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# - Do divestment rates of foreign and domestic acquisitions differ? -

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Oslo, 10.08.2016

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**Abstract**

This thesis investigates whether there is a difference in the divestment rates of cross-border and domestic acquisitions of Norwegian subsidiaries acquired in 2004. The sample consisted of 101 acquisitions traced over 10 years as well as company data collected in 2004, 2007, 2010 and 2014. We used chi square ( $\chi^2$ ) testing, t-test hypothesis testing and Cox survival analysis as methods of analyzing our data. No difference in the divestment rates between the two groups was found. Moreover, we found size of the parent and host country experience to be factors that could moderate the difference between the two groups measured, while integration of the target into the parent seemed to have a positive influence on subsidiary survival.

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## **1. Introduction**

In this thesis we analyze the divestment rate of Norwegian acquired subsidiaries acquired by both domestic and foreign firms in 2004. There seems to be a negative connotation with foreign acquirers. They are allegedly known to divest their foreign operations more often than domestic firms (Benito, 2005; Mata & Freitas, 2012). Loss of technology, knowledge and jobs are some of the aspects that local stakeholders are concerned about whenever a local firm is acquired by a foreign MNC. Shareholders, on the other side, wish to create maximum value for their businesses.

Several attempts have been made describing differences in divestment rates between foreign and domestic owned companies. The liability of foreignness, which is the inherit disadvantage that foreign firms endure when conducting business abroad, could make them more prone to divestments (Hymer, 1976; Zaheer, 1995). This is one of the explanations offered to describe potential difference in divestment rates between cross-border- and domestic acquisitions. We seek to discover how the foreignness of acquirers influences the divestment decision of Norwegian subsidiaries acquired in 2004. Other scholars have a contradictory theory of how foreignness influences the divestment of subsidiaries, making this an interesting study. Some argue that foreignness has a survival premium (Li & Guisinger, 1991), while others have found there to be no difference in survival rates at all (Kronborg & Thomsen, 2009; Mata & Portugal, 2002). Mata and Portugal (2002) argue that ownership advantages and other characteristics as growth strategies and internal organizations are factors that are more important for the survival of subsidiaries than foreignness of the acquirer. For this reason we will also investigate which factors could influence subsidiary survival, and if some of these moderate the liability of foreignness.

Since globalization and cross-country capital flow is maintaining an upward trajectory (UNCTAD, 2015), it is very relevant to investigate, and hopefully clarify some of the myths that exist regarding cross-border acquisitions. To our knowledge, most research on the divestment of FDI's has focused mostly on the difference in divestment rates between entry modes. Those who have focused on differences between foreign and domestic firms have focused on new firms or

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subsidiaries in general. We have chosen to focus strictly on acquisitions due to the large divestment rates associated with acquisitions (Benito, 1997; Porter, 1987), and because the number of cross-border M&A transactions in the world has grown substantially in the past two decades (almost tripled since 1990) (UNCTAD, 2015). Few former studies seem to have this specific focus. Additionally, there are few studies on the topic that use a post year 2000 sample of acquisitions and divestments. Hence, we believe our thesis contributes to an important part of the international business environment, namely divestment of acquisitions.

Our sample is based on 101 usable cases of Norwegian firms that were acquired in 2004. We then follow them in a time period from 2004 to 2014, where we measure subsidiary survival on the measurement points 2007, 2010 and 2014. The subsidiary is counted as divested if the subsidiary is sold, bankrupted or dissolved within this measurement period. The statistical tools we use are a  $\chi^2$  test, a simple t-test hypothesis testing, and a more sophisticated survival analysis called a Cox hazard rate model.

The results of this research could prove useful for several types of stakeholders. Target firms and local citizens might increase their awareness as how the origin of an acquirer influences their future; local authorities could obtain information on how inward FDI influences the local economy and potential suppliers of target firms could become aware of when they need to worry about a reduction in revenue if their customers are acquired. It could also be useful for shareholders, and especially managers of the acquiring firms to learn which factors influence the survival of acquisitions. Hence, the results from this thesis could aid them in performing better due diligence prior to cross-border acquisitions, and perhaps provide useful information about key-actions post-acquisition. Academically, this research is another step in an underexplored area of international business, and could hopefully inspire scholars to do more research in this area.

This thesis is structured as follows: We start off with a research statement, followed by a review of relevant literature regarding FDIs, divestment of subsidiaries, the influence of foreignness on subsidiary survival and other factors

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that might influence divestments. The next section is devoted to the development of hypotheses based on the reviewed literature, before the methodology used and the data collection process is described. The last parts are devoted to a disclosure of our findings, followed by a discussion of these findings seen in the light of the literature reviewed. Lastly, the paper is concluded.



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## **2. Research statement**

In this thesis we are going to investigate how foreignness influence the divestment of acquired subsidiaries. The motivation for our topic is that the literature is mixed when it comes to how foreignness influences the divestment of acquired subsidiaries. One perspective is an established theory called the liability of foreignness (Hymer, 1976; Zaheer, 1995), which is used to argue that foreign acquirers are compromised when they enter a foreign country, thus their foreign operations are more likely to be divested compared to domestic acquirers operating in the same country. The other perspective has gained more attention in the last couple of decades and states that the liability of foreignness is neutralized by firm-specific capabilities (ownership advantages), which increase the firm's competitiveness (Mata & Portugal, 2002). This topic of foreign versus domestic ownership survival is an underexplored area of international business that we believe deserves more attention. That is why we wish to investigate how foreign ownership influences the divestment of acquired subsidiaries. Additionally, we are going to look at other characteristics of the acquirer, the target and characteristics of the acquisition in order to gain a perspective of what factors could influence the divestment of acquired subsidiaries.

In the UNCTAD World Investment Report from 2015 we see that cross-border acquisitions have shown a significant increase in the last couple of decades. We also know that among FDIs, it are those made through acquisition that are divested most frequently (Benito, 1997). Therefore, we find this topic to be highly relevant to the contemporary business environment.

In this thesis we focus explicitly on acquisitions. We do this because the previous literature often either combines or compares multiple entry modes. Since cross-border acquisitions have increased substantially in the last couple of decades, the study of acquisitions could provide valuable insight. Additionally, the sample for our thesis consists of acquisitions of at least 90% ownership or more, which makes the sample consist of large-endowment investments only.

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### **3. Literature review**

This literature review explores existing literature on divestments of subsidiaries, why firms invest abroad, how the foreignness of the acquirer influences divestment of acquired subsidiaries and how factors related to acquisitions can influence the divestment of subsidiaries.

#### **3.1. Domestic and cross-border acquisitions**

Mergers and acquisitions (M&A) have been frequently mentioned in a wide range of business literature. There exist a myriad of motives that could drive acquisitions, e.g. market expansion, competition elimination, scale economies, capabilities and tax efficiency (Johnson, Whittington, & Scholes, 2011). In short, firms acquire other firms in order to obtain some sort of benefit that is higher than the price they pay for the target.

Acquisitions conducted by firms are not constrained by geographical borders, cross-border acquisitions are a highly popular way for firms to expand across borders, and this method has been vastly increasing in frequency in the last 20-30 years (UNCTAD, 2015). Motives for cross-border acquisitions could be that firms would like to increase their market share, increase their presence in a geographical area, acquire capabilities, or obtain economies of scale (Sudarsanam, 2010). Therefore, the motivations for cross-border acquisitions and domestic acquisitions will often be similar; however cross-border acquisitions could also be used as a means to enter a whole new geographical area. When firms engage in cross-border acquisitions they introduce new obstacles that one does not face when constraining acquisitions to the domestic market. With cross-border acquisitions, the acquiring firm needs to manage a foreign unit that is both geographically and culturally distant from their home market. Not only is the geographical distance increasing when investing abroad, but the acquirer is also subject to a double-layered acculturation. This means that the acquirer must manage both the national and the corporate culture of the target (Barkema, Bell, & Pennings, 1996).

As mentioned above, cross-border acquisitions are a part of the internationalization process and can be one of several ways to enter a new market. Prior to any internationalization for a firm, there must be an underlying reason for

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why the firm would want to go abroad in the first place, instead of remaining in the home market. Dunning's eclectic theory of internationalization can be used to explain this internationalization process (Dunning, 1980). This model suggests that a firm who seeks international expansion needs to possess certain capabilities in order to have a competitive advantage (Sudarsanam, 2010). Without any competitive advantage the firm is not able to "beat" its foreign competitors. This is what is referred to as ownership advantages. The next step, according to the model, is to determine location advantages. In order for a firm to invest in a foreign country there must be some advantage in choosing that country that make it a superior location compared to other countries (Sudarsanam, 2010). Factors that could push the location needle could be trade barriers, psychic distance, location, or wage level. For instance, transaction costs or an unmanageable risk with a location could be determinants of outsourcing locations (Ellram, Tate, & Billington, 2008). The last part of the model is the internalization decision, where the question is whether the firm should perform the activities themselves, in which case there will be a FDI, or if they should outsource the activities. Transaction costs with investing abroad and the risk of dealing with partners are factors that could influence the internalization decision. It is important to be aware that in order for a foreign firm to use cross-border acquisition as an entry mode, all the facets of the OLI-paradigm must be in place. For instance, if the internalization advantages are not desirable e.g. high trade barriers as a result of foreign ownership caps (Hemphill, 2010), they would most likely use another entry mode than a FDI (acquisition, greenfield investment), as for instance licensing. Hence, for cross-border acquisition a whole array of conditions must be in place in order for the foreign firm to benefit from the acquisition, while the domestic firm does not have to meet these same conditions.

### **3.2. What is a divestment?**

Divestiture of an operation takes place whenever a parent company rids itself of an asset, product line, facility, subsidiary, either through sale, bankruptcy or another form of disposal (Moschieri & Mair, 2008). We will review this topic with a focus on divestment of subsidiaries. Factors influencing the divestment decision could be poor performance, lack of strategic fit, environmental factors, over-diversification or level of ownership (Decker & Mellewig, 2007).

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Divestment does not have to be a sign of failure, it could also be a form of a strategic option (Boddewyn, 1979), as asset divestment is often used to restructure a target after an acquisition has taken place (Capron, Mitchell, & Swaminathan, 2001). These authors analyzed horizontal mergers and discovered that asset divestment often occurred for the target firm when the acquirer redeployed their assets (Capron et al., 2001). Decker and Mellewigt (2007) argued that companies are more specialized now than they have been in the past decades, meaning that exits is not only primarily a means for “de-conglomeration”, but rather it is part of a restructuring strategy (Decker & Mellewigt, 2007). That is, divestment does not have to be a result of a lack of performance or any type of failure to meet expectations, but rather it means that the company could have made a strategic choice. Irrespective of the reason, divestment means change of ownership and/or termination of operation. Thus, regardless of the reason, subsidiaries are likely to suffer from being divested.

### **3.3 Divestment of acquisitions**

We have now looked at different motives for acquisitions, and when acquisitions occur. What needs to be explored next is the divestment decision of cross-border and domestic acquisitions. As we have seen, there are more conditions that must be met in order for a foreign firm to conduct a cross-border acquisition than it is for a domestic firm to conduct a domestic acquisition. Consequently, it would be reasonable to assume that cross-border acquisitions could be more prone to be divested compared to domestic acquisitions.

