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# PARENT-SUBSIDIARY RELATIONAL FACTORS AND THEIR INFLUENCE ON FOREIGN SUBSIDIARY SELL-OFFS

OLABODE GBOBANIYI

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**Abstract**

This study investigates the influence of a range of firm- and country- level factors on parent firms' sell-off of their foreign subsidiaries. These identified firm- and country-level factors are conceptualised as parent-subsidiary relational factors because they affect the relationships between parent firms' and their subsidiaries. Additionally, the study investigates whether the influence of these factors differs between manufacturing and non-manufacturing parent firms. While previous studies have shown the importance of factors that impact parent-subsidiary relationships on parent firms' divestment decisions, knowledge about the influence of these firm- and country-level factors on the parent-subsidiary relationships towards foreign subsidiary sell-offs is limited or underdeveloped. As a result, this brought about the need for this study to investigate these factors and their influence on the sell-off of foreign subsidiaries.

Data were collected using multiple secondary sources. Two database packages from the Bureau van Dijk were used – the Zephyr database was used to identify multinational firms that completed their foreign subsidiary sell-offs within the study period, and the Osiris database was used to gather information relating to the parent firms and their subsidiaries in terms of size, industry, location/geography, profitability/turnover and age. Other sources used included a publication from the British Council on countries and their official languages, the World Development Indicators from the World Bank for host country growth, and the Euler Hermes 2016 publication for country risk factors. Based on the datasets, the study used a quantitative approach with the logistic regression analysis to analyse the obtained data.

The results indicate that firm-level factors such as subsidiary size and profitability, in addition to country-level factors such as language commonality and geographical linkage positively influenced the sell-off of foreign subsidiaries, regardless of the parent firms' industry affiliations. The results also indicate that the host country growth has a negative influence on the sell-off of foreign subsidiaries in manufacturing parent firms but not in their non-manufacturing counterparts and that the symmetrical linkage has a negative influence on foreign subsidiary sell-offs in non-manufacturing parent firms but not in their manufacturing counterparts. Additionally, the subsidiary's age was found not to have any influence on the sell-off of foreign subsidiaries, regardless of the parent firms' industry affiliations.

This study contributes to the existing body of knowledge on foreign subsidiary sell-offs with the conceptual frameworks that explicitly captures parent-subsidiary relationships with the conceptualisation and measurement of these firm- and country-level factors as parent-subsidiary relational factors. The study also contributes to the debate on whether and to what extent these firm- and country-level factors influence parent firms' on the sell-off of their foreign subsidiaries, and the significant differences in the influence towards foreign subsidiary sell-offs based on the parent or multinational firms' core industry affiliations.

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## Dedication

This thesis is dedicated to the memory of my brother Olawale Gbobaniyi.

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## CHAPTER 1: Study background, aims and objectives

### 1.1 Introduction

This chapter aims, as an introduction to this thesis, with its identification of firm- and country-level factors that may affect the parent-subsidiary relationships. The chapter provides a general outline of these firm- and country-level factors, and their conceptualisation as parent-subsidiary relational factors. This chapter also provides background on how these factors not only affect the relationship between a parent firm and its subsidiaries but influence parent firm's decisions and the multinational firm's strategic objectives. Other subsections in the chapter include the research theoretical framework and motivation, followed by the aims and objectives, and the thesis structure.

### 1.2 Study background

The performance and productivity of foreign subsidiaries have been identified as critical to both the survival and the growth of multinational firms. However, despite the increased focus on the growth strategy of multinational firms in the international business strategy literature, studies have shown that parent firms expect more than just improved subsidiary performance. Multinational firms use their foreign subsidiaries as tools or resources, to quickly react to identified global opportunities and reduce potential risks through their presence in their respective countries and regions (Boddewyn, 1983; Brauer, 2006; Nachum & Song, 2011; Peng *et al*., 2008). This indicates that foreign subsidiaries contribute to the value and growth structure of multinational firms. Studies have shown that parent firms use them towards being responsive to global opportunities and uncertainties which multinational firms may face (Nachum & Song, 2011; Sousa & Tan, 2015). Equally, because of the increase in global opportunities and uncertainties, parent firms amplify their strategic decisions towards their actions based on their parent-subsidiary relationships (Chung *et al*., 2010; Lee & Makhija, 2009a, 2009b; Song *et al*., 2015).

Parent firms are found to mitigate the impact of global opportunities and uncertainties on their growth structure by engaging in strategic decisions that may lead to their foreign

subsidiaries' divestment (Berry, 2010; Song & Lee, 2017). The use of measures such as international divestments has been found to help multinational firms to not only mitigate the impact of identified global issues but also to help them maintain and improve their competitive advantage in their global markets (Berry, 2010). A number of studies have described the strategic decision of a multinational firm to engage in a foreign subsidiary divestment as their ability to actively exploit the flexibility that their portfolio of subsidiaries provides (e.g. Ang *et al.,* 2014; Bandick 2010; Belderbos 2003, 2005; Berry 2010, 2013; Cairns *et al.,* 2008; Colantone & Sleuwaegen, 2010; Delios & Beamish, 2001; Garg & Delios, 2007; Gaur & Lu, 2007). Parent firms may shift added-value activities internationally, within their operational network, in response to the specific strategic needs and developments that may enhance the global competitive advantage and also their foreign operations' performance (Belderbos & Zous, 2009; Dau, 2013; Nachum & Song, 2011; Sakakibara & Yamawaki, 2008).

Related studies that investigated the relationships between the parent firms of multinational firms and their subsidiaries found that parent firms act as the locus of hierarchical decision-making and control. Thus, the relationship between the parent firm and its subsidiaries is central towards understanding the functioning of multinational firms, as this relationship plays a crucial role towards improving and strengthening the multinational firm's competitive advantage (Baumann-Pauly *et al.*, 2013; Johnston & Megnuc, 2007). Song & Lee (2017) stated studies that have investigated parent-subsidiary relationships have mainly focused on environmental and investment factors, with organisational factors being under-researched. Compared to previous studies investigations on parent-subsidiary relationships based on environmental, investment and organisational factors, this study focus is on crucial but rarely investigated phenomenons on parent-subsidiary relationships. These crucial but rarely investigated phenomenons on parent-subsidiary relationships are the firm- and country-level factors. This study assumes that the central role of the parent-subsidiary relationships is either based on their firm- or country level. For instance, the importance of profitability as a performance index at firm-level depends on the dictates and positions of the parent firms since the rationale for the establishment of foreign subsidiaries goes beyond their profitability. As a

result, parent firms expect the presence of their subsidiaries in their respective locations to be beneficial towards meeting both the local and international needs of their multinational firms by being integrative and responsive to the adaptation of their environments' adaptation (Ambos, Ambos, & Schlegelmilch, 2006; Baaij & Slangen, 2013). As a result, this study based on knowledge in the relevant studies defines relational factors as firm- and country-level factors that impacts on the relationship between parent firms and their subsidiaries, towards the continuous adaptation of their multinational firms' corporate strategy and structures for increased growth and competitive advantage (Baaij & Slangen, 2013; Dellestrand & Kappen, 2012; Johnston & Megnuc, 2007; Song & Lee, 2017; Vivien & Engel, 2018).

