Master Thesis

The influence of Brexit on FDI and the opportunities for the province of North-Brabant

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Preface

Before you lies the product that concludes my master Economic Geography; A thesis on Brexit, FDI and North-Brabant. This also concludes my time as a student of the Radboud University, a time I look back on fondly.

I wish to thank my supervisor Arnoud Lagendijk for his guidance and endless wisdom, both of which helped me finish my thesis.

Furthermore I would like to thank my internship supervisor Thijs Taminiau, from the BOM, for his support and endless patience. This also extends to the BOM in general, for making this research possible and supporting me during my internship.

Finally I want to thank all the respondents who took the time to participate in this research. It is much appreciated.

Enjoy reading.

Floris de Kort

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Abstract

Geopolitical disruptions have increased in frequency and severity in the last few years, with a recent example being the unprecedented Brexit; The United Kingdom leaving the European Union. As globalization increased, economies have become more interconnected and dependent through global production networks, value-chains, and finally foreign direct investment (FDI), of which the latter forms the main focus of this research. How well a specific region can deal with and recover from the impact of such geopolitical disruptions or shock effects is measured in the level of 'resilience.' This research focusses on the potential opportunities that this unique disruption offers on a regional level with regards to FDI, specifically the region of North-Brabant in The Netherlands. The concept of resilience in this instance is not used as a measurement of the economic 'shock' impact, but more as an underlying regional ambition. This results in the following research question: *How does Brexit affect FDI decisions and what are the opportunities for the province of North-Brabant to improve its competitive advantage?*

The research utilizes elements of several theoretical frameworks. For understanding and analysing how FDI changes as result of Brexit, Dunning's OLI-paradigm is used, which stands for: ownership advantages, location advantages and internalisation advantages (1980). Each of those is, to an extent, necessary for a firm to invest abroad. The locational aspect introduced by Dunning, is in this research further developed by applying elements of Porter's competitive advantages (1990) and the previously mentioned resilience concept. Two concepts of resilience literature are used, namely: adaptive capacity and inherent capabilities. The first correlates with the concept of Porter's 'government' and the latter correlates with both (basic and advanced) factor conditions and related & supporting industries. The government in this case is operationalized with the main tasks and objectives of investment promotion agencies (part of regional development agencies, in this case De Brabantse Ontwikkelingsmaatschappij (BOM)).

A qualitative methodological approach is used to identify the causal factors that influence FDI as a result of Brexit. The research used both primary (expert-interviews, firms-interviews) and secondary data (documents, scientific literature, news articles), to identify the previously mentioned motivations of firms to invest. This qualitative data was further supplemented with quantitative data from a dataset which consist of 126 firms that considered investing in North Brabant, resulting in a mixed-methods approach.

With regards to FDI related to Brabant, several top-sectors with regards to FDI could be identified, namely: Life-sciences & health (LSH), High-Tech systems & materials (including a high-tech automotive component (HTSM), Agri-food, logistics and to a lesser extent Chemicals. The main types of activities of the investment promotion agency are identified: Reactive acquisition, pr-active acquisition, invest relations and strategic acquisition. In total about 80% of investments related to the BOM were in the market access category (firms seeking access to the market through goods and services) and 20% in the technology access category (with focus on innovation, R&D and high-tech manufacturing).

The project identified several Brexit-related factors through several expert interviews, firm interviews and secondary sources like documents and scientific articles. The two main categories identified are market access and technology access. Within firms related to market access, the largest category in amount of firms, the main causal factors to consider an investment are uncertainty, tariffs, and most importantly non-tariff barriers. The main examples of non-tariff barriers are customs, rules of origin, red tape (including bureaucracy, VAT issues and product

certification issues) and problems related to licensing of products and services. All these barriers result in higher costs and increased lead times for firms that trade from the UK to the EU. The main causal factors for firms in the technology access category are uncertainty, the restricted movement of persons and the restricted access to international funding programmes, such as Horizon Europe. Both categories affect the competitiveness of the UK as a destination for FDI, and thus possibly have a structural long-term effect, which can be seen in the transfer of multiple headquarters from the UK to the EU. Foreign firms that wish to enter the European market will less likely do so from the UK. The factors mentioned above have a significant influence on the FDI dynamic and limits how firms can exploit their ownership advantages and to what degree they internalise their investments. The increase in lead times affects the logistical and marketing capacities of firms and in the case of perishable products such as in the Agri-food and Life sciences sectors, this is especially severe. The rules of origin criteria means that firms that source part of their supplies outside the UK and EU have smaller margins to work with, limiting their access to favoured inputs. The marketing capacity of firms in the service sector is at times limited due to licensing issues, for example in IT and the financial sector. The innovative capacity of firms is in some cases affected by the uncertainty regarding funding, access to talent as a result of the restricted movement of persons and to a lesser extent their intellectual property.

As a result of the issues mentioned, firms require a locational component. For North-Brabant a distinction is made between inherent capabilities and the adaptive capacity of the region. The inherent capability contains both basic and advanced conditions, which indicate how unique certain characteristics of the region are with regards to Brexit related FDI. Both basic and advanced conditions seem to play a significant role for firms. The access to the European market is, naturally, often the most important 'basic' locational advantage mentioned. This can be achieved by being anywhere in the EU, but the geographical position of North-Brabant and The Netherlands in general, near major economic centres, make this preferable. Other advanced locational motivations are the cultural similarities, innovation incentives and the access to EU funding, all of which are, however, not unique to the region. The geographical position is also linked to the more advanced factor of the logistics infrastructure, which is highly developed in the region and features sector specific logistical necessities for LSH, Chemicals and IT among others. The presence of several clusters, namely, LSH, High-Tech Systems & materials (including IT and high-tech automotive) and Agri-food are also advanced locational advantages, since these are all sectors that are in one or several ways affected by Brexit. The Agri-food and LSH sectors deal in (at times) perishable products and seek quick and secure supply chains, while the HTSM sector is affected in the increase in cost of materials and access to talent like engineers, who are available in the region. The presence of the well-developed logistics infrastructure and sector in combination with clusters in the previously mentioned sectors provide a competitive advantage. Finally, regarding the adaptive capacity to redeem the mentioned opportunities, certain actions for the investment promotion agency (IPA) are the most significant. The invest-relations/services are important for potential future expansions. Many firms, that as of right now have only investment in distribution or even outsourced their distribution and manufacturing (especially in the regional top-sectors), might consider future value-added or R&D related investments. Another important IPA activity is related to pro-active strategic acquisition, possibly in collaboration with the Netherland Foreign Investment Agency, which coordinates FDI-related activities on a national scale (NFIA). As there are specific relevant sectors for the region affected by Brexit, and as of now many of these are in the market access category, there is an opportunity to possibly seek out specific relevant firms and present tailor-made propositions. This could lead to a more resilient North-Brabant, from an FDI perspective.

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1. Introduction

The process of globalization has far-reaching effects on almost every aspect of society. The increase in interactions globally resulted in a growth in trade and an increase in exchange of ideas and culture (Kellner D., 2002). Economic globalization is "the increasing economic interdependence of national economies across the world through a rapid increase in cross-border movement of goods, services, technology, and capital" (Rakesh Mohan, 2009). This trend can be linked with the intensification of globally integrated production networks (GPN's), value chains (GPV's) and foreign direct investments (FDI) (Lammarino, 2018). This economic (and political) interdependence and integration is also visible in the European Union, which included the United Kingdom (UK).

Besides this economic, political, and cultural integration, the UK voted in June 2016 to leave the European Union, following a referendum in which 52% voted in favour to leaving the EU. Economic consequences can be noticed globally, in the EU, nationally and regionally. Brexit is unique since this is the first time an economy this large, the second largest in Europe, has departed from the single market of the EU.

The Netherlands, being in close proximity of the UK, both geographically as economically, is bound to be affected in one way or another, with sectors like trade and industry, education and research and government finances (Rekenkamer, 2019). Regions like the Randstad, which includes Amsterdam and Rotterdam are obvious regions that could be affected, both positively as negatively. A policy paper by the Centraal Planbureau (Bollen, J.C.et al. 2016) mentions that a 'hard' Brexit might affect the Netherlands more than most other countries in the European Union, especially with regards to trade. This is also the result of a study by Noja et al. (2020), mentioning The Netherlands as being in the highest impact category due to the geographic proximity, tight trade, and investment & financial relations. While effects for the national economy are certain, it is uncertain what this will mean on a regional (provincial) level, for example North-Brabant. The province of North-Brabant is the thirds largest province of the Netherlands economically and thus highly relevant to analyse regarding the possible opportunities regarding the impact on FDI. The extent to which a region will be affected by and respond to different kinds of (economic) shock effects, in this case Brexit, can be measured in the resilience of a region (Pike, Dawley and Tomaney, 2010).

Since Brexit is considered a geopolitical disruption and economic shock effect, the viewpoint of economic resilience is highly relevant (Roscoe et al., 2020) . This disruption has a significant impact on trade, but also on investment flows as this often correlates with trade and provide tax income, employment, and technology spill overs among others (Denisia, 2010). The Covid-19 pandemic can also be considered a shock effect, with an even larger economic impact, but Brexit might affect different aspects of the economy. In a recent report with regards to the Covid-19 pandemic, the province of North-Brabant was considered the most resilient on a national level, with a minimal shrinkage with regards to the regional economy (Aalders & Raspe, 2020). FDI, being one of the most prominent features of the world economy that is strongly linked to disruptions in trade and production, is a vital element in retaining a resilient economy. This research will identify how FDI is affected as a result of Brexit, which factors affect this, and finally in light of the underlying ambition of resilience, what this means for the FDI related opportunities for North-Brabant.

1.2 Relevance

Scientific

Within the field of economic geography, the geographical impact of different 'shock effects' and geopolitical disruptions has recently become more prominent (Martin & Gardiner, 2019). In this case the notion of resilience has been used to "conceptualise and analyse how regions and cities react to and recover from disturbances and disruptions" (Martin & Gardiner, 2019). The scientific relevance in this case will be furthering the academic research on resilience, from a geographical aspect in particular. The paper *"Resilience, adaptation and adaptability"* approaches the concept of resilience from an evolutionary geographic perspective (Pike et al., 2010). Instead of using an evolutionary approach as is the case in the paper by R. Boschma (2015), a regional economic and behavioural perspective will be used. The scientific resilience literature will be compared to The Porter Diamond (1990) of competitive advantage, which in this case will be applied to a regional scale instead of a traditional national scale. The regional appliance of the Diamond Model was also done by Cui et al. (2020), but without any comparison from a resilience perspective. A recent essay by F. Van Oort (2020) explores the concept of resilience on the region of Oost- Nederland with regards to both Brexit as well as the Covid-19 epidemic, and argues that both positive as well as negative effects might be possible and depend on the possibility to adapt as well as absorb.

The concepts of adaptive and inherent capability will be used to analyse the economic resilience with regards to the business climate of a region and how this relates to possible FDI. Both concepts were used by Palekiene et al. (2015) and more recently by Dormady et al. (2022), but not as of yet in this economic context. An analysis of the impact of FDI and the general behaviour of companies during economic shock events with regards to the economic resilience has been limited since the previous research mostly mentioned general overview of the impact on trade and sectors. Since recent studies have mostly been solely quantitative in approach (Martin, 2019), a qualitative approach to an economic shock effect, could discover new elements previously unknown. Furthermore, the role of human agency in resilience studies is generally underdeveloped, as noted by Bristow & Healy (2020). In the case of this research, the role human agency is vital through the application of the adaptive capacity of the region, in the form of a regional development agency.

The OLI-paradigm of Dunning (1979) will be applied in understanding how FDI flows are affected. The appliance of this paradigm in the context of a geopolitical disruption is only found once in the scientific literature. Another novel aspect is the larger scope of incorporating investments outside the manufacturing industry while also incorporating findings about SME investments instead of merely MNE investments. A recent study by Moradlou et al. (2021) also attempts to identify certain factors influencing FDI decision as a result of Brexit using elements of Dunning's FDI theory (1979) but limits the scope to the manufacturing industry. Furthermore, most of the available Brexit literature, especially with regards to FDI, has been published or researched before an official trade deal had been reached and put in effect, focussing more on different scenario's (Dhingra et al. 2016, Dhingra et al. 2018, McGrattan et al. 2020, Welfens et al. 2018, Driffield et al. 2019). A more locational perspective with regards to FDI has been applied in the previously mentioned research by Moradlau et a. (2021) and by Cieslik et al (2021), both published after the start of this research. The latter research focusses solely on Japanese firms, however, both use data of location decisions of firms as a result of the Brexit announcement, not after the final agreement. This makes the thesis scientifically relevant as it also incorporates data of firms who are considering investing or have

invested after the agreement has been reached while also employing different forms of data collection and beyond the merely manufacturing & production perspective.

Societal

The research will be societally relevant since an extensive study on possible economic effects for the region might help for further mitigating possible negative economic repercussions or maybe even help stimulate economic activity, the general notion of economic resilience and main ambition of the thesis as mentioned before, Brexit is an economic and political shock effect, with possibly far-reaching repercussions. Since the trade agreement has only recently been completed its impact on several aspects of society are still unknown. Its potential impact or opportunity on a regional economic level area still unclear and this thesis could give valuable insight in how such an event influence this. Depending on the outcome, Brexit could even be considered an opportunity, adding to the possible value of the research.

This is naturally helpful for the province of North-Brabant as this could lead to a more refined strategy with regards to economic shock effects and this could lead to a template for other regional development agencies or more specifically Investment promotion Agencies (IPA). Furthermore, this research could be helpful for not only a regional level, but also national, since the Netherlands Foreign Investment agency is also closely related to these development agencies. A better understanding of the effects on FDI can lead to different national policies. The importance of FDI with regards to regional development cannot be underestimated and is an essential part of economic performance and job-creation (Moran, 2012).

The combination of an explorative research on the effects of Brexit on FDI and a regional component from a resilience perspective make the research highly relevant.

1.3 Research objective & questions

The main research question is:

How does Brexit affect FDI decisions and what are the opportunities for the province of North-Brabant to improve its competitive advantage?

To answer this main research question, the following sub-questions are necessary:

Sub-question 1

What are the strengths of North-Brabant as a location for FDI and what is the respective role of the regional development agency?

Sub-question 2

How does Brexit affect FDI decisions and which factors influence these decisions?

Sub-question 3

How can the province of North-Brabant improve its competitive advantage and redeem the FDI-related opportunities as a result of Brexit?

Research objective: understanding how FDI is affected as a result of Brexit by identifying which factors play a role in the FDI decisions of firms and finally what the opportunities are for North-Brabant from an FDI perspective.

2. Theoretical Framework & Context

In this section the most important theories will be briefly summarized and their relation to the research objective will be further elaborated on, concluding in a conceptual model. It is important to note that some of the theories and frameworks mentioned below are not necessarily being 'tested,' but rather serve as a means to grasp and comprehend a complex case such as Brexit better. But first it is necessary to elaborate on the context, namely that of Brexit, in which these theories must be considered. FDI is one of the central concepts of the research and will thus be explored from a theoretical perspective, specifically by Dunning (1988) to better understand and apply it. The regional aspect of the province will be further explored from the viewpoint of competitive advantages by Porter (1990). This regional aspect will finally further be developed using the concept of economic resilience (Martin, 2012).

2.1 Brexit in context

Before focussing on the effects on FDI, some macro-economic context is necessary to further understand the Brexit phenomenon.

2.1.1 Trade Agreements

The years of negotiating after the referendum in which the United Kingdom decided to withdraw from the European Union, resulted in a free trade agreement between the UK and the EU, called the EU–UK Trade and Cooperation Agreement. It is important to consider this in perspective.

Generally, trade agreements are considered a form of "economic collaboration to achieve specific and welfare goals", a dimension which can be on a regional scale between states that are in geographical proximity to each other (Dicken, 2015). Most nations are part of the World Trade Organization, an intergovernmental organization that regulates and facilitates international trade between nations by removing some barriers that might hinder trade activity (Narlikar, 2005). A regional trade agreement (RTA) develops on that notion by providing preferential access to their markets by, for example tariff reductions (Dicken, 2015). The most important types of trade agreements that can lead to regional (and political) integration are the *Free trade area, Customs Union, Common market* and *Economic union,* with each following agreement, increasing the integration and removing further trade barriers. The European Union (EU) is unique in this regard as it is currently the only case in the world of this highest form of economic integration where there is this internationally controlled harmonization of economic policies (Dicken, 2015).
As mentioned by Belassa (1967, p.3), trade agreements can lead to both trade creation and trade diversion. Where trade creation can occur when countries within the trade union, trade more with each other "either because of the reduction of intra-area tariffs has created new trade", trade can in this case replace home production (Dicken, 2015). Trade diversion can occur when trade is diverted from a more efficient exporter towards a less efficient one as a result of a trade agreement (Magee, 2008). The lower tariff results in a cheaper cost, even though the product is less efficiently produced. The general interconnectedness of trade and FDI as mentioned by Aizenman & Noy (2006) makes is clear that general trade flows, and how these might be affected by trade agreements, also affect FDI flows. Since Brexit resulted in a free trade agreement, it is interesting what the effect on FDI flows will be. This is elaborated on by Dicken (2015, p.205), who mentions that "regional trading blocs also

have a major influence on flows of investment by TNC's". The concepts of creation and diversion as a result of trade related regional integration can also be applied to investments. Diversion in this case means "the potential realignment of organizational structures and value-adding activities to reflect a regional rather than a strictly national market," and thus diverts investment from one location to another. This phenomenon is even more relevant in the case of Brexit: normally a trade agreement changes the interaction between nations and related industries. Since this creation trade falls under the facilitation of the WTO. The uniqueness in this case is that the status quo was a full economic union instead of just a WTO arrangement.

2.1.2 Tangled Webs

The impact of the trade agreement has an impact on supply chains and global production networks Since many logistical processes are likely to be affected, they are possibly essential in understanding FDI flows. The GPN is defined as "the circuit of interconnected functions, operations and transactions through which a specific commodity, good or service is produced, distributed and consumed" (Dicken, 2015). It is to be noted that non-physical commodities also play a significant role and that they are less tangible. Financial services for example are also produced in a GPN and are in the case of Brexit just as vulnerable as more physical characteristics of the network. Taxes as well, can have far reached effects on complex production and value chains, something which became apparent at the start of Brexit negotiations. In this case the GPN and related concepts serve more as an addition to the vocabulary and context of the issue.
With the rise of multinational corporations, the "complexity of supply and value chains for manufacturing and services has grown" (Lipsey & Sjöholm, 2005). Global value chains have "enhanced the significance of FDI as a critical engine of trade and development.

