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# **The Role of Business Intelligence in FDI Entry Mode Choice Between Joint Ventures and Wholly Owned Subsidiaries**

International Business

Master's thesis

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Questions related to foreign direct investment entry mode choice contribute to a great amount of international business research. The uncertainty surrounding the decision of going to a new market in general requires a thorough understanding of the company's internal situation together with the external evaluation of the operating environment. Business intelligence has been widely used to address different adversities in relation to decision making but its role in foreign direct investment entry mode choice remains unexplored. This study extends the existing knowledge over this specific relationship of foreign direct investment and business intelligence.

The ways that foreign direct investment entry mode choice and business intelligence are related to each other are diverse. Business intelligence can affect the FDI entry mode decision in many multi-level ways and has certain principles guiding its usage in the entry mode process. In this study, the above-mentioned relationship is under evaluation. This thesis provides a deep look into the different variables determining the relationship of these concepts and provides empirical data to build on top of the existing literature over the topic.

This study provides a literature review over the existing literature surrounding the topic along with a tailored approach to analyse the phenomenon in practice. This thesis also involves empirical data collected through interviews following a qualitative approach to further explore the phenomenon.

**Key words:** Foreign direct investment, Entry mode choice, Business intelligence, Decision-making, Joint venture, Wholly owned subsidiary.

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Suorat ulkomaan investoinnit (FDI) ja niiden etabloitumismuodon valintaan liittyvät kysymykset ovat merkittävä osa kansainvälisen liiketoiminnan tutkimusta. Päätöksentekoon liittyvä epävarmuus uuden markkinan avaamisessa edellyttää perusteellista ymmärrystä yrityksen sisäisestä tilanteesta sekä laajaa ulkoisen toimintaympäristön arviointia. Liiketoimintatiedon (business intelligence) hyödyntämistä on laajasti tutkittu päätöksentekoon liittyvien haasteiden ratkaisemisessa, mutta sen roolia suorien ulkomaan investointien etabloitumismuodon valinnassa on tutkittu vähän. Tämä tutkimus laajentaa käsitystä juuri suorien ulkomaan investointien ja liiketoimintatiedon välisestä yhteydestä.

Suoran ulkomaisen sijoituksen etabloitumismuodon valinnan ja liiketoimintatiedon suhde on monitasoinen. Liiketoimintatieto voi vaikuttaa FDI-päätökseen usein eri tavoin, ja sen käyttöön etabloitumismuodon valinnassa liittyy tiettyjä periaatteita. Tutkielma syventyy näiden käsitteiden väliseen vuorovaikutukseen, analysoi niiden määrääviä tekijöitä ja tarjoaa empiiristä aineistoa aiemman kirjallisuuden tueksi.

Tutkimus sisältää kirjallisuuskatsauksen aiemmasta aiheeseen liittyvästä tutkimuksesta sekä räätälöidyn lähestymistavan ilmiön tarkasteluun käytännössä. Lisäksi tutkielmassa hyödynnetään laadulliseen tutkimukseen pohjautuvaa empiiristä aineistoa, joka on kerätty haastatteluiden kautta ilmiön syvällisempää ymmärtämistä varten.

**Avainsanat:** Suora ulkomaan investointi, Etabloitumismuodon valinta, Liiketoimintatieto, Päätöksenteko, Yhteisyritys, Täysiomisteinen tytäryhtiö.

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# 1 Introduction

## 1.1 Background

Questions related to foreign direct investment (FDI) of companies contribute to a great amount of international business research due to the complexity of the process. FDI is an investment reflecting long-lasting interest and willingness to gain control over foreign operations in another economy (UNCTAD). One of the major dilemmas companies face when considering an entry to foreign markets is the entry mode choice. Entry mode choice refers to the institutional arrangements the company makes along with the conduct of business transactions in the foreign economy (Bui, Hoang & Bui 2022, 2). In the decision-making process that goes in the entry mode choice, there is always uncertainty, and the process is limited to a group of managers who also have constraints in the available information regarding this decision. The orientation of the management can affect the decision process among other factors. If the management is orientated rather internationally than domestically, the management (and the company) are generally better at coping with the varying cultural and institutional differences in foreign markets. Different characteristics and experiences of the top management team can shift the decision towards one more preferred entry mode over the other. (Nielsen & Nielsen 2011, 185-186.) The uncertainty and imperfection in information causes a high equity risk for the firm while considering the entry mode choice. (Morschett, Schramm-Klein & Swoboda 2010, 60-61.)

It is in the firm's best interests to limit this risk as much as possible and one way of doing so is through utilisation of business intelligence and analytics. Information gathered with business intelligence (BI) can be utilised to assess the target market and the findings can affect the decision-making process. (Ulman, Musteen & Kanska 2021, 597-599.) Business intelligence refers to all data-gathering initiatives for the enterprise spanning from collection to analysis (Munoz 2018, 1). Business intelligence and analytics is increasingly used by firms of larger scale, and this is why the relationship of this key decision-making process determining the success of a foreign entry, and business intelligence should be researched (Chen, Chiang & Storey 2012).

Continuously growing investments and attention towards digital business and different utilizations of business intelligence is reforming the way some businesses operate.

Business intelligence, software and services expenditures were in the vicinity of 16 billion dollars in 2016. Business intelligence has substantially gained ground in the field of business. (Munoz 2018, 2-3.) Business intelligence is shaping the horizon of different kinds of data-driven decision making and is already automating some aspects of knowledge-intensive work and providing valuable tools for various fields of work and business. Companies are investing aggressively towards technological advancements to stay on top of the change and not to fall behind of competitors. This means that the maturity for the usage of different technological tools on average is improving. Different utilizations of technological advancements in business are gaining more ground and are continuously becoming more recognized by executives. Demand for talent in the field is increasing among with awareness over different solutions and these trends display a solid background for why different connections between technology and business-critical decisions should be researched more. (Yee, Chui & Roberts, 2024.)

The developments in the technological field of decision making are opening doors for new different utilizations of business intelligence. The possibilities in the field are endless and this study provides basis for future international business research over the topic. The dynamic use of BI in foreign direct investment entry mode choice has not been extensively researched before.

Among all IT investments, financial contributions to BI have been the largest expenditure within organizations since 2009 (Torres, Sidorova & Jones 2018, 822). The trend of high investment amounts in IT continues today in different forms and utilizations of business intelligence. Different companies use these BI applications differently. Organizations that leverage data effectively in their operations can experience significant competitive advantages, while those that fail to embrace data analysis risk falling behind (McKinsey & Company, 2020).

Information is everywhere in today's world: everyone has their own cellphone, laptop, social media accounts and other devices utilizing and generating different sorts of data constantly. Data is easy to access nowadays, and the biggest challenge is the utilization and management of it. This presents a variety of opportunities and challenges for companies. Smaller companies might simply not have enough resources or know-how to manage and utilize data in decision-making. However, companies that excel in the usage of business intelligence have the ability to create themselves a competitive edge and are

quicker to address changes in the operating environment. (Munoz 2018, 13.) Due to the resource constraint, this thesis will only focus on companies capable of carrying out capital-intensive (joint ventures and wholly owned subsidiaries) market entries.

Business intelligence can be used to answer the uncertainty about different factors related directly to the FDI entry mode choice. These factors include but are not limited to e.g. logistics costs, trade barriers, political and economic risks and concerns about firm strategy (Hill & Hult 2018, 432). All these risk factors pose different risks of failure within the entry, and it is in the investing company's best interest to mitigate these risks as much as possible.

This thesis will approach this topic from the perspective that the impact of BI can be either positive or negative, in other words BI can either enhance or constrain the FDI entry mode process. This is due to the fore-mentioned concerns about data access, utilization and management. This complex process requires a high level of know-how and resources to be carried out successfully. In order to determine how exactly the impact of BI can occur, thorough definition of the central concepts is required among an extensive array of international business, decision-making and business intelligence literature to link the two topics together. The relationship of business intelligence and foreign direct investment entry mode choice is the key topic under analysis in this thesis.

## **1.2 Aim of the study and research questions**

The main research question of this thesis is "*What is the role of business intelligence in foreign direct investment entry mode choice?*". Through this question, this study will examine the possible different ways that business intelligence can affect the FDI entry mode choice and the preferred mode of entry: Joint venture or a Wholly owned subsidiary. In order to make inclusive conclusions regarding the main research question, this study will use two sub-questions. The research questions are as follows:

Sub-questions:

1. How is the collected BI information utilized in the entry mode decision-making?
2. What type of business intelligence informs the decision between an entry with a joint venture / wholly owned subsidiary?

These questions allow to delve into the connections in the relationship of FDI entry mode choice and business intelligence and the implications whether the information used can also have an impact over the final entry decision. Through theoretical literature and interviews with company executives it is possible to identify the key variables determining the relationship between business intelligence and FDI entry mode choice. This study explores how the chosen phenomenon appears in practice and makes conclusions about the possible level of maturity that is required for companies to utilize business intelligence in foreign direct entry mode choice. Through research questions this thesis determines the ways that business intelligence can answer the uncertainty over different factors related directly to the FDI entry mode choice and especially to the choice between joint ventures and wholly owned subsidiaries.

The structure of the thesis is as follows. First the theoretical background of the study will be introduced with a thorough literature review focusing on literature related to foreign direct investment, business intelligence and decision making. After the literature review follows the empirical part of the study. In this section the research methodology is introduced along with empirical data. In the final part of the thesis will be a summary over the findings among with managerial implications.

## **2 FDI entry mode choice**

Foreign direct investment (FDI) is one of the two most central concepts of this thesis. In this section a thorough definition for the concept of foreign direct investment will be presented along with a framework that will be further used later in this thesis as a lens to combine the two central building blocks of this study. This section will also cover discussion over the foreign direct investment entry mode choice process and present characteristics typically leading to an entry with a joint venture or a wholly owned subsidiary.

### **2.1 Definition of foreign direct investment**

The United Nations conference on trade and development (UNCTAD) defines FDI as an investment indicating a long-term interest and control in a foreign economy (UNCTAD, 2021). This however is a very broad definition for FDI and does not specify the actions and processes FDI is connected to or what the main goals of these investments are. The word “control” is often key when distinguishing FDI from other forms of cross-border economic activities.

The bottom goal of FDI is indeed to gain control over foreign economic activities such as production or distribution over time. This is accomplished by gaining ownership over assets which suit the goals of the investor in the long run. Among control, the longevity of FDI is to be pointed out. When a company decides to make financial contributions (big or small) to a foreign market, it intends to stay there in the long run according to the definition. (Moosa 2002, 1; Hill & Hult 2018, 224.) This is why considerations going into the entry decision play a crucial role in terms of the success of the entry and the overall firm cross-border strategy.

In order to gain the intended amount of control over foreign activities, investors (companies) must make the decision on how much resources they are willing to dispose on the cross-border activities. The resources and control of the foreign activities are determined through the chosen entry mode. This thesis will analyse the topic through two entry modes: joint ventures (JV) and wholly owned subsidiaries (WOS).