Despite the increasing knowledge of the influence of parent-subsidiary relationships on multinational firms' growth goals and objectives in the strategy and international business literature, the available knowledge has not thoroughly provided the needed understanding of how these relational factors (firm- and country-level) impact the parent firms' strategic decisions and actions towards their foreign subsidiary sell-offs. Rather, the available knowledge has only been able to provide an understanding of how parent-subsidiary relationships influence multinational growth options (Alessandri *et al.,* 2012; Arrighetti *et al.,* 2014; Higon & Antolin, 2012), expansion and internationalisation (Mohr et al., 2018), multinational performance (Ambos & Mahnke*,* 2010; Bouquet *et al.,* 2009) and the sharing, transfer and usage of resources between the parent firm and its subsidiaries (Baaij & Slangen, 2013; Lieberman *et al.,* 2016). These studies have provided the potential to examine the influence of a parent-subsidiary relationship, based on an identified firm- and country-level factor, on a foreign subsidiary's sell-off. However, evidence indicates that the knowledge of an understanding of these identified factors and their influences on parent firms' strategic actions were based on analyses of multiple factors rather than discrete, singular factors – e.g. the relationship between a subsidiary's performance and its geographical distance/relatedness on its parent firm, rather than the subsidiary's performance or geographical distance to its parent firm (Ambos & Mahnke, 2010; Baaij & Slangen, 2013; Benito, 2005; Paterson & Brock, 2002). As a result, future studies need to identify the influence

of discrete parent-subsidiary relational factors on the parent firm's strategic actions on their foreign subsidiaries.

Interestingly, while previous studies within the foreign divestment paradigm have shown that the decisions of parent firms to engage in a divestment action with their foreign subsidiaries are due to a combination of factors, such as the influence of relatedness and profitability (Bergh, 1995; Norback *et al*., 2015), knowledge from other related strategy studies indicates that such decisions may not always be as a result of a combination of factors. Evidence available in the literature suggests that distinct relational factors may have a significant influence on the parent firm's strategic intent towards their foreign subsidiaries, which may include its decision to sell-off (Belderbos & Zous, 2009; Burt *et al.,* 2008; Chidlow *et al.,* 2015; Norback *et al*., 2015). Previous studies focused on merging the influence of multiple subsidiary factors, such as their profitability and their relatedness into a single factor. However, it is possible that each factor may have a distinct level of significance in influencing the parent firm's strategic divestment action. The review of extant literature indicates that a parent firm decides to engage in a divestment action based on identified individual factors, which it considers towards responding adequately to global uncertainties or potential opportunities that may confront it (Berry, 2010; Mohr *et al.,* 2018). As a result, it can be assumed that rather than the parent firm being influenced jointly by its foreign subsidiary profitability and relatedness factors, the profitability factor or that of its relatedness may singly influence divestment decisions if the parent has to be adequately responsive towards an uncertainty or an opportunity that may impact its multinational growth. Foreign divestment actions are known to involve strategically reacting and making difficult decisions to enhance the performance and competitive advantage of a multinational firm (Dai *et al.*, 2015).

Additionally, it has been argued that when parent firms engage in strategic actions to react to factors that may impact their growth, such strategies are likely to develop further into broader strategies of the multinational firm and towards increasing its competitive advantage, value and growth (Ambrosini & Bowman, 2009; Bowman & Ambrosini, 2000, 2003). However, with multinational firms' strategies towards increasing their growth having been

conceptualised within an integration-responsive (IR) framework, there is the need to further extend this framework within the foreign subsidiary divestment paradigm, particularly towards the parent-subsidiary relationships, to provide an in-depth understanding of their influence on the sell-off of foreign subsidiaries (Benito, 2005; Haugland, 2010). Furthermore, the evidence available from previous studies suggests that there is a need to increase our focus on the divestment of foreign subsidiaries by multinational firms, as parent firms are found to engage in sell-off of both profitable and unprofitable subsidiaries.

The focus of this study is to improve our knowledge based on the IR and the resource-based frameworks with a specific focus on the influence of the firm- and country-level factors as relational factors on foreign subsidiary sell-offs. Similarly, because previous foreign divestment studies mainly focused on divested subsidiaries that were only either performing or underperforming and investigated multinational firms regardless of their industry affiliations, their findings, as identified by Brauer (2006) and Moschieri & Mair (2008), remain ambiguous. Consequently, it has been suggested that the ambiguity of these studies may be resolved if the sell-offs of profitable and unprofitable foreign subsidiaries are investigated together. There is also a gap in knowledge in terms of whether the findings are applicable to manufacturing, non-manufacturing, or mixed industries. Thus, this study aims to further improve our knowledge of foreign subsidiary sell-offs with a specific focus on the impact of the identified firm- and country-level factors on parent-subsidiary relationships.

The interest of this study in examining the sell-offs of wholly-owned foreign subsidiaries is a result of previous studies failing to adequately address such strategic subsidiary objectives as discussed above. With the previous focus being centred on a combination of factors, there is no knowledge of the influence of distinctive firm- or country-level factors, such as the relational impact that a subsidiary's size, age, geography and symmetry may have on foreign subsidiary sell-off decisions by their respective parent firms (e.g. Belderbos 2005; Berry, 2004, 2010; Burt *et al.,* 2004, 2008; Cairns *et al.*, 2008; Coudounaris, 2017; Dai *et al*. 2013; Delios & Beamish 2001; Dranikoff *et al.,* 2002; Gaur & Lu 2007; Moschieri & Mair, 2008).

The advancements in our knowledge on the influence of other factors on subsidiaries divestment actions by parent firms, such as the need for operational refocusing, resource redeployment, and restructuring of the multinational's core activities, brings about the need to discretely investigate the influence of parent-subsidiary relational factors that may perhaps be significant for foreign subsidiary divestments. Additionally, it is important to review the core influence of parent-subsidiary relational factors on the sell-off of foreign subsidiaries as the evidence from earlier studies indicates that strategic factors, such as resource redeployment, relocation of production activities, and better opportunities for firm resources to influence the sell-off of subsidiaries, may not necessarily hold if not for the relationships between the parent firms and their foreign subsidiaries (Berry, 2010; Colantone & Sleuwaegen, 2010; Liebermann *et al.,* 2016; Norback *et al*., 2015).

