they relate to strategy and with supporting quotations and references in order to bring validity to the paper. It is first of all important to note that although Volvo Car group is a Swedish company it is partially owned by a Chinese investment group Geely Automobile Holdings Ltd, which is of course mentioned in the company reports for these years. This does have an impact on strategies taken by the company specifically concerning manufacturing location.

As of the 2018 report, around 44% of production is placed in Sweden, a growth from the previous year, when production was at 39% (Volvo Car Group, 2018; Volvo Car Group, 2019). This is a marked increase that shows the significance of this production facility. However, Volvo cars do overall emphasize in their reports the significance of their global presence and supply chain. Yet as mentioned above they were chosen due to the fact that they are a reported case of a Swedish company backshoring.

A strategic shift for the company in the three years analyzed is the importance of research and development, taking into account the current development in car manufacturing focused on new technology, and connectivity to the end customer. This is obviously an important driver for the company as they further call themselves “a pioneer within the auto space” (2018, p.6) putting forward the importance of maintaining their brand at the top when it comes to innovation and newness. Which is at the heart of who they are according to the presentation in the annual reports. In their 2018 report they further drive this home by stating:

> With our strong and very competitive product offering, we have a unique opportunity to scale our business and improve our brand awareness, which is key for Volvo Cars’ strategic development.
>
> (Volvo Car Group, 2019, p.6)

In this passage from their 2018 report, it is noticed that innovation or the presentation of it has to do with both being brand aware and competitive in the automotive industry. Competition is on many levels also to do with the ability of the company to meet new consumer desires as is stated below:

> 2020 will be the year of electrification. I believe we are well prepared; we have competitive products and a global footprint with sufficient capacity. By delivering on existing, as well as developing new innovative business models and expanding our range of products and services, we will continue to deliver the mobility our customers want and need.
>
> (Volvo Car Group, 2020, 5)

The passage above, was coded as innovation; however it also relates to an external factor due to the desire of the company to be able to meet customer demand and wants. Furthermore, the reports indicate that the company is trying to improve technology on all levels from connectivity to electrification of the car. This means that Volvo Cars are trying to move with their consumer base desires and focus on sustainable production where they are trying to maintain a certain level of flexibility as well in their production strategies and research and development.

Regarding the ‘made in’ effect, the company places a great importance on its Scandinavian origin, in order to see this a lexical analysis was performed on the reports and it was found that

throughout the three reports ‘Scandinavia’ was mentioned 21 times, it is also significant as it was observed that that the term is usually related to quality. Likewise, ‘Sweden’ was mentioned 304 times and ‘Swedish’ 116 times throughout the reports. It is of course relevant to mention that around 40% of the mentions of Sweden are used in statistical matters throughout all papers.

This means that, although they are partially owned by a Chinese corporation, Volvo Cars would still like the consumers to perceive it as a Swedish company. On many levels this has to do with positive stereotypes of Swedish and negative correlations made with Chinese products. Further supported by the following statement from the 2019 report: “People who are willing to pay more for our offer of Scandinavian luxury, sustainability and safety.” (Volvo Car Group, 2020, p. 21)

As mentioned above Volvo Car Group is an international company with facilities on three continents (China. EU and USA). Because of this, control on both the manufacturing and management levels is a large part of their annual report. As a loss of control poses a great risk to the company, they are maintaining separate management teams for each location with a central office. As mentioned there is a great risk in offshoring, recall the classification scheme explained above, if there is a loss of control. Such issues could mean increased costs and a decreased ability to meet demand and also the needs of the consumer due to a lack of investment in Research and Development. This is one of the external factors which affect Volvo Cars and can be seen as drivers of backshoring.

Furthermore in 2019, the company moves forward with plans on creating a circular economy for their products. This is in the report connected to a sustainability effort however it can also be seen as a way to reduce costs through reusing raw materials and optimising their production cycle. As seen in this quote from their 2019 report, “ Increasing resource utilisation and minimising waste, including through reducing production waste by 15 per cent by 2021.” (2020, p. 26).

Showing here the importance of resource management for the company, they are further striving to recycle aluminium and other metals they use in manufacturing in order to lower costs for the company which is also related to a shift in strategy for them (Volvo Car Group, 2020). In accordance with problems of the global economy they strive to be self-sustainable and independent in their production cycle. Creating a circular business model also relates to the idea

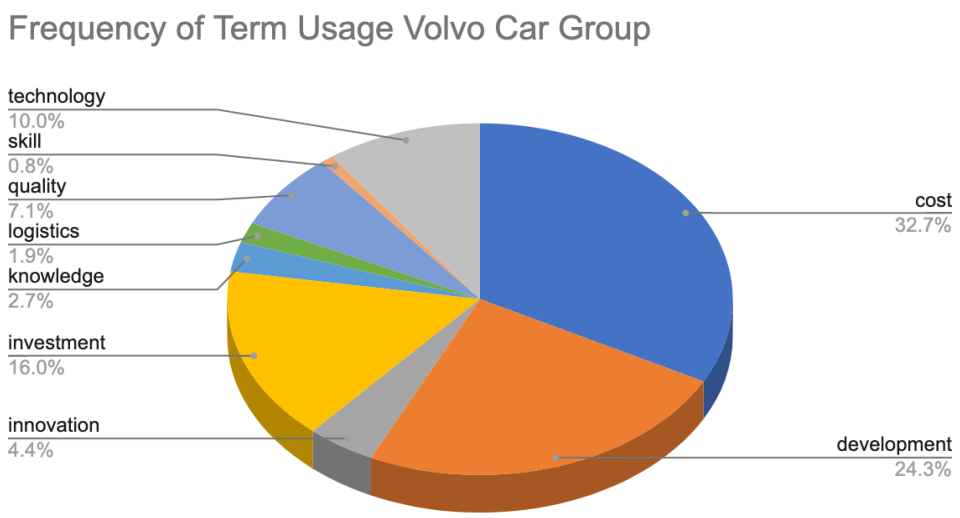
of flexibility further as they try to be their own suppliers on many levels and therefore lower risk of failure and managerial mistakes.

The company is also putting forward investments into their sales growth and production facilities, this means that they also have to increase costs as stated in the 2018 report “During 2019, we plan to continue driving growth in our sales globally, and increase our market share, even though this will mean continued pressure on our margins.” (2019, p.6).

It was mentioned above in this section that Volvo Cars is partially Chinese owned and that they have multiple facilities around the world. Yet they are a case of backshoring due to a move they made in the middle of 2018, shifting the production of the XC60 model to their Swedish factory. A decision such as this one was based on one external factor that was rising cost, due to newly instated tariffs by the United States Government on Chinese products. The company, in large part thanks to its flexible strategic management, reorganised production back to Sweden in order to avoid increased costs. This decision to backshore a part of its production is not mentioned in the annual report, it is however reported on in news articles (Sergeev, 2018). This is also done in order to avoid a managerial mistake, due to possibilities of failure when it comes to lowered demand for a higher priced product.