#### **3.3.1. A negative perspective of foreign ownership on subsidiary survival**

There is a theoretical perspective, which states that foreign firms that invest abroad possess an inherent disadvantage, called the liability of foreignness. One of the initial contributors to this theory was Stephen Hymer who argued that this disadvantage stems from the fact that foreign firms do not have the same knowledge about foreign markets as domestic firms do, additionally the foreign firms may be treated differently than the domestic firms (Hymer, 1976). These disadvantages could be related to a lack of “approval” from the host country, additional costs accumulating as a result of geographical distance, unfamiliarity with the local market or perhaps increased costs as a result of home country issues

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such as regulatory restrictions (Luo & Mezias, 2002; Zaheer, 1995). If we see the theories of Dunning (1980) and Hymer (1976) together we can observe that in order for an FDI to take place the firm's ownership advantages must therefore be larger than its liability of foreignness. If this condition is not met the firm would not be able to compete in the foreign market. Divestment of a FDI could therefore be a result of the acquirer overestimating its ownership advantages or underestimating its liability of foreignness. A divestment could also be a result of a changing relationship between ownership advantages and liability of foreignness causing the liability over time to become larger than the advantage.

Zaheer argued that MNEs could be stereotypically judged when entering a new market, especially if there is a lack of knowledge about the MNE entering. As a result, legitimization of the MNE by the host market could easily be delayed (Kostova & Zaheer, 1999). An example mentioned was when stereotypical feelings related to the colonial era developed following a British firm's entry into the Indian market. In addition to the aforementioned legitimacy issues, Kostova and Zaheer (1999) also argue that there often exist expectations of higher standards for foreign MNEs as for instance expectations that the MNE will support the local community or increase focus on environmental protection. Thus, approval by the local market might have been dependent on the MNE's ability to meet these expectations (Kostova & Zaheer, 1999). Another study also gave attention to the legitimacy issue. The author of this study scrutinized several retailers in Chile in search of causes of failed internationalization attempts. What the author discovered was that even though there were prevalent internal issues causing internationalization failure. Local acceptance also played a part in the failure. There was clearly a discrepancy between the MNE's behavior and strategy and the local norms with regards to retail in Chile (Bianchi & Ostale, 2006).

Zaheer (1995) investigated the liability of foreignness in her study of western and Japanese foreign exchange trading rooms located in New York and Tokyo. Zaheer found support for her hypothesis that there existed a liability of foreignness, as the trading rooms located abroad were less profitable than trading rooms located in the home countries. The author found it particularly interesting that the liability of foreignness existed in an industry like foreign exchange trading, which is a global,

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highly competitive industry and with a homogenous product (Zaheer, 1995). The same study also discovered that firms were more likely to overcome this liability of foreignness if they accentuated their firm-specific advantages rather than adapting to local practices. In another study Zaheer once more confirmed the liability of foreignness. This time she used a sample of 2667 trading rooms located in 47 countries and checked their survival rate (Zaheer & Mosakowski, 1997). This time the authors found that foreign trading rooms were divested more often than local trading rooms.

The theory of footloose multinationals suggests that MNEs often have a low barrier to portfolio adjustments and therefore they are likely to be footloose in terms of foreign locations (Flamm, 1984; Mata & Freitas, 2012). This means that foreign firms are less attached to a particular location than are domestic firms, and they will therefore reallocate more often if the host economy becomes less attractive, or if changes elsewhere increase the attractiveness of other locations. This shows us is that divestment of foreign operations might not only be related to performance or an ownership disadvantage, but rather it might be a strategic adjustment of a portfolio similar to what Benito (2005) argued. He based his article on divestment and international business strategy on the integration-responsiveness framework (Bartlett & Ghoshal, 1998), and argued that the initial baseline probability of a foreign subsidiary being divested is lower when firms pursue a multi domestic or international strategy compared to pursuing a global or transnational strategy (Benito, 2005). A possible explanation for why this is the case might be that firms that follow a multi-domestic- or an international strategy could be present in specific countries for other reasons than just desirable factor prices or desirable legislative benefits. Firms, who pursue a global- or a transnational strategy and are located in a certain location primarily for low labor costs as an example, might be prone to flee a certain location if they experience relative changes in factor prices.

### **3.3.2. Alternative perspectives of how foreign ownership influences subsidiary survival**

Literature regarding the effect of being a foreign firm is often angled towards the disadvantages of being foreign; however, there also exists a different line of

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thought that seeks to explore the benefits experienced by foreign firms. Some recent works have argued that studies on negativity of foreignness and cultural distance are saturated and that more research should be conducted on the positive sides of these factors (Stahl & Tung, 2015; Stahl, Tung, Kostova, & Zellmer-Bruhn, 2016). Edman (2016) suggested that both the liabilities and the advantages of foreignness could depend on how foreign firms act/identify themselves in a foreign country. He argued that if a firm accentuates its foreignness in situations where they should blend into the local environment, then foreignness could become a liability. On the contrary, there are situations where a foreign firm should accentuate its foreignness instead of blending in. An example of the latter is the case where the host country admires the foreignness factor, or if foreign employers attract a part of the host country workforce that is discriminated against, e.g. educated women in a country where educated women are not usually hired (Edman, 2016).

This contradictory perspective towards the liability of foreignness is gaining more strength when considering (Kronborg & Thomsen, 2009; Li & Guisinger, 1991; Mata & Portugal, 2002). In 1991 a study analyzed foreign entry into the US and discovered that foreign-controlled firms failed less often than domestic firms did (Li & Guisinger, 1991). They argued that the ownership advantages for the firms that survived played a pivotal role as it outweighed the liabilities associated with being a foreign firm. The authors of this study used bankruptcy as a measure of failure and used a sample from 1978-1988. More recent studies have reported similar findings (Kronborg & Thomsen, 2009; Mata & Portugal, 2002). The Danish researchers Kronborg and Thomsen studied survival rates of foreign- and domestic owned subsidiaries in Denmark over the period 1895-2005. Their results showed that foreign firms had a higher survival rate than did domestic firms, however this foreign survival advantage eroded with time (Kronborg & Thomsen, 2009). In the Portuguese study by Mata and Portugal (2002) they studied differences in survival rates of domestic and foreign firms, with a sample that lasted from 1982-1992 and included both greenfield investments and acquisitions. Their findings showed that the survival rate of foreign- and domestic firms were close to equal when accounting for factors like growth strategies, ownership advantages, economies of scale, and internal organization of firms (Mata &

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Portugal, 2002), but, as mentioned, Mata and Freitas later found foreign firms to be more footloose than domestic firms (Mata & Freitas, 2012).

The findings from Kronborg & Thomsen (2009), Li & Guisinger (1991) and Mata & Portugal (2002) show that the inherent disadvantage of being foreign emphasized by Hymer (1976) and Zaheer (1995) could be outweighed by specific capabilities which the foreign acquirers possess making them more competitive against domestic acquirers.

Barriers to exit could create differences in the divestment rates between cross-border- and domestic acquisitions. There is some evidence that having a diverse presence in terms of locations might mitigate divestment rates. This means that a firm, which is active globally, is not as adversely affected by changing conditions in one country. A diverse presence allows multinational firms to become more flexible and thereby move production between locations as needed (Fisch & Zschoche, 2011; Song, 2014).

It is helpful to see the liability of foreignness in the light of the OLI paradigm in order to understand what can drive divestment of cross-border acquisitions. The liability of foreignness is not the same as lacking any of the ownership, locational or internalization advantages, but it is rather a disadvantage, which could impede the performance of foreign operations. One could argue that a foreign firm will only invest abroad if it has OLI advantages that are larger than the disadvantages associated with being foreign. This is what Mata and Portugal (2002) discussed when they stated that ownership advantages moderated the survival differences, and that was why they found no significant difference in the divestment rates between foreign and domestic firms. Earlier we explained that a foreign firm could abstain from investing abroad if not all of the facets of the OLI were in place. The same could be true for divestment of a cross-border acquisition. If all the advantages of the OLI were in place, but at one time for instance ownership advantage was not there anymore, then that could have induced a divestment decision for the foreign firm. The liability of foreignness will then be larger than the OLI advantages and there would be an incentive to divest. This might be thought of as the opposite of what Li and Guisinger (1991) argued when they



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stated that foreign firms utilize their ownership advantage and thereby have a higher survival rate compared to that of domestic firms.

### **3.4. Factors influencing the differences in divestment rates of acquisitions**

In addition to the origin of parent companies, several other factors may influence the survival of acquisitions.

#### **3.4.1. Parent size**

There is some literature indicating a positive relationship between large parents and subsidiary survival (Pattnaik & Lee, 2014). An explanation of why foreign larger parents are associated with subsidiary survival is that large parents have the financial muscles to support their subsidiaries and thereby increase their chances of survival (Zaheer & Mosakowski, 1997). Contradictory to what they initially believed, the authors did not find size of the parent to have a significant influence on the survival of subsidiaries. The authors studied the interbank currency-trading sector and suggested that a possible explanation of why parent size did not influence subsidiary survival could have been that the trading room's independency from the parent neutralized the parent size's influence on the subsidiary survival. Moreover, other studies have also tested the influence of parent size on survival of subsidiaries, but most fail to find a positive relationship between parent size and survival of a subsidiary (Mata & Freitas, 2012)

Opposed to what the aforementioned studies have experienced, Hamilton and Chow (1993) discovered that the firms which divested were significantly larger and faster growing than the ones that did not divest. They speculated that a potential higher level of diversity among the larger companies might have influenced their higher divestment rate. The motivation for divestment was typically the need to convert unattractive assets into capital, which then could be used to strengthen the balance sheet, or reinvested in either the core business or a new area.

#### **3.4.2. Host country experience**

An FDI is a large commitment for a firm and it requires a larger investment than most other entry modes, e.g. licensing or distribution through an agent. The

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classical Uppsala model explains that firms gradually expand abroad and make a larger commitment into the foreign market as their knowledge about the market increases (Johanson & Vahlne, 1977, 2009). A possible pattern that foreign firms use when they internationalize is to enter a foreign market through licensing, and then go on to export through an agent. When they have gained satisfactory market knowledge they can increase the commitment to the market and conduct a FDI (either a greenfield investment, or a cross-border acquisition) (Welch, Benito, & Petersen, 2007). This acquired market knowledge from the host country could moderate the liability of foreignness and increase the foreign firm's chances of surviving in the host country. We can observe multiple examples of this in the literature. A study of survival of foreign banks in Norway discovered pre-entry relationship with Norwegian firms and pre-entry host country experience contributed to survival of the subsidiaries (Tschoegl, 2002). Shaver et al. (1997) expanded further on the influence of host country experience on FDI survival. First, they confirmed that host country experience increased the chance of FDI survival, then they expanded further and argued that there are two types of knowledge that can be obtained from host country experience: Country-specific knowledge and industry-specific knowledge (Shaver, Mitchell, & Yeung, 1997). Country-specific knowledge facilitates development of industry-specific knowledge, which then aids the foreign firm in identifying unique opportunities in the host country market (Shaver et al., 1997). Delios and Beamish (2001) also argued that host country experience was important for subsidiary survival. Moreover, they stated that host country experience could facilitate adaption of existing capabilities to the new market, and thereby foreign firms could overcome the liability of foreignness and become more competitive in the host country market (Delios & Beamish, 2001). Knowledge and experience in the target market are critical to international expansion. Firms are more likely to invest in markets where other industry competitors have invested before them (Davidson, 1980).

### **3.4.3. Acquisition relatedness**

When firms engage in related acquisitions (horizontal) they usually do it either to increase revenue, to reduce costs or to expand the business. Motivations for unrelated acquisitions could be increased market power, or the creation of an internal capital market, which will benefit the diversified firm (Sudarsanam,

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2010). The market power benefit enable diversified firms to stifle competition if the power is large enough, and the internal capital market benefit occurs if the diversified firm is able to obtain internal market information better than the ordinary capital market is and can allocate capital accordingly (Sudarsanam, 2010). There seem to be agreement academically that unrelated acquisitions are associated with higher divestment rates compared to related acquisitions (Benito, 1997; Bergh, 1997; Berry, 2013; Duhaime & Grant, 1984; Hamilton & Chow, 1993; Li, 1995). Pennings et al. (1994)'s main finding was that vertical, horizontal, and related expansion moves have the greatest chance survival. A Norwegian study from 1997 investigated factors that induced divestments of foreign manufacturing operations, discovered that horizontal subsidiaries were less likely to be divested compared to unrelated acquisitions hereby supporting the findings of Pennings et al. (1994) (Benito, 1997). Duhaime and Grant (1984) also made a similar conclusion, when they found interdependency between the divested unit and the other activities of the parent company to be significantly low. Companies were more likely to divest units where divestment would not have an effect on other parts of the company's core activities. Firms that diversify their operations beyond their core activity might struggle to perform these unrelated activities well, thus their operation as a whole could be affected negatively.