This study will focus on the investigation of the influence of identified firm- and country-level factors as parent-subsidiary relational factors in an attempt to understand the reasons why they influence parent firms' in the sell-offs of foreign subsidiaries and whether there are differences or similarities in parent firms based on their core industry affiliation. Most of the previously identified divestment antecedents used in justifying the influence of parent firms' strategic decisions on their foreign subsidiaries were focused exclusively at either the subsidiary/unit level or the parent level. This study's focus on parent-subsidiary relationships will advance our knowledge of divestment antecedents based on the influence of these discrete and contextualised relational factors. Established facts in the literature on multinational firms' strategic decisions indicate that due to the parent-subsidiary relationships, a parent firm tends to measure the value of a subsidiary based on the strength of their relationship, as they consider such a relationship to contribute heterogeneously (i.e. in different ways) to their multinational growth (Tong & Reuer, 2006, 2007). Additionally, Tong *et al.* (2008) argued that these contributions are not necessarily straightforward measures of value by merely placing figures on performance, but rather measures based on the relational significance between the parent and its foreign subsidiary towards their multinational growth objectives. For instance, studies that investigated multinational firms' geography indicate that

foreign subsidiaries located within the same geographical locations as their parent firms are considered more valuable compared to those which are not (Tong *et al.*, 2008). The reason for such position on the value associated to subsidiaries that are in the same geographical locations as their parent firms is because parent firms derive a higher contribution from their geographically linked subsidiaries than from those with which they are not geographically linked (Beugelsdijk, McCann, & Mudambi, 2010).

It has also been suggested that a factor such as the size of a subsidiary may directly impact on the value it will be associated with by its parent firm (Nachum & Song, 2011). Therefore, parent firms of multinational businesses are most likely to treat their subsidiaries based on the value which they attached to them. For instance, a parent firm with a few subsidiaries will attach more value to each of its subsidiaries, compared to a parent firm with a large number of wholly-owned subsidiaries. Likewise, the value attached to a small-sized subsidiary will most likely differ to that attached to a large-sized subsidiary based on the parent firm's financial gains and competitive advantage they provide in their respective markets. Therefore, one may argue that based on available knowledge from the literature, the value a parent firm may attach to a foreign subsidiary is based on the contributions it derives from that subsidiary (Bandick, 2010; Bergh, 1995; Damaraju, Barney, & Makhija, 2015).

The preceding arguments have identified some gaps in the extant literature and indicated what investigations are necessary to fill such gaps and improve our knowledge. For instance, to bridge one of the identified gaps in the literature, the study will investigate the influence of firm-level factors such as the subsidiary's size and its age on its parent firm's decision to engage it in a sell-off, which no previous study has investigated as a factor that influences the parent-subsidiary relationship. This will present incremental knowledge of an understanding of the influence of parent-subsidiary relationships on parent firms' strategic decisions towards their foreign subsidiaries sell-offs. Additionally, as indicated earlier, the neglect in the previous investigations of factors that are of relational significance based on their contributions to a multinational growth, may not only explain some of the reasons for the identified contradictions and ambiguities but also provides opportunities for incremental

knowledge (Brauer, 2006; Engel *et al*., 2013; Moschieri & Mair, 2008). For instance, Brauer (2006) pointed out that while some studies indicated that parent firms are most likely to sell-off a foreign subsidiary due to its unprofitability or underperformance, other studies indicated that the decision to sell off an unprofitable or underperforming subsidiary is due to the subsidiary being no longer strategic to the parent firm's operational and strategic values and growth. As a result, Brauer (2006) argued that profitability may be less significant in a parent firm's divestment decision if it still considers the subsidiary to be strategic to its growth, and as such a parent firm may decide to sell off a profitable foreign subsidiary if it is no longer strategic to the multinational firm's value. The only means towards a better understanding of divestment is through discrete contextualisation and empirical analyses of the level of influence of these relational factors.

Additionally, along with the increased calls for research to improve the available knowledge of parent firms' divestment strategies, there have also been calls to develop and integrate a new theoretical framework and approaches towards enhancing the understanding of multinational firm strategies. As a result, strategy scholars may have to rejuvenate previous knowledge on multinational firms' divestments, productivity and performance strategies with other established theoretical frameworks, to further advance and improve our knowledge of the influences on foreign subsidiaries' divestments (Brauer, 2006; Defren *et al.*, 2012). The review of divestment literature indicates that the data used in previous studies were old. It may be difficult to ascertain whether the findings from old data may provide the needed understanding that may improve our knowledge of current strategies of multinational businesses. It may be that the difficulty in accessing recent multinational firms' data and the costs associated with acquiring and processing current data might have been behind the use of old data. It is believed that access to recent data and information on multinational firms' divestments may stimulate and refresh ideas and findings concerning what might have previously been neglected or overlooked with the use of old data. For instance, a few scholars in divestment studies, such as Chidlow *et al*. (2015), Lee *et al*. (2013), Lieberman *et al*. (2016) and Norback *et al.* (2015), used in their investigations data generated between 2001 and 2005.

While the use of these old datasets may not necessarily impact the validity of their findings, more recent data may be of benefit to identify whether there may be fundamental changes concerning the age or period differences between the results for old and current data. The use of recent data and information on international divestment in this research may bring along with its findings the new impacts and effects of more recent changes in international business, and how multinational firms react strategically to global behaviours in their positioning towards achieving their goals and objectives.

Furthermore, the consequence of the lack of consensus in the foreign divestment literature on the predictive value of determinant(s) in international divestment actions has contributed to increased calls for improved research. For instance, while some studies indicated that a foreign subsidiary which is unrelated to its parent firm and unprofitable is most likely to be engaged in a divestment action, other studies concluded that regardless of the relatedness factor between a parent firm and its foreign subsidiary, a parent firm will most likely engage an unprofitable foreign subsidiary in a divestment action (Brauer, 2006). Importantly, it is vital to note that based on recent global events, the rate of all forms of corporate divestments in multinational firms has continued to increase (EY, 2013). A survey conducted by the firm 'Ernst and Young' in 2012 indicated that there has been a consistent increase in corporate divestments in multinational firms, with their report finding based on an extensive investigation of 567 corporate executives representing 14 industries. The study by Ernst and Young indicated that there is a continued increase in decisions relating to subsidiary divestment and that multinational firms engage in the process as a strategy towards achieving an increased growth value. As a result, the best way to investigate the understanding of these strategic actions of multinational firms is by using their recent information to capture the impact of these unique relational factors. Another significant highlight of the Ernst and Young study was the indication that these multinational firms conducted regular and structured operational portfolio review management. The structured operational portfolio reviews by these multinational firms were said to ensure that parent firms engaged the use of their multiple operational structures as a strategic rather than a reactive tool towards the continuous

improvement of the multinational firms' value (EY, 2013). Therefore, with the position of most of the foreign divestment literature figuring out divestment as a reactive tool, it is essential to enhance our knowledge about international divestment as a strategic tool, based on the identified relational factors that may influence such decisions.