In performing the analysis use was made of the lexical analytical tools of MaxQda, where in terms in connection with the drivers mentioned in the table above were imputed in order to see the rate at which words were mentioned across the data and thereby gain insight into which are most likely to be prescribed.

The graph below shows the rate at which drivers were mentioned in the annual reports. It is clear from the chart that, the focus of the reports from the years analysed is on costs and secondly and in support of findings from the coding analysis development is of high importance in the reports and in third place investment is a word which employed in connection with the strategies taken by the company in order to be capable of innovation. Technology, is also a word which is utilized both in connection to new technologies and also manufacturing capabilities as mentioned above.



Graph 1: Volvo Car Group frequency of term usage

5.2 Volvo

Volvo Group, another subsection under the Volvo name, had a case of backshoring where production was moved from the US to Sweden in 2016 (Dagens Nyheter, 2016). The decision to decrease the number of US factory workers came as a result of the 33% decrease in truck sales from the previous year (Axelsson, 2016). Further reasoning came from Martin Lundstedt, Volvo Group's CEO, who said it was to balance production levels, stock levels, and demand (Dagens Nyheter, 2016). This was not a case of a full reshoring, but partial production was removed from the US and that production was instead moved to Sweden with the subsequent hiring of 400-500 employees at their Gothenburg facility (Dagens Nyheter, 2016). The annual report from Volvo that year states that the lower sales in the Americas were at least partially offset by the increase of sales in Europe and Asia but that there was still a net decrease of 3% (The Volvo Group, 2017). The decrease in sales in the Americas and subsequent decision to backshore is a shift in the market interest, where Volvo focuses on their stronger market option. This is further supported by the percent of market share change reported by Volvo from 2015 to 2016 where North America market share dropped from 33% to 27% and Europe increased from 39% to 44% (The Volvo Group, 2016; The Volvo Group, 2017). The decision to focus on the more profitable market could broadly be considered a strategic choice by management as the decision to produce

the trucks in question closer to the market they will be sold in can be considered a proximity/time-to-market issue.

The major strategy readjustment Volvo underwent from the time period of 2015 to 2016 could have an impact on the decision to backshore as well. In October of 2015 Volvo changed leadership from former CEO Olof Persson to the present CEO Martin Lundstedt. With this change, the Volvo Group stated that they would be changing from an active acquisition strategy to focus on, "organic growth, improved efficiency, increased profitability and getting closer to customers" (The Volvo Group, 2017, pp.8). This shift can lend reason to the decision to backshore to the more desirable market as this statement indicates that the Volvo Group's primary new strategy is to strengthen existing profitable markets.

Another approach to understanding Volvo's decision to backshore is by categorizing it as a managerial mistake. Jan Gurander, Volvo's CFO, stated in 2015 that,

> The North American market is slowing down, but in a controlled way, and we believe that 2016 will be a good year as well, albeit not as good as last year.
>
> (The Volvo Group, 2016, pp.2)

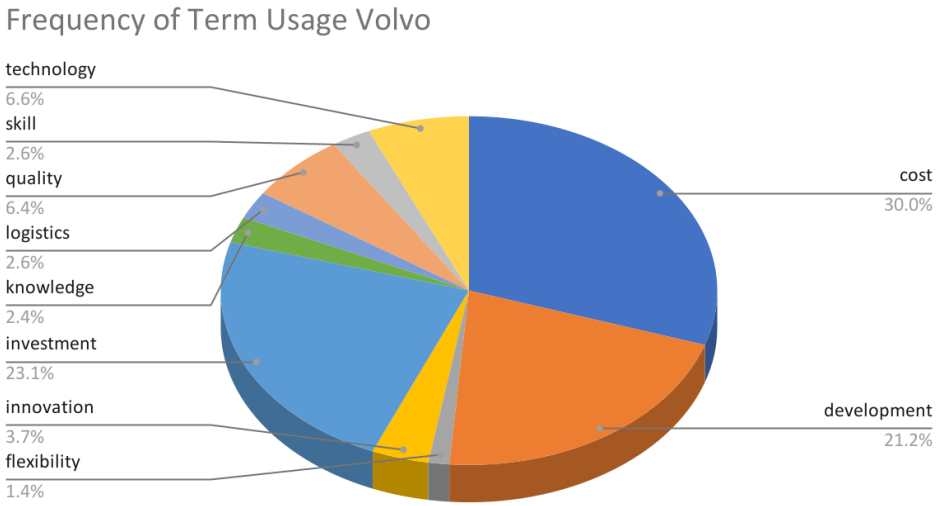
This statement would indicate that the decrease in sales for 2016 was underestimated. This is further supported by the fact that there was an overproduction of trucks at the North American facility, leading to excess stock (Dagens Nyheter, 2016).

The decision to backshore also comes after a change to the cost priorities of the Volvo Group which were established in 2014 and 2015, which included, "... substantial reductions of white-collar employees and consultants, a reduction in research and development expenses, optimization of the sales and service channel and the industrial footprint..." (The Volvo Group, 2017, pp.8).

This statement would indicate that R&D was not a high priority for Volvo and that proximity to R&D likely played little to no role in their decision to backshore. The reduction in strategy centric positions also aligns with their strategic shift to focus on organic growth and their existing markets. This suggests that Volvo's decision to backshore production after a less profitable year is an aspect of their less aggressive marketing approach.

A search of the frequency of keywords is displayed below, created with the use of the literary analysis tool MaxQda. Though the most frequently mentioned terms: cost, development, and investment, align closely in terms of percentage with the other observed companies, there are a few unique outliers for Volvo from this search. The terms technology and flexibility are more frequently used for Volvo than the other companies. The exception to this is the later Volvo Cars report which has a markedly higher use of the term technology. This would indicate that technology is a primary concern in the Volvo Group and has only gained relevance in recent years. This could also be because of the technological nature of Volvo's end product, which would also be a reason for Volvo to be more concerned with technology both for the production and end product when compared to other industries.

In regards to flexibility, this would be important to Volvo not only due to the highly international nature of their Group but could also be influenced by the issues caused by not maintaining a flexible enough structure to avoid overproduction in the US in 2016. The term innovation is used at less than the rate of Billerud Korsnäs and Orkla Foods, two of the other companies discussed. This in accordance with their reduction of R&D expenses, would indicate that this is not the highest current priority to the Volvo Group.



Graph 2: Volvo frequency of term usage

5.3 BillerudKorsnäs

BillerudKorsnäs, a Swedish pulp and paper company, had an instance of backshoring in 2016 where they moved their machine glazed kraft paper from their plant in Finland back to Sweden (Euwid, 2016). This move has been partially credited to opportunity from growth in attractive market sectors, assisting in the streamlining of production structure, and increasing their position geographically as well as in the value chain (Cision, 2016). This would indicate that proximity to market and supply chain are reasons for this backshoring project.