#### **3.4.4. Target identification**

Existing literature has showed that the performance of the acquired subsidiary is a determinant of divestment (Boddewyn, 1979). This is the most obvious reason for divestment, as it is only natural that a company wants to eliminate parts of the company that do not meet its targets. Duhaime and Grant (1984) tested a framework for factors that influenced divestments among large firms. One of their main findings was that the "unit strength", which was a measure comprised of unit financial strength, unit profit growth, sales growth of the unit and its contribution to parents profits, had significant influence on the divestment decision. Their findings also suggested that the divesting companies in general suffered from weak performance relative to the industry average. A newer study also confirmed that poor performing operations were more likely to be divested (Berry, 2013). Therefore, being able to identify targets that will perform well could have a

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significant influence on subsidiary survival. There is some evidence that foreign acquirers are better at identifying good targets compared to domestic acquirers (Balsvik & Haller, 2010). Balsvik and Haller studied the Norwegian manufacturing industry and found that foreign acquirers picked the “cherries” and domestic firms chose the “lemons”.

### **3.4.5. Integration of subsidiaries**

Integration can be defined as “the making of changes in the functional activity arrangements, organizational structures and systems, and cultures of combining organizations to facilitate their consolidation into a functioning whole” (Pablo, 1994). It has been claimed that integration and implementation are crucial in order for a successful acquisition to happen (McNaught, 2004). The author used a study by KPMG from 2003, which revealed that 66 per cent of all acquisitions failed to create value. He stated that integration and implementation are very important to create value from an acquisition, but this can only be done if the deal is right in the first place.

It is proposed that the level of integration between target and parent can have a moderating role when it comes to subsidiary performance. Slangen (2006) argued that the different result of cultural distance’s (we will discuss this topic later) effect on subsidiary performance is caused by the moderating role of integration. He argued that cultural difference would affect a subsidiary’s performance when they are tightly integrated with its parent. At this point, the differences will become clear and could be a potential management problem. Foreign owned subsidiaries should therefore be negatively affected by close integration (Slangen, 2006). Accordingly, cultural distance will be beneficial if post-acquisition integration is limited as this gives the target the possibility of only implementing practices that are considered to be attractive and useful without being forced to implement all practices.

### **3.4.6. Psychic distance**

Psychic distance is a constituent part of the liability of foreignness and thereby some of the disadvantages associated with the liability of foreignness could be attributed to cultural differences between host country and the foreign entrant. The

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Scandinavian culture is quite different from various Asian cultures and the cultural attributes in each area, like power distance, masculinity versus femininity or individualism versus collectivism (Hofstede, 1994) determine how people behave in the respective organizations. Not surprisingly, Hofstede (1994) argued that management practices might not work the same way in all countries due to cultural differences between nations. Thus, the way the foreign entrant acts in the home country might not work in the host country. The classical Uppsala model suggests that firms initially internationalize by entering foreign markets that are close, and then gradually expand into more remote locations in terms of psychic distance (Johanson & Vahlne, 1977). Psychic distance can be defined as “factors that make it difficult to understand foreign environments” (Johanson & Vahlne, 2009). This strategy helps combating cultural differences by gradually obtaining experience of the internationalization process, which would increase the chances of success when adapting to new cultures.

In the literature we find some support for the disadvantageous perspective of cultural distance. For instance, Pattnaik and Lee (2014) looked at 2435 foreign subsidiaries of companies with HQ located in Korea. The subsidiaries were located in 67 host countries and were traced between 2000 and 2010. They found that cross-national distances critically influence the divestment of foreign affiliates. Their findings suggested that traditional differences between home and host countries plays a crucial role in conducting business abroad, and could have a negative influence on the success of foreign operations, despite the increase in globalization. Their study suggested that two factors seemed to make the subsidiary overcome this distance; choice of entry mode and host-country experience, i.e. that if foreign owned subsidiaries choose the right entry mode, and if the owner has sufficient host country experience, they can neutralize the potentially negative effect of being foreign. Li (1991) divided his sample in two groups by cultural distance from the host country. He discovered that foreign operations with parents that belonged to the culturally dissimilar group were more likely to be divested compared to the foreign operations that belonged to the culturally similar group. Another study also found that increased psychic distance between the host country and the parent country could have a negative influence on the performance of a subsidiary. However, the effect subsides as the firm

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increases its market knowledge (Dikova, 2009). Earlier studies have concluded that acquisitions characterized by high cultural distance were accompanied by less value created and lower chances of success (Barkema et al., 1996; Datta & Puia, 1995).

Some studies have also discovered the opposite results, for instance Morosini et al. (1998) concluded that larger cultural distance increased the success rate of cross-border acquisitions (Morosini, Shane, & Singh, 1998). They argued that an effect of increased cultural distance introduced more diverse routines, which the acquirer could have benefited from obtaining. For affiliates located a far distance from the host country it will normally take longer for the unit to achieve its targets (Hutzschenreuter, Lewin, & Dresel, 2011). Sousa and Tan (2015) discovered that increased cultural distance increased the chances of survival. They argued that the reason for this finding could be that managers were aware of the difficulties associated with operating in a culturally distant market. Hence, they were more patient with the divestment decision of these FDIs than they were with FDIs located in more culturally proximity (Sousa & Tan, 2015). Reus and Lambert (2009) argue that cultural distance is a double-edged sword with both positive and negative attributes. On the negative side cultural distance can inhibit communication and the transfer of capabilities between the parent and the target. Thus, cultural differences may cause suboptimal acquisition performance. On the contrary, cultural distance could offer good learning opportunities, which could have a positive effect on the acquisition. The authors also argued that the positive and negative effects could not be treated separately since they may very well be intertwined and that good integration capabilities are vital in order to reap benefits from cultural differences (Reus & Lamont, 2009).

### **3.5. Key takeaways**

The motivation for acquisitions is often the same for foreign and domestic firms, but as we have seen all the OLI-conditions must be in place for a cross-border acquisition to take place. Previous and present literature on foreignness differs in their theories on how foreignness impacts survival of subsidiaries. Some, especially older research, suggest that the liability of foreignness reduces chances of survival of cross-border acquisitions, while others, often newer research,

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suggest that the liability of foreignness can be moderated by firm specific capabilities or characteristics with the acquisition.

Various factors could moderate the potential difference in divestment rates between cross-border- and domestic acquisitions. The characteristics with the parent, for instance its size and its previous host country experience are examples of such factors. Also target factors like whether the target is related- or unrelated, whether the target performance is good or whether the target is merged with its parent, can also influence the chance of divestment. Additionally, country factors, like psychic distance between parent and host country, can also have a moderating effect on the difference in divestment rates between cross border- and domestic acquisitions.

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## **4. Hypotheses**

This section provides the main hypothesis we want to test. We also formulate hypotheses about factors that might have a moderating or direct effect on the divestment rates of foreign and domestic companies.

### **4.1. Main Hypothesis**

The literature regarding differences in divestment rate between cross-border and domestic acquisitions offers multiple explanations of why the divestment rate might be higher for one part, or that the divestment rates are fairly equal. Both cross-border acquisitions and domestic acquisitions can be motivated by economies of scale, market power, capabilities/knowledge (Johnson et al., 2011). Additionally, cross-border acquisitions could work as an entry mode into a new market, which introduces a new set of factors that can influence the acquisitions.

Foreign firms that invests abroad are a subject to the liability of foreignness (Zaheer, 1995), they do not know the market as well as domestic firms do, they might lack access to a good network, trade barriers could impede their competitiveness, and prejudice and high expectations could give foreign entrants a hard time in foreign markets. All of these disadvantages could significantly skew the survival rates between cross-border- and domestic acquisitions. That being said, if you explain firm internationalization through the OLI-paradigm lens, then firms do not invest abroad without taking any precautions. Foreign firms know that in order to be successful abroad they need to have superior capabilities that will enable them to compete with local firms. These capabilities (ownership-advantages) need to be larger than the liability of foreignness; otherwise it would not be worth investing abroad. We observe support for this perspective in studies like Kronborg & Thomsen (2009), Li & Guisinger (1991) and Mata & Portugal (2002), where they find no difference in the survival rates of foreign and domestic firms, or they find a survival premium in favor of foreign firms.

H<sub>1</sub>: The divestment rates between cross-border- and domestic acquisitions differ.



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## **4.2. Additional hypotheses**

In order to identify other potential influential factors on subsidiary divestment we are going to test these additional hypotheses:

### **4.2.1. Parent size**

A common notion is that large parents have the means to support their foreign subsidiary so that the subsidiaries will be more likely to survive. However, most studies find a negative relationship between parent size and subsidiary survival (Hamilton & Chow, 1993). Hamilton and Chow (1993) argued that large firms were more diversified, thus more prone to divest subsidiaries. This is consistent with other literature which states that unrelated acquisitions are associated with higher divestment rates compared to that of related acquisitions (Benito, 1997; Bergh, 1997). Since foreign firms are associated with being generally larger than domestic firms are (Mata & Portugal, 2002), it could be that their larger size has a negative influence on their divestment rate, thus increasing any potential difference in divestment rates between cross-border- and domestic acquisitions.

H<sub>2</sub>: A large parent size will increase the divestment rate of the acquired subsidiary.

### **4.2.2. Host country experience**

Cross-border acquisitions (FDI) is an operation mode that is often used when the foreign firms has gained market knowledge about the host country market and is ready to make a larger commitment to that market (Johanson & Vahlne, 2009; Welch et al., 2007). Since we have seen evidence indicating that host country experience is associated with higher chances of subsidiary survival (Davidson, 1980; Shaver et al., 1997) one might argue that this gradual internationalization could moderate the liability of foreignness and increase the foreign firms' chances of surviving. A reason for this could be that host country experience enables firms to develop relationships with other firms, customers and institutions in the host country, and it enables the foreign firm to obtain knowledge about the host country market and industry, which it then can use to adapt its capabilities to that

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specific market. Thus, with time, the liability of foreignness could subside (Kronborg & Thomsen, 2009).

H<sub>3</sub>: Host country experience will decrease the divestment rate of the cross-border acquisitions.

#### **4.2.3. Acquisition relatedness**

Large firms are associated with being diversified/conglomerates (Sudarsanam, 2010). Hamilton and Chow (1993) addressed this when they argued that larger firms divested more than smaller firms since the larger firms were more diversified. Foreign acquirers are often associated with being larger than domestic acquirers in that country (Mata & Portugal, 2002), it would therefore be reasonable to assume that acquisition relatedness could influence the difference in divestment rate between cross-border- and domestic acquisitions.

Acquisition relatedness is commonly believed to have a positive influence on subsidiary survival (Benito, 1997; Hamilton & Chow, 1993; Pennings, Barkema, & Douma, 1994). By diversifying their operations beyond their core activity, firms might struggle to perform these unrelated activities well. Thus, their operation as a whole could be affected negatively. Another explanation of why unrelated units are divested more often could be that firms divest unrelated subsidiaries because they want to concentrate their operations (John & Ofek, 1995).

H<sub>4</sub>: Acquisition relatedness will decrease the divestment rate of acquired subsidiaries.