### 1.3 Research theoretical framework and motivation

The integration-responsive (IR) and resource-based framework are some of the few tools in strategy and international business research that lay a structural foundation for extensive research multinational strategies. These frameworks have been used to build a contingency approach to understand international business strategies in multinational firms (Haugland, 2010; Mohr *et al.,* 2018; Shan *et al.,* 2019; Vidal & Mitchell, 2018). The core perspective of the IR framework focuses on the responsiveness and integrativeness of multinational firms operating within a global scope, while that of the resource-based is that changes to resource bases through addition, deletion, and recombination or reconfiguration impacts on multinational firms' growth. In essence, it can be suggested that the resource-based framework compliments the IR framework within a multinational firm perspective because the resource-based view of a firm examines links between the multinational firm's internal characteristics (i.e. the multinational firm being a bundle of resources that simultaneously consist of valuable, rare, imperfectly imitable and non-substitutable), while the IR perspective links the multinational firm's internal characteristics to the external characteristics (i.e. opportunities and/or uncertainties towards growth and competition) (Butt *et al.,* 2019; Lin & Hsieh, 2010; Lockett *et al.,* 2009; Nachum *et al.,* 2008). These frameworks suggests that for the continued and increased growth of a multinational firm, it must be able to balance the need to be responsive to local demands and uncertainties with their need to exploit market imperfections for opportunities based on the strength of resources within their multinational framework (Benito, 2005; Karim & Capron, 2016).

Additionally, with these underlying perspectives in this research stream, this study extends the use of the IR framework with the resource-based perspective because in order

for a multinational firm to be able to be integrative and responsive to uncertainties and opportunities in its respective markets, it requires the contribution of its resources to achieve its competitive advantage relative to its peers (Barney, 1991; Butt *et al.,* 2019). Hence, this thesis examines the interplay between foreign subsidiary sell-offs and resource redeployment, reconfiguration and relocation because distinctive competencies shape strategies that multinational firms pursue. The competencies that shape multinational firms' strategies help towards their growth and competitive advantage using their available valuable resources to strengthen existing resources or build a new one. As a result, the easiest way for a multinational firm to advance its global integration and responsiveness is its use of superior resources within its network through transfer, reconfiguration, relocation, or redeployment that may lead to the sell-off of foreign subsidiaries that have or help in the development of these superior resources (Moradlou, *et al.,* 2017; Mohr *et al.,* 2018).

### 1.4 Problem statement and research questions

This study investigates the influence of the contextualised parent-subsidiary relational factors on foreign subsidiary sell-offs and whether there are differences or similarities in the sell-offs of foreign subsidiaries based on the parent firm's industry affiliation (i.e. manufacturing and non-manufacturing). Consequently, this study's problem statement focuses on the identification of the extent to which parent-subsidiary relationships influence multinational firms' foreign subsidiary sell-offs. There is a crucial need for strategy-related studies to understand the influence of parent-subsidiary relationships on multinational firms' divestment actions, and particularly to look beyond profitability as a factor measured not only in financial terms but also in non-financial strategic relational terms, along with other relevant relational factors. As a result, this study aims to bridge the identified gaps in the literature by providing answers to these questions - "*to what extent do these firm- and country-level factors, contextualised as parent-subsidiary relational factors influence sell-offs of their foreign subsidiaries",* and *"does the influence of these factors on foreign subsidiary sell-offs differ*

*when analysed based on the parent firm's core industry (i.e. manufacturing and non-manufacturing)".*

Importantly, the motivation towards the investigation of these firm- and country-level factors as parent-subsidiary relational factors on foreign subsidiary sell-offs is because not only is this field yet to be researched but studies have shown that these firm- and country-level factors impact on the relationship between parent firms and their subsidiaries (Baaij & Slangen, 2013). Additionally, with previous divestment studies having to focus only on investigating the influence of a combination of multiple factors on foreign subsidiaries, leaves a gap in our knowledge on whether discrete firm- and country-level factors could influence decisions of parent firms on their foreign subsidiary sell-offs.

### 1.5 Aims and objectives

Based on the previous arguments, the aims of this study are to "*investigate the level of influence of these firm- and country-level factors as parent-subsidiary relational factors on foreign subsidiary sell-offs"* and to *"investigate the differences or similarities based on the multinational firm's parent industry in which these contextualised parent-subsidiary relational factors influence their foreign subsidiary sell-offs".*

Based on these aims, the following objectives have been developed.

- *To investigate the influence of firm-level factors such as subsidiary's size, age, symmetrical linkages, and the profitability of foreign subsidiaries on parent firms' decisions to sell-off their foreign subsidiaries.*
- *To investigate the influence of country-level factors such as host country growth, language commonality, and geographical linkages between the parent and the foreign subsidiary on parent firms' decisions to sell-off their foreign subsidiaries.*

- *To investigate the differences and similarities with the sell-off of foreign subsidiaries based on the parent firms' core industry affiliations (i.e. manufacturing and non-manufacturing).*

### 1.6 Thesis structure

The structure of each chapter is summarized as follows:

*Chapter One: Study background, aims and objectives*

This introductory chapter provides the outlines of the thesis: theoretical background, rationale and motivation, research questions, aims and objectives.

*Chapter Two: Literature review*

This chapter explores and reviews relevant empirical literature pertaining to multinational firms' divestments and their influencing factors in order to identify gaps in the body of extant knowledge on the differences in divestment influences between manufacturing and non-manufacturing multinational firms.

*Chapter Three: Theory and Hypotheses*

The chapter discusses the study's theoretical framework and the conceptualisation of the firm- and country-level factors as parent-subsidiary relational factors, i.e. the subsidiary size, host country growth, subsidiaries' profitability, age, language commonality, geographical and symmetrical linkages leading to the development of the study's hypotheses.