It was stated in the 2015 Annual Review that BillerudKorsnäs was doing a feasibility study regarding moving the machine to Skärblacka in Sweden and investment into surface treatment capacity for MG-paper. It was decided that the MGpaper machine would be moved from Tervasaari, Finland to Skärblacka to increase growth and production efficiency (BillerudKorsnäs, 2016; BillerudKorsnäs 2017). They further stated that these actions would, "... secure the production unit's position as the most efficient in the world in this particular paper segment." (BillerudKorsnäs, 2016).

This is also partially attributed to the integration of the machine with pulp production in the plant (BillerudKorsnäs, 2017). Due to the estimated efficiency gain of the move, future cost reduction could be a motive for this move. The efficiency gain could also be attributed to the access to technology that allows for greater productivity, as surface treatment equipment was installed on the machine to be able to produce more advanced products (BillerudKorsnäs, 2018).

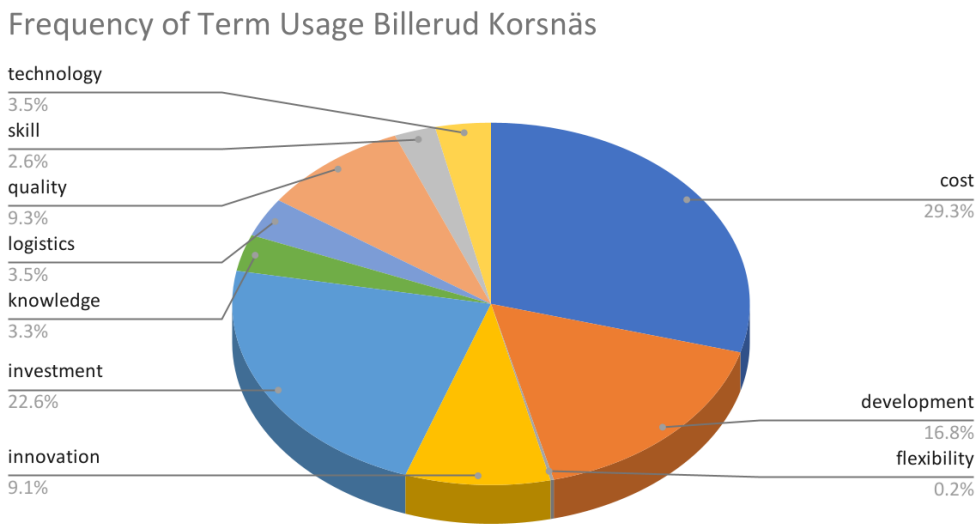
Innovation as a driver for the decision to backshore can also be derived from a statement from BillerudKorsnäs' 2017 report,

> With the billion kronor investments in Skärblacka and Gruvön, we are laying solid foundations for long-term growth and significantly strengthening both production capacity and capacity for innovation.
>
> (2018, pp.6)

This indicates that innovation was an objective and possible driver of the decision to backshore. This would be considered a strategic shift.

Furthermore, BillerudKorsnäs has stated they wish to add on to their sustainable materials with packing solutions, as it is not only a natural progression, but also necessary (Cision, 2016). Sustainability as an issue was integral to the annual reports from BillerudKorsnäs. In the respective years of backshoring, BillerudKorsnäs mentioned sustainability 307 times, compared to Orkla Foods' 148 and Volvo's 28. BillerudKorsnäs is included in the Dow Jones Sustainability Europe Index, as well as CDP's Climate A List of companies, and has been awarded a Gold rating by EcoVadis (BillerudKorsnäs, 2017). They also use renewable bio-energy for 97.2% of fuel use in production as of 2017. This indicates that sustainability is likely an important consideration in most planning, as they also have conducted a preliminary study in Skärblacka to determine how to make the plant entirely fossil-free (BillerudKorsnäs, 2018).

The results of the lexical analysis of BillerudKorsnäs are shown below. There was little that stood out besides a decided lack of text about flexibility, having only been mentioned a total of 3 times in all of the reports analyzed. This would indicate flexibility is not a major concern for BillerudKorsnäs and likely did not contribute to the decision to backshore.



Graph 3: BillerudKorsnäs frequency of term usage

5.4 Orkla Foods AB

Orkla Foods AB is a Norwegian company which supplies products in a variety of grocery related sectors, Orkla Foods Sverige is the Swedish subsidiary. In 2017 the Danish factory in Ringkøbing was closed. Orkla made the statement that the production of the goods made there would be moved to the Swedish facility in Kumla, which would mean a 10% increase in production for that facility (Hansson, 2017). Kristina Fransson, the production director for Orkla Foods Sverige stated in an interview that the consolidation would be for a Center of Excellence at the Kumla factory (Petersson, 2017). She further commented that this gave evidence that their production facility is at the forefront. In addition, Orkla commented that their goal in this move is to increase their competitiveness and create the most cost effective drink production (Thander, 2017). These comments indicate that besides cost as a primary concern in this decision, there is an implication of greater technological production in the Swedish facility, which impacts the productivity and incentives the move.

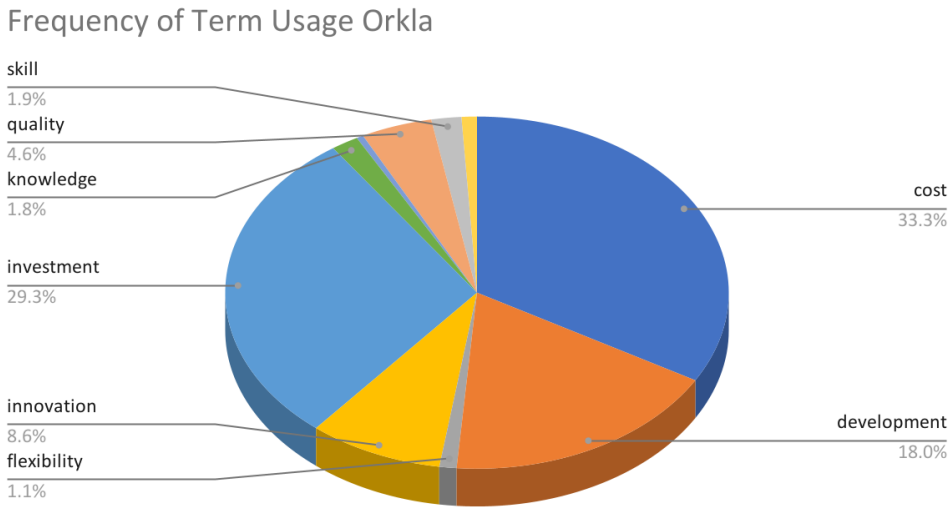
In Orkla's annual report of the year of the backshoring project, 2017, they stated that, "We took a number of steps to optimise our value chain and ensure efficient, competitive production of Orkla's branded consumer goods." (Orkla ASA, 2018, pp.5)

Though this does not directly cite the decision to backshore to the Swedish facility, it is a good indication that the thought of value chain optimization was being considered. Orkla's desire to have efficient production aligns with the statement from Orkla Foods Sverige's productuction director about the Swedish facility being at the forefront of production (Thander, 2017). This would indicate that the production was moved to a more efficient facility, with one explanation being better equipment in the Kumla facility.