2.2 FDI

A foreign direct investment (FDI) is "an investment made by a firm or individual in one country into business interests located in another country" (Chen, 2020). Although FDI is often considered positive for the economy it might in fact have a negative effect in some cases since the diversification of the economy might decrease the effectiveness of the comparative advantage of a region (Dunning, 1994). In general, however, positive effects such as economic growth, direct job-creation and through linkages with different service providers, often outweigh the negatives.

2.2.1 Eclectic OLI – Paradigm

To understand why firms make the decision to make a foreign investment into another country, it is essential to look at the different theories on the subject. Multiple FDI theories have been formulated over the years: some of the most influential being the production cycle theory of Vernon to the Internalisation theory from Hymer (Denisia, 2010). The internalisation theory proved particularly import to another theory: The Eclectic Paradigm. This paradigm proposed by Dunning (1980) which, as the name suggests, lends aspects of previous FDI theories, like the internalisation theory, combines these into a new paradigm in an attempt to explain different kinds of FDI flows by identifying the criteria necessary for an investment. The OLI-paradigm was initially developed to

explain location-based decisions of manufacturing firms but has since then been applied to other industry sectors and activities as well (Pitelis, 2007).

The OLI-model stands for the interaction between the ownership advantages, location advantage and internalization advantage, as these three conditions have to be met in order for a firm to invest abroad (Dunning, 1998). Without ownership advantages over foreign competitors', firms wouldn't need to invest abroad and would likely remain domestic. If there are advantages, then the location should provide an extra advantage. If this is not the case, then exporting would likely be a better alternative. If there are locational advantages for firms that are not redeemable when internalising these investments, outsourcing or licensing is an option. If three of these criteria are met, actual FDI takes place (Denisia,2010; Dunning, 2001).

The ownership advantage of firms refers to the competitive advantages of the enterprises seeking to engage in FDI, which are specific or unique to the firms (Dunning, 2000). Examples of these advantages are the size and extent of production, extent to which firm is innovative or marketing-oriented, values security and stability of supply chain, and importance of favoured access to inputs and markets. Locational attractions refer to the alternative countries or regions, for undertaking the value adding activities of multinational enterprises. (Dunning, 1998;2000). The internalisation advantage of firms refers to what extent firms internalise their investment by keeping certain advantages in-house or choose to collaborate with other firms by outsourcing parts of their activities. This is determined by the extent to which vertical or horizontal integration is possible and desirable, organizational and control procedures of firms and their attitude towards subcontracting, licensing, and franchising, among others (Dunning, 1988; Dunning, 2000). The last necessity for a firm to engage in FDI is for there to be locational advantages to performing specific function within another region or country Chen, 2020). Advantages can include saving in tariffs, transportation time and costs of intermediate and final goods, circumventing non-tariff barriers (Dunning, 1988; Ruhl, 2016). While other attractive locational aspects can include the physical and psychic distance between countries, tax incentives and an advantageous geographical position are often decisive (Dunning, 1988).

The mix between three theories show that the OLI parameters are different for each case and scenario. It is this flexibility of the theory that makes it relevant to understand an unusual case such as Brexit, where there is often a combination of factors in play. In the case of the OLI- framework, each advantage is a prerequisite for making an FDI related decision as a firm. If a company doesn't have an ownership specific advantage over any other company, it wouldn't make sense to invest abroad. The locations specific advantages are especially significant for the research since the effect of Brexit on the regional level will be analysed. The locational advantages with regards to the specific region of North-Brabant will be further developed with the help of both the Porter Diamond and resilience literature.

In addition to the OLI framework, Dunning (1998) also identifies four types of FDI based on the motivation of the multinational enterprise. These are:

Market Access	*Natural resource-seeking*: The availability, cost, and quality of resources, as well as processing and marketing: infrastructural development: availability of joint venture partners.
	Market seeking: Size, growth of domestic and regional markets, cost of labour, infrastructure quality, institutional competence, agglomeration economies and service support, macro-economic policies of host government
Technology Access	*Efficiency seeking*: Production costs, skilled labour, competitiveness quality of institutions, economic policies innovation development
	Strategic asset-seeking: Availability of knowledge related assets, access to different assets of foreign firms or institutions.

In this thesis, a distinction is made between firms related to market access and technology access instead of the 4 motivations mentioned by Dunning (1998). The former, firms related to 'market accesses relate to natural resource-seeking and market seeking firms and the latter, firms related to technology access, relate to efficiency seeking and strategic asset seeking firms.

2.2.2 Investment promotion

Building on the work of IFC (1997), P. Christodoulou (1996), S. Young et al. (1994) and P. Dicken (1990), investment promotion can be divided into four main areas: *Strategy and organization* (setting the national policy context; setting objectives; structure of investment promotion; competitive positioning; sector targeting strategy). *Lead generation* which consists of marketing and company targeting. *Facilitation,* project handling. And finally, *investment services,* related to after care and product improvement, monitoring and evaluation.

2.3 Regional impact

Even though the location advantages (L) by Dunning (1973) mention the advantages a firm can acquire if an investment abroad will be made and the different goals that can be met, it doesn't explain why a certain region can be competitive, and what this means for the development of a region. Dunning's theory is more firm centric, but also mentions specific locational assets that are vital in FDI decisions (1988). The impact of a shock event like Brexit thus will likely have an effect on FDI decisions and intensity, but consequently also on a regional level. Besides using Dunning (1988) as a starting point, two other theoretical perspectives serve as an inspiration for looking at the

regional element: Porter's competitive advantage theory (1990) and the more recent theoretical perspective on economic resilience (Martin, 2015), mostly as a result of different type of shock events, in this case Brexit. This will conclude with a comparison between these two theories with regards to the regional effects on North-Brabant as a province.

2.3.1 Porter's Competitive Advantages

The Porter Diamond (1990), of competitive advantage, was initially conceived to determine the competitiveness of the nation-states, but has since then also been for used for cities, business clusters and for determining regional competitiveness (Cui, 2020). The so-called diamond model is helpful since it allows for the mapping of multiple interconnected factors that contribute to competitiveness of a region. In this case the factor conditions are the resources (human, financial) and infrastructure available to a firm. The demand condition refers to the size, growth, and demand of the economy (Cui, 2020). The related and supporting industries are in this case for example logistical facilitation and distribution of products. The firm rivalry and strategy are harder to determine on a regional level and are also dependent on the role of the government. In this case the BOM is partially linked to governmental functions, in the sense that choices are made which companies will be facilitated. The business climate "affects the activity throughout the economy, and incentives to invest," and is thus highly relevant with regards to FDI (Delthier et al., 2011). A healthy business climate attracts companies and entrepreneurs, which are essential for economic growth and in this way stimulates the regional economy by attracting investments (Wennekers & Thurik, 1999). FDI is consequently also a driving force for economic development and thus tied to the business climate and regional economy, determining the competitiveness of the region (Moran, 2012).
The 4 main variables that affect such a climate are the infrastructure, access to finance, absence of corruption and crime and the regulatory framework like competition policies (Delthier, 2011).

Usage of the framework will be done with some criticism in mind. The contextual use of the model is in this case different than being purely a story on national competitive advantages. This national element perhaps ignores the way states compete differs from the way firms compete (Kurgman, 1991). More importantly the role of FDI in the framework is highly debatable. According to Porter (1990) only outward FDI is a sign of competitive strength while inward investment indicates that "the process of competitive upgrading is not entirely healthy". This statement is disproved by Rugman and D'Cruz (1993), who found that in Canada for example, foreign firms carry out just as much R&D activities as domestic firms and export as much as they import. Finally, the 4 main factors in the framework are clearly defined and their interconnected relations well elaborated. The 2 additional factors of 'government' and 'chance' are not as developed. In the case of Brexit, the 'chance' factor probably has a significant impact. This can make it even harder to identify anything significant within the already complex model (Reich, 1990).
Porter makes the distinction between natural factor conditions and created factor conditions (1990). According to Porter, created factor conditions are more valuable, since these can actually be influenced whereas natural factor conditions are often a given.

2.3.2 Resilience

Resilience is a nation that seeks " to capture the differential and uneven ability of places to react, respond and cope with uncertain, volatile and rapid change" (Pike et al. 2010). It "should be a key topic in the study of dynamics of spatial economic systems" in particular how places react to economic shock events (Martin, 2011). In this case Brexit.
The concept of resilience is often associated with the perspective of evolutionary economic geography: Evolutionary Economic Geography uses "concepts and ideas from evolutionary economics to understand the evolution of cities, regions, and other economic systems" often over a longer period of time (Bosch et al. 2006). Within the theoretical concept of resilience, multiple sub-concepts can be derived, for example adaptation, adaptability, and absorption. Adaptation concerns changing within preconceived paths (Boschma, 2015). It can lead to an "increasing specialization of resources and a pronounced preference for innovations that reproduce existing structures" (Grabher, 1993). Adaptability is "the geographically differentiated capacity of loosely and weakly connected social agents in places to interpret, frame and effect multiple evolutionary trajectories over time" (Pike et al.,2010). The capacity to act, is in this case essential to understanding this concept in relation to economic resilience and to be flexible regarding rapidly changing situations and developing new pathways (Boschma, 2015).
Two types of structural factors shaping regional resilience are defined according to Martin (2012), namely inherent capabilities and adaptive capacity. Inherent capabilities are defined as "region's economic structure, innovation system, skill base, competitiveness level prior to the shock" and adaptive capacity as "the mix of actions and decisions are needful for accelerating regional resumption." These two structural factors and corresponding definitions will be used further in this research.

2.4 Merging concepts

Although both the Diamond Framework and Resilience related concepts result in different insights, approaches and vocabulary, there are multiple resemblances. The two factors shaping structural regional resilience, namely the inherent and adaptive capabilities will be taken as a starting point.
It is clear that the barriers as a result of Brexit have implications for both trade and investments. Through the OLI-paradigm it will be made clear in what way the nature of the FDI changes and for what reason, however, this phenomena does not clarify the impact on specific regions. The merging of several theoretical insights leads to the main factors that influence FDI flows specifically in North-Brabant.

2.4.1 Inherent capabilities

The inherent capabilities of a region largely resemble the factor conditions mentioned by Porter. These can be categorised in both natural factor conditions and created factor conditions, generally considered 'hard' location factors (Eickelpasch, 2007). Natural factor conditions can be considered the natural resources and the geographical advantages in relation to other markets of a region. Porter, however, emphasizes the importance of created factor conditions (human resources) such as skilled labour, a scientific knowledge base and good infrastructure (Porter, 1990). In the case of North-Brabant, the geographical advantage of being situated in the 'blue banana' of Europe, close to

the main economic activity of the continent could lead to more investments. This geographical advantage is further exploited by the qualitative logistical infrastructure, providing large volumes of goods of foreign companies access to the domestic and (more importantly) European market.
Besides geography and infrastructure, innovation and a skill-based labour force are mandatory for long-term, and in a sense structural, competitiveness. The specialization in certain industries and activities can lead to a region which excels in a few sectors, making it more competitive. It can help if these activities are related to knowledge intensive practices and knowledge institutions such as universities, both related to a having a highly skilled and educated workforce.
This knowledge creation is further amplified by related and supporting industries, creating a market in which companies can excel and continue to grow. This might not only benefit domestic companies, but benefits and entire region, also with regards to relevant FDI (Nonaka et al., 2015).

2.4.2 Adaptive capabilities

As previously mentioned, the adaptive capabilities of a region are "the mix of actions and decisions needful for accelerating regional resumption," after a certain "shock." This definition closely resembles the role of the government as a "catalyst and challenger" (Porter, 1990). A government should for example focus on specialized factor creations such as infrastructure and education, partially encompassing the factor conditions mentioned earlier. The government has an indirect impact on the competitiveness of a region by stimulating certain activities related to FDI. Another role is that of the facilitation of FDI and attracting new firms. These activities resemble that of Investment Promotion Agencies (IPA) but often these tasks are also part of regional development agencies, which not only promote but facilitate as well. Building on the work of IFC (1997), P. Christodoulou (1996), S. Young et al. (1994) and P. Dicken (1990), investment promotion can be divided into four main areas: strategy and organization, lead generation, facilitation, and investment services. The BOM can be considered both a regional development agency, but in the case of this research also an investment promotion agency. The extent in which the BOM can redeem or create opportunities with regards to the changing FDI decisions as a result of Brexit can be determined by the four previously mentioned factors of investment promotion (Loewendahl, 2001) and finally other stakeholders

2.4.3 Soft Conditions

Eickelpasch et al. (2007) mention that besides the 'hard' location factors mentioned in 2.4.1, 'soft' location factors often play a significant role in the performance and innovation of companies. Dunning (2003) also mentions this factor as important in FDI decisions. Although the role of the government can be considered a soft indirect factor, it actively participates in the promotion and facilitation of FDI. With regards to Brexit, cultural aspects are important. The fact that people can speak the same language mitigates both the cultural and practical distance. This factor is even more important in the more innovation and R&D oriented sectors. Another soft condition that relates to this is the quality of life (Eickelpasch, 2007), which is considered important for especially highly skilled labourers, since they often have a chance to work anywhere and thus have more leverage. These factors are of course connected to both the inherent capabilities of the region but also to the adaptive ones since they can promote and present these 'intangible' assets to foreign firms and further facilitate improvement.

2.5 Conceptual Model

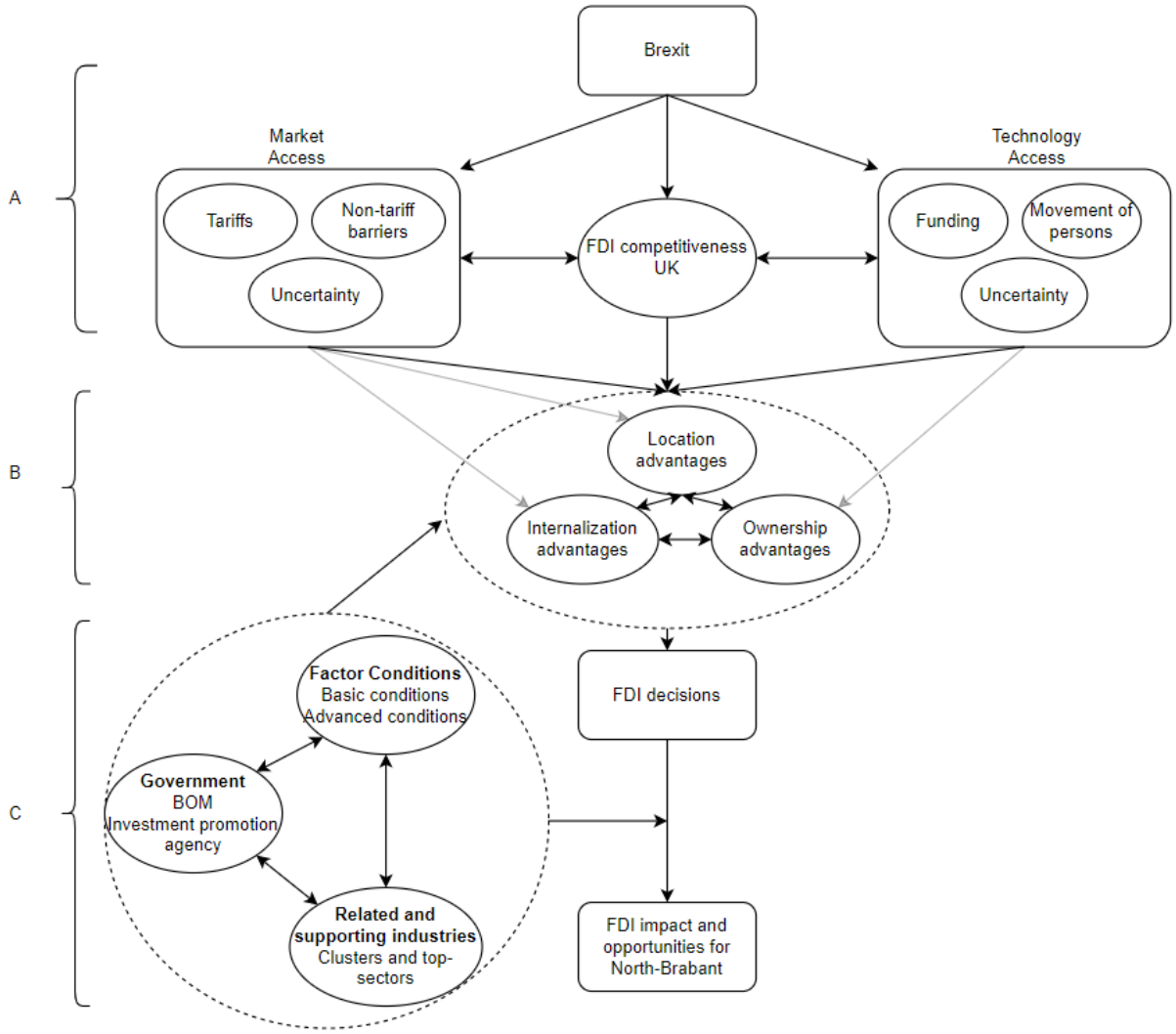

Figure1: Conceptual model

Both the OLI-paradigm and the FDI motivations mentioned by Dunning (1998) serve as means to both understand FDI flows and decisions and as a way to categorise several factors that might play a role. The previously mentioned distinction of market access and technology access is visualised in the A section of the conceptual model. Within these categories the specific causal factors that influence FDI decisions as a result of Brexit are identified. Both categories have an influence on the UK as a location for FDI and this potential impact on FDI competitiveness in turn has an influence on investments in both categories, hence the reciprocal arrows.
These three Brexit-factors have an effect on the OLI dynamic of firms as can be seen in section B. These OLI dynamic serves as a way to better understand the effect of Brexit (which is located on top of the A section) on the FDI dynamic and consequentially FDI decisions (located in section C). As the three OLI factors are interconnected and all in one form or another relevant in each individual investment, all three arrows from the causal Brexit factors are pointed towards the entire dynamic, visualized by the pointed circle around the OLI factors. However, the transparent arrows from the two main Brexit factors to specific OLI advantages are present to indicate a slightly more significant link between the concerning categories (market and technology) and FDI factors (OLI).