*Chapter Four: Methodology*

This chapter explores the theoretical model of this study, which includes the research design, strategy and measurement of variables. The chapter presents a detailed description of research methodologies to identify the appropriate strategy, data collection and analytical methods. It also addresses the operationalisation of the measured variables, which includes the dependent, independent and control variables.

*Chapter Five: Data analysis*

The focus of this chapter is on the study's analyses using the logistic regression model to investigate the marginal effects of the described parent-subsidiary relational factors (the independent variables) influencing the sell-offs of foreign subsidiaries (the dependent variable).

*Chapter Six: Discussion of results*

This chapter discusses the findings derived from the regression analysis based on the study's aims, objectives, and hypotheses. The discussions in this chapter identify how the results fill some of the gaps in our knowledge.

*Chapter Seven: Conclusion*

This chapter summarises the findings of the detailed empirical investigations on the influence of parent-subsidiary relational factors towards foreign subsidiary divestments, and the different effects these factors have on manufacturing and non-manufacturing multinational and parent firms in terms of their foreign subsidiary sell-offs. This chapter also discusses the study's contributions to our knowledge, the implications to practitioners, its limitations and advice for further research.

## Chapter 2: Literature review

### 2.1 Introduction

The reasons why multinational parent firms sell-off their foreign subsidiaries have received increased scholarly attention in recent years (Benito, 2005; Berry, 2010, 2013; Mohr *et al.,* 2018; Norback *et al.,* 2015). However, despite this increase in scholarly attention on divestment antecedents, research on the factors influencing the divestment decisions of multinational firms remains inadequate, compared to the literature and research on the impact of post-divestment on multinational firms' strategies. Furthermore, research on international divestments of multinational firms, particularly from the international business strategy point of view, indicates that there is a need to improve our knowledge of multinational firms' divestment antecedents since previous findings failed to establish the level of significance of key influencing factors on the parent firms' divestment actions. Therefore, this study, through its investigations of the firm- and country-level factors as parent-subsidiary relational factors, can provide the means to bridge the identified gap in our knowledge, based on the contextualisation of the influence that parent-subsidiary relational factors have on foreign divestment sell-offs. While this chapter was mainly developed based on knowledge from relevant divestment literature (Berry, 2010; Chakrabarti *et al.,* 2011; Coudounaris, 2017; Dai *et al.,* 2013; Engel *et al.,* 2013; McDermott, 2010; Mohr *et al.,* 2018; Song, 2014; Vidal & Mitchell, 2018), a considerable amount of knowledge from the non-divestment strategy literature also helped in shaping it, as these non-divestment studies have shown how the parent-subsidiary relationship contributes heterogeneously to a multinational firm's growth value (Alessandri *et al.,* 2012; Arrighetti *et al.,* 2013; Shan *et al.,* 2019).

Accordingly, this literature review presents and discusses an overview of international divestment and its influencing factors in manufacturing and non-manufacturing multinational firms. Other areas this chapter presents and discusses are an overview of parent-subsidiary relationships and their contributions to multinational firm growth, and their influence on subsidiary sell-offs.

## 2.2 Foreign divestment: influencing factors

Foreign divestment is a complex, high impact event by which multinational firms adjust to growth opportunities and constraints by engaging in strategic actions such as a unit/subsidiary sell-off, reshoring, spin-off, equity carve-out, closures, or split-up (Barbieri *et al.,* 2018; Berry, 2010; Mulherin & Boone, 2000; Stentoft *et al.,* 2016a, 2016b, 2016c ). The review of the extant literature indicates multiple descriptions and definitions attributed to foreign divestment because it not only affects critical parameters of a firm at the industry, firm or country-level but is also affected or influenced by essential parameters within a multinational firm; such as its size, competitive structure, ownership, performance, organisational and strategy structure, diversification, and workforce level (Baaij & Slangen, 2013; Benito, 1997, 2005, 2009; Brauer, 2006; Burt *et al.*, 2008). Foreign divestments, particularly within the international business strategy dimension, have been studied from three perspectives – corporate strategy, industrial organisation, and financial (Ang *et al.,* 2014; Bandick, 2010; Belderbos & Zous, 2009; Benito, 2003, 2005; Berry 2010, 2013; Brauer, 2005, 2006; Cairns *et al.,* 2008; Dai *et al.,* 2013; Damaraju *et al.,* 2015; Ferragina *et al.,* 2014; Lee & Lin, 2008; Lee & Madhavan, 2010; Lee *et al.,* 2013; Lieberman *et al.,* 2016; Mata & Freitas, 2012; McDermott, 2010, McDermott & Luethge, 2013; Norback *et al.,* 2015; Nyuur & Debrah 2014; Procher & Engel, 2018). The literature has brought about the richness of available knowledge from both the theoretical and practical interests of foreign divestment research. However, as identified in the introductory chapter, most of these previous studies revolved primarily around the plethora of already known divestment influencing factors. While these previously known factors have enhanced the increased availability of well-grounded knowledge, they have also increased the need to improve upon them in order to advance the literature on foreign divestment determinants (Barbieri *et al.,* 2018; Belderbos & Zou, 2009; Cao *et al*., 2008; Damaraju, Barney, & Makhija, 2015).

Furthermore, a review of the international business strategy literature on foreign divestments indicates that there has been more focus on the strategic impact of foreign divestment, compared to the research on factors that may have influenced parent firms'

decisions to divest. For example, only a few studies can be identified to have investigated the impact of inadequate governance systems at post-acquisition in a multinational firm, which has been found to bring about decreased sustainability, less productivity and profitability, and to influence parent firms' divestment decisions and actions. Most of the focus in the divestment literature has been on the impact of governance systems on multinational firms' post-divestment productivity and performance (Lee & Madhavan, 2010; Nyuur & Debrah, 2014). There is a need to balance this with increased research on divestment determinants to fill some of the identified gaps in the literature. Furthermore, previous studies that investigated the influence of governance systems on ownership structures as divestment determinants were found to have mainly engaged such studies from an industry and a diversification point of view (e.g. Colantone & Sluewaegen, 2010; Gaur & Lu 2007). Over-diversification had been seen to have a negative impact on multinational firms' governance systems and influenced their divestments to get the firms back within their desired performance level (Haynes, Thompson, & Wright, 2003; Vidal & Mitchell, 2015, 2018). However, a major factor identified in the existing literature is that parent firms mostly influenced their foreign divestment decisions by *ex-ante* commitments; that is, a factor that influences the multinational firm to remain in a market or industry rather than to exit from it. These *ex-ante* commitments are based mainly on the need of the multinational firm to remain in a market due to high sunk costs, which are associated with foreign divestments (Chidlow *et al*., 2015; Lieberman, Lee, & Folta, 2016). The literature indicates that the high sunk cost associated with a foreign divestment is a major deterrent or a barrier towards divestment. The managers of multinational firms consequently need to adequately justify their need to engage in foreign divestments within their structures as either the best choice of action when dealing with issues of governance systems on poor or underperforming operations, or in response to better opportunities that may lead to the enhanced performance and profitability of the company (Berry, 2010). However, Lieberman *et al.* (2016) have shown that the potential to redeploy valuable resources from a divested subsidiary reduces the cost impact associated with the *ex-ante* commitments of staying in a market rather than exiting. Foreign divestment could therefore be the response of a