## **2.2 Motives for foreign direct investment**

To analyse the motives for the choice of different entry modes in foreign direct investment, this thesis will draw on the eclectic paradigm, also known as the OLI framework by John H. Dunning (Dunning 2000). The paradigm is called the “eclectic paradigm” since it has been constructed on the basis of other theories (Hill & Hult 2018, 228). Dunning originally presented the theory in the 1980’s but has since updated his views on the framework. The advantages of this framework regarding the topic of the thesis include the simplicity and constructiveness of it. The abbreviation OLI stands for ownership (O), locational (L) and internalisation (I) advantages. (Dunning 2000.) Even though the paradigm was first presented decades ago, it still provides a solid framework for evaluating FDI and among the original author himself, other people have presented new research and updates to the paradigm. Through the years, the paradigm has proved to be very adaptable since it makes very little restrictions. The paradigm is intended to be used as a tool to analyse the situation and find the most suitable information and solutions to the problem at hand (Cantwell & Narula 2003, 457; Dunning, 2000).

The ownership advantages of the framework refer to specific advantages which a firm is in possession of. These advantages can be tangible or intangible. The ownership advantages can be based on tangible possessions of the firm, such as production facilities, scarce resources or technology which puts the company into an advantageous position in their field of business. The O-advantages can also be abstract or intangible, such as knowledge of the management which improves the performance of the firm’s decision making. From the ownership point of view, foreign direct investment would occur when the company has a chance to add value through these advantages. In other words, the better the firm-specific competitive advantages are in relation to competitors in the target market, the more likely the company is to participate in FDI. The value adding process can be purely about harnessing tangible assets better or it can also be knowledge intensive. The exploitation of ownership advantages has shifted from pure wealth creation activities to be more about organising knowledge intensive assets of the firm. (Dunning 2000; Cantwell & Narula 2003, 458.) Such shift in the usage of firm-specific ownership advantages and creating new ones is interesting in the context of this thesis.

The locational advantages in this paradigm consist of the possible benefits bound to the location of value-adding activities. These assets are regarded as useful in terms of value-

adding activities from the firm's perspective and therefore should be combined with their existing unique capabilities (Hill & Hult 2018, 233; Dunning 2000). These can include for example market-seeking, resource-seeking or efficiency-seeking. The company might aim to find suitable markets for their products, cheaper accessibility to raw-materials or to arrange their production and other operations more efficiently. The ownership advantages can be utilised best when the location for the firm's operations is suitable. Locational advantages go beyond physical resources in Dunning's theory. For example, establishing agencies in locations which host other companies from the same field of business may result in advantages in knowledge generation and research (and knowledge-spillovers). In general, the attractiveness of a foreign market location is considered to be one of the major drivers of foreign direct investment due to the potential realization of market potential for the business. (Hill & Hult 2018, 234; Morschett, Schramm-Klein & Swoboda 2010, 2.)

The internalisation advantages combine the previous categories of advantages and helps to find the best way to organise the value-adding activities in order to get the most out of the firm-specific capabilities. (Dunning, 2000.) The problems and questions related to internalisation advantage have also shifted more and more towards managing the continuously growing research and development budgets of multinational enterprises. Another relevant question to answer is how to effectively encourage a creative environment in a company which requires certain bureaucratic structures in order to be able to operate (Cantwell & Narula 2003, 458).

According to the literature, the OLI framework makes certain demands for the company in order for it to benefit from foreign direct investment. Firstly, the ownership advantages have to give the company a comparative advantage in relation to other companies. Secondly, it must be more valuable for the company to use those advantages rather than sell them. This refers to the internalisation advantages: should the company expand or sell the means of expansion to competitors. Thirdly, the company must profit from using a combination of their advantages when located abroad. If this is not the case, it is more sensible to export. (Moosa 2002, 37; Dunning 2000; Li & Xiong 2022, 2.)

Typically, FDI can be categorised from the perspective of the investing company and the host country. A general way of distinguishing different types of FDI would be to class it to horizontal, vertical and conglomerate foreign direct investment. Horizontal FDI occurs

when a company wants to produce the same goods abroad. Horizontal FDI is generally related to patented or very differentiated products. Vertical FDI is conducted usually in search of advantageous resources or to be closer to the potential customers. Conglomerate FDI involves both, horizontal and vertical foreign direct investment. (Moosa 2002, 5.)

### **2.3 Foreign direct investment entry mode choice**

Foreign direct investment entry mode choice can also be viewed as a decision process which aims to intentionally enhance the competitiveness, efficiency and control over foreign operations and important resources (Daphne & Shige 2002, 667; Peng 2011, 5). Participating in FDI is both risky and expensive. It is risky because there is never complete certainty about the business environment, market situation and the rules of the game in the foreign culture. It is expensive because the investor needs to be able to bear the projected and possible additional costs of establishing operations in the foreign market. (Hill & Hult 2018, 229; Peng 2011, 312.) One way of tackling the challenges of determining the suitable approach to FDI is by using different frameworks. Questions related to the entry decision are the scale of entry, which markets to enter and when to make the entry. Large scale entries which are conducted rapidly have a higher chance of gaining the local operating environment's trust. By disposing a larger number of resources to the entry, the local customers and companies are more likely to see the company as being there to stay and wanting to gain a permanent market presence. This however creates larger strategic commitments to the new market very quickly and these commitments are difficult to reverse. If the entry does not go the intended way, large scale entries may result in highly increased costs. (Hill & Hult 2018, 436.)

The choice between a joint venture and a wholly owned subsidiary requires a careful evaluation of the circumstances in the foreign operating environment and the long-term goals of the company. Research suggests that joint ventures are preferred over wholly owned subsidiaries when the investor must acquire assets which when obtained in the foreign market entail significant transaction costs (Makino & Neupert 2000, 705). Research also suggests that the management team's personal background and experiences may affect the entry decision. More international experience can increase the management team's confidence in estimating risks and addressing uncertainty regarding the entry sometimes translating into preferring wholly owned subsidiaries over joint ventures. (Nielsen & Nielsen 2011, 191.) Through an acquisition the investor gains a lot

of intelligence on how to conduct business in the area. Also, resource limitations are a driver of the choice: a greenfield venture is the most expensive option in terms of the market entry so in terms of resource constraints, acquisitions might be sometimes the preferred option. The financial side however is not the only variable which determines the entry mode.

The similarity between the target market's rules of the game and the domestic market also plays a significant role in the process. If the company predicts that acquiring knowledge about the local ways of business is increasingly more difficult, JV would be the more preferred approach. If, however the target market and the domestic market are culturally and institutionally similar, WOS might be the more sensible way of acquiring foreign operations. Another situation in which it would be more sensible to go with a WOS is when environmental uncertainty is high. A wholly owned subsidiary allows the company to limit communication and transaction costs and remove the risk of insufficient internal information flow which could occur with JV's. (Li & Xiong 2022, 1-2.)

The more dominant indicator of entry mode choice is still the transaction cost perspective since the ability of adding value to the operations is the primary reason of FDI. (Makino & Neupert 2000, 709-710.) An understanding over the local market along with familiarity to the socio-cultural rules and values of the market also tend to direct the choice regarding the entry modes. In example, wholly owned subsidiaries are generally the less preferred option when the socio-cultural distance between the domestic and foreign market is greater. In this scenario, joint ventures are generally the preferred option. Companies tend to avoid full ownership in countries they consider of being higher risk in terms of the investment. However, when the market potential is perceived to be of the higher threshold, companies generally aim to enter with wholly owned subsidiaries since these are expected to provide the highest long-term profit for the company due to the ownership advantages. (Morschett et al 2010, 61-62.)

Research often views the choice between joint ventures and wholly owned subsidiaries as a matter of equity control. Among the financial factors of the FDI entry mode choice, institutional perspective on the matter suggests that the entry mode decision can also be viewed as a sum of the investing company's institutional motivations to gain legitimacy in the foreign market. Only looking at transactional factors when determining the entry mode may be insufficient and the institutional perspective is indeed relevant in the

consideration. The country-firm tension which a company must conform to, is complex and depending on the entry target, can shift the decision between JV and WOS to one way or another. This can occur because of the liabilities of foreignness which can be mitigated through partnering with a local company. Setting up a WOS might pose more issues (especially in terms of greenfield ventures) in this sense. (Yiu & Makino 2002, 680.) The institutional factors may also pose restrictions towards wholly owned subsidiaries reducing the probability of a company to go forward with this kind of an investment. The institutional factors can influence the choice greatly and override other logical considerations regarding the decision. (Morschett et al 2010, 63.)

### 2.3.1 Joint ventures (JV)

A joint venture refers to a jointly owned firm by two or more independent firms. The collaboration is based on an agreement which determines the ownership stakes and operating control of the joint venture. A common way of going forward with this kind of an agreement is a 50-50 venture, in which each party holds half of the ownership stake and supplies a team of managers to run the operations. Joint ventures have several advantages and disadvantages. On the positive side, this is a good way to limit the amount of capital which is required to make an entry to the foreign market. Also, the risk related to the foreign operations is shared with the other parties of the agreement. When creating a joint venture with a local company, the foreign company benefits from the local partners knowledge. The local company already has an understanding over the local operating environment and the rules of the game. This can make the entry smoother and prevent additional costs arising from market resistance. (Hill & Hult 2018, 443; Peng 2011, 339.)

Joint ventures give ground to knowledge-spillovers. These spillovers can either benefit or harm the investing company depending on the assets they are in possession of. They can help to mitigate liabilities of foreignness by informing the investor on how to do business in the new area. On the other hand, the spillovers might create ground for the competitors to gain knowledge about technology or other firm-specific advantages possibly diminishing the competitive edge gained through them. (Yiu & Makino 2002, 670-671.) The harming or benefiting effect of knowledge-spillovers is partly determined by the technological and organisational maturity of the company. If the competitors or partners simply do something better, it is easy to say that there can be visible benefits from the spillovers (Vujanović et al 2022, 1- 2, 8). However, internal firm-specific know-

how and/or technology of the investor might have to be accessible for the partner(s) which might benefit the partner and undermine the investor's competitive advantage in the long run.

If a joint venture is the preferred entry mode, the investor should find a partner with similar capabilities in technology and production to make the relationship sustainable (Wu et al 2022, 139). However, the joint agreement can be constructed so that the risks to excessive knowledge spillovers are mitigated to an extent. Among issues arising from spillovers, there can also be friction with the management and questions about the distributed control over the newly formed joint venture. Determining the common strategy can divide opinions and affect the operational performance negatively. Conflicts of interests may occur when battling the local rivals and evaluating the ways and scale to which the parties are willing to answer to the competition. After all, the parties of the agreement are otherwise independent firms with different strategies, finding a common goal with the joint venture might be difficult in some cases. (Hill & Hult 2018, 443.)