This affected FDI dynamic also interacts with the regional level; The “government”, “factors conditions”, and “related and supporting industries” boxes inspired by Porter (1990), represent the regional aspect of North-Brabant through reciprocal arrows and a dotted circle. Furthermore, the “government” node represents the adaptive capacity of the region and the “factors conditions” and “related industries” the inherent capabilities. As a whole, these elements represent and affect the opportunities, impact and amount of investments into the region.

This general description allows for more specific explanation of how the model relates the sub-questions. The first sub-question, regarding North-Brabant as a location for FDI, is represented through the arrow from the three Porter elements to the OLI dynamic. These regional competitive advantages interact with the changing FDI dynamic. The role of the regional development agency in this interaction is visualized in the government node. The second sub-question is related to the effects of Brexit on FDI. First the identified causal factors are split between the previously mentioned categories of market and technology access, with a separate box indicating the competitiveness of the UK for FDI. These causal factors then influences the FDI dynamics of firms, visualized and theorized through the OLI-dynamic. This leads to an identification of what Brexit means for FDI decisions. The final research question combines this Brexit-related FDI with the regional components of Brabant, encircled with a dotted line, and with an arrow to the effect of FDI decisions to FDI opportunities.

3. Methodology & Operationalisation

The objective of the research is to explore how Brexit affects inward FDI and which opportunities this can offer for the province of North Brabant. This chapter focusses on the methodological approach of the research and the operationalisation. First the type of research approach will be identified that is considered most suitable and appropriate concerning the main research question and which specific methods are most applicable and relevant. After this the different types of data collection will be discussed, together with the projected scope and limitations that these bring and how these provide valid and reliable scientific results. Finally, the different sub questions will be presented, visualised in a table, and consequently operationalised with the previously discussed data collection and research methods.

3.1 Research approach

The research is for a large part exploratory in nature on a relatively recent topic. A qualitative approach seemed at first to be the most logical choice as "*qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem* (Creswell, 2011). The research aims to understand how FDI is affected and thus several factors that influence FDI as a result of Brexit have to be identified first, the exploratory aspect of qualitative research is more suited in this case (Barbour, 2008). This made the choice of a quantitative approach less likely as this approach is best suited if one wants to test or confirm certain theories or assumptions (Becker, 2021). At the beginning of the research, it was also considered unlikely to have sufficient data available for this approach to work. At this point a Qualitative Comparative Analysis was briefly considered, as this requires less data to work than a quantitative approach, but the lack of variables and the pre-determined factors seemed not optimal. Finally a mixed-methods approach was chosen a little bit later in the process, which can "*offer a deeper understanding of the research problem"* (Ivankova et al., 2009). Although qualitative in nature, a quantitative dataset was used to supplement the data.

3.2 Data collection

This section discusses the data that has been collected, why these forms of data were used and how this was analysed. For this research news articles, grey and scientific literature, interviews, webinars, and a dataset of 126 firms were used.

3.2.1 Literature

Both grey and scientific literature was used to get a better understanding of the influence of Brexit on both trade and FDI. As the trade agreement had only just been reached at the start of the research, there were many uncertainties and often conflicting new reports about the severity of the problems caused. In this beginning stage news articles were helpful to get a better grasp the topic and notice the most obvious problems that firms were facing. Besides this, multiple scientific articles were consulted, all of which at the beginning of the research were written before a final trade agreement had been reached. Nonetheless these articles were helpful in understanding the possible effects, not only on FDI directly, but also on the larger macro-economic scale, for example regarding trade and industry sectors. Furthermore, as there were already noticeable effects after the 2016 Brexit announcement, there had been several analyses already on FDI flows and most significant

factors (Dhingra et al. 2016, Dhingra et al. 2018, McGrattan et al. 2020, Welfens et al. 2018, Driffield et al. 2019).

3.2.2 Interviews and respondent collection

In-depth *"semi structured interview data constitutes the backbone of much qualitative research"* (Campbell et al. 2013). In total, 15 interviews have been held: 10 with experts and 5 with firms. All interviews were done in a semi-structured way in which the main concepts and topics were predetermined, but the order of questioning was open. This made it easier to let the interview flow more naturally while still covering the necessary topics and also facilitating the mentioning of new topics, essential for exploratory research. A separate interview guide for both experts and firms were developed, while slightly editing both along the way. In addition to this, notes of conversations at the internship about North-Brabant as a location of FDI and their perspectives on Brexit were also used. Considering the Covid-19 pandemic, all interviews were conducted in a videocall format.

Expert interviews

Several of the respondents were chosen at the start of the research in agreement with the internship, as these were seen as highly relevant and knowledgeable respondents, each with personal professional experiences regarding Brexit and FDI. The respondents first identified were someone from the NFIA, the NBCC, the Department for international Trade, Dutch Customs and Nederland Distributieland (NDL). This approach can be considered a form of purposive sampling (Etikan et al., 2016).

The other experts were contacted and identified only after some of the first few interviews were held. The snowball method (Naderifar, 2017) was partially used by asking respondent if they knew more potentially relevant respondents themselves and this resulted in an additional interviews with the NFIA, the KvK and an investment consultant.

The degree to which the respondents were relevant to the whole extent of the research did vary. The interviews with the NFIA were useful for both the identification of Brexit related FDI factors, how these affected FDI and industry sectors, naming important locational aspects and finally relevant in their view on the adaptive capacity as they are also a stakeholder and collaborator of the regional development agencies. The NBCC, The Department for International Trade, NDL and Torbay Intelligence all have in common that these are expert that interact and give professional advice to firms, from both a trade and investment perspective. These parties also occasionally collaborate with the regional development agencies. The Kvk, Dutch Customs and the TU Eindhoven, each provided professional knowledge on more specific parts of the research and to clarify certain aspects: in the case of the KvK and customs, technicalities for importing and exporting and for the TU more specifically about the funding aspect as a result of Brexit.

Firm interviews

Although most of the expert interviews were useful for identifying factors and more general factors related to Brexit, the individual experiences of firms affected by this disruption give a new dimension to how FDI is affected, especially in how the O and I advantage relate to this as these can be more difficult to generalise and can differ for each firm. Besides this, each personal experience of the firms concerning the regional development agency is valuable in identifying the key adaptive capacities.

At first the plan of operation was to interview firms from as many different industry sectors and activities as possible. Ideally from all of the top-sectors of North-Brabant. In practice this proved to be rather difficult, as the choice of firms was limited to firms that were at that moment being in the

process of completing an investment into North-Brabant while being facilitated by the BOM. These firms were easier to approach and more likely to co-operate than firms who were not as advanced in their process to invest. Finally, at least some diversity in industry sectors and activities was reached, although unfortunately missing a more technology access related firm in R&D activities, a MNE and a firm from the LSH sector. A firm meeting all those criteria had to cancel at the last time.

3.3.3 Dataset

In addition to the interviews and literature, a dataset of 126 firms was used. This dataset consisted of firms that had in any point in time considered investing into North-Brabant as a result of Brexit, which is why it was available through the internship. The goal of the dataset was to supplement and triangulate findings from the qualitative part of the research. Especially as the number of firm interviews seemed limited, the decision was made to incorporate this into the thesis and analysis at a later stage. A few categories like the industry sector, country of origin and type of investment, were available for every firm, besides the fact that all of the firms were considered Brexit related. The description of Brexit specific factors for influencing their decision to invest were available for only a limited number of firms. This started a time-consuming process of analysing and summarising the written interaction history, which spanned from 1 to 20 possibly relevant interactions, of all the 126 firms available. The dataset was used both as a word document (to be able to analyse in Atlas.Ti) and as an excel spreadsheet.

As the amount of relevant information per firm varied dramatically, the most difficult part was attempting to operationalize all the firms in ownership advantages and internalization advantages. Only one category per firm was possible in order to analyse the spreadsheet. For some firms a category had to be added while having lacking data, at times making a decision based on the type of investment, sector and Brexit related factors.

Expert-interviews	
Organisation	**Function**
Netherlands Foreign Investment Agency	Executive Director
Netherlands Foreign Investment Agency	Marketing & Communications
Netherlands Foreign Investment Agency	Project manager (LSH IT, Logistics)
Netherlands British Chamber of Commerce (NBCC)	Executive Director Projects & Services
Department for International Trade Netherlands	Head of Trade
Kamer van Koophandel (KvK)	Advisor entrepeneurial support
Dutch Customs	Communication
Nederland Distributieland (NDL)	Manager Business Relations & Development Europe
Torbay Intelligence	Entrepreneur/ Consultant
TU Eindhoven	Subsidy Advisor
Firm-interviews	
Firm	**Sector and activity**
Logistics Service Provider (3pl)	Logistics Distribution/Services
Ink Production Company	Engineering/Chemicals Manufacturing/distribution
Furniture supplier	E-commerce Distribution
Aromatics supplier	Agri-Food/ Chemicals Distribution
Engineering service provider	Engineering/High-Tech Manufacturing/Services

Table 1: Respondents

Sub-questions	Data collection
What are the strengths of North-Brabant as a location for FDI and what is the respective role of the regional development agency?	Documents, Literature, Written notes
How does Brexit affect FDI decisions and which factors influence these decisions?	Documents, News articles, Literature, semi-structured expert and firm interviews, dataset
How can the province of North-Brabant improve its competitive advantage and redeem the FDI-related opportunities as a result of Brexit?	Documents, Literature, semi-structured expert and firm interviews, dataset

Table 2: Questions and data collection

3.3 Data analysis

Atlas.Ti was used for analysing the data from both literature, interviews, and the dataset. Atlas.Ti is a qualitative data analysis tool, often used in the social science disciplines (Hwang, 2008). All sixteen interviews were fully transcribed in addition to additional research notes of other conversations and attended webinars The dataset was converted into a word file to be able to code in Atlas.Ti as well.

Atlas.Ti's coding ability works well in combination with the chosen research approach as the labelling, adding memos and combing of different codes and labels are closely related to the different qualitative practices. Coding by itself is considered a core process of a qualitative approach (Bryantz et al., 2007). The three steps that were made in the coding process followed that of Creswell (2013), namely open coding, axial coding and selective coding.

Open coding was used throughout the research, but mainly in the first few months. This resulted in an overwhelming number of codes, as clear structure had yet to emerge. Coding of different documents and studies provided a lot of the initial data, but this led to questions as to how relevant some of the coded material was for an FDI analysis. At this stage, the first steps of axial coding were done in an attempt to categorize the codes. Axial coding is the second step in the coding process and aims to provide insight in the specific coding categories and how these are connected (Creswell, 2013). The axial coding process was accelerated after multiple interviews were held, as these helped to bring structure in the categorization. This was also the most difficult process of the coding, which continued until the end of the research, as the relation between the codes and formation of causal factors and categories were constantly revised. The final step of coding was the forming of the two main categories (market access and technology access) in which the axial codes were placed in a process similar to that of selective coding in which the relation of the coding categories is presented (Creswell, 2013).

3.4 Validity and reliability

Reliability and validity are "*ways of demonstrating and communicating the rigour of research processes and the trustworthiness of research findings" (*Roberts, 2006). Reliability is related to the precision of the result of the research and if this is measured consistently, *"since inconsistent results undermine the strength of research findings"* (Fitzner, 2007). Each step in the research should be made operational (Yin, 2009). Reliability can be difficult to achieve when using qualitative methods such as interviews, because it is harder to achieve consistent results (Yin, 2009). This was also apparent in the research, where not every respondent was related to every part of the research and topic. Triangulation, "*a way of collecting and processing information by using different operationalizations, data sources, researchers or methods,"* was an import part of the research. This

was employed by using varying types of respondents (experts and firms), existing information (literature, documents, news articles) and finally a quantitative dataset.

This triangulation is related to the internal validity of the research, which refers to the certainty of a cause-effect relationship; in this case between Brexit and FDI (Vennix, 2011). External validity refers to the extent to which results can be generalized. A reasonable external validity is to be expected as experts were interviewed who interact with many firms, as well as the fact that an extensive dataset was used. The fact that the amount of interviews with firms is limited, is thus not necessarily an issue.

Due to interviews with experts who themselves interact with many firms combined with the dataset, a reasonable external validity can be expected. The smaller number of firms interviewed is not necessarily and issue as a result of this.

3.5 Operationalisation

Independent Variables	Causal factors	Sub-factors	
Market Access Firms that seek access to the (European) market in goods or services through e.g., distribution, basic-manufacturing, and sales offices. A combination of market seeking and natural resource-seeking. (Dunning, 1988)	Tariffs	Customs	A type of trade barrier that can influence the decision of firms to invest abroad. Since the UK does not take part in the customs union, custom fees are applied when importing depending on the origin of the goods. Inspired by WCO, 2019.
	Non-tariff barriers These indicate all trade barriers, excluding tariffs.	Rules of Origin	A type of trade barrier that can influence the decision of firms to invest abroad. Since the trade agreement there is a free trade on goods with no extra taxes, except for a customs fee. However extra taxes do apply if the majority of the origin of goods can be traces outside the UK and the EU. (WCO, 2019).
		Customs	Although a customs duty is considered a tariff, the administrative costs for each check regardless of origin and increase in lead time as a result, can be considered a form of a non-tariff barrier.
		Red Tape	A general term that refers to regulations and conformity to formal rules. In the case of Brexit this refers to the increase in bureaucracy, VAT issues and certification for goods(Berg, 2016).
	Uncertainty		Uncertainty has both a positive and negative causal relation with regards to investment. The uncertainty of Brexit leads to delayed investments. But the uncertainty with regards to the UK as a place for FDI might increase the amount of outward FDI (Graziano et al. 2018).
Technology Access Firms focussed on innovation that seek specific clusters in their respective sectors, knowledge and or talent. E.g., R&D, High-Tech manufacturing. A combination of efficiency and strategic asset-seeking (Dunning, 1988)	Movement of persons		To be able to work in the EU or UK a visa is required and even then, it is only allowed to work for a limited number of days each year, this results in a decrease in the amount of international talent moving into the UK (Moullin, 2017).
	Funding		The ability to receive funding and participating in international projects like Horizon 2020 and Horizon Europe has become uncertain for firms (De Meulenaer et al., 2019).
	Uncertainty		Uncertainty has both a positive and negative causal relation with regards to investment. The uncertainty of Brexit leads to delayed investments. But the uncertainty with regards to the UK as a place for FDI might increase the amount of outward FDI.
FDI competitiveness UK			Brexit has an impact on the attractiveness of the UK as an investment location. Influencing outward FDI.

OLI Framework **(Dunning, 1988)** The dynamic between O,L and I helps to better understand and analyse how Brexit has an effect on FDI.	Ownership Advantages	Ownership advantages refer to that which gives a firm a competitive advantage, such as a reputation for reliability. In the case of this research a distinction is made between the innovative, managerial, marketing and logistical capacity of firms (Dunning, 1988).	
	Location Advantages	Companies must assess whether there is a competitive advantage to performing specific functions within a particular nation other than their own. The specific assets of this potential new investment location are considered location advantages. Examples in this research are access to the market, the quality of the regional sector and availability of talent (Dunning, 1988).	
	Internalisation Advantages	internalization advantages, signal when it is better for an organization to produce a particular product in-house, versus contracting with a third-party (Dunning, 1988). Due to Brexit related customs delays, paperwork and fees, an exporting firm from the UK might consider outsourcing distribution to the EU. If there are more benefits in doing this themselves than letting a third party do this, they have acquired internalisation advantages.	
Adaptive Capacity (Theoretical Framework – Resilience)	Government (Theoretical Framework -Porter)	Regional development agency/ investment promotion agency	The ability of the region to adapt to these new FDI opportunities depends on the practice of the regional development agency. In the literature specified as an investment promotion agency, the following tasks are identified: Strategy and organization Lead generation (marketing; company targeting). Facilitation (project handling). Investment services (after-care and product improvement. monitoring and evaluation). (IFC, 1997)
Inherent Capabilities (Theoretical framework –	Factor Conditions (Theoretical Framework – Porter)	Factor conditions in a certain country refer to the natural, capital, and human resources available. (Porter, 2000). The geographical advantages, talented and skilled labour market. A distinction is made between basic and	

resilience)		advanced factor conditions.
	Related and Supporting Industries (Theoretical Framework – Porter)	The presence or absence in the nation of supplier industries and other related industries that are internationally competitive. (Porter, 2000). The presence of clusters in certain industry sectors or activities.

Table 3: Operationalization

Chapter 4: Investment profile North-Brabant

This chapter will serve partially as a case description, giving general information on North-Brabant as a region and specifically as a location for FDI. Also relevant is how the region relates to the rest of the Netherlands and lastly the role that the BOM plays in stimulating FDI and its place as a regional development agency and investment promotion agency. The most important aspects of the investment climate and the different 'top-sectors' will be highlighted. This includes the most relevant and prominent industry sectors which fall within the top-sector policy and industry activities. This chapter concludes with an answer to the first sub-question: *What are the strengths of North-Brabant as a location for FDI and what is the respective role of the regional development agency?*

4.1 The BOM and the Invest in Holland network

The Brabantse Ontwikkelingsmaatschappij (BOM) is the regional development agency of the province of North-Brabant. The regional development agencies (ROM's) of the Netherlands were created by the ministry of economic affairs to stimulate economic development in the more disadvantages regions but shifted into stimulating economic activity as a whole by strengthening the regional economic structure (ministry of economic affairs, 2004). One of the main tasks of the ROM's is similar to that of other investment promotion agencies. All of the ROM's are part of the Invest In Holland network, which also includes the Netherlands Foreign Investment Agency (NFIA), which coordinates the activities related to FDI on a national scale (Interview ;3,2).

The Invest in Holland network identifies four types of acquisition (Invest in Holland, 2021):

1. Reactive acquisition: Being approached by its network/partners, or directly by a company, in order to support the search for a location for a new operation in Europe/the Netherlands or a specific Dutch region.
2. Pro-active acquisition: Pro-actively approaching foreign companies by generic promotion or organizing/attending seminars, trade shows, road shows, and subsequently finding out if expansion in(to) Europe is on the agenda
3. Investor relation: Maintaining of and expansion of existing operations of foreign companies in the Netherlands/Dutch regions by setting-up an extensive aftercare program
4. Strategic acquisition: Pro-actively approaching foreign companies by a tailor-made (technology) proposition, based on the related cluster in the Netherlands/Dutch regions (contacting companies in cooperation with cluster/experts).