multinational firm towards better opportunities (Berry, 2010), or the reaction to uncertainties (Belderbos & Zous, 2009) in their global market, as it provides the potential to redeploy valuable resources (Lieberman *et al.,* 2016) that may be used to improve and achieve the firm's strategic goals. As a result, divestment can be identified as an incentive towards a multinational firm's growth, as a foreign subsidiary with valuable resources may influence their parent firm's decision towards a sell-off to redeploy valuable resources to another subsidiary. Equally, a parent firm's decision to engage in a divestment/sell-off of their foreign subsidiary will be influenced by the subsidiary's contributions to overall multinational growth, which is a result of the relationship it has with its parent firm (Beugelsdijk, 2010, cited in Asmussen *et al*., 2011; Tong *et al*., 2008). It may be argued, therefore, based on the empirical findings in divestment literature, that a critical influence on divestment decisions is the value attached to resources, to justify the actions either as a barrier or an incentive towards a multinational firm's growth (Berry, 2010; Hryckiewicz & Kowalewski, 2011).

Studies have also shown that multinational firms, their operations, units and subsidiaries (either foreign or local) may be considered not only as assets but also resources towards the achievement of their strategic goals and objectives (Bandick, 2010; Barney, 1991; Bass & Chakrabarty, 2014). The relevant international business strategy literature identifies that the primary purpose of a multinational firm towards global integration is to be able to use its foreign operations and subsidiaries for its adequate responsiveness to global opportunities and uncertainties, to ensure its multinational growth and survival (Benito, 2005). This is also tied to the literature assertions that foreign operations and subsidiaries of multinational firms do not only become assets but also resources within the hold of the parent firm, to be used along with their integrative and responsive approach towards achieving their strategic goals and objectives (Ambrosini & Bowman, 2009; Bowman & Ambrosini, 2003). Consequently, parent firms tend to measure the value and impact of their global operations through the lens of the positioning of their foreign operations/subsidiaries, based on their responsiveness towards uncertainties and opportunities that may influence their multinational firms' growth. As a result, for the parent of a multinational firm, the value it attaches to a foreign operation or

a subsidiary has been identified to go beyond the foreign subsidiary's performance or profitability alone, but on other factors that may influence its contributions towards its multinational and parent firm's growth (Hult *et al*., 2008; Rabbiosi, 2011). This is because the profitability of a foreign subsidiary may be significant towards its growth and survival, but it may not be that significant for its parent or multinational firm's growth as the parent expects its subsidiaries to be responsive to opportunities and uncertainties that may have a positive impact on the multinational firm's competitive advantage (Mukerjee, 2016). The factors that influence the value of foreign subsidiaries based on their contributions to the multinational firm are the product of the relationship between the parent and its foreign subsidiary. These factors, either at firm, industry or country-level have been identified to impact on parent-subsidiary relationships in the relevant literature (e.g. Ambos *et al.,* 2006; Arrighetti, Landini, & Lasagni, 2014; Bouquet & Birkinshaw, 2008; Kostova *et al.,* 2016; Procher & Engel, 2018; Song *et al.*, 2015).

Consequently, this suggests that the reason why academic scholars argue that parent firms attribute value to their foreign operations and subsidiaries is due to their overall contributions to their multinational network and not only based on their individual profitability (Chen & Moore, 2010; Tong *et al*., 2008). Additionally, scholars in strategy and international business have attributed a foreign subsidiary's contribution to its multinational firm growth to significantly impact its parent-subsidiary relationship (Vidal & Mitchell, 2015). This further suggests the importance of foreign subsidiaries' broader contribution, not just profitability, towards their multinational firm's value and growth, which may be a significant influence towards the parent firm's decisions on their divestments. However, available data suggests that while the focus has been mainly on understanding the influences on foreign divestments, previous investigations overlooked the consideration of parent-subsidiary relationships in their decisions to divest. Previous studies have focused their investigations only on factors associated with divested foreign subsidiaries, such as their size, host country growth, age, profitability, geography, and relatedness (Coudounaris, 2017; Johnston & Menguc, 2007; Kolev, 2016; Mata & Frietas, 2012; Song, 2014; Soule *et al.,* 2014). Consequently, this left a

gap in the available knowledge and led to the assumption that these factors associated with the divested foreign subsidiaries may have influenced their respective parent firms' strategic decisions. As a result, the assumption that the strategic decisions of parent firms to engage in a divestment action, based on the factors associated with the divested subsidiary, is debatable without having to independently examine their level of influence from a parent-subsidiary relationships point of view (Baaij & Slangen, 2013; Song & Lee, 2017).

As the relevant literature has shown, multinational firms review their portfolio of multiple subsidiaries before engaging in actions that are strategic to their multinational growth goals and objectives (EY, 2013). A better understanding of foreign subsidiaries' heterogeneous contributions through the impact of their relational factors may provide the needed evidence to advance the literature on foreign divestment antecedents or determinants, particularly from the parent firm level. An investigation from a parent firm level towards their strategic sell-off of a foreign subsidiary will not only bridge the identified knowledge gap mentioned above, but also align with increased calls for studies in strategy and international business, to improve our understanding of the strategic actions of parent firms based on parent-level parameters and not just the subsidiary-level parameters. However, since research is about identifying unexplored areas of knowledge and providing the necessary information towards improving on previous knowledge, it is pertinent for this research to advance our understanding of the justifications and explanations of the reason(s) why a parent firm may have decided to engage in the sell-off of a particular foreign subsidiary from its portfolio of available subsidiaries. As subsidiaries in the fold of their parent firm are assets and resources for potential use towards opportunities and increased growth (Ambrosini & Bowman, 2009; Ashrafi & Mueller, 2015; Berry, 2010; Coudounaris, 2017; McDermott, 2010; Procher & Engel, 2018) , the potential for engagement in a divestment for resource redeployment reasons increases, as the parent firm will rather sell-off a foreign subsidiary after transferring identified valuable resources to itself or other foreign subsidiaries (Lee & Lin, 2008; Lieberman, Lee, & Folta, 2016; Ryngaert & Scholten, 2010). Therefore, as foreign divestment has been identified to involve a series of difficult decisions which may impact on a multinational firm's broader strategy to grow and

remain competitive, the knowledge of the heterogeneous contributions of foreign subsidiaries, based on the influence of parent-subsidiary relational factors, may provide an improved understanding of parent firms' decisions on their strategic intents to remain advantaged in their competitive environments.