Orkla further states that, "Production will be concentrated on fewer, but larger production units, thereby freeing up resources for innovation, growth and competence-building" (Orkla ASA, 2018, pp.8). This, in addition to the emphasis that Orkla place on trends, stating that, "[they work] systematically to create innovations to meet changing trends" (Orkla ASA, 2018, pp. 28), indicates that Orkla highly values innovation, and this could be an influence in decision making regarding production location.

Orkla values a strong company culture, with their "One Orkla" initiative focusing on innovation as a unified brand (Orkla ASA, 2017; Orkla ASA, 2018; Orkla ASA, 2019). Their strategy of unification and brand image could be considered a re-establishment of control over their subsidiaries. This may have also been a benefit of the consolidation of manufacturing facilities that came as a result of their decision to move production to Kumla.

The results of the lexical analysis of Orkla Foods are shown below. The terms logistics and technology were noticeably not present enough to be included in the pie chart shown below as they counted for less than 0.1% of the total term usage. This would indicate that logistics and supply chain issues are not a concern and neither is technology particularly significant.



Graph 4: Orkla frequency of term usage

5.5 Stille AB

Stille AB is one of the world's foremost medical manufacturers, it has existed since 1841 and is a producer of not only handmade surgical instruments but also innovative operation tables (Stille AB, 2021). In the following report of findings three reports were used from the years 2017 to 2019 and a few articles with relevant information from reputable sources.

There are a number of drivers that can be found in the annual reports that have to do with strategic shifts of the company. In reading the company reports they put an extreme effort into maintaining that they are:

> ... one of the world's oldest medical instrument companies, with the needs of surgeons and patients in focus, ... they develop products .... which simplify and better the healthcare process...
>
> (Stille AB, 2018, pp.2 own translation)

This statement is repeated throughout all reports from 2017 to 2019, it shows an extreme focus on pushing the concept that their product is of an extremely high quality. Moving forward through the years 2018 and 2019 the company has proceeded to invest in development of new instruments and technologies in order to expand their product line and be able to compete within their industry.

According to the report from 2019, they are working with surgeons in order to be able to develop high quality products that are better able to meet the needs of the profession. Furthermore as mentioned above they are also trying to continuously innovate in order to be able to compete in what they refer to as “a market that is in strong development” (Stille AB, 2020, pp.7 own translation).

Control is found within the text where the company makes statements in regards to maintaining production capabilities. The company wants to meet the demand for their products and maintain their position within the Swedish and American markets, in order to do this they have in 2018 reported that they are strengthening their “service organisation” and they expect this to promote “growth and improved margins … in the long term” (Stille AB, 2019, pp.4 own translation).

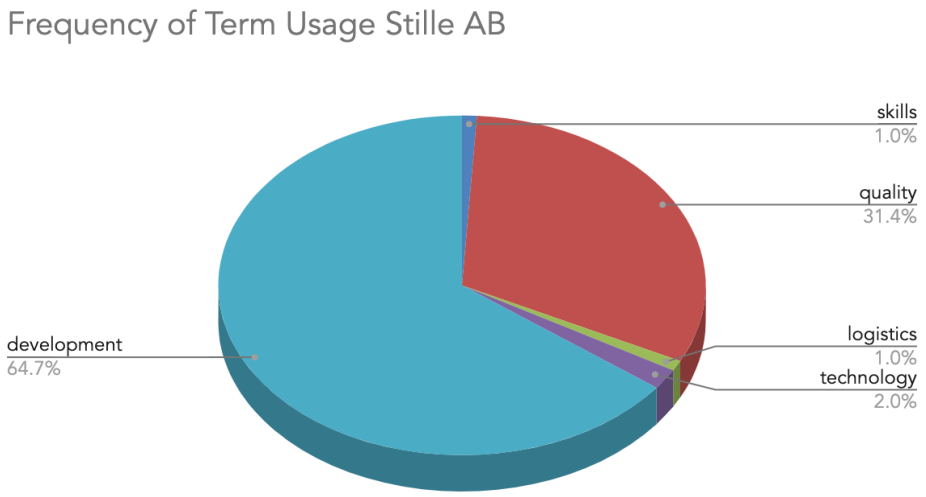
Technologically, the company focuses on the production of handmade instruments but has as well begun to produce surgery tables as of 2019, which is a move towards a more innovative approach. Although their production of handmade instruments is still at the forefront of the brand.

Cost is a manner of discussion in the reports in regards to the investment they have to make to strengthen their hold in the US market as well as the Swedish. Although the company made a large investment and bought an American firm pre-2017, however a decision was made to move

production back home to Sweden in 2017. In the report, there was little to no explanation of why this decision was made, however in later reports from 2018 and 2019 it is made apparent that the decision was to increase flexibility in the production process and decrease costs. They are furthermore trying to expand their production capacities in their Swedish facility in order to meet higher demand for their products.

As can be seen from the below graph, the term most frequently used in the reports is ‘development’, here translated from the swedish ‘utveckling’ as all Stille AB reports were only available in Swedish. Development as a term has to do not only with technology but also with new initiatives in manufacturing and the development of their facility in Sweden in order to meet demand.

The term ‘quality’, translated from the Swedish 'kvalite', is at second place when it comes to frequency, however it is quite significant as it shows the importance of promoting both the products and services offered by the firm as excellent and competitive.



Graph 5: Stille AB frequency of term usage

5.6 Woods TES Sweden AB

Reports made by TES AB or as they later became known Woods's TES Sweden AB, are sparse in textual information. However they do mention their move back to Sweden briefly in the report and the reason for this being their desire to produce specifically Swedish made air purifying products (2018, 2019). Another important point is that the backshoring move was made even though the transition meant a large investment on their part and an increased cost of production. The company focuses on flexibility by managing their own sales corps which allows them to have greater control over the manner through which the end product is sold (Woods TES Sweden AB, 2019).

The change of name from TES to 'Wood's' also implies the desire of the company to change their image and also not only innovate their products but also the brand. Furthering, the idea that the company is trying to characterize itself as an innovative and eco-friendly product, as woods are stereotypically connected to fresh air.