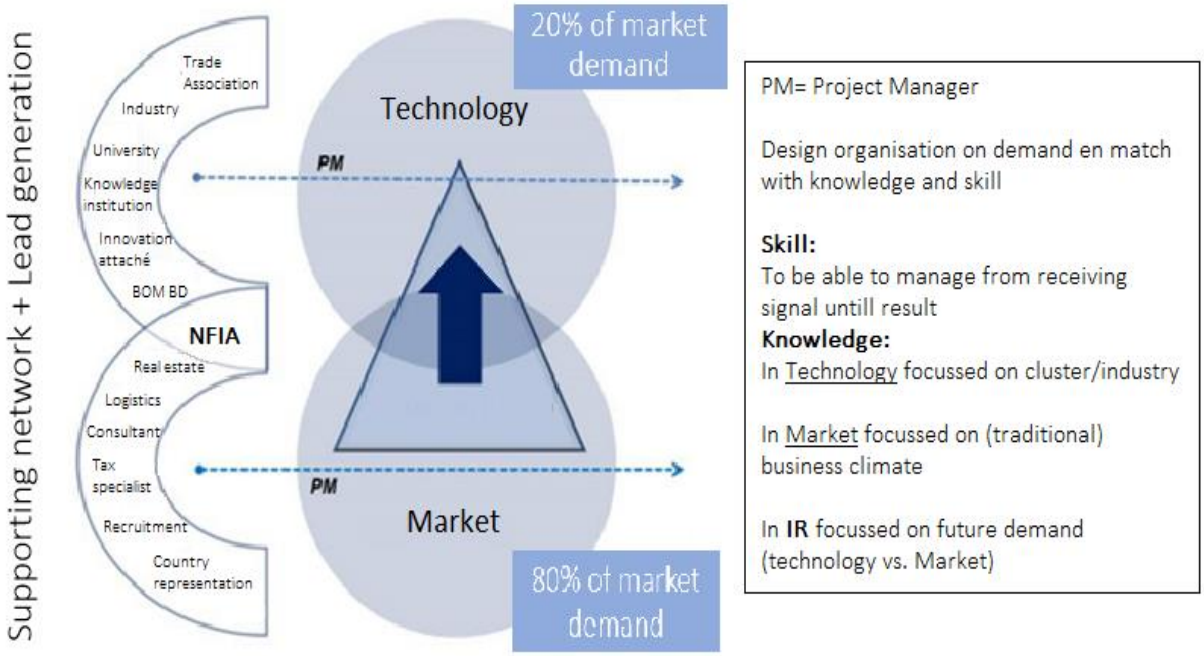

Figure 2: Market access vs technology access. Source: BOM, 2021

Figure 2 represents the general acquisition strategy of the BOM. 80% of acquisitions and facilitations are related to market access and only 20 % to technology access where industry clusters are more relevant. Part of the technology access demand comes from current investors that are already situated in Brabant, making investor relations an important activity of the ROM's.

4.2 North-Brabant top-sectors and investment climate

North-Brabant is situated in the southern part of the Netherlands spanning over 5000 km2, constituting about 12% of the surface area of the Netherlands. In this area live over 2,5 million people, or 15 % of the total population, which results in a population density slighter higher than the national average. Brabant also contributes over 15 % to the national economy with a GDP of 111,88 billion, making it the third largest regional economy behind North and South-Holland (CBS, 2018). The amount of people employed in the secondary sector at 15 % is higher than the national average while the amount of people in the services sector is slightly lower than the average at 57 %. The economic growth of the region was 3.7% in 2017, which is higher than the national average. The attractiveness of North-Brabant as a location for FDI is determined by both the local investment climate and the strength of its so-called top-sectors. The focus on the strengths of several industry sectors mirrors that of the national top-sector policy, which has been implemented since 2011. This policy aims to make the country and respective regions more competitive internationally by focussing on innovation and sustainability. Four of the most important regional sectors will be further discussed and their respective competitive edge further elaborated on. It is important to note that there is at times certain overlap of the several sectors.

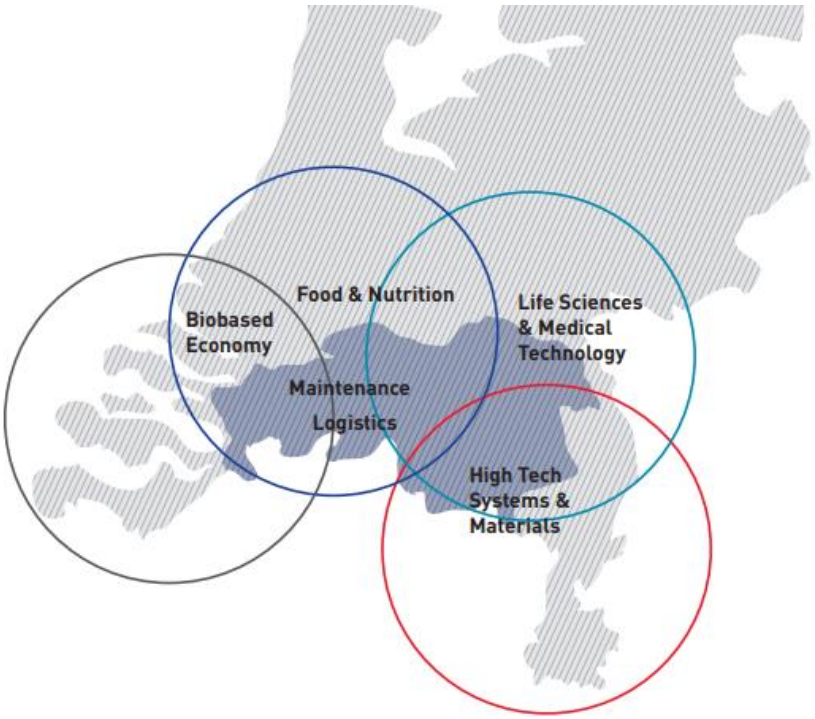

Figure 3: Several top-sectors and the geographic extent of the clusters within the Netherlands (source: province of North-Brabant

High Tech System and Materials

A quarter of the national production value in the HTSM sector is conducted in Brabant, which as a whole consists of 14.770 companies and 125.710 jobs in 2017: over 20% of all HTSM related jobs in the Netherlands. North-Brabant is the leading national region with regards to labour volume, production volume and added value (Vestigingregister, 2017). Three regional strengths can be identified with regards to the HTSM industry: concentration of a broad variety of companies, a high R&D intensity, and logistic advantages (BOM, 2020). The substantial amounts of HTSM related companies in the region result in a clustering effect with the Brainport region as its centre. Most of the large international operating companies are established there. Almost the entire value-chain with regards to machinal engineering is located in the region, with even suppliers of suppliers being well established. The most important sub-sectors are Automotive, Agri-Food, Health, and Construction. The region has the highest amount of R&D expenditure by businesses, a high number of patents and a technical university (BOM, 2021).

Life Sciences & Health

The advantages of the LSH sector in North-Brabant are the amount of clusters present, the proximity to clusters in other provinces and specific LSH related education. The most prominent clusters are in MedTech where Philips Healthcare makes up for 95% of the jobs, Pharma and Pharmaceutical logistics. LSH specific talent is facilitated because of the presence of the educational facilities of Pivot Park and the TU, it also provides almost a third of the total national employment in the sector. Pharmaceutical logistics is provided by the large amount of LSH specific distribution companies (BOM, 2021). Specific focus areas can be identified, namely: Oncology, immunology, and drug delivery.

Agri & Food

An advantage of the Agri-food sector in North-Brabant is the fact that the entire Agri-food value-chain is present in the region. This includes input companies, farmers, trading & processing companies. (BOM, 2021). Several Agri-food clusters are present which specialize in agri-food and technology, agri-food and health and biobased economy. Agricultural activities and biobased economy initiatives are located mainly in the west and food production and processing is mainly located in the east. Although knowledge and technology are present in the connected clusters in the region, the knowledge-based activities are not as competitive as in Wageningen, which still is part of the national cluster.

Chemicals

Although not officially a top sector, the largest chemicals site of the Netherlands is located in Brabant. Internationally it is part of the largest chemicals cluster in the world, the ARRRA. Besides this, the chemicals sector is responsible for 21% of chemicals related companies nationally. The strengths are the combination of the geographical location in combination with a large ecosystem (BOM, 2021).

Logistics

The logistics sector can be considered a sector in itself and as an activity linked to the different sectors that require logistics support. Advantages of the logistics sector in North-Brabant are the availability of labour, infrastructure & geography, available location & real estate and finally sector specific qualities. The availability of labour is present in several different levels of expertise including university and higher and lower vocational. The geographic distance between the ports of Rotterdam and Antwerp is advantageous, forming the centre of trade flows in Europe and being located in a 500 km radius of London, Paris and the Ruhr. The multimodal infrastructure of roads, channels and railways provide opportunities for international transport to these regions. Business parks and Greenfields in Tilburg, Waalwijk and Moerdijk, among others, provide existing locations and real estate in these logistics areas. A final advantage is the presence of sector specific logistical facilitation for e-commerce, IT, LSH and Chemicals (BOM, 2021).

National vs regional assets

At times it is hard to distinguish between regional and national assets, depending on the industry or aspect of the business climate. This can be attributed to the relatively small scale of the country, or due to assets that transcend the spatial level. An example of the former is the central geographic location of the Netherlands in Europe with access to large ports and generally high-quality infrastructure. The latter focusses on aspects like the tax climate, a stable economic, political, and social climate, quality of life and competitive labour costs (Bayraktar, 2023). Tax incentives for example, important for the attraction of FDI are applied nationally. Another example are the corporate income tax and value-added tax. The Netherlands ranks 4th globally in the global competitiveness report, measured by its business enabling environment, access to human capital, the innovation ecosystem and market (GCI, 2019). This competitive national scale can overshadow but also stimulate the regional level regarding foreign investments. This focus on the positioning of the Netherlands as one country with an attractive business climate is also preferred by the Invest in Holland Network (2018).

4.3 Conclusion

FDI in Brabant is focussed on certain sectors, namely the so-called top-sectors, in line with the eponymous policy of the national government and province itself. The main sectors regarding FDI are that of High-Tech Systems and Materials (including Automotive), Life-Sciences & Health, Agri-Food and logistics, the latter of which is considered both a sector as well as industrial activity. The previously mentioned sectors are also represented in specific clusters located within the province, of which the HTSM cluster in the Brainport region of Eindhoven is specifically important, having its own FDI related program, as well as the province itself. The previously mentioned industry activities and clusters constitute the supporting and related industries mentioned by Porter (1990). The combination of the geography and skilled workforce, among others, result in the presence of both basic and advanced factor conditions for the region. The BOM, the regional development agency of the province, can also partially be described as an investment promotion agency, stimulating, promoting, and facilitating FDI. The regional development agency in this case is related to the role of the 'government' in the Porter Diamond (1990). Regarding FDI, a specific distinction is made between market access related firms and technology access related firms, which form 80% and 20% of the total FDI respectively, which is relevant to known when comparing this to findings from Brexit related FDI.

Chapter 5: Brexit-related FDI factors

This chapter will answer the sub-question: *How does Brexit affect FDI decisions and which factors influence these decisions?* Where the previous chapter attempted to paint a broader picture of Brexit and its relation to FDI based on a variety of scientific articles, reports, grey literature and news articles, this chapter attempts to focus more specifically on the case of Brabant. This chapter will be more empirical in nature, being based on both expert-interviews and interviews with foreign companies that are considering an investment or have already invested in Brabant for Brexit-related reasons. References to interviews will be done with a number identifying the respondent followed by the paragraph which includes the referenced information. For specific quotes of expert-interviewthe organization or function title are named and in the case of firms the concerning industry activity and sector are mentioned.

5.1 Brexit-related FDI

Before focussing more on the region of Brabant, it is important to put the region into context on the national scale of Brexit-related FDI. This also serves as a way to validate or contradict findings from the previous chapter. Also, most information acquired through expert-interviews and existing information used in the previous chapter is focussed on the larger development of the relation of Brexit to general FDI trends, in which the regional component is often the Netherlands as a whole. Brexit related FDI is categorised in two groups, namely: market access and technology access, as inspired by Dunning (1998). Within market access, a distinction is made between FDI related to goods and related to services, as often different factors are relevant. There are several indications that three waves of Brexit related FDI can be identified, starting with FDI related to the market access of services, the access to talent and funding (technology access) and finally that of market access related to goods (2,4;3,5;15,5). The most important distinction of market access and technology access categories was made in the last step of selective coding and can be considered the highest form of abstraction. Within each category the specific causal factors influencing FDI decisions are identified, as can be seen in figure 4.

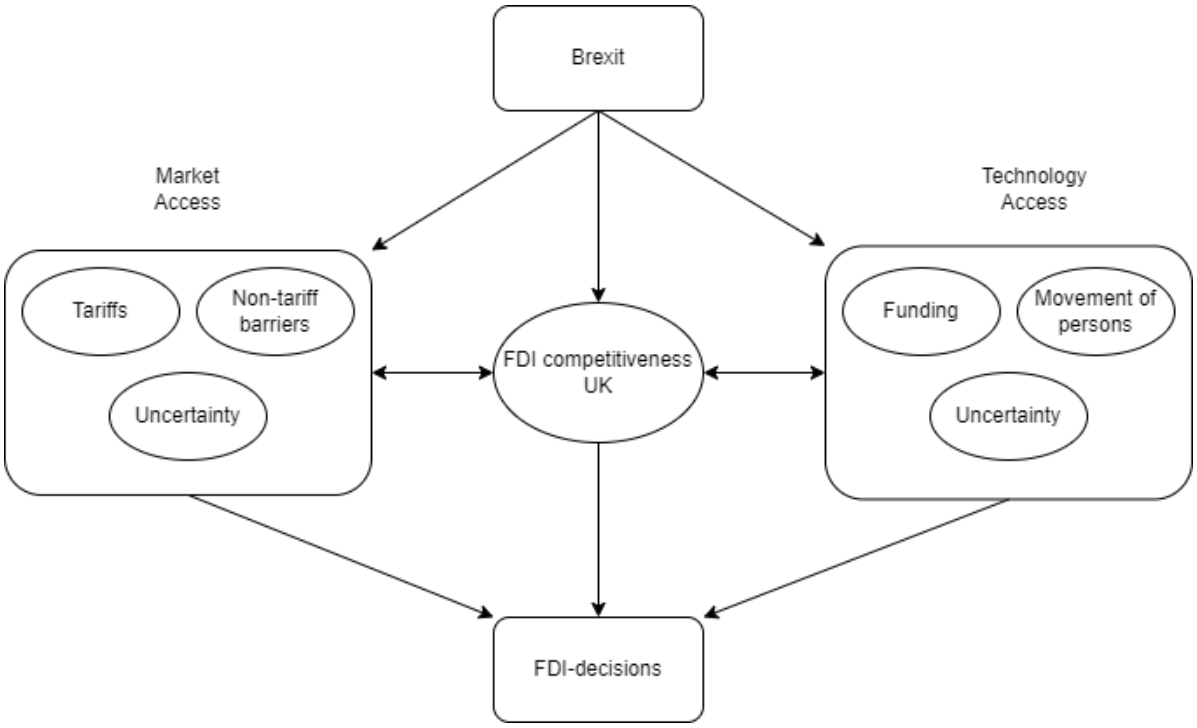

Figure 4: Specific factors that contribute to FDI decisions.

It is important to note that the main factors in the market access category can also be relevant in the technology access category and vice versa. These are just the most significant in their respective categories.

5.1.1 Market Access – Goods

The three main factors that affect firms in the market access category concerning goods are tariffs, non-tariff barriers and uncertainty. Of these the non-tariff barriers are the most significant and diverse. Types of non-tariff barriers identified are rules of origin, customs, and the idiom red tape. Red tape includes general bureaucracy, VAT issues and mandatory product certification.

Tariffs & non-tariff barriers

Although there is no standard tariff for goods and services traveling between the UK and the EU, there is an administrative fee that has to be paid at the customs check at the border, since the UK is not part of both the Customs Union and the European Single market (Trade and Cooperation agreement, 2020). An official tariff only needs to be paid if products do not comply to the rules of origin criteria, an example of a non-tariff barrier. Tariffs thus only exist in combination with non-tariff barriers (TCA, 2020).

As mentioned, the most significant factors are non-tariff barriers, which are trade barriers that restrict trade in goods and services in a form other that a tariff (Chambolle, 2005). A prominent type of non-tariff barrier in the case of Brexit is the previously mentioned rules of origin criteria. This barrier implies that goods that travel across the border need to originate for at least 50% in either the EU or UK (TCA, 2020). The rules of origin are prominently mentioned in studies about the projected impact of Brexit, so before the agreement had been reached, including Dhingra (2016), Soprano (2019) and Porto (2020). The impact on trade is also reflected in FDI. Rules of origin are mentioned as a being the reason for investing or considering investing for a significant number of firms since the trade deal (1,30; 3,8; 5,22; 7,12; 8,3). This non-tariff barrier is even more impactful on complex supply chain that requires multiple shipments between the UK, EU, and the rest of the world, resulting in double tariffs, for example in the automotive sector (Cieslik, 2022; Cieslik, 2021; 1,6; 7,7).

The possible impact of the customs formalities and tariffs for firms are already noted by Grainer (2016) mentioning possible costs and an increase in lead times due to physical inspections. Besides the literature, the impact and importance of the mandatory customs fees and inspections is mentioned in expert interviews (1;6, 5;6, 7;8, 8;3) and interviews with firms (2;2-10, 11;2, 12;4). A customs administration fee has to be paid each times goods pass the border, regardless of the volume, so smaller shipments are affected just as much as bulk shipments. The most prominent type of non-tariff barrier with regards to Brexit, based on literature, expert interviews and interviews with firms are the Rules of origin. Trade between the UK and EU is essentially tariff-free as a result of the trade agreement, besides the previously mentioned tariff at customs.