Additionally, as explained in the introductory chapter, available knowledge on the heterogeneous contributions of foreign subsidiaries towards their multinational firm's growth structures indicates that not all contributions can be quantifiably measured. As a result, it is the value attached to a subsidiary by its parent firm, based on the impact of their relationships based on their home-host country and industry characteristics, that determines the contributions of a foreign subsidiary to the growth of the multinational firm (Damaraju, Barney, & Makhija, 2015; Engel *et al.,* 2013; Tong *et al.*, 2008). Consequently, this study investigates the impact of multinational firm factors that may have a significant influence on the relationship between a parent firm and its foreign subsidiaries, to provide the opportunity to advance the knowledge of international divestments. This study focuses its investigations on the conceptualisation of the firm- and country-level factors in relevant strategic studies, which have been shown to impact parent-subsidiary relationships and parent firms' strategies towards their multinational firms' growth options. The identified firm-level factors or characteristics include the size of subsidiaries; the age of the subsidiaries; their relatedness based on industry and product similarities, and the profitability orientation of the available foreign subsidiaries (Berry, 2010, 2013; Lieberman *et al.,* 2016; Vidal & Mitchell, 2015, 2018). On the other hand, the country-level factors considered in this study include the parent-subsidiary geographical linkage based on their regional linkage, the host country's growth, and their commonalities in language (Fisch & Zschoche, 2012; Maurer, 2011; Piekkari & Tietze, 2011; Piekkari et al., 2014; Sousa & Tan, 2015; Song, 2014).

Moreover, with the focus of this study on these critical parent-subsidiary relational factors, the study's emphasis is to argue that while the profitability of foreign subsidiaries is vital to their parent firms' decisions towards critical strategic actions, parent firms do not only make use of their subsidiaries' profitability in order to make decisions on such actions. As a

result, this study suggests that parent firms base their foreign divestment strategic decisions on the independent reviews of key factors that influence their parent-subsidiary relationships, to be able to match their strategic intents with the required resource tools for their actions. In addition, where there is an intention towards a foreign subsidiary divestment, parent firms, with their reviews of their parent-subsidiary relationships, associate the benefits and contributions of such relationships towards their responsiveness to global opportunities and uncertainties (Berry, 2010, 2013; Song, 2014). Therefore, parent firms are most likely to review their subsidiaries' portfolio based not only on why some subsidiaries may be more prone or less prone to being divested (i.e. Song & Lee, 2017) but also, based on the influence of their parent-subsidiary relationships and which firm- or country-level factor is most significant towards their decision to sell-off a foreign subsidiary. For instance, Song & Lee (2017) investigated the importance of foreign subsidiaries to their multinational firms based on their product-level vertical integration, human capital investments, and technological investments in the subsidiaries. The investigation by these scholars examined the probability that a parent firm will engage in a subsidiary divestment under the condition that all other subsidiaries are also at risk during the same period (Song & Lee, 2017). However, Song and Lee's focus on the factors that deter parent firms from selling-off their foreign subsidiaries still leaves an unanswered question from previous studies about the extent to which independent firm- and country-level factors influence parent firms' decisions towards their foreign subsidiary sell-offs. Additionally, since there is a significant amount of knowledge available from research on foreign divestments (Barbieri *et al.,* 2018; Belderbos & Zous, 2009; Benito, 2005; Bergh, 1997; Brauer, 2006; Coudounaris, 2017; Dai *et al.*, 2013; Delios & Beamish, 2001; Dhanaraj & Beamish, 2009; Fisch & Zschoche, 2012; Karim & Capron, 2016; Lee & Lin, 2008; McDermott, 2010; Mohr *et al.,* 2018; Mudambi & Venzin, 2010; Soule *et al.,* 2013; Sui & Baum, 2014; Vidal & Mitchell, 2018), this study will also be able to advance our knowledge with its investigations on the independent influence of these relational factors towards multinational firms' divestments, particularly foreign subsidiary sell-offs.

Consequently, this study, through its theoretical and empirical analyses, hopes to provide the opportunity to advance our knowledge towards the understanding of the level of influence that these identified relational factors have on the sell-offs of foreign subsidiaries, as they have been identified to influence the parent-subsidiary relationship independently and to contribute value heterogeneously, towards their multinational firm's growth (Chang *et al.,* 2013; Dossi & Patelli, 2008; Gates & Egelhoff, 1986). Furthermore, it will be of additional importance to identify whether there are any differences or similarities in the investigations of this study from the purview of relational differences between manufacturing and non-manufacturing multinational firms. The intention towards investigating whether the influence of these factors differs between manufacturing and non-manufacturing multinational firms is a result of previous studies failing to establish whether there are any differences or similarities as the focus has remained mainly on the size of the sold-off subsidiaries or just the parent firms regardless of their industry specifications (Alexander *et al.,* 2005; Bandick, 2010; Belderbos & Zous, 2009; Bergh, 1995; Ferragina *et al.,* 2014; Zheng *et al.,* 2012). Table 2.1 groups international divestment influences and foci as determined by previous studies, while Table 2.2 groups the same previous studies based on their study focus, industry and sample size.

**Table 2.1:** Divestment **l**iterature based on the host country, parent and subsidiary firm

| **Influences** | **Focus** | | |
|---|---|---|---|
| | **Host country** | **Parent Firm / Industry** | **Subsidiary Firm** |
| Political and institution | Chung & Beamish (2005); Demirbag, Apaydin, & Tatoglu (2010); Görg & Strobl (2003); Soule, Swaminathan, & Tihany (2013) | N/A | Belderbos & Zou (2009); Dhanaraj & Beamish (2009); Dai, Eden & Beamish (2013) |