In this analysis, the secondary source of data, articles, was particularly useful. As it became clear that the move back to Sweden was a decision based on particular external factors. According to articles on the backshoring decision, due to newly instated European Environmental regulations the company had to change their manufacturing procedures. As a result of the unwillingness of the Canadian facility to actually make these changes, the company decided to entirely move production back to the country of origin (industritorget.com, 2021; Svensk Verkstad, 2018).

Furthermore, the decision was also made in connection to control and time-to-market consideration as this statement by the CEO Patrick Tedsjo shows:

> With the move from Canada, we will get closer to the market and contribute to benefiting the local industry, says Patrik Tedsjö according to a press release…. Through the new facility and the proximity between the various functions in the supply chain, we also avoid long and emission-heavy transports.
>
> (Johansson, 2018 own translation)

In this passage there is both a mention of time-to-market drivers and also reaction time, both are to do with control of the manufacturing process and also consumer awareness. Quality is not

mentioned outright in the company reports, however during a review of the company website, there was a distinct focus on the innovative and high quality products offered by the company (Wood's webpage, 2021). This signifies that the firm would like to be seen as a provider of quality goods and through this and the mention of the 'made-in' factor they can justify a higher price for their goods.

For the previous five companies, lexical analysis could be performed as the reports had enough words and therefore the results would be of significance for the findings. Although coding analysis could be performed on the articles and annual reports of Woods TES Sweden AB, it did not amount to meaningful findings and is so omitted here.

5.7 Summary of findings

The analysis of the six companies presented a number of significant findings which have merit for the study. As this chapter of the report was split into six parts in order to allow for a deeper review of the findings, below the findings will be summarized to show the overarching themes, where cases converge or where they are unique in their drivers.

The theme of strategic shift concerns the shift in firm strategy decision making on a number of drivers, those being innovation (technology and automation), quality, development, flexibility, skills and knowledge and the 'made-in' factor. These drivers can be seen in all companies however they are not always connected to the reason for backshoring. For example, Stille AB and Wood's TES Sweden AB moved production back home in order to meet higher quality standards or in an effort to increase their R&D capabilities. BillerudKorsnäs, Orkla Foods and partially the Volvo Group moved production back in order to achieve greater efficiencies, meaning increase flexibility in production and be able to quickly react to market changes. Automation and technology came into play for both Orkla Foods and BillerudKorsnäs, with both of them moving production to higher efficiency or more productive facilities. Volvo Cars appeared to be influenced by the "made-in" factor to some degree as well, with the offshoring location being an issue and due to the pride in their Scandinavian origins.

Regarding the second theme, managerial mistake, concerning both changes the company makes in order to avoid and rectify possible mistakes made by management. Involving, where there are issues with offshoring production logistical or manufacturing, control over production and

increased reaction time. And for the cost consideration, by moving production back home being able to properly calculate and regulate costs. Here, it is perceived that BillerudKorsnäs, Orkla Foods AB, the Volvo Group, and Stille AB all have increased cost of manufacturing in their offshoring facilities which motivated their move back to the original location. Furthermore, the aforementioned companies implied that they desired to focus their manufacturing to the market which is most profitable, which could indicate a lack of proper financial analysis or, in the case of the Volvo Group, the control and reaction time necessary to avoid overproduction and losses.

The third theme of the external environment has to do with costs of offshoring where the increased cost is a result of external factors and not the company itself. An example of this would be market proximity considerations, such as disruptions caused by logistics issues and the ability to offer products specifically targeted to the profitable market. Volvo Car Group backshored part of their production mainly due to new tariffs imposed on Chinese made products by the United States government, this is a clear external driver caused by rising costs of offshoring. Market proximity was the major consideration for BillerudKorsnäs and the Volvo Group, both of which strived to have a closer proximity and reaction time to the market which was most profitable.

In conclusion, the theoretically based drivers of backshoring can be seen to a certain extent in the six case companies chosen for this analysis. However, drivers are unique and case specific as can be seen from the above findings and summary. They cannot be generalised to all companies and furthermore although drivers such as quality and innovation can be seen in all firms they are not the most common cause for the company to wish to backshore. Indeed most often within this sample, the consideration has had to do with flexibility, cost reduction, control issues, and/or market fluctuation and external factors.

The manner through which these results are in line or in opposition to previous research will be discussed in the following chapter. This is in order to be able to understand the applicability of these aforementioned theoretically driven drivers to real life cases.

6. Discussion of findings

In this chapter, the findings of the research will be discussed in conjunction with the theories discussed in the literature review in order to perceive the implications of this study on the field in general. This study set out to assess the applicability of the theory based drivers of backshoring to real-life cases of backshoring. This was done through a qualitative analysis of secondary data, consisting of annual reports and newspaper articles, for six Swedish based companies which had a documented backshoring strategy.

6.1 Statement of results

The present study was designed to assess the real life application of theory based drivers of backshoring through the analysis of company reports, a type of empirical data previously unstudied in this field. Although the sample size was relatively small at just six companies it nevertheless contributed to some interesting findings in relation to the research question asked.

The main focus of the research was in establishing how well theory-based drivers of backshoring explain real cases of backshoring. In order to perform this analysis backshoring drivers were extracted from previous research and classified into three categories: strategic shift, managerial mistake and external environment. Each of these categorizations has to do with the explicit aim of the company in taking this specific location strategy.

Following is an analysis of how the drivers from previous literature relate to drivers found for the six observed companies, as separated into the aforementioned categories.

6.1.1 Strategic Shift

Within the purview of strategic shift, are included drivers such as quality, flexibility, innovation, the ‘made-in’ factor, R&D, and access to skills and knowledge. These drivers bring competitive advantage to the firms undertaking them although they often mean higher investments and costs. According to RBV, these types of immaterial strategy decisions are significant as aspects of strategy, meaning that they are important to companies in many industries due to the need for a niche in marketing and having a strong competitive advantage. Many of these factors are vital in consideration of TCE and RBV due to their cost centric juxtaposition. Both TCE and RBV have

the make-or-buy decision as a crux, where cost is weighed against value brought to the firm. Furthermore, the eclectic paradigm relates to these factors given the importance of the internalization advantages, due to the direct control and inter-business communication abilities.

Surprisingly, immaterial drivers such as quality, innovation, and consumer awareness were not seen to be significant in the backshoring decision making process for the six companies analyzed here. Although all companies to a certain extent mention these factors in their annual reports. They are connected with creating a perception of the company as having a good product quality, vague insinuations of innovation as a goal or discussion of aspects they felt consumers valued. The primary example of efforts into consumer awareness and values came in the form of Orkla's discussion of trends such as vegetarian and vegan substitutes and the focus on sustainability from Volvo Cars and BillerudKorsnäs.