The problem is that supply chain related issues are in general much more expensive to overcome, requiring investment in real estate or constant services to logistics service providers, as mentioned by the NFIA: "*This supply chain problem has a large impact on many firms since these typically only revise their supply chain every 5 or 10 years, since this is so expensive. Increasing even more if the supply chain is more complex."* (Interview; 2,20). Complex supply chains that have a large amount of their input outside the UK and EU are noticeable affected. Specifically, the automotive industry is known for its complex supply chains, a sector which is quite prominent in the UK. As expected,

customs formalities for both exporting and importing lead to an increase in lead times and cost, causes by increase in paperwork and certificate control.

The most common type of market access investment is related to distribution and logistics. Often related to warehousing and transportation (1, 15; 2, 13; 3,6; 4,14). One of the larger sectors is this regard is e-commerce related. There is, however, a significant difference between an e-commerce company that sells a portion of its products online and an e-commerce fulfilment company, which provides the entire warehousing and shipping service (14,10). As mentioned, the largest impact of FDI flows started when the official trade deal was signed and it was made clear for companies what they could be expecting. This mainly involved companies that required access to the market with goods, of which a lot was distribution related and to a lesser extent manufacturing (3, 10; 2,10; 5,12; 15,6). Contradictory to the importance of manufacturing location decisions related to Brexit in research by Gasiorek et al. (2018;2019), Mordlau et al. (2020) and Waton et al. (2018), few indications of large development have been noted by experts after January 1st 2021 (1,14; 2, 18; 6,15; 3,20). An exception to this is the automotive industry (7,14; 3, 20).

The collective term of red tape has been used to refer to the increase in general bureaucracy limiting the trade flows, which results in the lead times previously discussed in addition to VAT and product certification issues (Berg, 2016; Alexeev, 2017; Sandhu et al. 2021). Firms that comply to the rules of origin criteria need to fill on paperwork that confirms this, which results in an additional delay and man-hours (8,12; 5,14; 1,9). This has resulted in 27% of trade that complied to the rules of origin criteria in the first quarter of 2021, that still paid the tariff as the paperwork was not worth it (Islam, 2021). Intra-community regulations do not apply anymore as a result of Brexit and this has consequences for the Value-Added Tax (VAT). Sellers from the UK are required to charge a VAT on every transaction for customers outside the EU, which results in higher prices, impacting sales revenue and competitiveness (1, 20; 7,15, 11, 10, Table 15). In addition to this, product certifications are mandatory for products made or assembled in the UK after January of 2021 that want to enter the EU market (Sampson et al. 2018; Pogose, 2021; 8,7; 16,10). Products require specific CE-markings, a safety guarantee, according to the KvK: *"…when an English product enters the EU market, it is an English product, so not automatically CE as before. Those products can't be sold unless these are checked and certified, but this takes time as well* (Interview; 8,12). This is relevant in a wide variety of sectors, which include medical devices within the LSH sector, automotive in the HTSM sector and a variety of e-commerce firms (Pogose, 2021; 16,12, 8,14, Table 15)

5.1.2 Market Access – Services

Access to the European market is not only limited to goods, but also for services, the largest sector at 80% of the total GDP. This sector, just as with goods, is affected by non-tariff barriers, most noticeably regarding licensing, which includes passporting and regulatory affairs.

Licensing

Previous reports and research by Serwicka et al. (2018), Breinlich et al. (2020) and Latorre et al. (2020) mention the importance for UK based companies in the service sector to have access to the European market, illustrating that since the 2016 referendum to 2019 a sizeable FDI increase from the UK to the EU can be observed in this sector. This is confirmed by the NFIA: *"After the 2016 referendum It became clear quite quickly that a large number of firms would get into trouble with licensing, mostly in the financial sector, a lot of office functions"* (Interview; 2,6). Many of these functions went to the larger financial centres like Frankfurt, but some also landed in Amsterdam (2,3; 6,4) The reason these activities were the first to transfer was because of the necessity to fix their

licensing issue and to be close to the regulator, but at the same time relatively low in costs to transfer, since these were mainly office-holding functions (6,4; 2,3). This corresponds to both the general findings of Breinlich et al. (2020) and specifically for the Netherlands, the Clingendael institute (2019), where a similar reason was theorized. Although this 'wave' of FDI according to the NFIA has decreased, the need to access the European market with services through marketing & sales offices and headquarters remains, as can be seen in figure 8 (2,12; 3,14; 15,6).

Specific Brexit related factors contributing to FDI decisions in this sector, were related to uncertainty, at least before the trade agreement was signed. The uncertainty of having access to a market, specifically through licensing. Another aspect was related to the uncertainty of the freedom of movement of people already working in several service sectors in the UK.

5.1.3 Technology Access

The two main factors that have an influence on the investment decisions of firms on the side of technology access are related to the movement of persons and funding. The restricted movement of persons is also relevant outside of the technology access category, however.

Talent

The expected impact of Brexit on the availability of talent had been discussed before the trade deal (Ridgway, 2019; Djankov, 2017, Psychogios, 2018; Busse, 2017). The necessity for many firms at the time before the deal was not as high but the potential effect was detrimental enough to look abroad*: "firms were afraid if they could find the right people, especially in R&D, Tech and LSH"* (Interview, NFIA; 2,12). The possibility of a limited freedom of movement between the UK and EU was confirmed when the deal was signed in December 2020 (TCA, 2020). The general access to talent is limited mostly as a result to the requirement of a work visa for everyone outside the UK and the cancellation of the Erasmus programme. Some sectors were dependent on imported talent from the EU, like engineering and to a lesser extent financial services (Ridgway, 2019; 2,12; 6,3).

Funding

In combination with the access to talent, the access to funding was also considered a major issue and reason to invest. This is related to scientific research programmes like Horizon 2020 and Horizon Europe, as mentioned by the TU Eindhoven: "*many organisations were uncertain if they could have access to these types of programmes and chose to set up in Europe. It is now clear that they can officially still participate but the amount of funding depends on the investment of the UK in the programme*" (Interview; 16,5). Even though some uncertainty has been taken away, the precise outcome for companies is uncertain to such an extent that some decide to invest abroad. Other collaboration programmes like the Erasmus programme have indeed been cancelled as mentioned previously.

5.1.4 FDI competitiveness UK

The previously discussed causal factors affect the competitiveness of the UK as a location for FDI. The decrease in competitiveness in turn leads to a decrease in FDI into the UK and an increase toward the EU. A 20% decrease in FDI into the UK, from the Brexit announcement in 2016 until 2018 was noted and a 25% decrease specifically in the service sector (Serwicka, 2018). The affected competitiveness can be seen as structural change with possible long-term effects, although these will remain unclear. Firms outside the UK that want to enter the European market will more than likely do so within the

EU and not in the UK (1,10; 3,8; 6,6). This potentially structural change can also be seen in the considerations of opening headquarters within the EU, as can be seen in figure 8 and table 6.

5.2 Brexit in ownership and internalization advantages

The influence of Brexit on FDI is conceptualized and understood through the OLI-paradigm, being part of the whole changing FDI dynamic. This dynamic differs per firm, sector, size, and activity and is thus hard to generalise, although it helps to understand how the previously mentioned factors lead their way into the conceptualized FDI trajectory. As mentioned, the majority of Brexit-related FDI, since the signing of the trade agreement, has been related to market access, for a large part related to goods. The sharp increase in distribution and logistics related requests is an indication of this. Through several interviews with market-oriented firms, it became clear that these market access requests can differ widely in their extent of influence on the OLI dynamic. First the effect of Brexit on the ownership specific advantages will be explored and after this the degree of internalisation.

Ownership advantages

The way Brexit affects ownership specific advantages of firms differs widely, since these ownership advantages are themselves often variable depending on the size of the firm, specific sector and the industrial activities deployed. Significant effects can be seen in firms which rely on quick delivery times, since these often have smaller cost margins and have a large portion of their product's origin from outside the EU or UK and thus paying an extra tariff. Companies that manufacture their product or import their stock from the EU or UK are significantly less affected, but this also depends on the respective size of the domestic market.

As previously mentioned, E-commerce and lifestyle related firms form a large portion of the investment flows since the trade deal, being the largest sector for both the Netherlands Distribution Council, The NFIA and the BOM (Interview; 1,4; 2,5; 3,7). An E-commerce company from the UK that imported goods manufactured in China and then exported these to the EU, faced severe difficulty in exploiting the ownership advantages it had in the EU market after the trade deal, their specific advantage mainly being their specific brand of lifestyle products: "*In March we made the decision to not sell in Europe this year. It was too much work that wasn't going to be helpful. So, we had prioritise, we had to cut off 35% of our turnover "*(Interview;12,10). This severe effect was mitigated by an increase in domestic sales as a result of the Covid pandemic, resulting in an increase in web shop activity but this was not considered a structural solution. "*The margins were already smaller since importing from China has become significantly more expensive the last 2 years, but the additional costs and lead times introduced since Brexit really diminished any profits we had*" (Interview; 13, 16). This is also an example of an industry specific ownership advantage that is being affected, namely the ability to have unhindered access to the inputs in their supply chain.

The previous example is also noticeable with E-commerce fulfilment companies, with one of the ownership advantages being the speed of delivery and a technologically advanced way of tracking products and orders, the numerous problems related to customs and VAT, completely diminished that advantage, at least in the serving of customers in the EU (10,11). Expanding into the EU was not only a necessity to keep access to the market and retain the ownership advantages, but a deliberate part of the strategy, as mentioned by a manufacturing firm: "*the plan was there to expand into Europe for a while, Brexit just accelerated that. The EU, as a larger market gives more opportunities to grow. Not only our speed and service are important but also our low costs. This way we serve many smaller companies who would otherwise do it themselves. With the extra transit times and costs, we*

can't do this anymore" (Interview; 11, 20). The additional VAT problems for us and customers further confirmed their decision: customers have to pay an additional VAT on imported products. So, this indirectly affects businesses in the UK since they have become more expensive relative to competition in continental Europe, further straining the ownership specific advantages firms might have. The cost doesn't increase for the firms but for the customers. For the more service-oriented industries like IT, licensing issues are a significant factor influencing their ability to use their marketing capacity as an ownership specific advantage on the firm level (15,6). The uncertainty regarding funding in programs like Horizon 2020 and Horizon Europe possibly affects the innovative capacity as a competitive advantage of firms on the side of technology access (2,4; 16,3, Table 9).

There are several indications that not only the previously mentioned causal factors related to Brexit influenced the decision to invest abroad out of necessity, but also as an acceleration of their business plans of a European expansion based on expert interviews (1,18; 7,15) and with firms (11,2; 3,6). An interviewed SME manufacturing company also saw Brexit as an accelerator of their plan to move into Europe (11,2). Their ownership advantage being a combination of the quality of the service and their image: "our products are not different than our competitors, we call them me-too products, so we have to compete in price or delivery time. Both of those are especially hard hit by Brexit. But it was our longer-term goal to invest into the EU anyway, Brexit just accelerated that" (Interview; 11,20). The importance of the delivery times was in this case of such importance that even part of the manufacturing was to be transferred into the EU, which was a necessity to stay competitive. This competitive edge was further enhanced by the significant decrease in costs. The ability to exploit the ownership advantages as a SME through the sheer speed of delivery is mentioned more than once: "our competitive edge is that we can deliver to our customers within a few hours sometimes, you won't see this with larger companies" (Ink manufacturing company, Interview; 10,23). The additional lead times and costs due to customs also diminished their advantages. A Chemical and Agri-Food related company consider their product quite a niche, with only a few firms providing a similar product but their business model of importing chemicals from hundreds of different Asian producers and distributing these in the UK and EU was not feasible since every product costs double because of the rules of origin: "*we had years of experience with importing from outside the UK and EU, so all these customs checks were not new to us and not that big of a problem. But the fact that we had to pay double for each shipment meant that our business model was not sustainable"* (Interview; 13,6).

Although it differs widely how Brexit factors influence the ability of firms to exploit their ownership advantages, some patterns and indications can be identified. It is clear that the factors mentioned at the beginning of this chapter have a significant impact in variety of ways, depending on the industry sector, firm activity and size. The need for firms to access the EU with goods and services demands security and stability of their supply chains. If part of the inputs in these supply chains originate from outside the EU and UK, the favoured access to these inputs and markets is an ownership advantage that is being affected. The impact on the innovative capacity of firms is mostly relevant for firms that rely on European funding, specific international talent like engineers and for LSH firms in clinical trials to be closer to the regulator, the EMA (2,6; 11,3; 6,4).

Internalisation advantages

The previous paragraph shows that Brexit has a varying influence on the ownership advantages of firms. The way in which firms then decide to organize their business to retain these ownership

advantages as much as possible differs as well, with varying levels of internalisation and for varying reasons.

Small-medium enterprises (SMEs), being the largest group of firms considering an investment as a result of Brexit, are looking for outsourced options, especially those related to distribution (1,4; 2,7; 7,3; 8,4, Table 5;6). This lack of an internal component in the investment can have various explanations. Previously, exporting was the easiest way to use their ownership advantages internationally for an E-commerce company, outweighing the need to set up a base in the EU. Opening a warehouse would mitigate the customs formalities, paperwork, extra VAT returns, a tariff (since the products are manufactured in China) and generally longer lead times. Shipping in bulk, instead of per order, would save a lot of time and costs. Instead of setting up their own warehousing facility, however, they opted to outsource their distribution request to a third-party logistics service provider (3PL). Even though they considered a proper investment, the total costs in the short term would be too significant and the type of products can just as easily be shipped by others as opposed to themselves.

A different picture is observable with larger E-commerce fulfilment companies, where the internalisation advantage is inherent to the type of company, being a 3PL themselves and thus being able to offer an outsourcing solution for other E-commerce sellers. As previously mentioned, Brexit accelerated decisions to invest abroad, but choices made by a competitor with similar ownership advantages to set up their own large warehouse also influenced the decision (14,3;1,8).

The internalisation advantage for certain companies was clear at the start, as mentioned by an ink manufacturing firm: "*Using a warehouse on the mainland seemed the logical solution but doing this internally was a requirement: "outsourcing was not an option in this case. We mostly ship from the warehouse, but if a customer wants a specific custom made colour, we have to assemble that ourselves, you can't let other people do that"* (Interview; 10,8). Doing this, however, requires setting up a proper entity, requiring an accountant, a notary, and setting up a bank account, increasing the costs: "*we were used to having solicitors doing all this for us, but then we were told that this requires a notary, since they are internationally recognized, and they also cost more. I used to do the VAT returns but I was told that it is necessary to have an accountant as well. Again, increasing the costs. We will see if this is worth it in a year."* The describes the uncertainty of many firms if their investments are worth the cost versus cooperating with an external party (7,15; 1, 14).

An engineering company that is both a manufacturer and distributor was aware of the benefits outsourcing would have in relation to Brexit related issues*. "We considered the outsourcing from the Brexit point of view, just the cross-docking. But that would have really just have solved one issue. Also, our product... we don't sell shoes in nice small boxes. We sell engineering systems and solutions, so every product is different, ranging from 10kg to boxes 6m long and two tonnes. So, to outsource would be nearly impossible, very few companies can and will do that. We also need the manufacturing as well and we can't really do that. All the manufacturing that we outsource, and sub-contract might as well be specialist items for machines we don't have and have use for once a year. Outsourcing is a big thing for companies that want to sell that service. And a lot have pick and pack services. We use the phrase: We row our own boat. We do everything ourselves; we build the factory we ship it"* (Interview; 11,16). This shows that purely from a Brexit point of view outsourcing could make sense, but it is highly dependent on the type of product and in this case related activities and future strategy as well.

The choice for companies that want access to the European market and compete with products is often based on the locational advantages this brings by circumventing the large amount of trade restrictions. Through interviews it was made clear that the specific effect of Brexit on their ability to use their ownership advantages differs significantly, for different reasons and the extent in which this is internalised. For larger companies it is easier to accept the large cost of investing in their own warehouse or facility even though it became clear that even smaller companies chose to own their facilities themselves since the ability to exploit their ownership advantages measured up to the high costs of doing so (5,6;1,4;11,4). Companies that have less to gain from internalising this process, especially when these are smaller in scale, often choose to outsource this part in their supply chain, according to NDL: *"For a lot of smaller companies that either lack funds, have a smaller part of their business in the EU or generally have less to gain by doing all the work themselves, fiscal representation instead of setting up a proper entity is the quickest and cheapest solution"* (Interview,1,16). Fiscal representation seems to be a common solution for firms in both goods and services (12,6;1,4;7,3) This arrangement can often be made with logistic service providers, but again, often only profitable for certain companies of certain sizes: "fiscal representation can be considered a temporary solution in the Netherlands, basically shifting the VAT structure of the company to the EU, most importantly the import VAT, you have service provider who is considered the representation. But when for example volumes increase this solution might not be ideal" (NDL, Interview; 2,26). The lack of a structural solution this brings to firms is also highlighted by the department for international trade: "*it is not a one-time investment, you keep paying and basically ship in bulk every now and then, decreasing the times you have to pay tariffs or customers formalities*" (Interview; 5,6).

In general, the decision to move distribution, albeit in the form of an in-house (greenfield or brownfield) investment or outsourced investment can be considered a form of forward vertical FDI, as this is done 'forward' in their respective supply chains and vertical since this is in the same production & distribution process. SMEs are at least initially more likely to outsource their distribution as internalizing this part of their supply chain can be costly in the short term, while larger SMEs or MNEs more often accept the short-term costs for a longer-term gain (5,9; 11,10; 1,8). These firms also have the benefit of having more control over the quality control of their goods and services (1,19; 11,15; 6,20).

5.3 Conclusion

The influence of Brexit on FDI is categorized in market access and technology access. Firms who as a result of Brexit require access to the European market through investments can be divided into investments related to goods and to services. The main causal Brexit-related factors that influence goods-related investments are tariffs, uncertainty, and most significantly non-tariff barriers: Specifically rules of origin, customs delays and general red tape including increased bureaucracy, VAT issues and certificates for products. Service-related investments are mostly affected licensing issues such as passporting, also examples of a non-tariff barrier. Technology access related firms are mostly affected by the restricted movement of persons, resulting in a decrease in availability of talent in a few sectors, and a slightly limited access to funding programmes. All of the mentioned factors influence the competitiveness of the UK as a location for FDI, possibly influencing future investments.