### 2.3.2 Wholly owned subsidiaries (WOS)

A Wholly owned subsidiary, which refers to a subsidiary of which shares the parent company owns 100%, provides more control over the foreign operations than joint ventures and allows the parent company to coordinate their operations better. This is because the parent company has a 100% ownership stake over the new wholly owned subsidiary in the target market. A WOS can be established in two ways: either through acquiring an already established firm in the target market or set up entirely new operations in the market. During the past decades 40-80% of the overall FDI inflows have been mergers and acquisitions. Setting up entirely new operations on the new market is called a greenfield venture. (Hill & Hult 2018, 447; 453-454.) Wholly owned subsidiaries also come with a bigger price tag but the profits from the subsidiary also are fully for the company, not for partners. Another advantage of wholly owned subsidiaries is that they allow the company to protect their technological advantages from competitors. This protection over assets is often a dealbreaker in the entry mode choice between joint ventures and wholly owned subsidiaries. Subsidiaries come with greater foreign financial contributions and capital risks since the company must learn to do business in a foreign environment and invest in starting the operations on the market. A medicine for excessive

financial contributions during the entry can be acquiring a host-country firm through an acquisition. (Peng 2020, 153-156.)

Different sets of problems with the WOS entry can arise depending on how the WOS is carried out. With an acquisition there might be friction when trying to establish collaboration with the new subsidiary and make changes into the organisational culture or even merge the two different organisational cultures. Acquisitions can sometimes be challenging enough that the costs offset the benefits. (Hill & Hult 2018, 444; Morschett et al 2010, 1-2.) On the other hand, one of the greatest risks with greenfield ventures is the slowness of the process and uncertainty. Especially for an inexperienced enterprise greenfield ventures can be extremely challenging since they lack the knowledge of different actions that need to be taken for a successful establishment. However, with the slowness of the process comes a great freedom of choice to establish exactly the type of operations which best suit the company. Full-control entries are also more vulnerable to the uncertainty and risks on the market. This is due to the irreversible nature of the investment and the lesser flexibility of them. The vulnerability can be limited through shared ownership of the new venture, but this also naturally weakens the control over the foreign operations. (Hill & Hult 2018, 449; Nielsen & Nielsen 2011, 186.)

Generally, in FDI literature it is accepted that if a company possesses some valuable intangible asset such as technology or a brand, it is sensible to enter a new foreign market through a wholly owned subsidiary (Peng 2020, 153-154). A WOS entry allows the foreign parent company to share its intangible resources with the new subsidiary to a bigger extent than with a joint venture since they do not have to beware of the joint partner appropriating the assets. Wholly owned subsidiaries also provide complete independency in decisions regarding the new subsidiary. Other entry modes do not have this advantage. Research suggests that in industries containing high levels of intangible resources control over these assets provides a competitive edge. A WOS allows complete control over these assets with a mitigated spillover risk and therefore wholly owned subsidiaries perform better in these industries on average than joint ventures. (Chang, Chung & Moon 2013, 317; 334.) In terms of this thesis, it is important to note that companies capable of disposing large amounts of resources for data-driven decision making through business intelligence also must be capable of disposing even greater number of resources for the foreign market entry. This provides an implication over the fact that these companies are capable of somewhat capital-intensive entries to find success in the foreign market.

### **3 Business Intelligence in FDI entry mode choice**

This chapter will first thoroughly define the concept of business intelligence along with discussion on its challenges and benefits. After the introduction of business intelligence as a concept, this chapter then explores the ways that business intelligence affects the FDI entry mode choice process and if business intelligence can be used to inform which entry mode should be chosen. Furthermore, this chapter will discuss whether certain types of BI information can direct the choice between joint ventures and wholly owned subsidiaries in the entry mode process.

#### **3.1 Business intelligence**

Business Intelligence (BI) is the other central concept in the relationship under assessment. By definition, business intelligence is the means to monitor, gather and analyse data acquired from the operating environment. The usage of this data can affect strategic decision-making greatly by providing additional information to support these decisions. Regarding the entry mode choice process, it is important to understand the complexity of the process in reality. General discussion and simplified theories over the topic often transmit an image that the process is more or less pick and choose, meaning that the company simply just picks one mode over the others. This however is not true, and it is common for companies to combine different modes of entry to create the best approach. However, in the context of this thesis it is sensible to simplify the process and look at the relationship through the two introduced entry modes. (O'Higgins, Andreeva & Goya 2022, 2-3; Watson & Wixom 2007, 96-97.)

Business intelligence is a wide concept combining data gathering, data storage and knowledge management systems with analytical tools to transform complex data into information for decision makers (Negash 2004, 178; Torres, Sidorova & Jones 2018, 822). The meaning of the concept is twofold: it refers to both, monitoring and analysing the external business environment and to the software used to manage this information (Kinsinger 2007, 535-536). Other concepts such as decision support systems (DSS) have also been used to refer to business intelligence but nowadays the concept of BI generally includes these data examination systems used to analyse the surrounding environment.

Since the complexity and amount of data that can be utilised, analytics is a central concept to be connected with the concept of business intelligence. Analytics contain the raw data

transformed into a readable and understandable form (information). The analytical utilisation of big data as part of business intelligence has been defined as “*the data sets and analytical techniques in applications that are so large (from terabytes to exabytes) and complex (from sensor to social media data) that they require advanced and unique data storage, management, analysis, and visualization technologies*” (Chen et al 2012, 1166.) This definition is inclusive and accounts the way that big data is related to business intelligence analytics. It includes the process from storing the data all the way to visualizing it into an understandable and usable form. As an entirety, business intelligence consists of so many factors that it is often referred to as the framework which a company uses to enhance their organisational capabilities (Shao et al 2022, 2). This thesis will refer to business intelligence as the means to monitor, gather and analyse data acquired from the operating environment. In other words, as a company’s ability to leverage the available data beneficially (Niu, Ying, Yang, Bao & Sivaparthipan 2021, 2). This definition allows to make conclusions about the entire process going into the entry mode choice in terms of BI utilization.

### **3.2 Types of Business Intelligence Data**

E-commerce companies such as Amazon can interact with their customers directly online. This creates ground for better customer relationships and understanding the strengths and weaknesses of the products they are selling. Every time a customer visits a website which uses cookies and saves server logs of the visitation, the company gains valuable information about customer preferences and structure of the customer relationship. Research suggests that this information can be utilised in many ways, one of which is by directing certain brands to certain people. Strong evidence exists about the fact that people use brands to communicate their identity. This kind of data has become a true gem for many (e-commerce) companies since it can be used to identify customers’ wants and needs and chart new business opportunities and it is only one example of how customer data can be transformed into valuable information. (Chen et al 2012, 1167; Hu et al 2019, 925.) A way of directing personalized products is by using recommender systems. These systems give the consumer recommendations about possible other interesting products based on their behaviour on the internet. (Zhou et al 2022, 1.) Amazon is just an example of several multinational companies utilizing different data sources and business intelligence systems to enhance their business operations and generate profit. These different business cases and utilizations for BI are constantly being developed and

discovered. Examples like Amazon here, provide solid evidence over the fact that groundbreaking utilizations can be achieved through BI in many places, even when finding new business opportunities and perhaps even when choosing an entry mode for foreign direct investment.

Coming to establishing these new business opportunities, data collection and availability plays a key role. The data that has been collected from different sources can be used to evaluate the profitability of the new business venture if used correctly. In order to understand the usage of data in this context it is important to understand the general characteristics of it. Data can be structured and systematically collected or unstructured and created as a “side-product” of everyday operations (Table 1) (Negash 2004, 182.).

Table 1 Structured & Semi-structured data (Negash 2004, 182)

<b>SOURCE</b>	<b>INTERNAL</b>	<b>EXTERNAL</b>
<b>STRUCTURED</b>	ERP	CRM
<b>SEMI-STRUCTURED</b>	BUSINESS PROCESSES	NEWS ITEMS

Table 1 depicts the data types or characteristics of data and the sources where each type of data can be found. In relation to business operations, the sources can be divided into internal and external sources. Internal being systems and processes used and carried out within the company while external sources include information flow coming from outside of the company. A distinctive factor in internal and external data is whether it is entirely generated inside the company or if it is “disrupted” by coming from outside the company. However, the distinction is not defined sharply and sometimes it can be difficult to determine whether some data is internal or external. (Negash 2004, 182.) Table 1 presents a good example of each data type and data source to support the thought process going forward in this thesis.

*Structured data* inputs refer to the information which can be gathered in example through the company’s systems. These systems can include in example enterprise resources planning (ERP) systems, customer relationships management (CRM) or data warehousing systems. Structured data is organized by nature and this structure of the data

allows for easier data processing since the data is already in the correct format (generally in columns). Structured data can be directly transferred to a database for further usage.

The nature of structured data only allows it to contain pre-determined and measurable elements which are in standard form. This is why analyses based on structured data are missing the “human” aspect of potential information that can be gathered through it. It does not account for any other elements except for the ones pre-determined when arranging the collection process. Usually, the content of the data is stored in columns but in reality, very little amount of data is fully structured and requires some amount of processing to be used. Generally, structured data allows for immediate analyses since it requires very little manual labor to use. Since the generation of structured data is dependent on the user of these systems, it is important to ensure proper training for the users to avoid error within the data. Good quality training has proved to be crucial in system adaptation and improving organisational performance. (Strekalova & Bouakkaz 2022, 816-817; Almajali et al 2022, 12-13.)

*Unstructured (or semi-structured) information* on the other hand can be for example hearsay from different conversations, e-mails or news items. Semi-structured data resembles structured data through its similar format, but semi-structured data is not constrained by the same restricting rules. This allows for the data to be more flexible and to be collected even when some of the data is imperfect or it contains information that is not easy to conventionally transfer to the database. Semi-structured data brings the “human” aspect to the gathered data and most of it cannot be automatically transferred and processed. This can cause extra work for the analyst or engineer working with the data and makes analyses take more time. The usage of unstructured data requires more sophisticated tools to be analysed than structured data. This is because of the amount and complex structure of the data. The complexity also increases the possibility for error in the analysis. This is why the usage of BI systems (and different datasets) requires caution and is intended to be used as more of a tool than the absolute truth. (Strekalova & Bouakkaz 2022, 816-817; Negash 2004, 178-180; Niu et al 2021, 1.)

Distinguishing the different types of data used as support to decision-making helps to understand why the effects of business intelligence on decision-making in FDI entry mode choice can be twofold: it can either enhance the decision or constrain it. The complexity and amount of the available data leads to a point where professionals must be

able to collect the right data and make correct deductions based on it. If this process is smooth, BI can most likely be very helpful. Research displays that companies which have integrated the usage of BI systems operationally have lower risk values and higher profitability after the integration process is complete. This occurs through better employee relationships and process institutionalisation. Clearer structures and practices regarding BI systems and information collection creates awareness and enhances the information flow within the company. This directly contributes to the increase of organisational performance (Yiu, Yeung & Cheng 2019, 3963-3966; Olan et al 2022, 605-606.) However, if the data analysis process is not smooth and wrong observations are made, or the users are incompetent, BI usage can disrupt the decision-processes in a negative manner.