Quality as an issue was mentioned by BillerudKorsnäs and Orkla in relation to a different plant and one of their other subsidiaries respectively, but nothing related to the instances of backshoring examined were mentioned (BillerudKorsnäs, 2016, Orkla ASA, 2017). The presence of these issues in their reports lends credence to the belief that there would be a statement, were these considerations for the reviewed backshoring cases. The companies that are part of the study, while maintaining that their product was of the highest quality, did not place this as the reason for the move of manufacturing back to the home location. For example both Stille AB and Volvo Cars put emphasis on it as important to their brand image. However they do not connect this directly to strategies for manufacturing, instead it is presented as a constant consideration in their company ideals and designs (Stille AB, 2018; Volvo Car Group, 2018).

In the cases of BillerudKorsnäs and Orkla Foods, innovation within production capabilities is mentioned as part of the strategic decision. In the case of Orkla innovation is heavily discussed as an active goal to secure and further their market segments. BillerudKorsnäs actively wanted to increase sustainable production capabilities through the connection of the machine brought to the Swedish facility while backshoring to the machines already in use there. Stille AB focused production in one location partially in order to be able to focus investments on new innovation.

Interestingly, the 'made-in' factor was mentioned on a surface level utilized in order to create an impression of quality. With Volvo Cars, the Scandinavian brand image is one of the main points which they connect to the safety and excellence of their products. While Wood's TES Sweden,

used ‘Swedish made’ in their reports in order to appear as though they were backshoring for this purpose only, they were in fact affected by new EU regulations for their products.

Research and Development is the foundation of the RBV theory, wherein the ability of a firm to actively generate new products in order to be competitive on the market is the primary focus. This is found in the cases studied here at varying levels with Volvo Cars placing strong emphasis on this factor in their report. This emphasis is mostly through statements relating to investments made in order to set up R&D departments and facilitating innovation. A surprising case is that of the Volvo Group who indicate that they are moving to continuously reduce their R&D department and managerial costs in a move to lower expenditures. This is in contrast to Volvo Car, although both are subsidiaries of the same corporations, their view on investments toward product development were diametrically opposed.

Flexibility, although it could alternatively be seen as a managerial decision to avoid mistakes, is mainly perceived here as a strategy which aids in both the ability of the company to maintain quality through quick reaction in meeting customer demands and also in the development and research of new innovative products. In this sample it was perceived that Stille AB, took the step of backshoring production in order to be able to respond better to demand and increase or decrease production capacities as necessary.

Automation or access to technology can be implicitly recognized in several of the cases. One of the more evident is the case of BillerudKorsnäs, which describes the reasons for backshoring being related to increased production capabilities due to the combination and addition of technologies when the backshoring completed. The Volvo Group and Volvo Cars both mention technology at a higher rate than the other companies in their reports, though this could be due to the technological nature of their products.

Skills and Knowledge are little discussed drivers by the companies reviewed, despite the prominence of the driver in theory-based literature. None mention a need for skilled or knowledgeable labor as a driver for their decision to backshore, and the only instance where it may be implied is for that of BillerudKorsnäs, as they planned on more complex production after the backshoring was completed. However, this could easily be due to more advanced machinery, a more condensed production center, or being closer to the headquarters and R&D team.

6.1.2 Managerial Mistake

In this study, material considerations were found to be a major part of the decision to bring back manufacturing to the home location. The results indicated that cost reduction was significantly important for Orkla Foods, as they had implied in their reports the decision to backshore as a cost saving and production optimization strategy. The closure of the Danish manufacturing plant allowed for Orkla to remove all costs associated with the production, including the release of 34 employees. This cost was diminished by transferring production to the facility in Sweden due to the larger scale of production in place and the more efficient machinery.

Theoretically, cost considerations were a large part of study on manufacturing location decisions as they are most apparent within the transaction of any strategy. Within this field, the decision to offshore is most popular as it has in the past decades meant lowered costs of production and therefore the ability to produce at a higher rate and offer products at a lower cost. However, as mentioned previously, recently costs of offshoring have been increasing due to a number of factors such as logistics, increased tariffs and other external factors (Ashby, 2016; Johansson & Olhager, 2017).

Mentioned above is also the aspect of control which has to do with the ability of the company to react swiftly to changes in the market and be able to respond flexibly. Volvo can be considered having made a managerial mistake due to control and flexibility issues. This is considered a managerial mistake due to the fact that they had forecast further declines in the North American market but failed to provide extra flexibility which caused mass overproduction. Previously mentioned cost considerations are part of the control strategy however they do not make it up entirely. Due to a more developed global economy, it has been theorized that the advantages of offshoring have decreased and those of producing within the home location have increased (Johansson & Olhager, 2017). This has caused companies such as Stille AB, BillerudKorsnäs, and Orkla Foods to rearrange their production and backshore in order to meet either increased demand or to lower costs by increasing control through concentrating production in fewer locations.

6.1.3 External Environment

Another driver of the backshoring decision is the effect of the external environment. In this study a number of drivers were found to be connected to factors which were either outside of company control or had to do with the global business environment.

One of the more significant is that of closeness to the market, which is to do with responsiveness, the capability of the company to set a competitive advantage. According to Lampón & Gonzalez-Benito (2019) part of the decision making for companies right now is related to delivery time and customizability, both of which are better accessible when the company is placed closer to the focal market. This is specifically true of Volvo who, due to a failure in their offshoring location combined with increased growth in Europe, decided that a focus on the European market would be the most competitive choice. The change in customer behavior can be considered a general market shift and therefore influenced by the external environment.

Another important aspect to be considered in the discussion regarding backshoring is the effect of globalization. Fluctuations in the international business environment, outside of the control of companies, have a noted effect on the location strategies of companies. They include increased costs in the offshoring location or changes in product regulation which are the only cause for the partial manufacturing of Volvo Cars Group. This was also one of the main reasons for which Wood's TES Sweden moved manufacturing back to Sweden, there were EU regulations in place which influenced their decision despite the fact that in their annual reports they claimed the decision was made in order to increase quality and have uniquely Swedish made air purifying machines.

6.2 Compare and contrast to previous research

As stated, the present study was designed to determine the applicability of theorized drivers of backshoring to real cases of it. In order for this analysis to be performed, drivers were extracted from a number of research papers on the topic and then classified based on a scheme created by McIvor and Bals (2021), which helped to streamline the analytical process and the findings coming from it. In this section the results of the current paper will be compared and contrasted to those of the theoretical studies from which drivers were extracted.

The most obvious finding of the analysis was that drivers such as quality and R&D consideration were present in annual reports for all companies, however surprisingly they were not considered the primary factor which caused the firm to return manufacturing to the home location. Indeed these drivers were largely connected to brand image, which is prevalent in the empirical data, as it is based on annual reports and therefore can be biased towards a beneficial portrayal of the company. Yet, the significance of these results cannot be discounted due to its contradiction with suppositions of previous studies.