There are some indications of firms and sectors that are most affected. In general, all firms exporting from the UK are affected, but some more so depending on the amount of their inputs originating from outside the UK and EU. Furthermore, lead time issues can be detrimental to firms that require quick travel and transport, either as a competitive advantage or because of perishable products. LSH,

Chemicals and Agri-food related firms are most affected by the latter. Firms with complex supply chains, like for example the automotive industry are also significantly affected. In the service industry, the largest sector affected is the financial sector and to a lesser extent IT. The restricted movement of persons has implications for both the lower and higher skilled workforce and is as of now noticeable in the lack of talented engineers, although future predictions are still uncertain.

Chapter 6: Quantitative data on Brexit firms

This dataset contains information of 126 firms that are considering or have considered an investment into North-Brabant as a result of Brexit. General observations related to the OLI characteristics in relation to specific industries will be made clear through multiple pivot tables and descriptive statistics. This chapter serves as a further confirmation of findings from the qualitative results chapter and furthermore serves as a way to substantiate certain findings with quantitative data in the last part of the research. First, a general description of the dataset is made.. Some general findings are presented and related to the results from Chapter 5. The second half of the conclusion of this chapter focusses on the limitations of the dataset. Finally, some of the data serves to supplement the 'regional' Chapter 7, as location specific considerations are mentioned by firms in the dataset.

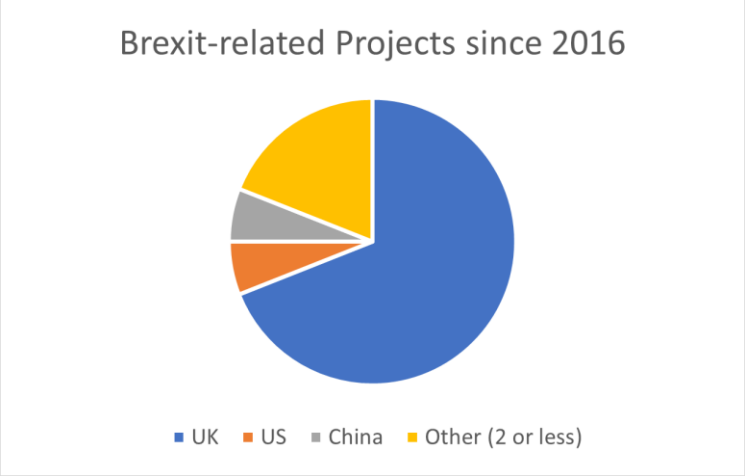

Figure 5: visualizes the origins of the investments per country, of which the largest one is the UK, followed by the US and China. A sizable number of investments comes from other countries never more than 2, and thus not represented individually in the model.

	Amount	Percentage	Exp. Empl. 3yr.
Expansion	15	11,9%	481
Initial	75	59,5%	2705
Outsourced	36	28,6%	42
Total	126	100%	3228

Table 4: Types of investments and expected employment within 3 years of the investment

6.1 Type of investments and data description

The three categories that were all complete in the dataset were that of 'project activity, 'type of establishment' and 'industry.' In this case project activity refers to the type of activity the firm is about to employ, including distribution, manufacturing, marketing & sales, representative office, headquarter or R&D as represented in table 6. The type of establishment refers to the type of investment, including initial (a new investment in the Netherlands), an expansion (investment in

another place in the region or on the same location) or outsourced (in which a third party is involved) (Table 4).

The information regarding the number of investments per type and the corresponding expected employment in table 4 makes it clear that there are large differences between total types of investments and their impact. This possibly skewed data leads to fact that only 6 possible investments result in over 70% of the total expected employment, the largest two of 800 expected employees each in the Chemical sector and Creative sector, followed by 300, 150 and 100 in Transportation, another 100 in Consumer & Household goods and another 80 again in the transportation sector. While there is some variation regarding the different sectors present in these larger potential investments, it is important to note that all of these are expected to be in the form of a distribution centre, so not technology access related.

The second largest group of investments by total amount is that of outsourced projects, which constitute about 27% of the total investments. Interestingly enough this type of investment only results in an expected employment of 42, which means a little bit more than 1% of the total expected employment generated by potential investments related to Brexit. Another perspective is to question if the measurement of economic impact by total employment is relevant, especially with regards to this type of investment. An increase of outsourced projects will increase the workload of existing firms in the region who decide to form a collaboration, indirectly increasing the employment within the region and this might lead to further investment or expansions to accommodate this growth.

Expansions and additions at locations as a result of Brexit within the region result in an a relatively similar expected employment compared to 'initial' investments, while also being similarly skewed in its proportion. Only 3 investments result in an expected employment of 331, or 70% of the total in this category. Two of these investments, of 150 and 81 expected employees, are once again in the transportation industry, while another potential investment of an expected 100 employees is in the consumer & household goods, which in combination with the large amount of expected employees from 'initial' investments, makes it one of the largest sectors by these criteria. An interesting observation is that the two largest investments in this category are once again in the form of distribution centres, other sizeable investments are done in the form of headquartering (managerial), manufacturing and R&D related. This might be an indication of the potential future expansion of the current investments in distribution centres.

6.2 General findings

Rijlabels	Aantal van Activity compact
Distribution Center	63
Headquarter	10
Manufacturing	12
Marketing & Sales	24
Representative Office	5
Research & Development	12
Eindtotaal	**126**

Table 5: Activities total

Rijlabels	Distribution Center	Headquarter	Manufacturing	Marketing & Sales	Representative Office	Research & Development	Eindtotaal
Agri-Food	6		3		1	2	12
Chemical sector	2	2	2	1		1	8
Construction & Infrastructure				1			1
Consumer & Household Goods	15	1					16
Creative Industries	8			2	1		11
Defense & Security	1						1
Electronics - Electronic components	2						2
Energy			1	1		2	4
Garments & Textiles			1	1			2
Graphical and Paper Industry	1		1				2
High Tech Systems	3	1		1			5
ICT	1	1		3		1	6
Industrial Engineering	1		2		1		4
Life Sciences & Health	3	1	1	7		5	17
Packaging	1			1			2
Services - Consultancy				4	2		6
Sport, Tourism and Leisure	2			1			3
Transportation Industry	11	2		1		1	15
Water		1	1				2
Wholesale, retail and trading	6	1					7
Eindtotaal	**63**	**10**	**12**	**24**	**5**	**12**	**126**

Table 6: Activities and industry sectors

6.2.1 Locational advantages in relation to industry sectors:

Rijlabels	Funding	Intellectual property	Logistics infrastructure	Market access (EU)	Regional sector	Talent/language	Tax incentives	Eindtotaal
Agri-Food			2	8	1	1		12
Chemical sector	1		1	5	1			8
Construction & Infrastructure				1				1
Consumer & Household Goods				15		1		16
Creative Industries				11				11
Defense & Security				1				1
Electronics - Electronic components				2				2
Energy	1	2		1				4
Garments & Textiles				2				2
Graphical and Paper Industry				2				2
High Tech Systems				4		1		5
ICT			1	3	2			6
Industrial Engineering				3		1		4
Life Sciences & Health	2	1	4	5	2	1	2	17
Packaging				2				2
Services - Consultancy				6				6
Sport, Tourism and Leisure				3				3
Transportation Industry			7	6	2			15
Water	1			1				2
Wholesale, retail and trading			1	6				7
Eindtotaal	**5**	**3**	**16**	**87**	**8**	**5**	**2**	**126**

Table 7: Locational advantages

As expected, Market Access is the most significant locational motivation for firms to invest. Access to the European market actually plays a role in almost every investment, so this locational advantage is probably even more significant than showed in the table above. Locational advantages like the proximity of transportation and logistics infrastructure are linked to the 'market access' locational advantage as well as this offers security and stability in the supply chains of firms. The large amount of market access might indicate a more basic locational demand for most firms, without specific advanced demands like firms that have identified more advanced logistics and transportation demands.

An interesting observation can be made regarding the LSH sector because of the focus on the logistical aspects (market access) as well as funding, the quality of the regional sector and securing intellectual property, which can be possibly R&D related, making this sector the most varied. Another sector with a clear identifiable locational advantage besides 'market access' is the Transportation industry, where the logistical aspect of the region is mentioned 6 times in addition to the presence of a strong regional sector in the respective industry and its proximity of transportation.

Some firms mentioned more than one locational advantage, which are visualised in table 11 in the appendix. When considering these advantages in combination with the data of table 7, some locational advantages of the region become more pronounced. The most significant example of this is the additional 7 firms that mention talent & language being essential in their consideration of the region for an investment. In comparison with only 4 firms mentioning this as their most important reason for an investment, this could be considered a secondary quality of the region, but still important. In the case of these specific firms, both funding, the quality of the regional sector and market access related reasons were more significant. Another locational advantage that is even more pronounced with this additional data is the regional sector, even though not one particular industry stands out. Nonetheless, LSH, transportation industry and ICT are slightly more present. The logistics infrastructure is also slightly more present, especially in LSH and the previously mentioned transportation industry.

6.2.2 Ownership advantages in relation to industry sectors

Rijlabels	Innovative capacity	Logistical capacity	Managerial capacity	Manufacturing capacity	Marketing capacity	Eindtotaal
Agri-Food	1	6	1	3	1	12
Chemical sector	1	3	2	1	1	8
Construction & Infrastructure					1	1
Consumer & Household Goods		15	1			16
Creative Industries		8			3	11
Defense & Security		1				1
Electronics - Electronic components		2				2
Energy	3		1			4
Garments & Textiles		1			1	2
Graphical and Paper Industry		2				2
High Tech Systems		3	1		1	5
ICT	1	1	1		3	6
Industrial Engineering	1	1		1	1	4
Life Sciences & Health	4	4	2	1	6	17
Packaging		1			1	2
Services - Consultancy				1	5	6
Sport, Tourism and Leisure		3				3
Transportation Industry	1	11	2		1	15
Water			1	1		2
Wholesale, retail and trading		7				7
Eindtotaal	**12**	**69**	**12**	**8**	**25**	**126**

Table 8: Ownership advantages in relation to industry sectors

As with previous tables, a clear pattern can be identified related to market access: the logistical capacity and marketing capacity of firms are the most prevalent ownership advantages when considering an investment. The former is mostly related to access to the market with goods while the latter is more related to the ability to access the market with services. The managerial capacity refers to the consideration of opening headquarters and thus influencing the management structure of firms, into the continent.

6.2.3 Locational advantages in relation to ownership advantages

Rijlabels	Innovative capacity	Logistical capacity	Managerial capacity	Manufacturing capacity	Marketing capacity	Eindtotaal
Funding	3			1	1	5
Intellectual property	2			1		3
Logistics infrastructure	4	10	1	1		16
Market access (EU)		56	6	5	20	87
Regional sector	1	2	4		1	8
Talent/language	2	1	1		1	5
Tax incentives					2	2
Eindtotaal	**12**	**69**	**12**	**8**	**25**	**126**

Table 9: Locational advantages in relation to ownership advantages

The logistical capacity ownership advantage is unsurprisingly related to access to the market. The marketing capacity indicates that the access to the market is not only relevant to firms who seek to import and distribute only products, but also offer their services easier and cheaper. An interesting finding when taking the additional data from table 12 into account, is as follows: Firms who mention the regional sector as playing a significant role in their decision to invest, 7 of these mention managerial ownership advantage as their most significant advantage by investing, 4 of which are related to LSH.

6.3 Conclusion

The results presented above have to be interpreted with caution. The number of firms and corresponding information is exhaustive enough to discover and confirm certain trends and patterns, partially already found through qualitative research. Some liberty was, however, taken with the interpretation and translation of the information contained in the spreadsheet. Data through interviews, which gives the opportunity to delve deep into the experiences of firms considering investments, grants a deeper layer of interpretation of the 3 main OLI characteristics. Mainly the ownership advantages and specifically the internalisation advantages are partially based on interpretation of industry sectors and type of investments, in addition to more expansive Brexit specific data, depending on the firm. Furthermore, the amount of 'Market Access' firms, even though it is the largest category by far, is still underrepresented, since many of the other firms also have this as one of their locational advantages, only in addition to several factors. The findings from the dataset also confirm the previous findings from chapter 5 regarding the specific sectors affected. The majority of firms are distribution related, often in the form of e-commerce firms active in household goods. Also related to the distribution related investments is the transportation industry. Furthermore, of a generally higher value-added activity such as the LSH, Agri-Food and HTSM sectors are also observable in the dataset, again confirming the findings in chapter 5. Just as in the previous chapter, the findings related to the LSH sector are especially diverse and indicate that Brexit related factors have an influence on multiple levels of the supply chains and innovative capacity (table 8;10). Regarding the amount of internalisation of the investments: a significant amount of outsourced investments can be observed in the dataset.

6.3.1 limitations of the dataset

One of the difficulties of the dataset was that of incomplete data and consequentially operationalizing this for usage in the research. A problem is the overrepresented 'initial' category, which also includes investments similar to outsourced option or fiscal representation, besides actual investments in for example real estate, as can be seen in § 6.1.

Another difficulty was the selection of the OLI advantages per firm, the type of activities and Brexit-related factors. Only one identification per firm is possible in pivot tables, so choices had to be made for many firms that had more than one variable. In the case of many firms, the most valuable and unique characteristic has been given priority to make a more meaningful analysis. For example, for firms that identified both market access and talent as consideration to invest, talent was given priority over market access as a locational advantage in this dataset. For firms with an affected managerial ownership advantage due to transferring their headquarters into Europe, the logistical capacity was not mentioned, while this was still relevant. Multiple innovative firms also mention the importance of access to the EU market, for example. '

The most glaring omission is that of the internalisation advantages, which were difficult to generalise from the data. The lack of internalisation in the form of outsourcing was, however, well documented. The projected activities of the investments as seen in table 6 do, however, give some indication to this.

Chapter 7: Competitive advantages of North-Brabant

Chapters 5 and 6 explore the effects of Brexit on FDI, the various factors that influence decisions to invest, and which sectors are the most relevant. This chapter focusses on what these developments could mean for North-Brabant with regards to the competitive advantages of the region. A link will be made, as described in the theoretical framework, with both the competitive advantage theory of Porter, serving as the main analytical instrument, the location advantages of the OLI-dynamic and elements of the concept of resilience. Included in the framework is the role of the regional development agency, in this case the BOM, which will also be linked with the 4 main activities of an investment promotion agency (IPA). In the end, this chapter answers the final sub-question:

How can the province of North-Brabant improve its competitive advantage and redeem the FDI-related opportunities as a result of Brexit?

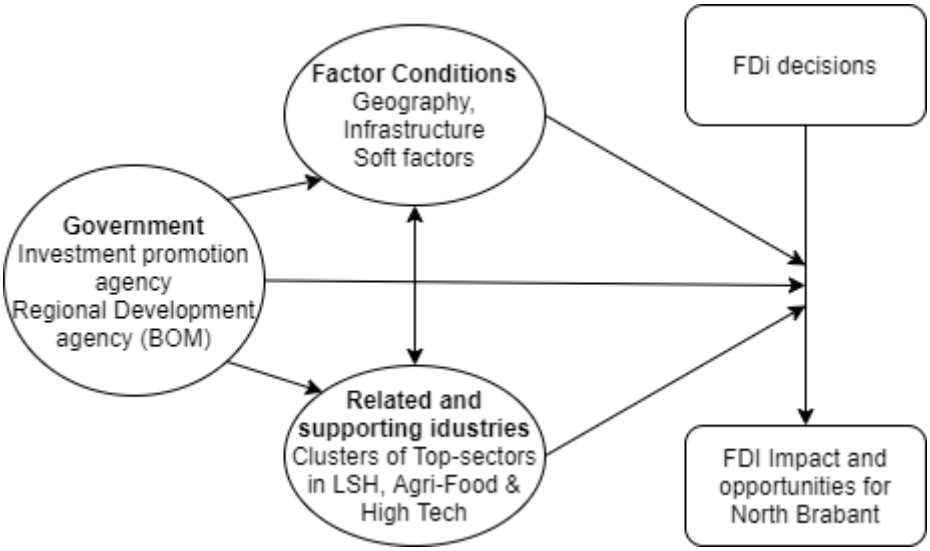

Figure 6: Representation of the locational advantages

7.1 Location advantages

The varying impact of Brexit on FDI decisions can only be fully understood through the locational component, in addition to the ownership and internalisation advantages previously mentioned. A distinction will be made between more basic location advantages and the advanced location advantages of North-Brabant as a location in relation to FDI.

7.1.1 Basic location factors

Geography and physical distance

The natural factor of geography can, however, not be understated in importance in its influence on FDI. The strategic geographical location in the heart of the European economy was mentioned almost every time when discussing FDI related to market access, both with experts as with firms. The proximity of the region to other markets is considered one of the main assets and motivations to invest. This is partially because of the number of potential customers in the proximity: “we just looked at where our customers were located, and the Brabant region was the ideal location, proximity wise” (E-commerce firm, Interview; 11,10). As mentioned by NDL: “*Brabant and the Netherlands in general is situated in that centre of gravity of economic activity, ‘the blue banana,’ that is certainly an important strategic position to be in”* (Interview, 1,38). According to Dunning

(1980) the closer physical distance between home and host country can be considered a locational advantage. The distance of the UK to Brabant and the Netherland is mentioned by all interviewed firms (10,11; 11,13; 12,4; 13,9, 14,9). However, this geographical asset can be mostly considered a basic endowment since this can't be influenced and are more hereditary in nature.

The uncertainty with regards to the access to funding was slightly reduced after the deal, as mentioned by a subsidy advisor from the Technical University in Eindhoven: *"Nobody knew exactly what was going to happen with the funding. Some companies decided to move to the EU just to be sure to receive funding. In the end it was guaranteed that the UK will remain in those programs, but the amount of funding the UK will provide is still uncertain"* (Interview; 16,8). The locational advantage of being located within the EU, either as a separate entity or as a partnership with another organization (thus depending on the extent of the internalisation), can in some cases increase the probability to attract funding through programs such as Horizon Europa. The NFIA further mentions this: "*It depends on the funding. Sometimes you need an entity, sometimes not. There is also a large difference per firm how much funding they can acquire. This has to be weighed against the cost of setting up a European entity"* (Interview; 15,20). This also depends on the extent on which the motivations to invest abroad is influenced by this. Although mostly related to firms in the technology access category, this asset is basic in the sense that it is not unique on a regional and even national scale.