#### **4.2.4. Target identification**

The aforementioned literature regarding firm performance introduces us to a new concept that could help us to explain how any potential differences in the divestment rate between foreign- and domestic acquired acquisitions could be moderated. If the performance of a target influences its probability for divestment, then any potential ability of a parent to identify targets that will perform well should increase the chances that this respective acquirer's target

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survives. According to Balsvik and Haller (2010) foreign acquirers have a tendency to identify better targets than what domestic acquirers do. Therefore, an argument could be made that since better targets could have an increased probability of surviving, then the liability of foreignness could be moderated by the foreign acquirer's ability to pick better targets than what domestic acquirers do.

H<sub>5</sub>: A firm's ability to identify good targets will decrease the divestment rate of the acquired subsidiaries.

#### **4.2.5. Integration of subsidiaries**

Some literature shows that subsidiaries that are closely integrated with the parent could have an increased survival rate. If a target is closely integrated it would most likely be difficult to divest it since it is now embedded into the acquirer's value chain. Targets that are important to the parent are less likely to be divested compared to unimportant targets (Bergh, 1997). An argument could therefore be made that consolidated targets are more important to the acquirer's business than the ones that are not consolidated, thus consolidated subsidiaries might have a lower divestment rate compared to subsidiaries that are not consolidated.

Moreover, it is argued that close integration will be negative for companies with high cultural distance. It is only when the companies are closely integrated that differences occur, and cause implementation problems that could reduce the acquired firm's performance (Slangen, 2006). If acquirers are aware of this, then we should be able to observe more subsidiary-parent consolidations for domestic acquisitions compared to their foreign counterparts. As a result, consolidation of the target with the parent might influence the difference in divestment rates between cross-border- and domestic acquisitions.

H<sub>6</sub>: Targets that are merged with their parent shortly after the acquisition will have a lower divestment rate than those who are not.

#### **4.2.6. Psychic distance**

The literature is mixed regarding how psychic distance influences the survival of subsidiaries. Some argue that companies will perform better in countries in close

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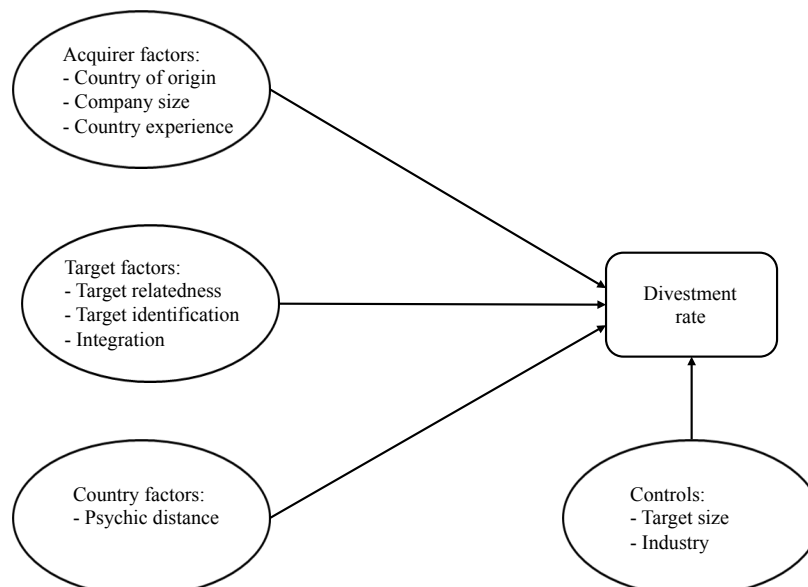
proximity as the ways of doing business there are likely to be similar to the way it is done in their home country (Pattnaik and Lee, 2014). On the other side it is argued that units located at a greater distance will experience a higher success rate. Due to the increased cultural distance more diverse routines are introduced, which the acquirer could benefit from obtaining (Morosini et al., 1998). Host-country managers could also be more patient with subsidiaries in culturally distant locations since they are aware about the difficulties that a large psychic distance creates (Sousa & Tan, 2015).

H<sub>7</sub>: Larger psychic distance will increase the divestment rate of acquired subsidiaries.

#### 4.3. Theoretical model

Based on the aforementioned discussion we have developed a theoretical model (figure 1) that shows how the different variables are associated to the divestment rate of acquired subsidiaries.

**Figure 1: Theoretical model**



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## **5. Methodology**

In this section we present the research design and strategies employed for collecting, analysis and assurance quality of the data.

### **5.1 Research design**

In this thesis we used a longitudinal research design. Longitudinal research designs can best be understood by contrasting them with cross-sectional research designs (Menard, 2002). In a purely cross-sectional research design, data are collected on one or more variables for a single time period. On the other hand, longitudinal research data are collected on one or more variables for two or more time periods, thus allowing at least measurement of change and possibly explanation of change (Menard, 2008). To determine whether there were any differences in the divestment rates between cross-border and domestic acquisitions we therefore found a longitudinal research design to be most fitting, as this made it possible to study this during a longer time interval.

### **5.2. Data collection**

To start off this study, secondary information about acquisitions of Norwegian firms performed in 2004 was collected from the database Zephyr, which is a database for merger and acquisition deals. We set the threshold of a minimum of 90% ownership takeover in order for the acquisition to be counted. When the acquisition deals were identified we tracked the survival of the targets throughout the measurement period 2004-2014. We had three measurement intervals where potential divestment could occur; 2004-2007, 2008-2010 and 2011-2014. This time-context was chosen for several reasons: the starting and ending dates were set at times without financial distress, omitting any severe biases from the 2001- and the 2008 financial crises. The 10-year measurement period allowed us to observe any trend development in terms of divestment of acquisitions. Additionally, the time period was chosen based on data availability.

We did not have an already existing database where we could have obtained all the necessary data about each acquisition therefore we created our own unique database, which consisted of information from different sources. The resources we used to collect our data were primarily:

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Zephyr: As mentioned earlier, this is a database for M&A deals. This database also contained financial data for many of the firms in our sample and in addition to being used to identify acquisitions we used it to obtain financial data for the foreign acquirers

PI Navigator: This is a database that provides financial data. It was used to find data about the foreign acquirers, whenever Zephyr was unable to give us the necessary data.

Proff.no: This is a database providing company information for Norwegian acquirers and all subsidiaries in the sample. The database helped us determine the survival of the acquired subsidiaries, and it was where we obtained financial data for the Norwegian companies. It also contains a lot of information about the history of Norwegian companies, for example about mergers related to the company.

Whenever the databases above did not provide us with sufficient data we resorted to the company websites or news articles that contained the information we needed.

When we needed to convert foreign currencies we used [norges-bank.no](http://norges-bank.no)'s statistics for historical average exchange rates from 2004.

The sampled firms were separated into two groups depending on the nationality of the acquirer. All acquisitions performed with a foreign acquirer belonged in the "foreign" group and those acquisitions that had a Norwegian acquirer belonged to the "domestic" group. The database Zephyr sometimes provided us with some misleading cases when a foreign owner had a Norwegian subsidiary that was the acquirer. In these cases Zephyr listed them as domestic acquisitions, but in reality they were foreign acquirers. One example of this was the firm ISS Norge AS. Whenever they acquired a firm Zephyr listed them as a domestic acquirer, but in fact their real owners were ISS global AS, which is Danish owned. Hence our definitions of foreign and domestic acquirer are as follows:

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*Foreign acquirer: The acquirer is foreign whenever the true owner of the entity acquiring a subsidiary in Norway is foreign. In the case where a Norwegian registered subsidiary acquires a firm but the owner of the acquiring subsidiary is foreign, the acquisition is identified as a foreign acquisition.*

*Domestic acquirer: The acquirer is domestic whenever the true owner of the entity acquiring a subsidiary in Norway is Norwegian.*

Initially, Zephyr provided us with a potential sample of 151 domestic acquisitions and 67 foreign acquisitions from 2004. The final usable sample ended up amounting to 62 domestic acquisitions and 39 foreign acquisitions adding up to a total sample of 101 acquisitions. The reasons for this vast reduction in sample size was mainly caused by an inability to obtain sufficient data in order to determine the destiny of a subsidiary, the subsidiary was acquired from foreign owners, the subsidiary failed to meet the lower threshold of a 5MNOK minimum revenue in 2004, or the acquisition was a MBO, an IBO, a merger or a JV. We wanted to single out acquisitions, and we only wanted to look at the acquisition of Norwegian firms, hence the definition of “foreign acquirer” must also count in the reverse cases. Therefore, foreign owned subsidiaries in Norway that were acquired in 2004 were not applicable for our study.

### **5.3. Measurement**

#### **5.3.1. Dependent variable: Divestment**

Our dependent variable was a survival/failure variable. Therefore, we found a Cox regression to be useful in order to determine survival of the subsidiaries. Since we also wanted to determine if there was a difference in divestment rates between cross-border and domestic acquisitions, a  $\chi^2$  test was also used in the analysis. The definition below was used to determine if a subsidiary was divested or if it had survived.

*Divestment of an operation takes place whenever a parent company rids itself of an asset, product line, facility, subsidiary, either through sale or another form of disposal (Moschieri & Mair, 2008).*

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Whenever a divestment was confirmed the divestment method was determined.

We distinguished between three different divestment methods:

*Subsidiary sold: The unit could still be operating but the acquired firm has changed owners.*

*Subsidiary is bankrupt: Whenever the subsidiary is listed as bankrupt and is no longer in operation.*

*Subsidiary is dissolved: Whenever the subsidiary is listed as dissolved, we observed that there has been no activity in the company i.e. no revenue for a prolonged period of time and/or assets are extracted from the subsidiary. An example of this could be an acquisition done in 2004 solely for the reason of shutting down a competitor and hereby gain market shares.*

What was not included as a divestment was whenever the acquirer changed owner during the period 2004-2014. This meant that if firm X was the owner of firm Y, and firm Y acquired firm Z. Then the acquisition that we focused on was  $Y \rightarrow Z$ . Moreover, if firm Y changed owners from firm X to firm Q during the period 2004-2014, then this was not an acquisition that happened as a result of the  $Y \rightarrow Z$  relationship. Thus, the ownership change from X to Q did not count as a divestment of Z. This was not considered an acquisition since the relationship between the initial target and the parent had not ceased to exist even if a third party had acquired the parent.

### **5.3.2. Independent variables**

#### **Parent size**

This variable was measured using the parent's revenue in 2004 as a proxy for firm size. This was an ordinal variable that took the values 1, 2, 3, 4 and 5. 1 meaning the subsidiary had less than 20MNOK in annual revenue, 2 meaning it had between 20MNOK and 100MNOK in annual revenue, 3 meaning it had between 100MNOK and 500MNOK in annual revenue, 4 meaning the subsidiary had between 500MNOK and 3BNOK in annual revenue and finally 5 meaning it had



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more than 3BNOK in annual revenue. We expected a large value of this variable to increase the probability of divestment, and we also expected this variable to be larger for foreign acquirers compared to domestic ones. Due to the difficulties in obtaining financial data over the foreign acquirers from 2004, we had to use revenue from 2003 or 2005 whenever we were unable to obtain the firm's revenue from 2004.

### **Host country experience**

This binary variable took the value 1 if the foreign acquirer was present in Norway prior to the acquisition, and 0 if the foreign acquirer had no previous experience from the Norwegian market prior to the acquisition.

A foreign acquirer had host country experience if it was already present in Norway at the time of the acquisitions. We defined "presence" in Norway if the foreign acquirer conducted the acquisition through a Norwegian subsidiary that it currently owned at the time, or if this was not the case then host country experience could be determined if the foreign acquirer had conducted business in Norway at the time of or before 2004. For firms that did not meet either of these criteria no host country experience was attributed. A limitation when it comes to this way of measuring the data is that foreign firms could have had experience from the Norwegian market, but we have not been able to identify it. We expected this variable to decrease the probability of divestment.