These results differ from Johansson et al.'s (2019) estimate of the significance of quality, and research and development for the backshoring decision. In their study the strategy is connected widely to the aforementioned factors. The implication that they make in their analysis is that the backshoring decision is pushed for in order to be able to increase the quality of the end product. The significance of quality in particular as a driver for backshoring is emphasized by every paper reviewed, making it the most frequently cited driver of backshoring in the literature reviewed for this study. Poor quality is further cited in a survey study by Dachs et al. (2019) as the most common driver of backshoring, alongside flexibility, with over half of the respondents declaring it a reason for their decision to backshore. Given the frequency and emphasis placed on quality as a driver, it was significant that this was not a frequently discussed aspect of the manufacturing location decision.

The issue of R&D was not as surprising given that it was not as frequently repeated in the articles reviewed. In terms of the study from Dachs et al. (2019) R&D is not considered a major factor in the decision to backshore, with less than 10% of surveyed companies citing it as a reason. Similarly, R&D was mentioned in just under half the papers, making it a moderately common theoretical consideration. Innovation was mentioned even less as a theoretical driver, with only 5 papers mentioning it and it not appearing at all in the Dachs et al (2019) questionnaire. The companies examined, however, place more emphasis on innovation than R&D overall. Though this could be due to the fact that innovation is often a more generalized consequence of research and development. R&D initiatives are only mentioned to a higher degree in Volvo Cars, but are not named in conjunction with the decision of the company to revert its production to Sweden. The Volvo Group conversely expressly states their intentions to reduce funding for R&D. Innovation however was mentioned specifically in reference to the

backshoring decision for BillerudKorsnäs and Stille AB, and more generally for Orkla Foods' product aspirations.

The 'made-in' factor, mentioned in five of the reviewed articles, was seen in the cases of Wood's TES Sweden AB and Volvo Car. However, in both instances where this driver was mentioned, it did not have a direct correlation with the backshoring decision. In the first instance of Wood's TES, although initially the 'made-in' factor seemed to be significantly involved in the decision making process it was later determined that it was in fact utilized to give this perception and actually the decision was primarily do with external factors. Volvo Cars, who were affected by the external environment as well, are observed to emphasize the Swedish origin of their products, although a significant part of manufacturing is done outside of Sweden.

This finding was unexpected and suggests that companies which have a large presence in their industry such as Volvo Cars, can maintain that their products are 'Scandinavian' in origin even though they are produced elsewhere. The parallel set in the annual reports is one which connects 'Scandinavian' or 'Swedish' to quality, therefore increasing value. The results here show that the 'made-in' factor, although maintained by some as connected to backshoring (Cassia, 2020), can be implemented in text or statement by any company even if they have offshored, partially or completely. These instances are unexpected given the skepticism relayed in the articles discussing the 'made-in' factor (Cassia, 2020; Johansson et al., 2019; McIvor & Bals, 2021). The readings indicated that this was not a well observed phenomenon and that the benefit from consumer perception was undocumented. Therefore, the presence of this driver to the extent which it appeared in the cases was surprising.

Flexibility as a driver was frequently mentioned in the literature, tying with access to skills/knowledge for the second most commonly described driver. It was also mentioned in Dachs et al (2019) as one of the most common drivers reported by companies, with over half the survey participants stating it was a reason for backshoring. Similarly to quality, flexibility appeared much less frequently as a driver in the cases that were examined in this study. Flexibility was heavily implied by Volvo's case, as the primary issue they faced was an overproduction of trucks in the US facility (Dagens Nyheter, 2016). It was due to the lack of flexibility that they were unable to stop or adjust production in a timely fashion, making flexibility a factor in their subsequent backshoring move. Flexibility is also implied, though less strongly, by Stille AB in reference to their strategic shift. Though flexibility was mentioned more

explicitly than quality as a factor, it was still underrepresented compared to their expectations raised by the literature.

Access to skills/knowledge was, as mentioned above, tied for second with flexibility as the most mentioned driver in the literature. This directly contrasts the study done by Dachs et al. (2019) which has a lack of skills being a driver in less than 15% of the cases. For the purpose of this study, however, access to skills/knowledge was largely considered access as a benefit to the backshoring location, not detrimental to the offshoring location. Still, as a factor for offshoring, neither views were explicitly mentioned in the cases studied. The only instances where access to skills and knowledge could be implied is in the cases of BillerudKorsnäs and Orkla Foods, where they described greater ability to manufacture goods after the moves back to Sweden.

However, in both of these cases automation and better technology could be considered the primary driver. This is especially evident in the case of BillerudKorsnäs, which explain their intent to combine the machine they are moving back to Sweden with existing machinery at the Skärblacka plant as well as an addition to make more complex types of paper solutions. Orkla Foods vaguely implies these drivers in their statement that the closing of the Danish facility will only increase the production output of the Swedish plant by 10%. In line with the access to skills/knowledge, these are the only cases of access to technology/automation within the company cases explored. In terms of the frequency of usage in the literature, it is represented less than expected, as 8 out the articles had mentioned technology or automation as a driver for backshoring. Furthermore, there was no mention of interconnection between technologies in the plants like was suggested may occur by Ancarani et al. (2019) and Kinkel (2020).

The primary driver of the Volvo Group decision to backshore production from the US to Sweden was the major decline of the US market. This can widely be considered a failure of offshoring due not only to the decline of the market but also because Volvo had already made the forecast the year before the backshoring decision that the US market would continue to slow, but did not adequately prepare. This oversight caused overproduction and led to the relocation of truck manufacturing. None of the other cases studied seem to indicate a market failure of any scale as a deciding factor. This is not overly unusual compared to the literature, as less than half of the the articles mentioned it as a factor and when it was, offshoring failure was usually presented in a different category than other decisions to backshore (Lampón & González-Benito, 2019).

A secondary reason for Volvo's decision to backshore comes from the shift in the market to be even more heavily European. The choice to backshore to Sweden to better accommodate their growing market presence in Europe can also be considered an issue of time to market. That is, by shortening the distance between production and end consumer, time to reach the end consumer is shortened as well. The Volvo Group is the only one to indicate this as a motive, as most of the other cases are instances of backshoring from within Europe. Time to market is mentioned in just under half of the articles as a potential motive, and not considered in Dachs et al.'s (2019) paper. These results are relatively unsurprising as there is representation within the company cases but it is not overwhelmingly discussed as a factor in the literature.

Control is mentioned as a driver in just under half of the reviewed articles, and has a range of implied applicability in the observed cases. Control over manufacturing can be determined in the cases of Stille AB, BillerudKorsnäs, and Orkla Foods who backshored in order to have better reaction time meeting demand or lowering control costs through production in one facility. Control is also an aspect of the Volvo Group case, as their closer proximity to their headquarters may help stop overproduction issues through greater control. This is a relatively expected result given the high correlation between mentions in the literature and mentions within the cases.