### **3.3 Business intelligence and decision-making**

#### **3.3.1 Business intelligence maturity**

Decision-making processes of companies have been evolving enormously hand in hand with the technological advancements made in the society and the world of business. Information has always been a crucial part of the process and the amount of information that can be used has been increasingly rising due to the enormous datasets generated on the daily and the systems created to analyse them. Usage of business intelligence tools in decision-making comes down to the maturity of a company to facilitate the use of them efficiently. Decision-making varies in every company and in order to use BI efficiently, it needs to be implemented thoroughly as a part of the other aspects building the decision processes within the company. BI needs to be considered as a natural part of the process that is given regard among other factors affecting the process. The actual influence of the BI application in the decision-making process is very complex. It is very difficult to determine whether the desired or undesired result was due to the application of BI or due to other factors affecting the process. (Kašparová 2022, 992-994.)

Generally, in information technology research, the research problems consider the business value provided by information systems in different operational contexts. Regarding business intelligence in decision-making, not enough research has been conducted to make extensive conclusions about the magnitude of its effects on different decisions. However, research regarding the success of business intelligence systems has

been modelled and different factors affecting the relationship identified. General maturity to use business intelligence systems directly contributes to the extent of quality to which the BI information can be used. General technological and analytical capabilities of a company can be used to determine the level of maturity to use BI systems. High maturity contributes to information content quality and information access quality which both are key factors building the success of BI information usage in BI processes. (Popovič et al 2012, 730-731; 736; Gudfinnsson, Strand & Berndtsson 2015, 37-38.) This relationship is depicted in figure 1.

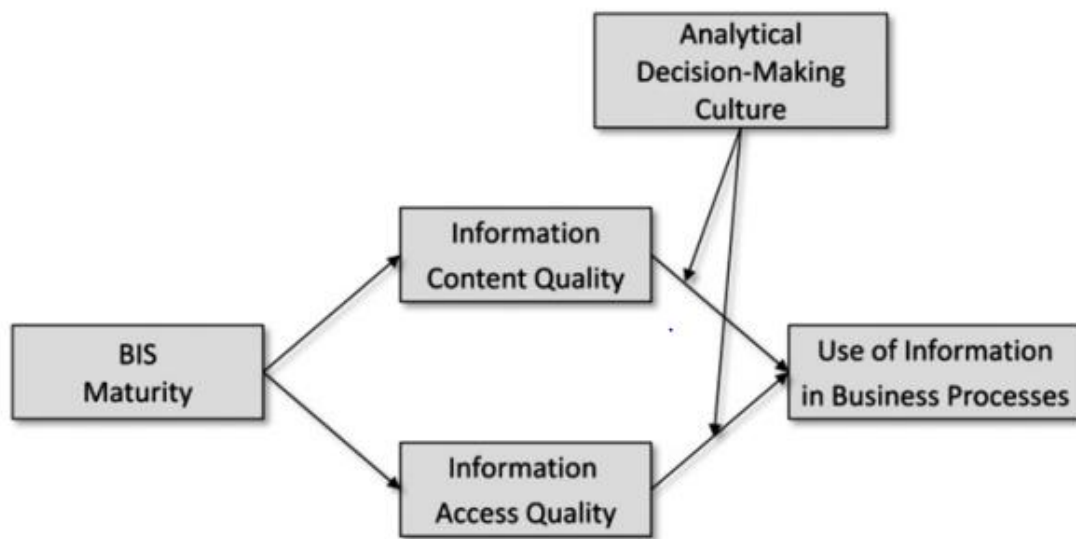


Figure 1 Business Intelligence System success model (Popovič et al 2012, 730)

Figure 1 displays the ways that business intelligence system maturity can affect the outcome of utilization of business intelligence in decision-making. The maturity of the organization to use business intelligence systems directly contributes to the quality of the data they can gather and also determines what information they have access to, and they know how to use in the first place. Also, the decision-making culture of the company must take the findings into account to be able to use the information effectively in business processes. (Popovič et al 2012, 730-732.) These are the building blocks of the effective use of business intelligence in any decision-making and in terms of this study it is key to understand how these linkages contribute to the FDI entry mode decision. Going back to Table 1, the different components of BIS maturity in Figure 1 affect the ability to use the different data sources and different data types. The information content and access quality in Figure 1 includes the data entries in the different data sources (I.e. ERP and

CRM) and with low-maturity companies even the internal structured data entries may not be on the level where they can be directly utilized with BI systems. This is because low-maturity companies are not deliberately paying attention to these entries since they are not planning to further use this data. However, high-maturity companies make deliberate efforts to keep the entries coherent to allow for further use of the data.

Since semi-structured data requires more sophisticated systems and higher level of expertise to use efficiently as support to decision-making, it can be concluded that the usage of semi-structured data also requires higher maturity to use business intelligence systems. Structured data can be used on lower maturity levels due to the little amount of manual labour and processing required to create reports out of it. (Strekalova & Bouakkaz 2022, 816-817.)

### 3.3.2 BI data effects on the FDI entry mode choice

The effects of business intelligence on foreign direct investment entry mode choice are twofold: business intelligence can either enhance or constrain the decision-making. Also, business intelligence can provide valuable information to support the decision on which entry mode to choose but it can't give a straight-forward answer to this question. To gain a deeper understanding on how exactly these effects can unfold, this thesis will draw upon the OLI framework and use it as a lens to combine the international business entry mode theory with modern views on business intelligence.

The first aspect of the framework is the ownership advantages which refers to assets the firm is already in possession of. Figure 1 provided an example of both internal and external structured or semi-structured data. The possessions and strategic assets of a firm can be related to almost anything internal that the firm simply does so well that it provides a competitive advantage over other companies in the same field of business. The ownership advantages can be best displayed through internal structured and semi-structured data. Structured data is easier to track since it is created almost as a side product of the pure existence of systems, and it also requires less expertise to use. For example, enterprise resources planning systems leave information in data storages which can be later used to gain a better image of how the company has been performing (Negash 2004, 180-181). However, internal structured data is not enough to create the big picture on the company performance. Semi-structured data is also crucial in this sense. Semi-structured data provides information about the "human" part of the everyday operations. This data

includes for example e-mails, marketing materials etc. The problem with this data is that it is a lot more difficult to process than structured data, but when done correctly it provides valuable information. This relates to foreign direct entry mode choice in the sense that FDI occurs when the company has a possibility to add value to these advantages (Dunning 2000). Going through internal structured and semi-structured information will help the management to find problems and opportunities which may create ground for new foreign direct investments or expanding the existing ones.

The second sub-paradigm of the framework, the locational advantages, refers to the location-specific advantages a company is in possession of or is planning to acquire in order to add value to their operations (Hill & Hult 2018, 233; Dunning 2000). This occurs through participation in foreign direct investment. BI decision making and the foreign location choice includes a wide variety of factors which have to be considered. These factors include data on the local operating environment, legislation, competitors, political atmosphere, consumer and stakeholder information and among all this, the company's internal capabilities and resources (O-advantages) (Ulman et al 2021, 602). Location analysis in the FDI entry mode decision is dependent more on the external structured and semi-structured data which can be acquired from the target market via market analysis or from possible existing customers (CRM). Information gathered through business intelligence and DSS systems can be used to target the specific locational advantage which the company is in search of. The company might aim to cut costs by finding cheaper and more efficient locations for production (efficiency-seeking), it might be suffering from expensive transportation costs of a critical resource and aim to bring the operations to the source of this resource (resource-seeking) or the company might aim to find new customer segments for their products in the foreign location (market-seeking) (Dunning 2000).

International business managers can use different BI systems to gain information about patterns and exceptions which they might have not noticed without these systems. This directly enhances considerations about foreign location choices (Ulman et al 2021, 602). Systems which are designed to gather and analyse locational data are called geographic information systems (GIS). These systems are designed to collect, store and analyse locational data which meets the criteria placed for the data requirements. This data can be understood by analysts and managers providing information about the geography, customers and distribution possibilities in the possible entry location. (Negash 2004, 193.)

Since locational advantages overlap with ownership advantages strongly, these two are most likely best researched together. Some of the ownership advantages might be highly dependent on locational factors and without awareness of the competitor activities and changes in the domestic and foreign business environment, these advantages might be fully or partially lost.

The question of the FDI entry mode choice comes down to internalisation advantages of the OLI framework when looking through it from the perspective of business intelligence and what information it can provide the management. Since internalisation advantages combine the O and L-advantages of the paradigm in order to find the best way to organise operations to add value, a thorough analysis of the internal and external structured and unstructured data sources will provide valuable information to determine the best entry mode (Dunning 2000).

### **3.4 Synthesis - The effects of BI on the FDI entry mode decision**

According to the prior presented literature and theoretical components, it can be concluded that a framework is required to support the coming empirical part of this study. In the literature, three key components were identified feeding the FDI entry mode choice and its relationship to business intelligence: The data types (and sources), the preliminary reasoning / drivers in participating in FDI (OLI-framework) and the business intelligence maturity. This chapter justifies the usage of the three components and draws further connections between their different aspects.

#### **3.4.1 Business intelligence and FDI entry mode decision**

Technical capabilities of companies are an important factor in determining the possible entry strategies to a foreign market (Li & Xiong 2022, 4-5). These capabilities relate directly to the ability to control the internal and external data the company is in possession of. The amount of data produced online every day is enormous. This data has become a point of interest for many companies since it can be used to produce interesting statistical information about the operating environment. The managers of the company can use this information to make decisions based on statistical facts (Niu et al 2021, 2). Different types of data can be used to find different market trends and evaluate whether for example an interesting foreign market is worth making an entry to. The usage of decision support systems (DSS) as a part of BI has been a turning point in managerial decision-making

supported by information systems. DSS systems can make the decision-making process more efficient by providing the management with valuable insight over the internal and external operating environment. They can also give a strong basis for the decision, making the manager more confident about their actions (Ulman et al 2021, 598).

The complexity of decisions related to international business arise from questions related to different culture, legislation and overall rules of the game. This uncertainty is impossible to analyse perfectly. One of the most difficult challenges top managers faces regarding FDI is that they have to analyse several complex factors affecting the entry decision and the investment. The amount of information regarding these factors is so enormous that the top management often cannot comprehend and account for. Different traditional heuristics and schemas can provide aid in this problem, but the human mind is still not able to analyse as vast amounts of data as technology and business intelligence systems. (Nielsen & Nielsen 2011, 187.)

In order to create a better understanding about the new operating environment, large volumes of data have to be analysed (Watson & Wixom 2007, 97-98). Rather than having a team of people familiarising themselves with the target market, business intelligence and analytics systems can sieve enormous amounts of data and give statistical facts for the managers to create a stronger understanding about the new market and support their decisions. Some systems, which provide information about cross-border activities and reduce uncertainty, already exist and are in use of top management of companies. The core benefit of BI in FDI entry mode choice is that it allows managers to use enormous amounts of data and “reduce” it to a more understandable report which indicates trends and notable exceptions relevant in the current situation. In other words, managers can use a lot more complex information than before but at the same time reduce the complexity of the process. (Chen et al 2012, 1167-1169.)