### **Acquisition relatedness**

The binary variable "Acquisition relatedness" took the value 1 if the target operated within the same industry as the acquirer, i.e. a horizontal or vertical acquisition or 0 otherwise. Related or not was here chosen by discretion considering the information the companies had given about their business. This variable measured if the acquisition was related and the effect that had on the survival of subsidiaries. We expected this variable to decrease the probability of divestment of acquired subsidiaries.

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**EBT/Revenue**

This was a relative measurement, measuring a target's EBT relative to its revenue. The measurement was based on 2004 financial numbers obtained from proff.no. In the cases where proff.no was unable to provide the data we needed, news articles published around the time of the acquisition regarding the target firm were used to obtain sufficient data. The variable was a measure of how "good" the target was, and it is primarily used to test if foreign acquirers identified better performing targets than what domestic acquirers did. A larger value meant that the subsidiary was allegedly a better target and we expected this variable to decrease the probability of divestment.

**Merged**

The binary variable "Merged" took the value 1 if the subsidiary was integrated into the parent company post-acquisition, and 0 if the subsidiary continued to operate as a separate entity post-acquisition. Normally, this information was obtained from the database proff.no, however in some cases we needed information from financial reports, press releases and news articles in order to determine the variable "merged". This variable was a proxy for close integration of the acquired subsidiary with the parent, because targets that were merged with their parent would most likely be more tightly integrated and have less autonomy than the targets that were not merged.

**Psychic distance**

This binary variable took the value 1 if the foreign acquirer came from one of the Nordic countries (Sweden, Denmark, Iceland and Finland), or 0 if it came from any other foreign country. We found it reasonable to split the foreign acquirers into these two categories because the Nordic countries have somewhat similar cultural properties. The "rest of the world" category was made for the reason that there were not enough acquirers from any other foreign location in order to provide any potential useful result. This variable was a proxy for psychic distance. We expected psychic distance to increase the probability of divestment.

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**Control variables**

These two variables were included as control variables only, hence no hypothesis, or a prediction of direction was expressed for these variables.

**Target size**

This variable was measured using the target's revenue in 2004 as a proxy for firm size. This is an ordinal variable that could take the values 1, 2, 3 and 4. 1 meaning the subsidiary had less than 20MNOK in annual revenue, 2 meaning it had between 20MNOK and 100MNOK in annual revenue, 3 meaning it had between 100MNOK and 500MNOK in annual revenue and finally 4 meaning the subsidiary had between 500MNOK and 3BNOK in annual revenue. In a few cases where the primary source of income was financial income we decided to use that instead of using regular revenue.

**Industry**

We divided the sample into three types of industries based on our knowledge of the target's business sectors. Ideally, definition of industries should have been more nuanced but we kept the definitions of industry very broad in order to obtain larger samples of the different industry categories. Since we had divided the sample into three industries we needed to create two dummies that represented two of the industries. The third industry was the baseline industry and was therefore not assigned a dummy variable.

Raw material industry: Any firm that engaged in some kind of raw material extraction e.g. mining, logging or oil exploration. This was the baseline industry and therefore had no dummy variable assigned to it.

Manufacturing industry: Any firm that manufactures a product. This variable took the value 1 if a sampled firm belonged to the manufacturing industry. Otherwise it took the value 0.

Retail/Service industry: Any firm selling a service or a product. This variable took the value 1 if a sampled firm belonged to the retail/service industry. Otherwise it took the value 0.

**Table 1: Explanatory variables**

*This table lists all the independent variables, their operationalization and what sources each variable is based on.*

Variable:	Operationalization:	Source of data:
Foreign	A binary variable that took the value 1 if the true owner of the acquirer was foreign (i.e. not Norwegian), otherwise 0.	- Proff.no - Zephyr
Parent size	An ordinal variable that took values from 1-5 depending on the size of the parent. 1 was the smallest, and 5 was the largest size measure.	- Company web pages - News articles - Proff.no - PI Navigator - Zephyr
Host country experience	A binary variable that took the value 1 if the acquirer was present in Norway pre-acquisition or conducted the acquisition through a Norwegian subsidiary, otherwise 0.	- Company web pages - News articles - Proff.no
Acquisition relatedness	A binary variable that took the value 1 if the acquisition was vertical or horizontal, otherwise 0.	- Company web pages - Zephyr
EBT/revenue	A measure of the target's EBT/revenue from 2004.	- Company web pages - News articles - Proff.no
Merged	A binary variable that took the value 1 if the target was consolidated with the parent or an entity that the acquirer controlled after the acquisition was made, otherwise 0.	- Company web pages - News articles - Proff.no
Psychic distance	A binary variable that took the value 1 if the acquirer came from Sweden, Denmark, Iceland, or Finland, otherwise 0.	- Company web pages - News articles - Zephyr
Target size	An ordinal variable that took values from 1-4 depending on the size of the parent. 1 was the smallest, and 4 was the largest size measure.	- Company web pages - News articles - Proff.no

Industry	The sample was divided into three types of industries. Two of the industries were assigned dummies that took the values 1 if the acquired subsidiary belonged to either the manufacturing or the retail/service industry, and 0 otherwise. The third industry was raw material. This was the baseline industry and was not assigned a dummy.	<ul style="list-style-type: none"> <li>- Company web pages</li> <li>- News articles</li> <li>- Proff.no</li> <li>- Zephyr</li> </ul>
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**5.4. Statistical methods**

The first stage of our analysis was a  $\chi^2$  test in order to test if the divestment rate of the foreign acquired subsidiaries were statistically different from the domestic ones. The reason for this was that we wanted to use an elementary test to initiate the more advanced Cox regression. Moreover, if we were to get matching results from the two models it would give some robustness to our analysis.

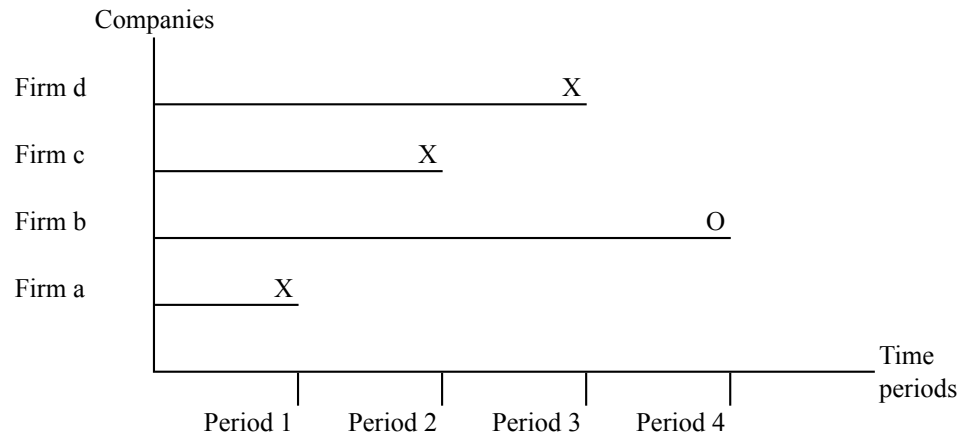
In addition to the  $\chi^2$  test we also ran a simple t-test hypothesis testing. The reason for this was that we wanted to test whether there was a difference between the characteristics of the foreign acquired- and the domestic acquired acquisitions. Our primary dataset was structured as a panel data displaying the existence of each sample firm until it was divested or until the measurement period ended. A Cox hazard rate model allowed us to analyze the survival of our sample periodically (Cox, 1972) and enabled us to test the difference in survival between the firms in our sample while accounting for other factors (Bewick, Cheek, & Ball, 2004). A Cox regression is also desirable when there are many prognostic factors (Mathew, Pandey, & Murthy, 1999), which supports our choice of model considering that we have multiple potential explanatory variables.

In order to facilitate better understanding of the Cox hazard rate model we have made a simple graphic illustration (figure 2) of how survival is determined. Each of the four lines symbolizes an imaginary firm. The “X” is indicating divestment and “O” is indicating survival. When the firm is divested (X) the firm is no longer observed, and only the firms that have survived remains in the sample. This is what is also referred to as right censoring and is how the Cox model keeps track of the surviving firms.

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**Figure 2: Illustration of the right censoring method**

Figure 2 illustrates how the right censoring is done. The Y-axis displays examples of sampled companies and the X-axis displays the time periods where the right censoring can take place. In the example below a, c and d are divested in different periods, while only firm b survives.



The equation for our model is as follows:

$$\ln h(t) = \ln h_0(t) + b_1x_1 + \dots + b_px_p$$

Where:

$h(t)$  = The hazard at time  $t$

$h_0(t)$  = Baseline hazard

$x_1 + \dots + x_p$  = Explanatory variables

$b_1 + \dots + b_p$  = Coefficients belonging to each respective explanatory variable

(Bewick et al., 2004).

We ran two models using the Cox regression. The first model measured the hazard rate of all acquired subsidiaries. It measured the impact of being a foreign acquirer on the survival of the acquired subsidiaries. Additionally, all non-foreign specific factors were included in this model (i.e. Psychic distance and host country experience were left out). In the second model we only tested the foreign acquired subsidiaries. The reason for this was that we wanted to see how psychic distance and host country experience influenced the survival of the acquired subsidiaries.

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## **6. Data analysis**

### **6.1. Description of the data**

All our observations start in period 0 (2004) and are followed throughout the follow-up period until period 3 (2014).

Table 2 below shows that around 1/3 of the subsidiaries acquired in 2004 were divested 10 years later. The share of domestic acquired subsidiaries divested was larger than for the foreign acquired subsidiaries. Hence, our first impression of the dataset was that foreign acquired subsidiaries were more likely to survive compared to that of domestic acquired subsidiaries.

**Table 2: Divestment frequency**

*Table 2 displays the frequency of survival and divestment for the foreign- and the domestic acquired subsidiaries.*

Origin	Survived	Divested	Total	Divest %
Foreign	30	12	42	29%
Domestic	39	20	59	34%
Total	69	32	101	32%

Table 3 shows that 53% of the 32 divested subsidiaries were sold, 22% were due to bankruptcy, while 25% were divested as a result of the subsidiary being divested. Interestingly, foreign acquired subsidiaries suffered from bankruptcies more often than domestic acquired subsidiaries. However, sale was the most common divestment method for both groups.

**Table 3: Distribution of divestment methods**

*Table 3 displays the frequency of each type of divestment method for the foreign- and the domestic acquired subsidiaries.*

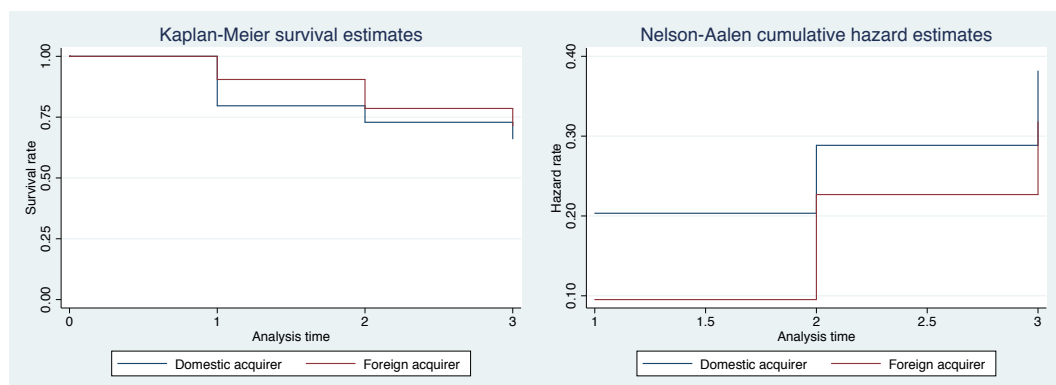
	Bankrupt	Dissolved	Sold	Total
Foreign	5	2	5	12
	42%	17%	42%	
Domestic	2	6	12	20
	10%	30%	60%	

Figure 3 shows the survival- and the hazard rates for both cross-border- and domestic acquisitions. The Kaplan Meier survival rate graph on the left side, displays the probability of surviving in each respective period measured. The length of the horizontal line shows the length of the measurement period, and the height of the vertical line displays the drop in survival rate if a subsidiary survives from one period to the next. The Nelson-Aalen hazard rate graph plotted on the right side, displays the cumulative hazard rate of subsidiary divestment. The horizontal lines displays the length of the measurement period, and the height of the vertical line show the increase probability of divestment if a subsidiary survives to the next measurement period.