Soft factors and psychic distance

The soft factors include human resources but can also be related to cultural factors. The proficiency in the English language can considered an advanced (soft) factor as this is an acquired advantage, but it is however not unique for the region within the national scale. Nonetheless it can still be considered an advantage The importance of the ability to speak English is a prominent criteria in both expert interviews (1,20; 2,8; 5,14; 7,13), firm interviews (10,6; 11,13; 12,16; 13,11) and the dataset (table 7). This preference is prominent in a wide variety of industry sectors from logistics and distribution to more R&D oriented firms. This often ties in with the 'ease of doing business' argument, which is hard to define precisely. The cultural similarities are often mentioned in preferring the Netherlands as a location. The extent to which this is unique for North-Brabant is of course limited, so in that sense it is hard to determine if this can be considered a competitive edge. Another soft factor that can be important, especially for international talent is the quality of life. Since highly skilled workers can often choose where they work, the quality of life in an area can be the deciding factor (2,6; 6,18).

7.1.2 Advanced location factors

Infrastructure and logistics

This geographical quality is further boosted by the general quality of the infrastructure present. The hard infrastructure is for example the quality of the road network and available warehousing in combination with soft infrastructure: the actual people that can transport goods, as mentioned by an E-commerce fulfilment company*: "We looked at where the geographical centre was for our business, but mostly the speed of transportation, which was one of the best we could find"* (Interview; 16,5). It is important, however, to also put this into perspective. Multiple times the qualities of the region with regards to logistics were mentioned, but also that the company could find these qualities in for example Limburg, or just over the border of North-Brabant as well: *"Brabant is not terribly important to us. And the Netherlands is already really small"* (Agri-food firm, Interview; 13,21).

The cost of warehousing or other logistics related activities is for example cheaper than near the Randstad, but similar to other provinces. Logistics can also differ per sector with for example the Life Sciences and Chemicals industry sectors needing specific infrastructure and transport options not always providable by every distributor but are considered specialties of the region. Considering both the LSH and Chemicals sector are affected in their supply chains because of delays and costs increases, firms in these sectors can gain a locational advantage by investing (Table 8). Furthermore, the availability of logistics centres and warehouses is particularly high in Brabant with large, well-connected areas, such as Moerdijk and Tilburg, the former also being connected by water and the latter with a specific silk-road rail connection to China. These examples offer cost efficient modes of transportation for 3PL's which are often employed by Brexit-related companies outsourcing their distribution (Invest in Holland, 2020).

The presence of these 3PL's is also important for the previously mentioned fiscal representation. Not only do these providers ship products or storage stock for companies, they offer the opportunity to shift or deploy their VAT structures into the EU, circumventing several VAT related problems for firms but just as importantly for customers, who are also affected. The location advantage in this aspect is not even related to specific geography, it is merely the fact that North-Brabant lies in the EU and thus a way to circumvent the many problems with regards to trade in goods and services.

Availability of talent and funding

The importance of the availability of talent in attracting firms is highlighted by several expert interviews and was considered one of the most important drivers for Brexit related FDI in the technology access category for the NFIA (2,16; 3,21; 15,12). This is also observable in motivations of companies considering North-Brabant as a location, however mostly before the trade agreement. The lack of freedom of movement and employment between the UK and EU does hamper the availability of talent in the UK. This is often in combination with the access to funding related to the EU organised Horizon 2020 and Horizon Europe programs.

Although talent can be considered an advanced advantage, the uniqueness of this asset is hard to determine, as mentioned by the NBCC: *"Yes, talent is indeed very important and there could be chances for this in the Netherlands, but to be honest... every region or country claims they have a lot of talent. So, I can't see this as something unique to the Netherlands or Brabant"* (Interview; 7,15).

Clusters and specific sectors

The presence of several clusters in the region including the top-sectors Agri-Food, High Tech and LSH indicates the strength of the region as a location for FDI in those respective sectors.

A noticeable finding from both interviews with firms and several expert interviews is that a lot of the logistics and distribution related FDI considerations (the majority of Brexit related investments) are not specifically looking for clusters as these are often less relevant to their business. The presence of clusters can, however, be relevant for specific industry sectors as illustrated by the Department of International Trade: "*There are industry sectors that are more focussed in their questions regarding specific specialised clusters or ecosystems, for example firms in the Life Sciences or Agri-Food. Specifically, firms active in clinical trials"* (Interview; 5,18). This was also confirmed by the NFIA: "*You see specifically Life Sciences related companies looking for the Netherlands, this could be because of the presence of the EMA (which could be considered the regulator for LSH firms)(…) Also Agri-food is important since British companies look for opportunities that are not present in the UK, like agri-food innovations and building greenhouses"* (Interview; 2,4). The extent to which this is applicable to

North-Brabant varies: The Life Sciences & Health and Agri-Food sectors are both well developed with clusters present with many foreign companies already situated there, but clusters like Wageningen could be considered more competitive in the Agri-Tech area. In LSH Brabant has a strong position as well but is for example not as close to the EMA in Amsterdam as Leiden and Delft.

The demand for clusters is, however, not only reserved for specific type of companies active in R&D or high value-added manufacturing. An Agri-Food company that opened a distribution hub in the Agri-Food cluster mentioned: *"It is nice to be in this cluster, but this was honestly something I wasn't even aware of until I was already about to decide on this location. Since we are only distributing. the presence of the clusters is not as important as being in a central location in Europe with good infrastructure"* (Interview; 13,8). Although the presence of the cluster was not important in the initial decision it could be in the future: *"the presence of these related companies in manufacturing for example could definitely influence our next investment decision,"* referring to the complete Agri-food value chain present in the region (13,6). In this case the related and supporting industries were not the drivers for FDI but potential factors that can influence future FDI through expansion and possibly further strengthening the cluster (2,6; 3,12; 15,7)

7.2 Adaptive capacity

The adaptive capacity of North-Brabant with regards to FDI is related to the performance regional development agency as an investment promotion agency. The three most relevant activities are: strategy & organization and facilitation, strategic acquisition and invest-relations and finally investment services.

7.2.1 Government

The adaptive capability of the region of Brabant with regards to FDI is determined by the activities of the BOM as an investment promotion agency and its collaboration with partners in the Invest in Holland Network. The two most significant activities related to the IPA, according to interviews, are related to strategic acquisition and invest-relations.

Strategy & organization and facilitation

The topic of general strategy and organization, which refers to setting objectives, the complete structure of investment promotion and sector targeting strategies, is of necessary but not unique with regards to Brexit, as these aspects are already implemented. The BOM as a regional development agency also follows in part the national policy and already has a well-developed structure of investment promotion. The quality of the facilitation in the investment trajectory of new projects is already done at high quality level according to firms interviewed (10,12; 11,19; 12,20; 13,14; 14, 12). The various testimonials of firms already present in the region and had contact with the BOM was experienced as helpful:

*"I came across the inward investment companies: there was an article online somewhere and they mentioned, and a company referenced the inward investment agency they worked with, so that was a great case study of how these things work. A short article about companies about setting up in the Netherlands and what kind of support they got offered< I think that would be really helpful for both sides. Sort of like the trajectory, how they did it, how they set it up. I found the article on a broader site about companies setting up abroad and in the Netherlands. Getting in the press a bit more is helpful. Creating good articles. "(*Interview, E-commerce firm; 12,21*)*

"Since everything was done through computers the communication has been really great. The team really provided great information and contact. But I really can't answer that fully until I really went

*over there, which we will do in the future. So, I can't really comment on that. I don't see what they can do in the circumstances at the moment. The BOM provided a lot of information, way above what we expected. "(*Interview,Agri-food company; 13,14)

The desire and goal for a balance between market access and technology access in relation to the top-sector policy has been discussed in chapter 4.

Strategic acquisition and invest-relations

In 4 expert interviews, including interviews with the NFIA, NBCC and an investment consultant, a more pro-active approach is suggested with regards to redeeming FDI related opportunities as a result of Brexit (3,14; 6,21; 7,20; 1,40). The majority of distribution related investments are not that valuable in strengthening the region, something that the NFIA is also working on themselves: "*All these small distribution companies are not really what you are looking for as a country and a region, so we are looking at specific new strategies to pro-actively contact firms that might be interesting for our ecosystems in the Netherlands"* (Interview; 3,22). This pro-active approach was further affirmed by a a business consultant for firms: "*I think that you can be very assertive… don't just call and ask firms if they want to come to the EU… but I think that you can be pro-active in approaching firms that have indicated that they are struggling because of Brexit. Then you have to look if those firms are interesting for the region"* (Interview; 6,21). A combination of the more generic pro-active acquisition strategies and strategic acquisition strategies, focussed on the region, is advised. Many firms are looking for a European foothold and at times consider the region-specific qualities as secondary of importance, depending on the sector. The importance of the national level was illustrated in an interview with a firm considering distribution: *"For us it wouldn't really be useful, it would only be confusing since we were looking mainly for a place in Europe first, secondarily a country and only lastly a region. So, advertising a region wouldn't really make sense to me"* (Interview; 13,14). The focus on the regional importance can even be considered slightly confusing, depending on the firm activities: *"Once we started going, we set up a private company (BV), that's Dutch, not specific for Brabant. But the next thing is finding a suitable location and with the BOM we… they searched for us, properties… there this local focus has been very helpful. That local element is important, but it feels weird to have any interest going away if you look further for two miles."* (Interview; 13,16). The regional importance is slightly more prevalent in firms related to technology access as seen in table 7. The national level of the NFIA in combination with regional expertise of the BOM might be essential in the acquisition of new relevant firms.

Investment services

Investment services and invest-relations refer to the after care, monitoring and evaluation of foreign firms already located in North-Brabant. A significant amount of FDI investments is, as a result of expansions of firms, already present in the region (table 4). A certain amount of distribution related firms is part of some of the regional top-sectors and are thus more likely to make future investments in the region if the relevant supporting industries and clusters are present. Market access related firms might expand into more technologically significant activities: *"It was not our priority, but I was made aware of the whole agri-food cluster that is present here apparently. It is not our priority right now, but definitely something to consider if we decide to expand our business "*(Interview; 13,6)

7.3 Conclusion

To answer the final sub-question, *How can the province of North-Brabant improve its competitive advantage and redeem the FDI-related opportunities as a result of Brexit?* With regards to the inherent capabilities of the region, both basic and advanced factors form an essential part with regards to Brexit related FDI. The more basic factors include geography, soft factors like cultural similarities and proficiency in the English language. From a firm perspective the most important 'basic' factors, however, are tied to being in the EU, circumventing the trade barriers. This also means having more certainty in their access to potential funding. Considering the clusters: The Agri-Food cluster is promising, especially since this sector is both vulnerable to an increase in lead-times due to perishable products and certificates and not as developed in the UK, despite being less competitive regarding innovation than the cluster in Wageningen. The HTSM sector is relevant since this cluster is the most developed in the Netherlands and the sector is affected by Brexit. More specifically high-tech automotive, due to increased tariffs and lead times in the complex supply chains and licensing and distribution issues for the IT sector. The access to talented regarding engineers is also relevant for this sector. The Life Sciences is being affected regarding both lead times, innovative capacity and at times tariffs, so in a variety of the different sub-sectors. The presence of the LSH cluster in Brabant and the EMA in the Netherlands make for an interesting proposition. The combination of these clusters with a highly developed logistics infrastructure and sector, advantageous geographical position and several soft factors like cultural similarities result in a competitive advantage for the region, especially considering the amount of distribution and manufacturing related issues, even with firms normally in the technology access category. This explains the double-sided arrow between the factor conditions and the 'related and supporting industries' in the conceptual model, as can be seen in figure 1.

The adaptive capacity of the region, indicated by the 'government' node, depends on how well these inherent capabilities can be utilized. This can be done through the various activities of the BOM as an investment promotion agency, with the two most important being strategic acquisition and invest-relations. Strategic acquisition is an essential component since this is related to a pro-active approach in targeting potential firms that are affected by Brexit and could fit within the top-sector clusters. Invest-relations and services since the potential expansion of firms in relevant sectors might be in the technology access category, even though right now most of these are in the market access category.

8. Conclusion & discussion

8.1 Sub-questions and main research question

In order to answer the main question "*How does Brexit affect FDI decisions and what are the opportunities for the province of North-Brabant to improve its competitive advantage?"* It is necessary to answer the sub questions and how these relate to the conceptual model.

The unprecedented event of the United Kingdom leaving the European Union, the so-called Brexit, can be considered both a geopolitical disruption and a 'shock' event with far reaching effects both politically, socially, and economically. This explorative thesis focussed on the latter, more specifically the effects on FDI and possible opportunities on a more regional level, namely the province of North-Brabant.

The first sub-question related to the regional level: *What are the strengths of North-Brabant as a location for FDI and what is the respective role of the regional development agency?* serves both as a type of case description and exploration of the role of the investment promotion agency. A finding is that FDI in Brabant is focussed on certain sectors, namely the so-called top-sectors, in line with the eponymous policy of the national government and province itself. The main sectors regarding FDI are that of High-Tech Systems and Materials (including Automotive), Life-Sciences & Health, Agri-Food and logistics, the latter of which can be considered both a sector as well as industrial activity. The previously mentioned sectors are also represented in specific clusters located within the province, of which the HTSM cluster in the Brainport region of Eindhoven is specifically important, having its own FDI related program, as well as the province itself. The BOM, the regional development agency of the province, can also partially be described as an investment promotion agency, stimulating, promoting, and facilitating FDI. Regarding FDI requests a specific distinction is made between market access related firms and technology access related firms, which form 80% and 20% of the total FDI respectively, which is relevant to know when comparing this to findings from Brexit related FDI.

The sub-question: "*How does Brexit affect FDI decisions and which factors influence these decisions?"* is quite extensive in nature and concluding this with one comprehensive answer is quite difficult. However, some main factors that have a causal effect on FDI decisions can be identified and grouped together. These are identified on the basis of multiple expert interviews, interviews with several firms and numerous news articles and scientific articles, using elements of a qualitative approach and a more quantitative approach. These factors can be roughly categorized into the previously mentioned 'market access' and 'technology access', based on both the terminology used by Dunning (1988) and Investment promotion agencies (2014), where a further distinction can be made within 'market access' into market access related to goods and related to services. Within the two main categories, several specific factors, can be identified, each being part of a causal relation between Brexit and FDI decisions, albeit directly or indirectly through its influence on the competitiveness of the UK as a place for FDI.

The most significant causal factors identified in relation to FDI related to market access in goods are tariffs in the form of customs, non-tariff barriers in the form of rules of origin, red tape (which includes the increasing bureaucracy, VAT problems and mandatory CE-markings) and uncertainty, each naturally varying in influence depending on industry sector & activity and size of the firms and investment. The majority of FDI since the trade deal with the UK and EU has been market access related, with a minority being related to technology access. The most significant factors related to technology access are access to funding, access to talent (related to the restricted movement of persons) and again, uncertainty.

Tariffs in the form customs formalities both have a direct financial impact as well as an impact on the lead times of products, resulting in a large indirect financial impact as well. The impact of the customs fee is generally more significant for smaller firms, which don't have access to large storage locations in the EU, having to pay formalities each time a product is shipped, contrary to larges firms who can ship in bulk. Furthermore, the extra lead times, being a form of a non-tariff barrier, resulting from the customs checks mean that firms might lose customers or certain products might lose value and might be unusable. The increase in lead times has a particularly large impact on the Agri-Food and LSH sectors since these industries often deal in perishable products. One of the most significant examples of a non-tariff barrier is the rules of origin criteria, which requires products for a majority to be made within the UK and EU to exempt these from additional tariff, is another main causal factor. Again, affecting smaller firms even more, considering this tax is applied for each shipment. Foreign firms who trade in internationally produced goods, which are located in the UK, mainly to serve the EU market are especially hard affected. This factor thus also affects the competitiveness of the UK for these types of firms, further impact possible FDI decisions into the EU. Industries that are affected vary widely as internationally produced goods are commonplace. The more complex supply chains related to the automotive industry for example, are especially hard hit. A variety of other factors under the idiom red tape, like the increase in bureaucracy, VAT issues and the mandatory CE markings also add significantly to the motivations of firms to invest abroad.

An example of non-tariff barriers being restricting in the trade in services are issues with licensing. This is an important factor for firms in the financial and IT sectors, among others. The mandatory visa and general restrictions to the movement of persons between the UK and EU have a significant impact on the availability of talent in the UK in varying industry sectors, both lower, medium, and higher-skilled, while the access to funding is tied to the participation of various scientific collaboration programmes such as Horizon 2020 and Horizon Europe. This ties in with the general uncertainty as a factor, both as stimulating and possibly limiting inward FDI.

The factors mentioned above indicate a structural change, both from a market access and technology access related viewpoint. Furthermore, the potential influence of the factors on the competitiveness of the UK as a place for FDI, while uncertain, might further amplify this structural change.

Influence on Ownership and internalisation advantages

Now that the causal factors are identified, it is time to look at *how* the FDI dynamic changes as a result of development. The previously described factors influence FDI, and thus the dynamic of Ownership, Internalisation (OLI) and Location advantages of firms. The influence of these factors on the OLI-dynamic can result in a deeper understanding of the effect of Brexit on FDI decisions. It is important to note that this OLI dynamic can be unique for each firm. Some general patterns can be described and identified within the O, and I advantage which result in certain requirements for the locational aspect (L). A general pattern that can be identified is the prevalence of relatively obvious parts of specific O advantages related to the corresponding type of investments in relation to Brexit. The majority of firms in the database used, related to market access in goods, mention the logistical advantage of the firm being important in retaining their competitive edge as a result of Brexit. Naturally being affected by customs formalities and general 'red tape,' increasing lead times and costs, the competitive advantage of the speed of delivery is clearly a significant contributor. Remarkable is that most firms in this 'market access' category only mention access to the market, without any clear locational demand. Regarding the service-related market access, the capacity to market their services (marketing capacity) is mentioned as being the most significant ownership advantage affected. This, however, is sometimes combined with the capacity to access the market

with goods as well. In some cases, the managerial capacity of the firm is the most prevalent, mostly in the case of considering moving the firms's headquarters. Most of the time this is as a result of the previously mentioned changing competitiveness of the UK as a FDI location, itself being the result of the factors above. On the side of tech-access, the innovative capacity of firms is named as being the most affected. This is mostly related to the factors funding and the restricted movement of persons, resulting in a lack of accessible talent in a few specific sectors in the UK.