Analytical tools provide perspective to the problem at hand and can add trends into the consideration which may not have been detected without these tools. This is clearly an enhancement to the decision-making process since it allows the company to find business opportunities even in foreign locations which might not have been thought of in the first place. (Ulman et al 2021, 601-602.) The foreign direct investment entry mode process is driven by the willingness to expand value-adding processes to foreign destinations. As previously deduced, finding locations that might not have been thought of for entry targets

is only beneficial in terms of value-adding activities. BI can be viewed as a tool enabling the organisation to transform their operations to be more efficient and allowing companies to improve their organisational capabilities (Torres et al 2018, 832).

Even though data can be used to gain advantages in many ways, there are also challenges related to the analysis of this data. These issues include for example the lack of accessible smart and real-time data sources. The data being up to date is crucial since the statistical analysis is almost always proactive. Making decisions about the future with obsolete information may lead to catastrophic effects on the entry decision. Problems with legislation have also arisen since the phenomenon is fairly new. Questions related to the safety and privacy of the data are yet to be answered completely even though standards are being created and updated actively. Also verifying the data being untouched is very important to avoid error in the analysis. (Niu et al 2021, 3-4.)

The analysis of international data is often delegated to other teams rather than the top management since the managers' time and technical expertise is limited. This creates pressure for flow of information to be fluent and the analysis to be time efficient. Using too much time to identify opportunities and threats in the new operating environment might result in costs for the firm. This can occur for example if the analysis takes such a long time that the "entry window" closes. (Ulman et al 2021, 602.) Maybe a competitor was quicker or other radical changes occurred in the foreign market changing the circumstances for the entry.

The constraining effects of business intelligence on FDI entry mode choice comes down to the usage of BI systems. Data is ubiquitous and BI systems are always available. Data is so central and holds so much valuable information for companies that not taking advantage of it, is a constraint in itself. However, not knowing how to take advantage of it or overusing these systems can also have a constraining and even paralysing effect in a sense. As said before, market entry is among other factors dependent on timing and the entry process takes time. Poor usage of BI systems can make the process take even more time and through the overwhelming amounts of information, paralyse the process. The big question every company must think about is how to discreetly use these systems to learn from competitors, customers and the foreign market so that these learnings provide competitive advantage. (Kinsinger 2007, 537-538, 541.)

### 3.4.2 The key-components of the relationship between business intelligence and foreign direct investment entry mode decision

Considering the literature analysed earlier in the thesis the utilization of business intelligence in FDI entry mode decisions is dependent on the general maturity of the organization to use business intelligence systems. The general maturity creates the basis for the companies to collect suitable data to support their decision and it is important to understand the level awareness by which the company collects the data to be able to make conclusions on how business intelligence is utilized in the foreign direct investment entry decision. This directly contributes to the data sources and data types that can be used. The different data types inform on different aspects important in the decision-making process. The information content and information access quality are dependent on the overall readiness to collect and analyse structured and unstructured data.

The OLI-framework provides perspective over the different drivers of the entry mode through which the initial decision will be made. Connecting the three components allows for a thorough analysis on how companies utilize business intelligence in the decision-process and why the decision is being made in the first place. Data can be used to support various different decisions, so it is important to have a framework directing the empirical part of the research for relevant findings (Figure 2).

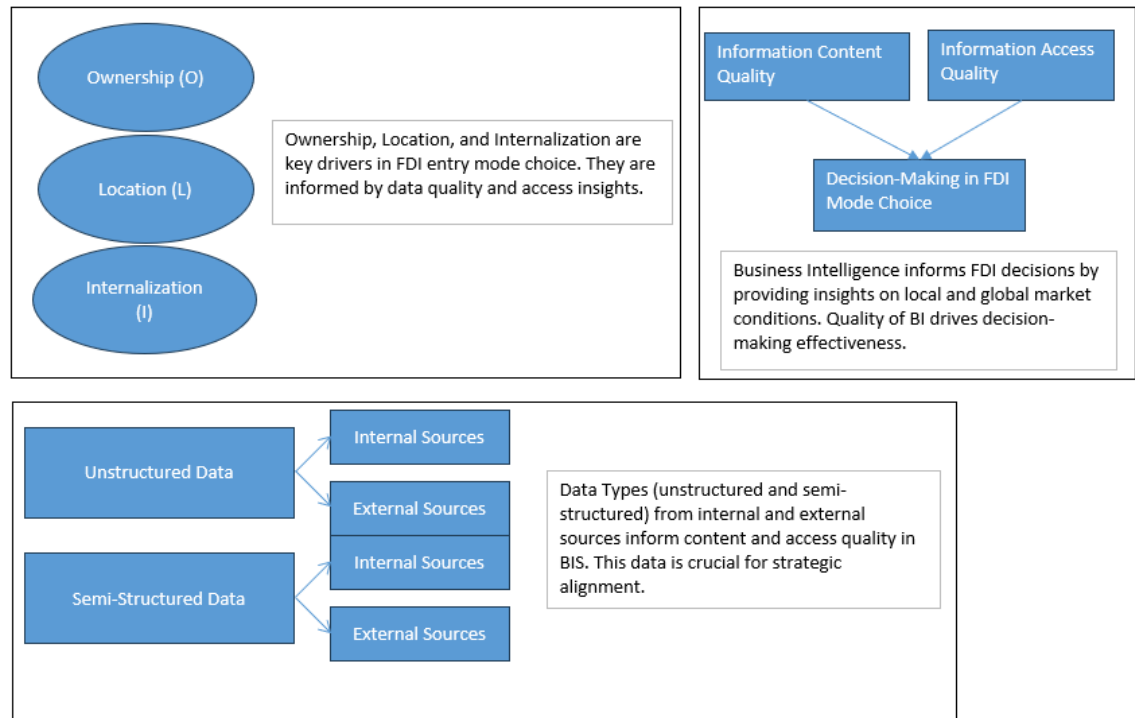


Figure 2 Key theory components

All the presented factors in Figure 2 are key components surrounding the entry mode decision process and the empirical part of the study is built on these three key components. The empirical part of the study uses the three components in the framework as a lens to understand the different characteristics of foreign direct investment entry mode decision and more specifically whether some components of the framework regarding business intelligence can inform on the choice between joint ventures and wholly owned subsidiaries.

These three closely linked components act as a framework for the empirical part of this study. The interview guide structure has been built on these components to gain a thorough understanding over the phenomenon and to make insightful conclusions over the topic. The findings of this study will be presented through these different components presented within the literature review of the study.

## **4 Methodology**

In this chapter, the methodology of the study will be presented with the different methods and tools chosen for the study. This chapter will present the assumptions behind the preliminary research and the chosen method for data collection and analysis. In the first section, the approach for this research is presented along with discussion on why the specific methods were chosen for this study. In the following sub-chapters, the data collection process and the data analysis process will be presented. In the last sub-chapter, the trustworthiness of this study will be evaluated based on the trustworthiness criteria by Lincoln and Guba (1985).

### **4.1 Qualitative research design**

This study follows a qualitative approach to form an understanding of the cases at hand. A qualitative approach was found most to be the most suitable approach for this study since the aim is to understand the phenomenon and generate a more extensive understanding of the different factors having effects on it, even some of the more unexpected ones. The research approach is always case-sensitive and should be based on the research questions as well as the aim of the study. There is an abundance of available methods and ways to carry out different types of research which allows for wide variety of tools to use in any research. This also makes finding the best possible option for each case a complex process requiring a lot of consideration going towards different options. The chosen research methods provide answers to the research questions and acts as a bridge between the theory and practice. (Eriksson & Koistinen 2005, 1-2.) In an ideal situation the theory and empirical study are having a conversation throughout the entire study which allows for high quality findings over the subject.

This study is a multiple case study where each participating company presents a case providing entries with the entry modes under review (joint venture or a wholly owned subsidiary). Three entries were collected from two case companies by interviewing executives. A multiple case study can be seen as suitable for this research due to the explorative approach of trying to form an understanding how multinational organizations utilize business intelligence in foreign direct investment entry mode choice. Case studies generally generate information about phenomena which occur bound to the time, place or other criterion prevalent in the research environment. (Eriksson & Koistinen 2005, 4.)

Different companies have individual ways of going forward the same. In terms of this thesis, forming an understanding of the different ways that business intelligence is utilized in foreign direct investment entry mode choice in different companies to reach the same end goal of a successful entry, is relevant.

## 4.2 Case selection

In this study, the cases were chosen from companies according to their professional profile and the availability of fitting entry-cases within the company. In this study, a company presents one case. The participants were chosen in two phases:

1. First, research on the internet was conducted about the companies and professionals with suitable entry-cases for this study.
2. Second, the people were contacted to chart their interest and suitability to participate in this study.

In the first step 30 companies were identified to be suitable in this study among with professionals with suitable responsibilities to speak about the topic of this study. A lot of the professionals chose not to participate in this study due to them not identifying the process going into utilization of business intelligence in the FDI entry mode choice. Some of the professionals did not respond to the invitation to be interviewed as a part of this study. The research cases and interviewees are presented in Table 2

Table 2 Research Cases

Case	Interviewee	Position	Industry	Size	Date of the interview	Duration	Entry location	Entry mode
A	Interviewee A	Managing Director	Electronic devices	Medium-sized	27.11.2024	30 min	USA	Wholly owned subsidiary
B	Interviewee B	CEO	Technology	Medium-sized	3.1.2025	55 min	USA and Brazil	USA: Wholly owned subsidiary Brazil: Joint Venture

In the end, two high-level executives were interviewed about three different entries (Table 2). Interviewee A who is a managing director in a medium-sized electronic devices company, was interviewed about their entry to the United States with a wholly owned subsidiary. Interviewee B, a CEO of a medium-sized technology company, was

interviewed about their entries to the United States with a wholly owned subsidiary and their entry to Brazil with a joint venture. The interview durations ranged from 30 minutes to 55 minutes in total. Both interviewees set strict boundaries to their anonymisation in this study since both companies operate in industries in Finland which have a limited amount of larger scale companies in the industry. If their industry classification was not left to a broader scale, both companies could be identified through the information given as part of this research.

### **4.3 Data collection**

Generally, in qualitative studies, different forms of interviews are the most used methods for collecting suitable data (Gioia, Corley & Hamilton 2012, 16-17). Collecting data from business executives among and linking their experiences to extensive theories surrounding the topic allows making interesting and unique conclusions over the topic. (Gioia, Corley & Hamilton 2012, 16-17). An interview is a conversation with a pre-determined structure tailored for a specific topic. Research based interviews are also initiated by the researcher which creates a setting where the researcher is directing the conversation according to the pre-determined research plan and possible interview structure. Interviews are not generally put under any philosophical school of thought, and it is a very diverse research method. However, the usage of interviews as a research method is always reflected through the research questions and the aim of the study. (Yin, 2014, 85–86.) Interviews allow for the “human” factor to be present in the research process through the different interpretations and meanings different individuals might give to i.e. concepts. Through interviews, subjectivity is highly present in the collected data. (Puusa 2011, 73-74.) These characteristics of interviews allow the researchers to create a deep understanding over the phenomenon under analysis. Another benefit of using interviews is that the researcher can choose to interview individuals known to be experts over a certain subject (Puusa 2011, 76). In this study, executive level managers were interviewed with a pre-determined interview guide (Appendix 1) to gain information over the research topic.