We observed a tendency towards higher divestment rates for domestic acquired subsidiaries compared to foreign acquired subsidiaries. By looking at the hazard rate graph (right side) we observed that domestic acquired subsidiaries were always more likely to be divested than foreign acquired firms were. However, neither of these graphs confirmed if these observations had any statistical power and therefore further statistical analysis is needed.

### Figure 3: Survival rate- and hazard rate graph

Figure 3 displays the survival rate graph on the left side and the hazard rate graph on the right side. The K-M survival graph shows the cumulative probability of survival for each group at each measurement point, and the Nelson-Aalen hazard rate graph shows the cumulative hazard rate for each group at each measurement period.



From the survival rate graph in figure 3 we observed that the two groups had quite different properties in their divestment distribution. While most of the divested domestic acquired subsidiaries were divested within the first period, the



divestment pattern of the foreign acquired subsidiaries were more evenly spread throughout the period measured. From the Nelson-Aalen hazard rate graph we observe that the domestic acquired subsidiaries had a larger initial probability of being divested. In period two, the divestment probability for foreign acquired subsidiaries did a large leap indicating that the majority of foreign acquired subsidiaries were divested during the last 7 years.

When looking at the Spearman rank test (table 4) we observe that there were no extreme correlations in our dataset, thus no significant multicollinearity issues.

**Table 4: Spearman rank test for the whole sample**

Variable:	1	2	3	4	5	6
Foreign acquirer (1)	1,0000					
Parent size (2)	0,4917	1,0000				
Acquisition relatedness (3)	0,1851	0,1915	1,0000			
EBT/revenue (4)	0,0025	0,2118	0,1005	1,0000		
Merged (5)	-0,0836	0,0187	0,1572	0,0681	1,0000	
Target size (6)	-0,0123	0,3600	0,0720	0,1340	0,1388	1,0000

We conducted another rank test exclusively for the foreign acquired subsidiaries (table 5), but this did not show any extreme correlations either. The reason for conducting this second rank test was that the variables “host country experience” and “psychic distance” only had values for those subsidiaries that were acquired by foreign acquirers. Hence, a correlation matrix including all variables would have given us misleading correlations.

**Table 5: Spearman rank test for the foreign sample**

Variable:	HCE	PD	2	3	4	5	6
Host country experience (HCE)	1,0000						
Psychic distance (PD)	0,3626	1,0000					
Parent size (2)	-0,0505	0,0775	1,0000				
Acquisition relatedness (3)	-0,2023	-0,1404	-0,1199	1,0000			
EBT/revenue (4)	-0,3941	-0,1879	0,3695	-0,0141	1,0000		
Merged (5)	0,2816	0,1510	0,0757	-0,1704	-0,0781	1,0000	
Target size (6)	0,1260	0,0316	0,1906	0,1632	0,1342	0,2249	1,0000

## 6.2. Statistical results

Our empirical analysis was multifaceted. First we conducted a simple  $\chi^2$  test in order to check if there was a statistical significant difference in the divestment

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rates of cross-border- and domestic acquisitions. Next, we performed a simple t-test hypothesis testing for certain explanatory variables with the objective of determining whether there were any differences in the subsidiaries acquired by foreign acquirers and the subsidiaries acquired by domestic acquirers. Lastly, we conducted a more advanced survival analysis called a Cox hazard rate regression where we in addition to test for the influence of foreignness on subsidiary divestment also included other explanatory variables. In order to test the influence of foreign characteristics like psychic distance and host country experience we performed a survival analysis with only the foreign acquired subsidiaries.

### 6.2.1. $\chi^2$ test

29% of the foreign- and 34% of the domestic acquired subsidiaries were divested within our measurement period of 10 years. Even though this difference in divestment seems nontrivial, a  $\chi^2$  test (table 6) showed that the difference in divestment rates between the two groups was not statistically significant on any approved level ( $Pr = 0.571$ ). This finding showed a lack of support for  $H_1$ .

#### Table 6: $\chi^2$ test

Table 6 displays how many of the foreign- and domestic acquired subsidiaries were divested and how many survived. The  $\chi^2$  measures if the difference between the domestic and the foreign group is statistically significant.

Outcome	Origin		Total
	Domestic	Foreign	
Divested	20	12	32
Survived	39	30	69
Total	59	42	101

Pearson  $\chi^2(1) = 0,3216$      $Pr = 0,571$

### 6.2.2. T-test

The next test we did was simple hypotheses testing using t-statistics. As explained in the introduction to the results section, we did this in order to see if there were any differences in the characteristics of the acquisitions performed by foreign- and domestic acquirers.

**Table 7: T-test hypotheses testing**

Table 7 displays the variables that we performed t-tests for. \* indicates 10% statistical significance, \*\* indicates 5% statistical significance and \*\*\* indicates a 1% statistical significance, all measured with a two-sided test.

Variable:	Mean value		P value
	Foreign	Domestic	H <sub>0</sub> : diff = 0
Parent size	4,160	2,950	0,0001***
Acquisition relatedness	0,929	0,763	0,0282**
EBT/revenue	-0,006	0,073	0,205
Merged	0,381	0,508	0,243

The results showed us that foreign acquirers were on average larger than what domestic acquirers were. The size difference was substantial; the mean value of foreign firms was a whole category higher than the domestic mean size (4,160 v. 2,950). The difference was also statistically significant on a 1% level. The t-test showed that foreign firms conducted more related acquisitions than what domestic acquirers did. This finding was also statistically significant on 10% level. This finding was different from what we expected considering the findings from earlier research. EBT/revenue was used to measure the performance of the target and it could have given an indication of how likely the subsidiary was to survive in the future. We expected the value for the foreign group to be larger than the value for the domestic group. However, we found the opposite. That being said, the result was not statistically significant. Merged was used to measure whether the target was integrated into the acquirer. Even though we expected domestic acquirers to integrate more their targets more often than foreign acquirers, no statistically significant difference between the two groups was found.

### 6.2.3. Survival analysis

A Cox hazard rate regression allowed us to observe how the foreignness of the acquirer influenced the survival of an acquired subsidiary. The Cox regression in (table 8) included 92 of 101 firms in the sample and all variables that we measured. The regression output showed 245 observations even though we only had a sample of 92 in the model. The reason for this was that we had several measurement periods, therefore the sample firms were observed on multiple occasions. The results from the model showed that foreign acquired firms had approximately a 30% higher chance of survival compared to domestic acquired

firms. This survival rate was measured by taking 1-hazard rate, with the hazard rate being the exponentiated value of the beta coefficients. The survival premium we observed for foreign acquired firms were not statistically significant on any approved level, indicating that foreignness was not a main driver of survival/divestment. This reinforced the results from the  $\chi^2$  test.

### Table 8: Cox regression

Table 8 displays the results from the Cox regression for the whole sample. All the variables included are listed on the left side. The numbers that are in parentheses below the coefficients are standard deviations for the respective coefficients. \* indicates 10% statistical significance, \*\* indicates 5% statistical significance and \*\*\* indicates a 1% statistical significance, all measured with a one-sided test.

_t	Coef. P> Z
Foreign acquirer (1)	-0,3574 0,486 (0,513)
Parent size (2)	-0,3626 0,019** (0,155)
Acquisition relatedness (3)	0,1686 0,753 (0,536)
EBT/revenue (4)	-0,0483 0,965 (1,089)
Merged (5)	-0,9266 0,041** (0,454)
Target size (6)	0,4280 0,066* (0,232)
Manufacturing (7)	0,6206 0,573 (1,101)
Retail and service (8)	0,4675 0,658 (1,056)
Log likelihood =	-107,26
LR chi2(8) =	15,42
Prob > chi2 =	0,0515
No. of subjects =	92
No. of failures =	26
Number of obs =	245

Parent size was expected to have a negative influence on subsidiary survival; however the results showed that a large parent size significantly increased the chances of subsidiary survival. This result was statistically significant on a 5% level but it was the opposite result of what we expected. Instead of finding support for H<sub>2</sub> we found support for the exact opposite. As mentioned in the methodology, the parent size was a measure comprised of the parent's revenue. Here the parent's revenue was a proxy for firm size. The preferable source for firm size

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have been shown to be a measure using employees, however our data on employees of both the parent and the target were inconclusive, hence in this case revenue size was a better proxy for company size. Acquisition relatedness increased the chances of divestment by 18% (hazard rate of 1.18), however this result was not statistically significant on any approved level. Therefore we did not find support for H<sub>4</sub>, which said that acquisition relatedness would have a positive influence on subsidiary survival. Through the EBT/revenue variable we observe that choosing better performing targets decreased the probability of divestment, though this result was not statistically significant on any sufficient level. Thus, H<sub>5</sub> was not supported. Interestingly, we found the variable “merged” to be statistically significant on a 5% level. The results showed that when a target was consolidated with the parent or with an entity that the parent controlled it increased the chances of subsidiary survival by 60.5%. Consequently, H<sub>6</sub> was supported.

A larger target size increased the probability of divestment. This result was also statistically significant on a 10% level. Neither of the industry measures showed any statistical significance on their influence on subsidiary survival.

#### **6.2.3.1. Cox hazard rate regression for foreign acquired subsidiaries**

The model with only foreign acquired subsidiaries (table 9) also revealed some interesting results. Host country experience had a positive influence on survival. If a foreign acquirer had host country experience from Norway its acquired subsidiary was almost twice as likely to survive as a subsidiary that was acquired by a parent without the same experience. This finding was statistically significant on a 10% level indicating support for H<sub>3</sub>.

Larger psychic distance seems to decrease the chances of divestment, with Nordic countries having more than twice the hazard rate compared to companies from countries with a larger psychic distance. This was contradictory to what we hypothesized; on the other hand the finding was not statistically significant on any approved level ( $P < 0.491$ ). Hence, H<sub>7</sub> was not supported.

**Table 9: Cox regression for only foreign acquirers**

Table 9 displays the results from the Cox regression where only the foreign acquired subsidiaries were included. The description is the same as the one for table 8, except now the foreign acquirer variable is removed and the psychic distance- and the host country experience variables are included. The industry variables were not useful since the cross-border acquisitions were only present in two of the industries.

_t	Coef. P> Z
Host country experience (HCE)	-4,0498 0,064*
	(2,182)
Psychic distance (PD)	0,8730 0,491
	(1,267)
Parent size (2)	-1,7547 0,013**
	(0,710)
Acquisition relatedness (3)	-4,6530 0,111
	(2,919)
EBT/revenue (4)	2,5450 0,389
	(2,953)
Merged (5)	-1,5965 0,206
	(1,263)
Target size (6)	0,3994 0,475
	(0,559)
Log likelihood =	-16,447
LR chi2(8) =	16,4
Prob > chi2 =	0,0217
No. of subjects =	36
No. of failures =	7
Number of obs =	103

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## **7. Discussion**

### **7.1. Main findings and how they relate to previous studies**

The discussion on the influences of foreign and domestic ownership on survival of subsidiaries has been mixed. Some studies lean on the liability of foreignness when trying to explain that foreign owned subsidiaries have higher divestment rates than what domestic owned subsidiaries have, while others, often newer studies, argue that the foreignness effect on divestment of subsidiaries is insignificant, and that ownership advantages are much more important. In this study we have looked at acquisitions of Norwegian subsidiaries by foreign- and domestic acquirers with the objective of discovering if the foreignness factor has an influence on subsidiary survival. Additionally, we have tried to detect factors that could moderate this potential difference in divestment rates between cross-border and domestic acquisitions.