The way that firms internalise these ownership advantages differs greatly. An identified pattern is that of the prevalence of outsourced related investments of SMEs in the market access category related to goods. These outsourced investments are a way for firms to maintain their respective ownership advantages and remain relevant on the market to a certain extent, while not requiring a large personal investment in real estate. This option helps firms circumvent the increase in lead times due to customs to a degree and limits the extra potential costs due to the rules of origin criteria. This is an example of forward vertical FDI investment, as these distribution related investments are made 'forward' in their respective supply chains This is often combined with fiscal representation, sometimes delivered by the outsourcing company to limit further VAT and licensing issues and thus also prevalent with smaller service-related IT firms. Other firms open representative offices for these same reasons but differing in the fact that these can be considered actual entities. Firms whose advantages are at least partially innovation related, can be observed internalising their investments in various forms: either as an alliance with a larger technology partner, or as a stand-alone investment. A seemingly important factor in the extent of the internalisation is the size of the firm, with larger firms often having more resources to produce, develop or transport without outside parties.

Locational aspect and inherent competitive advantages

Brexit-related factors and their influence on firm's ownership and internalisation advantages elaborated on above result in a locational aspect (which is part of the dynamic), which is found to be the most significant for many firms. This importance of the locational aspect as well as the prevalence of market access related FDI is in line with the recent findings from Moradlou et al. (2021). This locational aspect is further categorized through the use of elements of both Porter's competitive advantages and to a lesser extent the 'resilience' related concepts of inherent capabilities and adaptive capabilities, applied to the specific region of North Brabant. The causal relation between 'FDI decisions' (which is in itself influenced by the factors mentioned above) to "impact and opportunities" is being influenced by the adaptive capacity and inherent capabilities of North Brabant. This leads to the answer to the last sub-question: *How can the province of North-Brabant improve its competitive advantage and redeem the FDI-related opportunities as a result of Brexit?*

A significant finding is that many important locational factors for firms can be considered a more basic factor condition for the region. Besides the geographical location, being central in Europe, cultural aspects are also important, mostly that of the English language. The aspects can also be found in other regions and are not necessarily unique. These can, however, be considered an asset in combination with more advanced locational factors, depending on which ownership specific advantages are affected and how these will be exploited. This results in the reciprocal relation between the factor conditions and the 'related and supporting industries. This is further enhanced by geographical location in combination with the logistical qualities present in the region. The large amount of 'market access related firms considering Brabant is possibly a result of this. The access to the right transportation is also specifically mentioned.

This logistical quality, being an industry activity that can also be further exploited in combination with other top sectors such as the LSH related firms (specifically in medical equipment), which in some cases specifically mention these aspects in their consideration for the region. The more basic aspect of the presence of the European Medicine Agency in Amsterdam can be considered another asset while officially not being part of the region. While the prevalence of an English-speaking workforce is not exactly unique, the prevalence of talent in specific sectors certainly is. A specific labour mentioned is that of engineers, which were previously working in the UK but originating internationally. This availability of this specific talent group can be considered an advanced location factor. It is unfortunately hard to identify other specific talent-related industries and jobs at this stage. Sectors that specifically mention the local sector having an influence on their consideration are in the LSH, Agri-Food, Transportation (HTSM) and Chemical industries.

To be able to exploit these previously mentioned inherent capabilities of the region, a certain amount of adaptive capacity is required. The adaptive capacity of the region with regards to FDI is for a large part related to the efforts of varying parties related to FDI facilitation and promotion, most notably the regional development agency, the BOM. While the direct influence of a development agency on the previously mentioned sectors and clusters can be limited, it is highly important in bringing the different firms in contact with the right people and highlighting the most important and relevant aspects of the business climate and region. The promotion of the region and generating new leads is another highly relevant aspect, especially since this may contribute to having more relevant firms in the regional ecosystems, industry and activity-wise. One way to achieve this, is through a pro-active approach, targeting firms that are the most desirable for the current clusters and eco-systems, possibly in co-operation with other (national) stakeholders like the NFIA. Lastly the importance of the invest-relations or services is essential considering the amount expansion investment of existing firms in the region. Firms that are currently investing in mostly logistics related projects or fiscal representation but are active in the relevant top-sectors, can be potentially interesting for expansions.

The answer to the main question: *How does Brexit affect FDI decisions and what are the opportunities for the province of North-Brabant to improve its competitive advantage?* is the culmination of the answers to the sub-questions, of which at least the second is quite exploratory in nature. The factors identified in the second sub-question suggest a structural impact of Brexit on FDI, but the extent of this long-term impact is still to be determined. What can be identified is that Brexit has had quite a significant impact on FDI both before and after the deal trade agreement has been signed in a wide array of industry sectors (LSH, HTSM, Agri-Food) and activities (logistics). A majority of FDI since the official ‘deal’, has been related to firms seeking market access, mostly because of supply chain issues caused by the factors mentioned above. The locational advantage is found to be the most significant of the OLI factors.

The logistical qualities and advantageous geographical position make Brabant an interesting location for these types of firms, while the economic benefit of the large number of outsourced projects might be limited. The presence of several well-developed clusters, most notably in the LSH, HTSM and Agri-Food sectors in combination with the previously mentioned logistics and geography and availability of talent means that there are short- and long-term opportunities for the province of North-Brabant. Both the more advanced and basic location factors are found to be important in this case. These inherent capabilities in combination with the long-term effects of Brexit and how significant this geopolitical disruption is, are still uncertain, however.

8.2 Recommendations

This paragraph mentions both the specific recommendations for the regional development agency, the BOM and gives suggestions for further research on the topic. The recommendations are based on the general findings mentioned in the conclusion, but also on suggestions of several firms and experts.

The first recommendation is related to the facilitation of existing firms in the region (invest-relations); both older and newer. Since Brexit has caused many smaller SMEs to settle both in Brabant and in Europe in general, it can be helpful to keep facilitating these, especially if they are part of a relevant industry sector or activity. This is also true for firms who for now went for outsourced options. Facilitating the possible growth of these smaller firms in the right sectors, who represent only a small initial benefit for the region, might result in more positive economic impact for minimal time costs.

A second recommendation is focussed on a more pro-active, lead-generating, approach. This recommendation is based both on experts within the 'Invest in Holland' network, as well as some (slightly contradicting) input from firms, who at times mention the preference for council on a more national scale. Based on two interviews the NFIA is focussing on this more pro-active approach, where specific companies are targeted who might benefit from investing in the Netherlands. A possible cooperation with regional development agencies (such as the BOM) might combine both the national level of importance with the more specific facilitation and promotion for the specific region, when relevant. From other interviews and from the dataset it is clear that sometimes only a few large firms are enough to have a significant impact, especially if they are in line with the competitive advantages of the region. Specific sectors that are both clearly affected by Brexit and part of the advanced location factors are Life Sciences & Health, Agri-Food and HTSM. Within the HTSM sector more specifically engineering considering the specific talent shortages and the IT sectors.

A smaller and perhaps less significant suggestion was made twice related to the promotion of the activities of the development agency and its role for potential firms considering an investment. The different case studies of several firms already in contact with the BOM (so called testimonials) mentioned on the website, convinced a few firms to specifically search for the development agency, as these testimonials made clear what a development agency could mean for them.

Further research

This thesis provides wider scope of the complex phenomena of Brexit and its implications for FDI and opportunities on a regional level. While this larger scope is helpful in understanding the problem, it is also limited in depth and lacks certain causal conclusions in various aspects, also related to the regional level. While many of the results, considering the ongoing process of this disruption, are hard to determine exactly, some more insights in specific sectors and its long-term effects could be valuable.

Concerning North-Brabant specifically, it would be especially helpful to determine in which specific sectors talent is affected by Brexit (besides engineers), as this would indicate a potentially more meaningful argument on the side of technology access, which in turn stimulates the local ecosystems.

8.3 Reflection

The process of writing this thesis was at times quite a challenge, with changes being made throughout the whole process, changing or partially altering the main research question and sub-questions. Furthermore, the thesis and internship trajectory were further affected by the Covid-19 pandemic, limiting the physical visits and meetings at both the university and internship organization to a very low amount.

The original idea of a more 'impact' oriented research of the 'shock' event called Brexit, introduced a then seemingly more relevant concept of 'resilience,' determining part of the scientific relevance and approach of the thesis. The choice for a specific region affected by such an event seemed to further strengthen this choice, as this was done as well for the region of Oost-Nederland (Oort,F., 2020) and the more recent usage of the conception in literature (Martin, 2015; Gardiner, 2019).This concept also partially stood at the base of the internship assignment, which was discussed with both the supervisors of the internship as well as the thesis itself. As the thesis progressed the more specific implications for FDI became more relevant, which slowly altered the importance of the 'impact' of Brexit to possible opportunities on a regional level. While still being a relevant concept, it seemed increasingly less useful in comparison to literature by Dunning and Porter. Even though the OLI-paradigm and Porter's competitive advantage theories are at times considered too broad (Itaki, 1991), they are very applicable in the two scopes of the research.

Furthermore, the resilience seemed to be more of an umbrella term for multiple interpretations and difficult to apply on a specific case. This is partially in line with a critique by MacKinnon and Derickson (2012). Finally, the decision was made to incorporate the concepts of inherent and adaptive capabilities from Palekiene et al. (2015) to make a distinction between the 'government' in Porter's model (in this case being the regional development agency) and the other locational assets of North Brabant. At first, a choice was made to focus only on a few specific sectors relevant for North-Brabant, limiting the scope of the research and adding more depth and validity. However, by learning more about Brexit, it became clear that a more explorative approach to the research could be more suitable, since many of the respondents found it difficult to mention specific effects on specific sectors. This is possibly caused by the fact that the effects were, and are, still not very clear, with a few exceptions. This led to a larger scope and an ever-expanding conceptual model, which at times could be overwhelming. The changing conceptual model and identified causal factors is perhaps inherent to the grounded theory approach in which the 'codes and theory are constantly revised. This larger scope serves as a more general overview of the complicated effect of Brexit on FDI, but at the cost of depth and demarcation. It was also only in the final moments of writing the thesis that references to a grounded theory approach were finally abandoned. This way the thesis was finally structured was increasingly far removed from this approach, even though elements of grounded theory were used in the coding process.

The changing path of the matter of the research was partially complicated by the order of the interviews. Some questions were only asked in later interviews as the questions of the research and conceptual model had already been shifted since the earlier expert-interviews. However, in some cases it was possible to ask a few questions per mail. Another difficulty was the availability of firms to interview. The five interviews themselves were highly informative but were mostly related to firms in the market access category, although from different sectors and activities. This was luckily partially mitigated by the usage of the dataset. Finally, the previously mentioned 'impact' approach of the research meant that the deductive element, following the inductive part, was more clearly defined, as this was to 'test' the theory on how these might impact the region, instead of which opportunities

are present. Furthermore, most findings are triangulated, but the adaptive capacity paragraph much less so. This is due to the fact that not every respondent had something to say about this, while others only made some general suggestions. Finally, the extensive quantitative dataset proved to be a challenge to incorporate. While containing a lot of useful data, several key concepts were lacking in data. This made operationalising concepts like internalisation and ownership advantages a challenge, hence the slightly different terminology and lack of depth at times in this analysis.

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Appendix

Interview Guides:

Experts:

Introduction:

(formalities)

I am doing research on the effects of Brexit on foreign direct investments and what this will mean for opportunities for North-Brabant.

What is your role in the NFIA? (or other organization depending on respondent)

FDI Decisions

1. What are the most important problems or barriers for firms as a result of Brexit?

- What type of firms and in which sectors?
- How do you or your organization facilitate this?

2. How do these barriers influence the FDI decisions of firms?

FDI Impact

3. What are the biggest changes, with regards to FDI, before and after the trade agreement?

4. What location or institutional related factors are relevant for Brexit-related FDI decisions?

- And for which types of firms?

5. What do you think the long-term implications are of Brexit with regards to FDI decisions?

6. What are the chances for The Netherlands as a result of Brexit with regards to FDI?

- For Brabant?

Firms:

Thank you for participating in the research! (explaining the research and internship)

Maybe first introduce yourself and give a general description of the company?

How did Brexit affect the business and how did it influence the decisions to invest abroad. What has changed?

Mostly negative or also a chance to grow?

What type of investment (outsource?)? Relation with the parent company?

How was the investment trajectory? Contact with NFIA/BOM? What went well, or not that well? What could be improved?

Future investments, shift in activities? Structural changes? Brexit negative or does it also grant opportunities?

What influenced your decision to consider Brabant? What other locations were or are an option and why?

What are the most important criteria for an investment location?

Do you see any general trends as a result of Brexit within the industry or outside it? What do you think the longer term effect will be with regards to foreign investments?

Additional tables/appendix:

6.2.4 Sector specific developments

Table 10: LSH sector

The previously mentioned wide range of impact on the LSH due to Brexit can be noted in the dataset.

Rijlabels	Life Sciences & Health
Funding	2
Intellectual property	1
Logistics infrastructure	4
Market access (EU)	5
Proximity transportation	1
Regional sector	2
Tax incentives	2
Eindtotaal	**17**

Second row of location advantages, not yet integrated.

Aantal van Location 2	Kolomlabels				
Rijlabels	Customs	Logistics infrastructure	Regional sector	Talent/Language	Eindtotaal
Agri-Food					2
Chemical sector			1	1	3
Consumer & Household Goods		1		1	2
Energy					2
Garments & Textiles					1
Graphical and Paper Industry				1	1
High Tech Systems		1			2
Horticulture					1
ICT				2	3
Life Sciences & Health		1		1	5
Sport, Tourism and Leisure					1
Transportation Industry				1	1
Water			1		1
Wholesale, retail and trading	1		1		2
Eindtotaal	**1**	**3**	**3**	**7**	**27**

Table 11

(This is still vital info, since there is a relatively high amount of Talent/Language related locational elements. These specific demands are often related to more knowledge/R&D related investments.)

Firms with a representative office internalisation

Rijlabels	Market access (EU)	Source of product	Talent/language	Tax incentives	Eindtotaal
Agri-Food		1			1
Creative Industries	1				1
Energy - Solar Energy	1				1
High Tech Systems	1				1
Industrial Engineering			1		1
Life Sciences & Health				1	1
Services - Consultancy	1				1
Eindtotaal	**4**	**1**	**1**	**1**	**7**

Table 12

No significant results in relation to Location specific advantages

Specific sectors (L)

LSH (first L, second L and O)

Rijlabels	Agri-Food	Eindtotaal
Logistics infrastructure	2	2
Market access (EU)	6	6
Source of product	1	1
Talent/language	1	1
Eindtotaal	**10**	**10**

Table 13

Rijlabels	Life Sciences & Health
Funding	**2**
Innovative capacity	1
Security and stability	1
Intellectual property	**1**
Manufacturing capacity	1
Logistics infrastructure	**4**
Innovative capacity	2
Managerial capacity/Logistical capacity	1
Security and stability	1
Market access (EU)	**5**
Logistical capacity	2
Managerial capacity	1
Marketing capacity	2
Proximity transportation	**1**
Innovative capacity	1
Regional sector	**2**
Managerial capacity	1
Managerial capacity/Manufacturing capacity	1
Tax incentives	**2**
Managerial capacity/Marketing capacity	1
Marketing capacity	1
Eindtotaal	**17**

Table 14

Certification, Customs	1
Customs	8
Customs, Import duties, Shipping times	1
Customs, Lead times	2
Customs, Taks (excise)	1
Customs, VAT	3
Customs, VAT, Lead times	1
EMA	3
EU regulation	1
Lead times, Tax (duties, VAT)	1
Lead times, VAT	2
Licensing	1
Market access (EU), Visa, Geographic location	1
Regulation	1
Rules of origin	8
Rules of origin, customs	1
Rules of origin, Customs, VAT	2
Rules of origin, Logistics infrastructure	1
Uncertainty	2
VAT	4
Visa	1
(leeg)	
Eindtotaal	**46**

Table 15

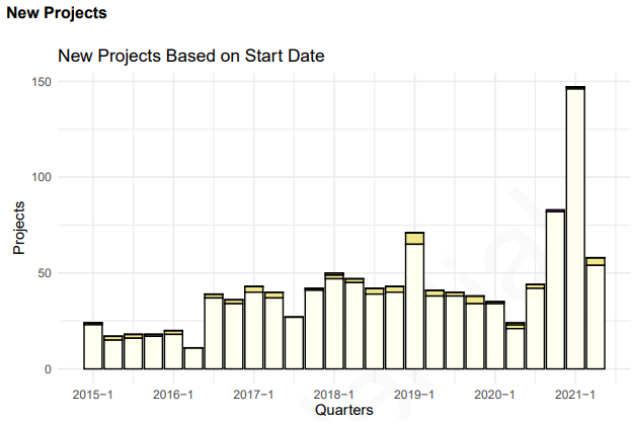

Figure 7: UK projects NL source: NFIA 2021

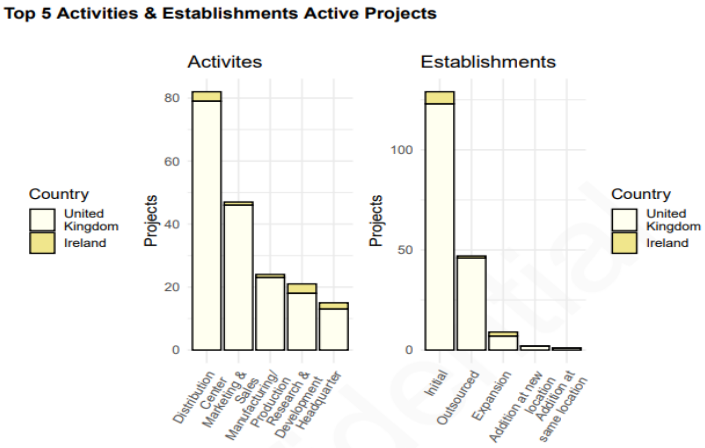

Figure 8: UK Activities and establishments NL source: NFIA 2021