The “human” factor is very important from the perspective of this study since the usage of business intelligence in decision-making can vary a lot between organizations. This is dependent on the decision-making culture, resource availability and overall business intelligence system maturity that the company has. Case-specific semi-structured

interviews were conducted as a part of this study. The phenomenon under research was determined to being case-specific according to the theoretical part of this study. Semi-structured interviews follow a less strict interview guide and allow for a more discussive approach to gain an understanding over the specific case at hand. The interviews were conducted through Microsoft teams with a remote connection and the interviews were recorded and then transcribed to further analyse the gathered data. (Creswell 95-98, 2017.)

In qualitative research conducted through interviews, language is a key variable in conveying the message from the interviewee to researcher and vice versa. Clear language and clearly formulated questions in the same format for each interviewee ensures that each conducted interview produces answers to the same exact questions. (Tynjälä 1991, 395-396.) In this study, the interviews were held in Finnish due to this being the native tongue of the researcher and the interviewees.

The pre-determined interview-questions (Appendix 1) included questions from 4 different topics: (1) Organizational decision-making culture, (2) Market entry strategy, (3) Business intelligence in market entry decisions and (4) Challenges in business intelligence and FDI entry mode decision. The interview themes were chosen according to the conducted literature review and theoretical framework. Table 3 presents the operationalisation of the study.

Table 3 Operationalisation of the study

The role of business intelligence in FDI entry mode choice	Sub-questions	Theoretical background	Interview themes
What is the role of business intelligence in foreign direct investment entry mode choice?	How is the collected BI information utilized in the entry mode decision-making?	Business intelligence / Decision-making literature	1, 3
	What type of business intelligence informs the decision between an entry with a joint venture / wholly owned subsidiary?	Business intelligence / Foreign direct investment literature	2, 3, 4

The topics in the interview guide (appendix 1) go from general questions to more specific questions within each theme. However, the questions were constructed in a manner that left room for the participant to answer broadly to each question. Supporting questions were also included under some of the more specific questions to get a deeper understanding of the case at hand. As a result, the interview guide provided a good supporting material to direct the interview within the topics and to gain information about the entry case. The researcher avoided participating in the interview too much in the form of leading questions (Patton, 2015, 25–27.)

#### **4.4 Data analysis**

After the data was collected in the form of the interviews, the next phase is to analyse the collected data. To take all the retrieved information in account, the interviews were recorded and transcribed. The transcriptions were used for the thematic analysis in this study. Analysing qualitative data aims to restore all the useful information collected from the interviews and transforming it into a form that is understandable and allows to find new information of the research topic. Semi-structured interviews allowed for the researcher to collect the same core information from each interviewee in this study. This allows for finding similarities and differences between the cases and the interviews (Belotto 2018, 2622.) The data collected from the interviews was divided into different themes that were discussed to allow the generation of findings and new information.

This study followed a thematic analysis approach in the data analysis phase due to the flexibility of the approach. Since the topic hasn't been extensively explored prior, this study aimed to leave room for even unanticipated findings to be made. Thematic analysis allows for the researcher to structure the collected data even when the collected dataset is large (Braun & Clarke 2006, 92). The flexibility and ability to provide structure directly contributes to a better organized final report. However, the biggest disadvantage of this approach is the lack of literature on it. In comparison to other data analysis methods, thematic analysis has much less available literature on its usage making it harder to find supportive factors on the usage from prior literature. (Nowell *et al* 2017, 2-4.)

Furthermore, to enhance the credibility and depth of the analysis, additional methodological rigor was introduced by incorporating the member checking technique. This helped ensure that the themes derived from the data accurately reflected the interviewees' perspectives. This approach not only strengthened the trustworthiness of

the findings but also provided a robust framework for interpreting complex qualitative data in contexts where prior research is sparse. (Patton, 2015, 524.)

In addition, triangulation was employed by comparing the thematic findings with secondary data sources and existing literature. This cross-validation helped to uncover potential biases and ensured that the themes were consistent. By incorporating multiple perspectives, the analysis was able to capture a more comprehensive understanding of the research phenomenon. Such triangulation practices are supported by qualitative research experts and have been shown to enhance the reliability of study outcomes. (Flick 2018, 45–48.)

#### **4.5 Trustworthiness of the study**

The trustworthiness of qualitative studies has been continuously under discussion due to the scattered methodologies used in qualitative research. Due to the various methods that can be utilized in qualitative studies, a single set of criteria does not suit every study. The traditional trustworthiness criteria of validity and reliability is often regarded as irrelevant in terms of qualitative research since the researcher themselves are an instrument of the study. This means that the researcher is not independent from the study. (Tynjälä 1991, 388-389.) Because of this, a different set of criteria is often used in evaluating the trustworthiness of qualitative studies.

This study uses the trustworthiness criteria presented by Lincoln and Guba (1985) to assess the trustworthiness and relevance of the study. Lincoln and Guba (1985) divide the trustworthiness into four different sections: *credibility*, *transferability*, *dependability* and *confirmability*. Each section contributes to analysing the different components of the study to determine whether the study was performed in a way that it persuades its audience to pay attention to the study and justify why the study is worth taking account of. (Lincoln & Guba 1985, 290; Tynjälä 1991, 390-392.)

The *credibility* of the study is about building the trust with the reader and displaying enough evidence behind the study to assure the reader that the study was conducted in way that excludes subjective values of the researcher and that the findings of the study are consistent with the presented theoretical material and empirical evidence. Different activities can be used to validate the credibility of the study and to justify that the findings are truthful and depict the phenomenon in the real world. The techniques or activities that

can be used to validate credibility are prolonged engagement, persistent observation and triangulation. Credibility can be seen as the equivalent to internal validity. (Lincoln & Guba 1985, 301; Korstjens & Moser 2018, 121.)

Prolonged engagement is about contributing enough time to create a vast understanding surrounding the phenomenon under assessment and building trust with the source of empirical evidence (Lincoln & Guba, 1985). In this study, thorough research through internet was conducted about the potential participants and their suitability to the study was checked according to their personal background and on company-level. The researcher chose the participants according to their long experience in the intersection of foreign direct investment, business intelligence and decision-making. The participants were contacted before the interview and presented with general information about the study. The participants were also offered the opportunity to see the interview guide beforehand if they wished to familiarize themselves with it before the actual interview. The reason behind this was to build trust with the interviewee and make sure that the participant knew what the research is about and how their participation contributes to the overall study. The credibility was also checked in the form of a member check. The corresponding part of the study was sent to the participant for review to confirm that there were no misunderstandings in the conducted interview and the facts provided by the participant were phrased in an understandable form.

*Transferability* of the study refers to the ability to transfer the results of a study to another context (Lincoln & Guba 1985, 316). The study provides a literature review of existing research surrounding the intersection of business intelligence, foreign direct investment entry mode choice and decision-making. The transferability of the study is to be determined case-specifically. However, the presentation of the prevalent literature, synthesis and the description of the research setting provide grounds to possibly apply the results in another context.

*Dependability* is about evaluating the conducted study overall. Dependability is a criterion that validates the logic and reliability of the study. This includes the presented data collection methods and theorizing behind the study. (Lincoln & Guba 1985, 318-319.) In this study, the operationalisation table (Table 3) provides an overview of the different connections between theory and the themes in the interview guide. The different stages and actions going into the research process are provided to the reader allowing the

reader to understand the logic behind the process. It is possible to repeat the study following the same steps and analysing the gathered material. Interviews are always unique in a way depending on the interviewee and the interpretations of the researcher. Due to this fact, the interviews were conducted in the language chosen by the interviewee to make sure that there are no major language barriers between the interviewee and the researcher. The interviews were recorded transcribed and for further analysis and the main points were then moved to the “findings” section after thoroughly analysing the transcription of the interview.

The usage of the native language allowed clear communication and prevented miscommunication regarding the answers. The interview questions in the interview guide were also carefully translated ensuring that the content of the questions remained the same despite the change of language.

In this study, the participants were fully informed about the purpose of the study along with the methods and potential risks. Consent from each participant was obtained prior to the data collection. The participants' identities and personal information were also kept confidential throughout the study process and the collected data was disposed accordingly once the study was finished. The participants were also informed that participation is voluntary, and they can withdraw from the study at any time. Additionally, any specific requirements regarding in example anonymisation in the study were respected and accepted by the participants prior to publication.

## 5 Findings

This section presents the two different case companies along with three conducted entries acquired from the two interviews conducted as a part of this study. This section also discusses the different findings related to each theoretical key component of the study.

### 5.1 Case Description

#### 5.1.1 Case A

The first selected case company (Interviewee A) is a medium-sized family-owned company specializing in electronic devices and originating from Finland. The company operates in eight countries and the interview was about their entry to the United States. Due to the size of the industry and the amount of available projects in each country, the options and interest to conduct foreign direct investment is limited to few markets. In Case A the most preferred option for them to conduct business across borders is direct exporting. However, in the case of their entry to the United States, the company bought the business operations of a local production company and set up a subsidiary around it to facilitate production directly in the country.

In Case A the decision-making culture of the organization was described as quite traditional culture for a family-owned company. The managers and executives have some independency in the decisions they make but all the bigger business critical decisions need to go through the board of directors. The decisions are mostly made according to the available information of the operational environment and the personal expertise of the executives.

As mentioned above, the company prefers direct exporting where possible but has set up various subsidiaries in different locations to ensure their presence in the country. When required, the company preferably sets up a new production facility in the new market as a subsidiary. The executives of the company are very aware of the state of the industry throughout the world and base their decisions on this knowledge. This awareness is due to the very limited nature of available projects in each market.

The company has not identified a requirement for sophisticated data analysis regarding a new market entry due to the nature of the industry. The company utilizes available market data to support their decision-making and gain further knowledge of the operating

environment in the potential entry target. In the entry to the United States the available market research data pointed out that in order to stay on the market, it is necessary to set up a subsidiary. However, it was found that any specific business intelligence tools were not used to come to this conclusion. The market research data utilized can be considered as external semi-structured data.

### 5.1.2 Case B

The second selected case company (Case B) presented two different entry cases in foreign markets. The company is a medium-sized international company originating from Finland and operating within the technology industry. In the interview, their entries to the United States and Brazil were under discussion. The company had conducted an entry with a wholly owned subsidiary in the United States and a joint venture entry to Brazil. A lot of consideration and thorough market analysis along with the expertise of the management was utilized regarding both decisions. The company is a family-owned company and the strategic decisions regarding FDI are made among the top management of the company. In operative decisions, more freedom and responsibility are given to the local business units. The company generally aims to increase their market presence through FDI. The company usually either sends their own personnel to open the new market or hires new experts to conduct the entry.

Different incentives encouraged the company to go forward with a wholly owned subsidiary in the United States regarding the institutional aspects of the entry. The company also already had experience of the US market for over 30 years from prior business operations in the region. The company wanted to identify more as a local production company, rather than as an importer, to the local market so the decision to set up a production facility in the country was made. The production facility had production and research and development capabilities. The prior experience from the market along with smaller institutional and cultural distance between the foreign and domestic markets lead to the company to move forward with a wholly owned subsidiary.