We found no significant effect of foreignness on the survival of acquired subsidiaries. That being said, we observed a trend towards cross-border acquisitions being divested less than domestic acquisitions. This trend is especially evident in the two graphs in figure 3 in the results section. There we see the survival rates on the left side, which is lower for the domestic group, and the hazard rates (probability of hazard/failure), which is higher for the domestic group.

A foreign firm's competitiveness is said to be compromised by the liability of foreignness when they engage in cross-border acquisitions and therefore they should have a larger divestment rate compared to domestic acquisitions (Zaheer, 1995). Clearly, this is not a correct representation of the reality. Even though, foreign acquirers might struggle with a lack of knowledge about the foreign market, cultural differences and legitimacy issues, their divestment rates in our study indicate that something else must moderate the effect of the liability of foreignness. A possible explanation of this finding could lay in the foundation of the OLI-paradigm. The theory behind the OLI-paradigm is that a foreign firm must have sufficient ownership-, location-, and internalization advantages in order to perform an FDI (Sudarsanam, 2010). According to the OLI-paradigm foreign

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firms must possess ownership advantages that exceed their inherent liability of foreignness, otherwise they would not have invested abroad. Therefore, those firms who invest abroad should be more than qualified to compete with the domestic firms in the countries where they choose to invest. Studies like Mata and Portugal (2002), Li and Guisinger (1991) and Kronborg and Thomsen (2009) find support for foreign firms being divested less often or just as much as domestic firms. Mata and Portugal (2002) specifically point out that ownership advantages play an important role as a moderating factor for the negative impact of being foreign.

We are not omitting the fact that all of these studies (including our thesis) use different ways to measure liability of foreignness/differences in survival between foreign and domestic owned foreign operations. While Zaheer (1995) uses average profits per trader to measure if there exists a liability of foreignness, Mata and Portugal (2002) and Zaheer and Mosakowski (1997) use the removal from a database to determine firm exit. Li and Guisinger (1991) use bankruptcy, and Kronborg and Thomsen (2009) and our thesis use divestment to determine subsidiary survival. As this could negatively influence the strength of either of the perspectives of survival, we see that it also strengthens the perspective of especially the liability of foreignness. This is because Zaheer on two separate occasions, with two different methods of measuring confirmed that the liability of foreignness is real.

Not surprisingly, foreign acquirers were observed to be significantly larger than what domestic acquirers were, which is congruent with what Mata and Portugal (2002) found in their study. The literature has been mixed with regards to what effect this difference in size could have on subsidiary survival. One argument is that larger firms have more financial muscles to support their subsidiary with, however the same study that used this argument found no support for the aforementioned claim (Zaheer & Mosakowski, 1997). One can also argue that larger firms are more diversified than smaller firms, hence they should be more prone to divest units (Hamilton & Chow, 1993). This was where our findings showed very different results compared to what we hypothesized. While we expected a large parent to increase the chance of subsidiary divestment, the exact



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opposite was the case. We found a large parent to have a positive influence on subsidiary survival. As Zaheer and Mosakowski (1997) argued, large firms could have sufficient financial assets to increase the survival chances of acquired subsidiaries, and so, a large size on average could be an ownership advantage that could moderate the liability of foreignness for the foreign acquirers. Since most of our acquisitions were related to the acquirer's core business, it could be an indication that the acquirers in our case were more concentrated, and therefore we did not experience the same result as Hamilton and Chow (1993) did.

Foreign acquirers were larger than the domestic acquirers were. Since larger units often are associated with being diversified (Hamilton & Chow, 1993), and since unrelated units are divested more frequently than related units (Benito, 1997), then the foreign acquirers should be more prone to divest their units compared to the domestic acquirers. Interestingly, we found foreign acquirers to conduct more related acquisitions compared to domestic acquirers, even though we hypothesized the opposite. However, to our surprise, acquisition relatedness did not have a statistically significant effect on subsidiary survival. Our results showed that foreign acquirers were larger and conducted more related acquisitions than what the domestic acquirers did. That foreign acquirers favor related acquisitions could be a way for them to mitigate the liability of foreignness. Cross-border acquisitions introduces the liability of foreignness, and by also investing in unrelated industries foreign acquirers create an even more risky environment (Barkema et al., 1996).

Possible explanations of why acquisition relatedness did not have statistical significant influence on subsidiary survival could be that the unrelated acquisitions in our sample provided financial synergies to the acquirers or that they met the expectations of the acquirer (Bergh, 1997), so that more of the unrelated acquisitions survived. Since the vast majority of acquisitions in our dataset were in fact related, a second, less theoretically grounded explanation for our findings could be that there were large groups of related acquisitions that were both divested and not divested. Hence, we cannot tell if a related subsidiary is more likely to be divested or not.

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If a foreign acquirer is able to identify better targets than domestic acquirers then that could be a capability that could mitigate the foreign acquirer's liability of foreignness. Identifying better targets compared to what domestic acquirers do could put the foreign acquirers in a position where the foreign acquired subsidiaries are divested less often. Our study did not show any indication that foreign acquirers identified targets that were in a better financial position to survive compared to the targets identified by domestic acquirers. Neither did our findings support that better performing targets at the beginning of our time period reduced the chances of them being divested at a later stage. These results did not correspond to the results that Balsvik and Haller (2010) experienced. However, Balsvik and Haller's (2010) sample contained only acquisitions of manufacturing plants, while our sample consisted of firms from all industries. It could be that the performance of the target at the time of the acquisition was more evident in the manufacturing industry while other characteristics of the targets, e.g. location or technology is more important when all industries are studied. Balsvik and Haller (2010) also had a much more comprehensive measure of performance than what was used in our thesis, which we acknowledge could have given a more precise result.

Subsidiaries that were consolidated with the acquirer or with another subsidiary of the acquirer were more likely to survive than those who were not. Moreover, we know that integration and implementation are crucial in order to have a successful acquisition (McNaught, 2004). Hence, if consolidation of a unit with the parent is a sign of integration, then our results support McNaught (2004)'s claims. Another explanation why consolidated subsidiaries might increase the chance of subsidiary survival could be that the subsidiaries that are consolidated have an important function for the acquirer's business, hence they are more likely to not be divested compared to other subsidiaries (Bergh, 1997). From our findings we know that by being consolidated the chances of subsidiary survival increased, but how could that influence divestment rates for cross-border- and domestic acquisitions? One explanation could be that large cultural difference make those differences especially evident when two businesses are consolidated (Slangen, 2006). Hence, domestic firms might have been more prone to consolidate their acquired subsidiaries and thereby increased the domestic groups survival rate. Even though,

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we did not find a statistically significant difference in the merger rates between the two groups, we observed a trend towards domestic acquirers consolidating more subsidiaries than what foreign acquirers did.

As predicted, host country experience had a positive effect on survival. This is congruent with what previous studies also have shown. We suppose that firms present in the Norwegian market prior to the 2004 acquisition possess specific industry knowledge- and country specific knowledge about the Norwegian market making them able to compete with other firms in the industry. Similar to what Kronborg and Thomsen (2009) argued, this could mean that as the time goes by and the acquirer's host country experience and knowledge increases, the liability of foreignness will subside. Thus, our study has shown that host country experience could have a significant moderating effect on the liability of foreignness.

Psychic distance had a trivial role on divestment of subsidiaries. This finding is contradictory to what most other studies have found. Usually, psychic distance is associated with either a negative- or a positive influence on subsidiary survival (Morosini et al., 1998; Pattnaik & Lee, 2014). Due to a relatively small sample size we had to divide the foreign acquirers into two groups, one with Nordic acquirers and the other with acquirers from the rest of the world. A larger sample might have provided us with more foreign acquirers, which could have made it possible to create a more nuanced psychic distance measure. Thus, a larger sample would have increased the chance of getting more precise and significant results about the influence of psychic distance on divestment of subsidiaries.

## **7.2. Limitations and avenues for further research**

By choosing a time interval that both included the years prior to- and after the 2008 financial crisis, we avoided any significant bias that this crisis could have caused. Additionally, we only explored data from one country, which eliminated any potential differences in macroeconomic, institutional and, political factors between host countries. That being said, there still exist limitations with our thesis that should be addressed. Our sample is constrained to one country only, which makes it difficult to generalize our findings to a broader population. Moreover,

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our pool of explanatory variables is limited and conducting a similar study with a wider array of explanatory variables is advised. More frequent observation intervals could provide more nuanced data to work with. Our data sample was sufficient in order to obtain some statistically significant results, but a larger data set could have provided us with a better analysis. Lastly, some of the data proved to be very difficult to obtain, consequently some of the variables were not optimally measured.

As of avenues for further research we have identified the need for more explanatory variables to be included and we especially suggest that the corporate strategy of the acquirer should be included when differences in divestment rates between foreign and domestic acquired subsidiaries are studied. We have seen from some studies (Benito, 2005) that the corporate strategy of a firm could strongly influence its divestment pattern. The performance of the divested unit and the performance of the acquirer are also factors that we do not take into account in this study and those are factors, which may influence the divestment of subsidiaries.

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## **8. Conclusion**

This thesis has explored the influence of foreignness on the survival of acquisitions. Little research has been conducted on how the foreignness of the acquirer influences the survival rate of acquired subsidiaries. In this thesis we did not find support for the notion that there was a difference in the divestment rate between cross-border- and domestic acquisitions. We conclude that if there exists a liability of foreignness, there must be some characteristics with foreign acquirers, which moderate this liability. We found foreign acquirers to be significantly larger than the domestic acquirers, and contradictory to what we hypothesized, this size difference had a neutralizing effect on the liability of foreignness. Foreign acquirers performed more related acquisitions compared to domestic acquirers, but we did not find acquisitions relatedness to have a significant influence on subsidiary survival. Subsidiary consolidation was something that had a positive influence on subsidiary survival, but we could not find support for any influence on the divestment rate between cross-border- and domestic acquisitions. Lastly, we found host-country experience to be a factor that also could moderate the liability of foreignness.

These findings are important to managers who conduct due diligence for cross-border acquisitions, because the findings from our study could help them to better assess foreign markets and targets. For instance, they should be aware that the foreignness factor might not be the most important factor for subsidiary survival, rather other factors such as the parent size; is it sufficiently large enough to handle and nurture an acquired subsidiary? Do they have experience from the foreign country? Or are they planning on consolidating the target into one of their units or is it going to operate on its own? Our findings could help answering all of these questions. We urge scholars to view cross-border acquisitions survival, not only as foreign versus domestic, but more in the light of firm capabilities and acquisition characteristics.

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- BI Norwegian Business School-  
Preliminary Thesis Report

-Influence of foreign ownership on  
divestment rates of Norwegian  
firms-

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**GRA19003** Preliminary Thesis Report

Supervisor:  
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Programme:  
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## **Introduction**

The world is as global as it has ever been; we are all interconnected in one way or the other. The number of global FDI outflows has more than doubled since 1995 and FDIs now account for around 40% of the external developing financing in the developing world (UNCTAD, 2015). Moreover, the number of cross-border M&A transactions in the world has almost tripled since 1990 (A. UNCTAD, 2015). Clearly the number of FDIs and cross-border M&A are increasing every year. Michael Porter concluded in his article from 1987 that firms divest more than 50% of their acquisitions (Porter, 1987). Similarly, Benito (1997) observed in his paper on divestment of foreign production operations that more than 50% of his sample of Norwegian foreign subsidiaries was divested after a 10-year period (Benito, 1997). Since there seem to be an increasing trend in the number of FDIs and since a vast amount of acquisitions end in divestiture we consider the area of corporate divestiture resulting from foreign acquisitions as a prominent and topical research area.