The findings point towards increased expenditure awareness by all companies, due to which Volvo, BillerudKorsnäs, and Orkla Foods, decided to move their production back to headquarters indicating a decision to streamline their operations in order to meet higher demand and/or focus on their most important market. Cost considerations like the reduction of cost following the decision to backshore and avoiding rising offshoring costs were prevalent in the cases studied. Though separated in the factor extraction from the literature, every article mentioned an aspect of cost consideration. Though in this case the theory based drivers are applicable to the cases, it does not align with the study by Dachs et al. (2019), which had less than a quarter of respondents list cost as a factor in backshoring. While this discrepancy from Dachs et al. (2019) is interesting, it does not fall under the scope of this study to postulate on the reasons.

Surprisingly, Volvo Car Group is noted as one of the companies which does not outright mention their reason for backshoring in their annual report. In fact, the reason for their decision is entirely external and connected to increased tariffs on Chinese made products by the United States government. According to Johansson et al (2019) this signifies that no benefits are to be expected from the strategy. However, as with any strategy taken by a firm this is done in order to avoid a

possible risk, here this being that of rising costs in offshoring. The possible interference of external factors cannot be discounted as in the global environment which the studied firms find themselves they are of great importance for continued success. Another example of this is the case of Wood's TES Sweden AB for whom the move back to Sweden was the result of a decision to produce within EU regulation. Although not reported on in their official documents, this was well documented in news articles and interviews with their CEO.

Unemployed capacity, though strongly indicated as a deciding factor by Dachs et al. (2019), having stated that over 40% of the companies interviewed considered it a driver, was not found in the other articles nor in any of the cases explored. Customization was similarly mentioned only by Theyel et al. (2018) and Sayem et al. (2019), and was not found to be present as a goal for any of the cases observed. Supply chain as a driver was also mentioned only 3 times in the articles and did not appear significant for any of the companies. Further, though infrastructure was mentioned by 4 of the articles including Dachs et al. (2019), which stated that it was reported by less than 15% of companies, it did not appear as a consideration for any of these backshoring cases. A possible explanation for this is that with the exception of Volvo Car, these were all instances of backshoring from North America or other European countries, which tend to have better infrastructure.

The results of this study indicate a complexity of backshoring drivers that are not generalizable. Some drivers occurred at more frequent rates than expected, while some results that were prominent in the literature were hardly discussed by the companies. These results would indicate that there needs to be more cross examination between the two sources of drivers, particularly with the drivers that were over-represented in the cases compared to the theory.

7. Conclusion

The aim of the present research was to examine the applicability of theory based drivers to real life cases of backshoring. In order to perform the analysis a thorough review of the literature on the topic was performed and the most mentioned drivers were identified which could then be classified through a scheme centered around three themes: strategic shift, managerial mistake and external environment (McIvor & Bals, 2021). These have to do with the relevant factors affecting manufacturing location decisions. The study was further supported theoretically by TCE, RBV and OLI models, all of which aid in understanding the decision making process of companies when it comes to location of manufacturing.

The companies included in the sample were active in a range of industries though all were involved in the manufacturing of different products. Stille AB is involved in surgical instruments, Volvo Cars and Volvo group are in the automotive industry, BillerudKorsnäs in the paper and pulp industry, Wood's TES Sweden AB in the manufacturing of air purifying systems and Orkla foods is in the foods industry. This variety in industry made it so that the small sample would not have too much overlap due to industry-specific factors, but in depth industry specific analysis was not possible.

The results of this investigation indicate that the most significant category of drivers for companies when they make a backshoring decision have to do with their consideration of the market and how to strategically handle it. Meaning, that factors such as proximity to market, where the market is most profitable, flexibility in terms of production times and quantities were prominently related to the determination of the company whether the decision should be made. These factors can be explained by two of the theories making up the framework, TCE and RBV, where the firms analyzed here are looking both at cost benefits and how to set a competitive advantage for their production.

This is further represented in the fact that out of the six companies, four (Stille AB, Orkla Foods, BillerudKorsnäs, Volvo Group) moved their facilities in order to consolidate production, increasing efficiency and management control in order to offer better strategic opportunities. These findings were in opposition to previous research, as these companies were found to be less driven by quality and R&D factors in their backshoring decision making, instead these factors

were presented as extensions of strategy but not significant in their location manufacturing decision. It is of further interest that all but one company, Volvo Cars, had backshored production from what would be considered a developed country further signifying the need for more analysis.

7.1 Ramifications of the study

The present study has been one of the first attempts to thoroughly examine this particular type of empirical data, with annual reports able to provide a valuable source of information into the inner workings of companies. Specifically, through performing a study concerning strategies taken by the firms and in performing a qualitative analysis on a small sample of cases the paper provided a novel approach to the analysis of backshoring.

This thesis has provided a deeper insight into the field of backshoring, specifically that there is a lack of theoretical understanding as to why firms actually backshore. Findings illustrate that deeper exploration is necessary into business specific factors such as cost consideration and market strategy as possible explanations of this specific location decision. Where drivers were present in the cases studied but not particularly present in the literature and theorization regarding backshoring are places of interest in future research.

Despite its exploratory nature, this study offers some insight into new perspectives on the location manufacturing decision. As the case sample size was small, the themes surrounding the decisions of the companies to backshore were able to be explored in a more in depth manner. This allows for the ability to more closely relate the specificities of the backshoring decision to the overarching company ideals and message they are trying to convey. This may allow future researchers to use this strategy to compare reported drivers of backshoring by survey or interview with annual reports from the companies.

This study also provides justification, explanation, and categorization of drivers in a multitude of ways that allow for a more comprehensive understanding of the current theorization state of the topic of backshoring. This may assist future researchers in selecting theory to base their work on and in showcasing different categorization styles for drivers.

However, these results were limited by the sample size and the time period for which the analysis could be conducted. Furthermore, information regarding companies which had backshored was

found through a database which was active only up to 2018. More research is needed, with a wider sample of companies in order to establish exactly how significant the findings of this case study were to the field as a whole.

7.2 Suggestions for future research

The literature on backshoring has highlighted several gaps which were unable to be explored in this work. Much research is still needed to be done, largely due to the recent nature of the field. Long term studies have not yet been possible as to the effects of backshoring on a production plant. Financial analysis of backshoring companies has also not yet been possible due to the obfuscation of data regarding the decisions as well as the lack of long term instances. Many studies that do exist are exploratory in nature, solely focused on the company perspective and therefore lacks the outlook of the consumer.

The research reviewed previously, performed over the last decade, has emphasised the effects of the strategy on the country to which production is returned, it however lacks clarity on the impact to the offshoring location. This is especially important in conjunction with more humanitarian and social studies linked study possibilities, and exploration of this topic could be important in determining the future of these countries' economies. Finally, as this study was conducted during the global pandemic of COVID-19, the ramifications that accompany the supply chain issues during and following the pandemic may be insightful in terms of how backshoring projects were decided and conducted.

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