In Brazil, the company went forward with a joint venture entry due to the complexity and bureaucracy of the market. The institutional and cultural distance was greater than in the entry to US which lead the case company to look for a local partner to conduct the entry with. A suitable local partner was identified, and a joint venture was formed to expand the operations to the Brazilian market. The local partner provided an existing production

facility to start the operations and conducts the local sales operations. An entry to Brazil (and specifically the production capability) opens the possibility to provide service in other countries on the South American market in the future.

The company utilizes a lot of data in decision making from internal and external sources. However, the problem they face is the acquisition of high-quality data. The data is generally not centralized but rather dispersed. This means that operational data can be utilized in local business functions but coming to top management decisions regarding the entire company, the data availability is worse. It was also mentioned that due to the fore-mentioned fact they must dispose resources to generate useful and suitable data themselves. In some processes the usability of the data is better but critical connecting integrations between data sources are missing to completely centralize the data. There are no existing systems in the specific industry to solve this problem.

The collected data and information are utilized to understand the dynamics of the entry target with the chosen segmentation. Market potential, competitive situation, regulation and costs are some of the factors considered through the collected data. With the US entry, the company was also able to utilize internal data from the market due to their prior presence in the US. The company did not have to acquire the data from other sources in the US but in a completely new market this would be the case.

Without an understanding of the local market, the operations are more likely to face difficulties. The company usually starts their entry approach first with a sales department and later they establish production facilities. The data directs the go / no-go decision with the entry. Data assists in creating an understanding of whether it is sensible to enter the market and with forming the business case for the market. Foreign direct investment is important for the company from practical reasons, in terms of logistics it is sensible to be closer to customers.

## **5.2 Entry-drivers in the case companies**

While considering the ownership, location and internalization (OLI) advantages provided by foreign direct investment, business intelligence was utilized most in the analysis of the first two advantages within the research cases. Both case company interviewees stated that business intelligence (more or less) is a part of the initial analysis of whether a location is suitable for an entry and gaining an overall understanding of the new location.

Case B interviewee also mentioned that according to the initial analysis regarding the location, decisions regarding ownership can be made. The different components regarding location and the market characteristics are major factors affecting the level of ownership that should be acquired. There are also differences in the possible data sources and systems that can be used regarding different fields of business which makes the use cases and the analysis different. In example, Case company B must produce a lot of the data for their needs themselves. In more complex business environments, the local understanding and the production of quality data to support the entry considerations, can help to understand the market and possibly mitigate the related risks.

*In example, Brazil in this sense is extremely bureaucratic and complex. In many cases without the local understanding, you can run into a wall. (CEO, Case B 3.1.2025)*

*There might not be that thorough analytical data available, as some organizations operating in more “mainstream” segments have, since they can acquire market analysis reports through which they can think about the possible business case could be. Of course, when forecasting the future, the reports won't have exact information, but they provide external information through which you can think of different scenarios. In example, what kind of a market ramp-up would be possible. (CEO, Case B 3.1.2025)*

*In our case the weak link is the fact that we must do a lot of our own evaluation about this. (CEO, Case B 3.1.2025)*

In Case A the characteristics of the industry determine where it is sensible to make a new entry and when. Due to the size and limited amount of possible projects for the company, there are overall only a few markets in the world which are interesting for them in terms of investment making sophisticated analysis unnecessary.

*These processes are extremely slow. Let's say that through public sources you would read that some operator is planning an investment in hardware now. But what they are planning now, the delivery will start in 10 years. (Managing Director, Case A 27.11.2024)*

The two case companies provide different perspectives in the usage of business intelligence in foreign direct investment entry mode choice through two very different

industries. In more dynamic industries (Case B) it is necessary to understand the entry target more in detail to create sustainable business presence. In some industries, however the market possibilities are so limited (Case A) that the main drivers are more related to the probability of gaining a market share and when this is viewed as a high potential opportunity the entry will be conducted.

### **5.3 Data type utilization in the case companies**

In terms of the different data types (structured and semi-structured) that can provide different insights regarding the entry, this study also found different approaches regarding the data types. Both case company interviewees mentioned a set of different data that they utilize in the entry decision. As mentioned, Case company A emphasized the market characteristics governing a lot of the required analysis to be made and fewer sources of information (mostly external) were utilized in the company's entries. Case company B however, mentioned several additional sources of information that the company utilizes (internal and external). According to the distinction of structured and semi-structured data made prior in this thesis, both companies mainly utilized structured data from internal and external sources.

In Case A the usage of external market research / market insight publications through which they aim to understand the general market trends within the industry. However, due to the small amount of supplier companies in the industry, the role of these reports can be considered as mainly supplementary information.

*...a German institution conducts a study over the industry every few years which we usually acquire. From the report we dig market trends and make forecasts and so on. However, our customer base is so limited in the world, so we mainly look for market information from our client contacts. (Managing Director, Case A 27.11.2024)*

In Case B the usage of internal and external data sources was identified. External in a similar sense as in Case A, but internal data is also utilized in the company in order to understand the situation within the company. In their entry to the United States, they were able to use internal data which they had already acquired from the market due to previous sales operations on the market. In Case B it was found that there are no general market

analyses available regarding the industry which forces them to process the data themselves.

*I would say we're on several so-called niche-areas where there is no "public general market analysis" available. So, we often must process these reports ourselves if we want to gain some sort of market data out of them. (CEO, Case B 3.1.2025)*

In some other industries, there is more existing available data and systems to use to gain information about the target market. However, in other industries such as where Case B operates, the lack of these existing systems forces the companies to dispose resources to generate this data and information themselves.

#### **5.4 Business intelligence maturity in the case companies**

The third main component of this study is the maturity aspect in terms of initial utilization of business intelligence. This study will not categorize the maturity of the case interviewee companies precisely since this would require a more sophisticated audit of the way the systems and information are used. However, general characteristics of the usage still provides implications on how effectively the case interviewee companies utilize BI data in their decision making regarding foreign direct investment entry mode choice.

Case company interviewee A did not specify a wide variety of different data sources they use in the FDI entry mode decision process. The general maturity of the company to use BI tools for a more sophisticated analysis can therefore be viewed as being resource-consuming due to the lack of routine and processes around this. The information content quality and information access quality are closely linked to the overall maturity and usage of BI tools, so should the company move towards wider utilization of business intelligence, a lot of groundwork is most likely required.

Case company interviewee B described a variety of internal and external sources they use and which they further process regarding the decision. Therefore, their business intelligence maturity can be viewed as more routine due to the requirement for them to produce some market-specific data themselves. The company is aware of their flaws regarding dataflow and centralization and this awareness allows them to take this factor into account within decision-making processes.

*So, we have more dispersed systems, so our data collection is a lot more manual and requires more effort. We don't have one (centralized) BI system, but in example on our finance side we have a consolidation system to collect the data. Producing more extensive information in-house is still a work-in-progress and if we would integrate several systems, we would be able to produce it. On the other hand, our operative side doesn't require this that much. (CEO, Case B 3.1.2025)*

The reason for the consideration of business intelligence maturity in this study is more to understand the starting points of the case interviewee companies from which they can start to build their decisions on. The analytical decision-making culture within each company is the key factor where the decisions are made, but the information gathered through various sources leading up to the decision within the process creates a direct link into the general usage and maturity regarding the systems and information being collected. This makes understanding the basis of the decisions highly relevant to the foreign direct investment entry mode decision.

## 6 Conclusions

This chapter discusses the findings of the study further. The discussion provides answers to the main research question of

*What is the role of business intelligence in foreign direct investment entry mode choice?*

And the sub-questions:

1. *How is the collected BI information utilized in the entry mode decision-making?*
2. *What type of business intelligence informs the decision between an entry with a joint venture / wholly owned subsidiary?*

This thesis presented a thorough literature review over the research topic along with empirical data and evidence to support the findings of the study. The theoretical basis of this study is in foreign direct investment, business intelligence and decision-making literature. Literature connected the topics together through different components presented in the theoretical chapter of the study. In analysing the connection between foreign direct investment entry mode choice and business intelligence, the empirical data collected provided differing approaches in the utilization of business intelligence in foreign direct investment entry mode choice. This study found that the utilization of business intelligence in foreign direct investment entry mode choice is dependent on multiple other factors rather than just the size of the company. In the cases provided, it was found that the industry also determines the decision-making process going into a new entry very widely.

Business intelligence utilization is required when vast amounts of data need to be analysed. Vast amounts of data need to be analysed when the operating environment is complex and highly competitive. (Watson & Wixom 2007, 96-97; Davenport 2006, 99-100.) In case A, the scarcity of available projects and competitors is limited to a small number removing the need for a sophisticated data analysis. In case B however, it was concluded that there is a clear need for the utilization of business intelligence but there were no plausible systems tailor-made for this specific use in the industry. There also was not available data for specific uses creating the need for the company in case B to generate a large portion of the required information for the new entry by themselves. This requires significant effort and resources from the organization (Teece 1986, 295).

In terms of the choice between a wholly owned subsidiary and a joint venture it was found that the experience of the executives drives the decision more than specific analysis of the markets through business intelligence (Chen et al 2012, 1166). However, dependent on the case at hand business intelligence plays a role in the decision process and can direct the go / no-go decision and shape the ramp-up phase after the entry. The factors behind the decision between the two lies in the perception and complexity of the target market. When the target market is regarded more complex and high risk, a joint venture is the preferred option to mitigate the financial risks and to gain a partner which already knows how to navigate the market rather than trying to push to the market without experience. Joint ventures can aid in mitigating the risk coming with the lack of experience of the new market. (Hill & Hult 2019, 446.)

In Case B the interviewee stated that the collected and analysed business intelligence data directs the go or no-go decision when considering a new market entry. Business intelligence being a component of this decision process can be viewed as a major implication over the fact that in some cases, business intelligence can have a large effect on the decision along with other factors. However, further industry-specific research is required over the topic to further understand what the role of business intelligence is in this decision process. (Dunning & Lundan 2008, 48.)

In the empirical part of the study, it was also found that internal and external sources of information are used according to the general capability to use them within the company among with the perceived requirement for the usage of different data sources. In Case A, mostly external data sources were mentioned due to the characteristics of the industry but in Case B internal and external data sources were mentioned. Both sources had a different role in creating an overview of the situation at hand and supporting the decision-making process going into the new entry. (Chen et al 2012, 1165-1167.)

## **6.1 Theoretical contribution**

Figure 3 builds on top of the synthesis made according to the literature review and includes the additional factors found in the empirical data presenting the overall findings in this study.