When a firm or subsidiary is divested it has entered one out of two states. Either it has been acquired by someone else or it has exited (shut-down). A divestment can be forced upon the investor (Kobrin, 1980). An example of this could be expropriation. Alternatively a divestment could be a deliberate divestment based on the strategy of the firm (Boddewyn, 1979). In this thesis we will focus on the deliberate divestments.

Our topic is mainly focused on the difference between the divestment rates of firms that are acquired by foreign acquirers versus firms that are acquired by domestic acquirers. To our best knowledge there seems to be lack of research on the influence of acquisitions by a foreign firm on the divestment rate of a target firm. The results of this research could prove useful for several stakeholders. Target firms and local citizens could get an indication on whether or not a potential acquisition from abroad will increase/decrease the chances of a divestiture of a local company. Potential suppliers of target firm could benefit from the results of this research since it could give an indication on the differences in divestment rates, which again could make them aware of the fact that certain firms

might disappear more frequently than others. Thus, the revenue from the shut down firm disappears accordingly.

## **Research Question**

### ***Research statement***

With this thesis we want to investigate the phenomenon of divestments regarding Norwegian companies. This will be reviewed in the context of foreign/domestic ownership of acquired Norwegian firms. We will focus our thesis around what differences there might be to divestment rates and discuss what might cause these differences or opposite discuss why there are no differences.

The “backbone” of the thesis will be data sample of acquisitions executed in 2004 where the target is Norwegian and the acquirer is foreign or domestic. 2004 is chosen to avoid the global “dot.com bubble” earlier in the century and the financial crisis in 2007. It is also sufficiently long enough back that potential changes regarding divestments and company structure is possible to identify, but not that long back so that it becomes too difficult to sample data regarding the fate of the companies.

### ***Research Question***

Based on the proceeding discussion in the introduction and in the previous sections we have decided on the following research question:

*Is the divestment rate for a Norwegian company that is acquired by a foreign firm the same as if it had been acquired by a domestic firm?*

### ***Relevance***

Our thesis will be an addition to the on-going debate about foreign ownership of Norwegian companies. Increasing inward FDI's into Norway has been a clear trend the last decades (Norway, 2015). The fear of many is that foreign ownership extracts and moves competence, resources and jobs out of Norway. Others argue that foreign ownership gives capital and international opportunities to Norwegian companies, which increase growth. With this thesis we would like to investigate

what the consequences of transferring ownership control cross-border are compared to keeping the ownership control domestic, and hereby bring valuable insight to divestment of Norwegian firms.

### **Literature review**

Reasons for why firms choose to divest a foreign operation could be many. The obvious reason for divestiture is poor performance of the subsidiary. However, firms could be willing to make an effort to improve poor performing subsidiaries in high growth regions as long as the products related to the firm's core business (Berry, 2013). This proves that poor performance might not always be an antecedent of divestment. In addition to poor performance; lack of or inappropriate internal control could result in inadequate expansion of a firm's operation, which then again could induce divestments due to the inability to obtain a strategic fit between the acquired subsidiary and the parent firm (Markides & Singh, 1997). Divestiture could also occur when acquirer's and target firm's strategies coincide resulting in divestment of the target's resources and redeployment of the acquirer's resources to the target (Capron, Mitchell, & Swaminathan, 2001).

Some studies are suggesting that using cross-border acquisitions as an entry mode increase the likelihood of divestments (Benito, 1997; Li, 1995). In the study conducted by Li (1995) the researcher discovered that the exit rates of firms that enter a foreign market through acquisitions of domestic companies or joint ventures are higher than for firms that enter new markets through greenfield investments. The same study also discovered that diversification into areas that are not related to a firm's core business increases the exit risk for a foreign subsidiary. Benito (1997) concluded in his study that the probability for divestments is significantly higher for subsidiaries that have been acquired than for that of Greenfield investments.

Whenever parts of firms are divested there is said to be a negative connotation associated with divestments by a foreign firm compared to divestments by a domestic firm (Benito, 2005). However, studies like (Kronborg & Thomsen, 2009; Mata & Portugal, 2002) are presenting a contradicting evidence for the

aforementioned claim. The Danish researchers discovered that the risk of market exit was higher for domestic companies than for foreign owned companies. However, the researcher looked at a timespan of 110 years and the difference in exit risk was almost equal in modern times (Kronborg & Thomsen, 2009). In the Portuguese study by Mata (2002) they concluded that the survival rate of foreign- and domestic firms are close to equal when you account for factors like growth strategies, ownership advantages, economies of scale, and internal organization of firms (Mata & Portugal, 2002), which means that divestment rate is similar when similar firms are compared.

Looking more into differences between domestic and foreign ownership Mata and Freitas (2012) experienced different findings than Mata experienced with his study from 2002. In the 2012 article they discovered that foreign companies are more likely to divest its operation in a given country than for that of a domestic company (Mata & Freitas, 2012). Additionally, this likelihood increases with time. So the longer a foreign company has been present in a country the more likely it is that it divests its operations in that country. The authors suggest that a reason for this could be the fact that a foreign firm enters a new market on a temporary basis, which means that it could divest its operation in any given country and move it to another country that possess more desirable characteristics. This supports the notion that foreign firms have a higher divestment rate than that of domestic firms.

An interesting topic in international business is the role of culture in a firm's internationalization success. The classical Uppsala model suggest that firms initially internationalize by entering foreign markets that are close in terms of Psychic distance, and then gradually expand into more remote locations in terms of psychic distance (Johanson & Vahlne, 1977). Psychic distance can be defined as "factors that make it difficult to understand foreign environments" (Johanson & Vahlne, 2009). There is some evidence that that psychic distance influences the performance of a foreign subsidiary, but the effect subsides as the firm increases its market knowledge (Dikova, 2009). Since we are discussing differences in acquisitions by foreign and domestic firms we consider the fact that a potential

explanation for differences in divestments could lie in differences in psychic distances between foreign and domestic firms.

When we discuss culture and business it is inevitable not to mention Geert Hofstede. He came up with five dimensions to measure cultural differences; *power distance, individualism vs collectivism, masculinity vs femininity, uncertainty avoidance and long-term vs short-term orientation* (Hofstede, 1994). In his 1994 paper he argues that since there are cultural differences between nations then management practices might not work the same way in all countries. Some studies confirm that cultural differences influence the pre- and post acquisition process, and could for instance affect the way firms from different countries evaluate target firms, conduct due diligence or manage the acquisition process (Angwin, 2001). Some studies have also discovered the opposite results, for instance one study concluded that larger cultural distance increases the success rate of cross-border acquisitions. Additionally, they argue that an effect of increased cultural distance introduces more diverse routines, which the acquirer can benefit from obtaining (Morosini, Shane, & Singh, 1998).

## **Methodology**

### ***Empirical model***

We would like to examine the difference in divestment rates of target firms that are acquired by a foreign firm and target firms that are acquired by a domestic firm. We found a longitudinal design to fit our study the best. Compared to a cross-sectional study that only gives us the possibility to observe the population at a single point in time; a longitudinal study gives us the possibility to detect developments and changes in the target population (Institute for work & Health, 2015).

For our study we have to create a database consisting of Norwegian firms that have been acquired by a foreign acquirer and Norwegian firms that have been acquired by a domestic acquirer. Primarily, we have to make observations at two different times ( $T_1$  and  $T_2$ ) for each firm in the two samples. The first observation will happen in time  $T_1$ . Here we will gather information of the acquired firms in

the two samples. Next we are going to observe the sample at another point in time  $T_2$ . In  $T_2$  we observe which one of the firms that have survived and which ones that have been divested. Additionally, at the two data collection points we are going to gather information that can be used to include control variables.

The original sample will be analyzed and sorted in to one out of two categories.

- Unidentified sample; firms we have not been able to sample at  $T_2$ .
- Identified sample; identified firms at  $T_2$ .

We will then split the Identified sample into two more categories.

- Identified but not usable; Identified firms but not able to identify the variables concerning the firm needed for our regression.
- Usable sample; sample of which we will run the regression.

The best fitting estimation technique to investigate the effect on the divestment rate depending on foreign/domestic ownership seems to be a logistic regression analysis, which is estimated by the maximum likelihood method. A reason for this is that the dependent variable in this study is a dichotomous variable

$Y = 1$ , if divested by 2014

$Y = 0$ , otherwise

We have a null hypothesis ( $H_0$ ) that says there will be no difference in the divestment rate if the acquirer is foreign or domestic (Norwegian).

$$H_0 : N_A^F, 2004-2014 = N_A^D, 2004-2014$$

Where A = acquired, F = Foreign and D = Domestic.

We need to include other variables to control for the real effect of foreign ownership on the divestment rate. Potential variables to include could be:

$X_2$  = size of acquirer

$X_3$  = size of target

$X_4$  = size of deal



$X_5$  = diversity of acquirer

$X_6$  = diversity of target

$X_7$  = industry growth of target

$X_8$  = age of target

$X_9$  = profit of target

$X_{10}$  = Performance of target

$X_{11}$  = Psychic distance

As mentioned above these are only potential control variables. The natural progression of this study is to use the literature to define the actual control variables that we are going to use in our research.

Independent variable ( $X_1$ ) and control variables ( $X_2$ - $X_{10}$ ) will be included in the logistic regression model.

$$Z = B_0 + \sum B_t X_t + \varepsilon_t$$

Where  $B_0$  is a constant, while  $B_t$  is the coefficient of variable  $t$  and  $\varepsilon$  are the unexplained residuals. The  $Z$  value will then be inserted **into**:

$$P(Y = 1) = 1/(1+e^{-z})$$

Where  $Y = 1$  if divestment had occurred in 2014, while  $Y = 0$  otherwise.

The population regression line will show us the probability for divestment ( $Y = 1$ ) given the value of all de independent variables.

After running the logistic regression we will test our hypothesis using the t-statistics and form confidence intervals. We will also check for multicollinearity. To measure the fit of the model we will look at the Psuedo- $R^2$  which is the best measure for a logit model (James & Mark, 2012)

### ***Data***

Data will be obtained from several different databases. Firstly, we need to gather data on both Norwegian firms that are acquired by foreign acquirers and on domestic acquisitions. Bureau van Dijk's owns a database called *Zephyr*, which provides good information on M&A deals.

A quick search in the *Zephyr database* where we used  $T_1 = 2004$  gave us these results:

Year ( $T_1$ )	Acquisitions by foreign acquirers	Acquisitions by domestic acquirers
2004	131	301

This proves that it should be doable to find a sample for our research. However, we take into account that for various reasons not all of these acquisitions will be usable in our study.

In order to track the fate of the companies belonging to our two samples and in order to conduct our longitudinal study, the *Bloomberg database* and the *Orbis database* could become useful when we are searching for financial data. Annual reports can give us valuable information of the survival of acquired companies. Additionally, they could aid us in the search for information on control variables like size, industry, location and diversity of company that will be used in our regression.

### **Tentative Time Schedule for Thesis Progression**

<b>Time-period</b>	<b>Task</b>
January 15 <sup>th</sup>	Deadline preliminary
January 15 <sup>th</sup> – February 1 <sup>th</sup>	Finalize methodology
February 1 <sup>st</sup> - February 23 <sup>th</sup>	Data collection, preparing for the analysis in Stata
February 23 <sup>th</sup> – March 31 <sup>st</sup>	Empirical research and analysis
April 1 <sup>st</sup> – May 15 <sup>th</sup>	Interpretation of regression/analysis and writing
Late May	Send finished thesis to supervisor for last guidance
July 1 <sup>st</sup>	Deadline Master thesis

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