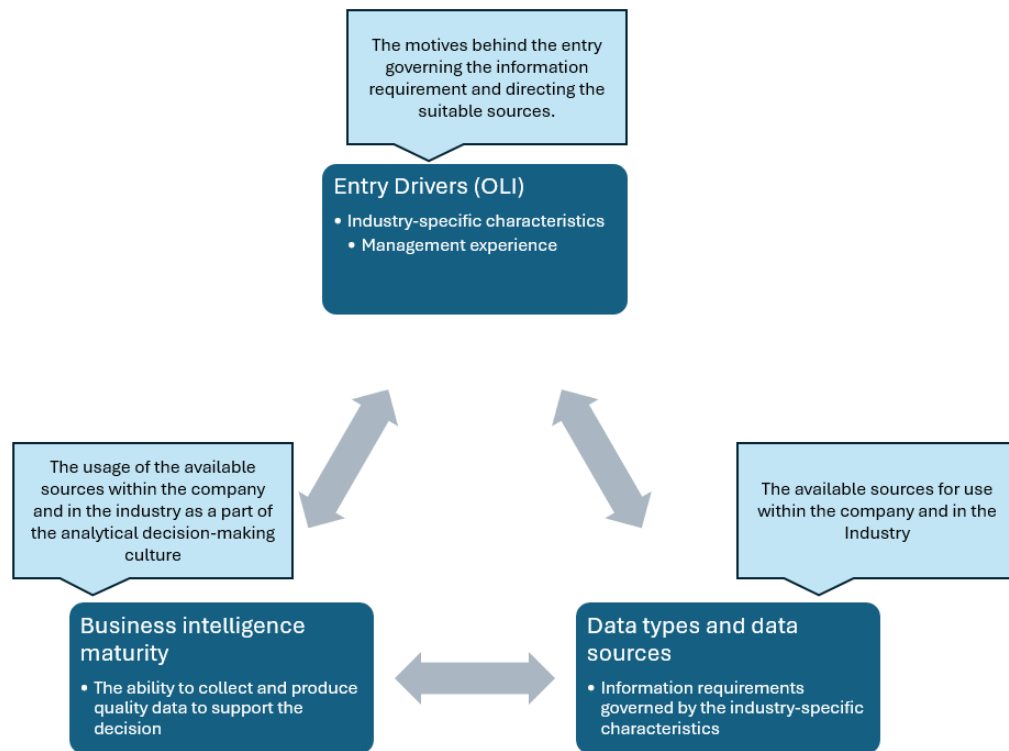


Figure 3 Framework on the role of BI in FDI entry mode choice

This study found additional components affecting the decision-making process regarding each of the theoretical aspects of which the empirical study was conducted on. All of the additional components found in the study are also closely linked together and provide basis for further research. The entry drivers on which the entry decision builds on top of, governs the information requirement for the specific entry along with industry-specific characteristics.

The experience of the management highly defines the approach which the company will take. Data types and data sources utilized is closely linked with the defined requirements for the entry according to the drivers behind the decision. The data types and data sources (especially external sources) are dependent on the industry since different industries have different amounts of available data to be acquired and in some cases (as concluded in Case B), the data has to be produced by the company itself. (Chen et al 2012, 1185.) The relevancy of the available data types and data sources informing on the entry-decision governed by the drivers of the entry is completely dependent on the business intelligence maturity which governs the general ability of the company to utilize the acquired data in the first place (Gudfinnsson et al 2015, 37-38).

The information access quality and information content quality depend on this ability of utilizing business intelligence systems and centralizing the data. As mentioned in Case B, the company had identified issues with data centralization due to missing integrations within the company systems making the usage of internal data more resource consuming. The quality of both information access and content depends on the company's capability to use business intelligence systems effectively and to centralize its data (Davenport 2006, 101-102). The study uncovered several additional factors regarding the relationship of business intelligence and foreign direct investment entry mode decision.

This study analysing the relationship between foreign direct investment entry mode choice and business intelligence provides valuable insights over the relationship to the academic fields of international business and information systems science. The additional components found in the relationship contributes to additional future study over the topic and provides a framework to support future empirical research to make further findings over the relationship. Moreover, the study helps to categorically understand the diversity of the topic and provides structure to the existing studies regarding business intelligence and foreign direct investment entry mode choice.

The empirical data of this study supports the theoretical factors presented and builds on top of them in the form of additional components relevant to the relationship under research. This study provides basis for further industry-specific research over the topic along with implications for companies developing business intelligence tools to gain knowledge of the possible use cases the tools require. This research concludes that all the presented theoretical components of the study were found highly related to the foreign direct investment entry mode choice and should be further researched.

Existing academic literature discusses foreign direct investment and business intelligence from various perspectives, but literature regarding the direct relationship of the two is very scarce (Chen et al, 2012; Dunning 2000). This makes the connection between the two through this study and further research highly relevant to the academic fields of information systems science and international business. The study demonstrates that there are other major factors to be explored in the relationship, leading into a discussion of the managerial implications of these findings.

## 6.2 Managerial implications

For managers participating in foreign direct investment decision-making, the study provides valuable insights on how to aid their foreign direct investment decision-process with business intelligence. The study also describes different factors that should be accounted for, such as the industry-specific characteristics, in the utilization of business intelligence in general and specifically regarding the entry mode decision. Industry-specific characteristics such as the availability of external sources to support the decision differs from one another among with the general requirement for a sophisticated analysis in the first place depending on the size of the industry. This study found that the general usage of business intelligence and various data-sources is generally considered within organizations but the actual usage of them is dictated by the perceived requirement for them. It is important to note that the utilization of business intelligence in foreign direct investment entry mode choice is always case-specific and should be considered by the management of each company to determine the best approach. However, this study provides basis on determining the approach by presenting different aspects to consider and support on creating an understanding of the overall readiness to start utilizing business intelligence in decision-making.

Based on the cases presented in the study, foreign direct investment entry mode choice requires a thorough consideration of various aspects when business intelligence is involved in the decision-making process. First, the preliminary reasons behind the entry should be clear to determine the next steps in evaluating the target market and next steps. Second, consideration about the available internal and external data-sources should be conducted to gain an understanding of what is available internally and within the industry. Then the identified data sources should be deployed to use according to the general maturity and ability of the company to use them. This study suggests that the general ability of organizations is closely linked with their ability to deploy data sources and business intelligence into efficient usage. This study also suggests that the industry-specific availability of data sources has a strong relation to the sensibility and ability to utilize business intelligence in the decision-making process in the first place.

In this study it is found that business intelligence can support the foreign direct investment entry mode decision and the choice between joint ventures and wholly owned subsidiaries. Business intelligence does not provide a single truth to the choice between

the two entry modes, but it can provide insights to direct the decision. This should motivate organizations to acknowledge the possible benefits of utilizing business intelligence in their FDI decision-making and note possible pain-points surrounding their ability to deploy it in practice. Even though business intelligence can provide valuable support to the foreign direct investment entry mode decision process, the usage is a matter of trade-off between the actual benefits it provides and the resources the usage requires.

### **6.3 Limitations and further research**

This study was conducted as qualitative research based on existing research and academic literature surrounding the topic. However, some limitations regarding the study should be addressed. The presented limitations also emphasize the requirement for future research within the topic. First, even though it is possible to draw conclusions and theory from a small sample of cases, this study only provides a small sample of organizations using business intelligence in foreign direct entry mode choice on two different industries. The findings of the study do hold value, but to further accomplish generalization and understand the phenomenon, more research should be conducted to support the findings. The topic should also be studied repetitively to further validate the presented perspectives. The study also found several factors which are closely linked with the phenomenon, so more extensive studies accounting for these additional factors would be recommended. The additional factors related to the phenomenon can be considered to being some of the most important and interesting findings of this study.

Secondly, the empirical part of this study was based on subjective perceptions of high-level executives about the phenomenon. This study suggested that the general maturity of organizations to use business intelligence plays a role in its utilization in foreign direct investment entry mode choice. This suggestion was confirmed within the presented cases. However, this study does not take a stand on the specific categorization of business intelligence maturity or what the maturity consists of but rather treats it as a supporting concept in exploring the phenomenon. To make conclusions about the business intelligence maturity aspect of the phenomenon, a more technical study should be conducted to determine the precise role it has within the topic.

Thirdly, the literature regarding the direct relationship between foreign direct investment entry mode choice and business intelligence is scarce creating the requirement for a framework to be used in exploring the phenomenon. This study suggested three main

components which are closely linked around the topic, but the framework should be enriched by additional studies to find the best theoretical approach to the topic.

Lastly, while foreign direct investment is a large phenomenon and there are various ways of conducting foreign direct investment, this study only evaluated the choice between joint ventures and wholly owned subsidiaries. More extensive research surrounding the possibilities of entering a new market along with the linkage to the establishment modes should be conducted to expand the views provided in this study and to achieve generalization.

## 7 Summary

This study has analysed how organizations utilize business intelligence in foreign direct entry mode choice and especially between the choice of joint ventures and wholly owned subsidiaries. The topic was approached through evaluation of existing literature and interviewing company managers about the key component identified through the literature review. The study was conducted as qualitative study with a multiple case study approach in order to gain specific insights over how organizations utilize business intelligence in practise as part of their foreign direct investment entry process. The presented cases provided insights over one entry with a joint venture and two entries with a wholly owned subsidiary.

The utilization of business intelligence in foreign direct entry mode choice is highly dependent on the organizations' overall ability to gain and utilize different data sources along with industry specific characteristics governing the degree of usage and data availability. Thus, the management of the company has to be continuously aware of the operating environment along with the organizations' internal situation to find the best approach on how to deploy business intelligence utilization into action in foreign direct investment entry mode choice.

The cases in this study provided two very different approaches to the utilization of business intelligence in foreign direct investment entry mode choice but both case companies also presented similar views over the phenomenon. Both cases in this study discussed the aspects in each of their industries governing the overall requirement for the usage of business intelligence along with the availability of data sources and systems to utilize it. Both interviewees also presented views over the fact that the initial knowledge of the managerial teams of the companies provide the most emphasized views regarding the entry process. This is due to the specific characteristics of each industry the interviewee companies operate in, the situation may be different within other industries requiring a more sophisticated approach to estimate the possible potential on a new market.

Based on the presented theories and empirical data, this study can conclude that business intelligence can provide valuable insights in foreign direct investment entry mode decision between joint ventures and wholly owned subsidiaries. However, there is still

uncovered ground surrounding the phenomenon which must be researched in order to achieve a more exhaustive understanding of the topic.



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## Appendices

### Appendix 1 Interview Guide

#### 1. Organizational decision-making culture:

Q1: Describe your organization's decision-making culture in your own words.

Q2: Does your organization generally utilize data and business intelligence tools in decision-making?

Q3: Can you summarize the decision-making process going into the entry mode choice in your organization in your own words?

#### 2. Market entry strategy:

Q4: Where was the new market entry conducted and why?

Q5: Was the new entry carried out through a joint venture or a wholly owned subsidiary?

Q6: What types of information does your organization utilize when considering a new market entry?

#### 3. Business intelligence in market entry decisions:

Q7: How has utilization of these different data sources impacted your organization's entry mode choices?

Q8: Does your organization generally have a more preferred entry mode? How does business intelligence inform on these choices?

Q9: In what ways does business intelligence (or the data sources you use) inform on the risks related to different entry modes?

#### 4. Challenges in business intelligence and FDI entry mode decision:

Q10: What kinds of challenges has there been related to the usage of business intelligence in FDI decision-making in your organization?

Q11: Is there something you would want to add to your previous answers in relation to these topics?