| | | | |
|---|---|---|---|
| Performance | Shaver (1998); Delios & Beamish (2001); Iwasaki (2012) | Alexander, Quinn & Cairns (2005); Mata & Portugal (2003); Berry (2013); Vidal & Mitchell, (2018) | Boddewyn (1979); Chidlow *et al.* (2014); Li (1995); Zheng, Singh & Mitchell (2012) |
| Ownership and foreignness | Bandick (2010); Belderbos (2003); Ferragina, Pittiglio, & Reganati (2014); Mata & Portugal (2000); Mata & Portugal (2002); Mata, Portugal, & Guimares (1995); Nyuur & Debrah (2014); Patey (2009); Pattnaik & Lee (2014) | Damaraju, Barney, & Makhija (2015); Duhaime & Baird (1984); Hamilton & Chow (1993); Zaheer (1995) | Ang, Jong & van der Poel (2011); Garg & Delios (2006); Gaur & Lu (2007); Geroski, Mata, & Portugal (2008); Hryckiewiczw & Kowalewski (2011) |
| Internationalisa-tion Strategy | Georgopoulos & Preusse (2006); Mata & Freitas (2011) | Baroncelli & Manaresi (1997); Cairns *et al.* (2007); Greenaway, Gullstrand, & Kneller (2006); Colantone & Sleuwaegen (2010); Norback, Tekin-Koru, & Waldkirch (2015) | Song (2014); Procher & Engel (2018) |
| Restructuring and corporate strategy | N/A | Boddewyn (1983); Cairns *et al.* (2010); Chow & Hamilton (1993); Berry (2010); Hoskisson, Johnson, & Moesel (1994); Peel (1995); Lieberman, Lee, & Folta (2016) | Benito (2003); Ghertman (1988); |
| Parent-subsidiary relationship | N/A | Song and Lee (2017) | |

**Table 2.2** Divestment literature based on the study focus, the industry and sample size

| Influences | Author(s) | Focus | Industry | Sample size/ data set |
|---|---|---|---|---|
| Political and institutional effects | Fotopoulos & Louri (2000) | Home country 'Greece' | Unspecified/ mixed | 209 |
| | Soule, Swaminathan & Tihany (2014) | Host country 'Burma' | Unspecified/ mixed | 449 |
| | Görg & Strobl (2003 | Host country 'Ireland' | General manufacturing | 17,789 |
| | Chung & Beamish (2005) | Host countries 'Multiple' | Unspecified/ mixed | 9,887 |
| | Demirbag, Apaydin, & Tatoglu (2010) | Host countries 'Multiple MENA countries' | Unspecified/ mixed | 265 |
| | Dhanaraj & Beamish (2009) | Subsidiary firms' | Unspecified/ mixed | 12,984 |
| | Belderbos & Zou (2009) | Subsidiary firms' | Electronic manufacturing | 1,095 |
| | Dai, Eden & Beamish (2013) | Subsidiary firms' | Unspecified/ mixed | 670 |
| Performance | Pennings & Sleuwaegen (2004) | Home country 'Belgium' | Specified/mixed | 2,999 |
| | Perez, Sanchis-llopis & Sanchis-llopis (2004) | Home country 'Spain' | Unspecified/ mixed | 2,912 |
| | Vidal & Mitchell (2018) | Parent Firm | Mixed | Conceptual |
| | Berry (2013) | Parent firms | Manufacturing | 759 |
| | Belderbos (2005) | Home country 'Multiple' | Electronic manufacturing | 104 |
| | Shaver (1998) | Host country 'USA' | Unspecified/ mixed | 117 |

| | | | | |
|---|---|---|---|---|
| | Delios & Beamish (2001) | Host country 'Multiple' | Unspecified/ mixed | 3,080 |
| | Iwasaki (2012) | Host country 'Russia' | Unspecified/ mixed | 751 |
| | Mata & Portugal (2003) | Parent firms' | Unspecified/ mixed | 1,033 |
| | Alexander, Quinn, & Cairns (2005) | Parent firms' | Retail | 167 |
| | Li (1995) | Subsidiary firms' | Computer and pharmaceutical | 267 |
| | Zheng, Singh & Mitchell (2012) | Subsidiary firms' | Electronic manufacturing (TV) | 280 |
| | Chidlow *et al.* (2014) | Subsidiary firms' | Unspecified/ mixed | 852 |
| Parent-subsidiary relationship | Song & Lee (2017) | Parent firms | Unspecified/ Mixed | 439 |
| Ownership & foreignness | Bordonaba-Juste, Lucia-Palacios & Polo-Redondo (2007) | Home country 'Spain' | Fashion retail industry | 188 |
| | Mata, Portugal & Guimares (1995) | Host country 'Portugal' | Unspecified/ mixed | 17,000 |
| | Mata & Portugal (2000) | Host country 'Portugal' | Unspecified/ mixed | 1,033 |
| | Mata & Portugal (2002) | Host country 'Portugal' | Unspecified/ mixed | 124,294 |
| | Belderbos (2003) | Host countries 'EU countries' | Electronic manufacturing | 67 |
| | Bandick (2010) | Host country 'Sweden' | General manufacturing | 14,593 |
| | Ferragina, Pittiglio, & Reganati (2014) | Host country 'Italy' | Mixed 'General manufacturing and services' | 369,002 |

| | | | | |
|---|---|---|---|---|
| | Nyuur & Debrah (2014) | Host country 'Ghana' | Unspecified/ mixed | 350 |
| | Pattnaik & Lee (2014) | Host country 'Korea' | Unspecified/ mixed | 1,697 |
| | Duhaime & Baird (1984) | Parent firms | Unspecified/ mixed | 115 |
| | Hamilton & Chow (1993) | Parent firms | Unspecified/ mixed | 98 |
| | Damaraju, Barney, & Makhija (2015) | Parent firms | Unspecified/ mixed | 1,117 |
| | Garg & Delios (2006) | Subsidiary firms | Unspecified/ mixed | 250 |
| | Geroski, Mata, & Portugal (2008) | Subsidiary firms | Unspecified/ mixed | 118,070 |
| | Gaur & Lu (2007) | Subsidiary firms | Unspecified/ mixed | 20,177 |
| | Ang, Jong, & van der Poel (2014) | Subsidiary firms | Unspecified/ mixed | 121 |
| | Hryckiewiczw & Kowalewski (2011) | Subsidiary firms | Banking | 149 |
| Internationali-sation strategy | Jagersma & van Gorp (2003) | Home country 'Netherlands' | Unspecified/ mixed | 868 |
| | Colantone & Sleuwaegen (2010) | Industry | Manufacturing | Unspecified |
| | Norback, Tekin-Koru, & Waldkirch (2015) | Home Country (Sweden) | Manufacturing | 338 |
| | Kronenberg (2011) | Home country 'Netherlands' | Unspecified/ mixed | 179,913 |
| | Procher & Engel (2018) | Subsidiary firms | Unspecified/ mixed | 3524 |
| | Georgopoulos & Preusse (2006) | Host country 'Greece' | Unspecified/ mixed | 199 |

| | | | | |
|---|---|---|---|---|
| | Mata & Freitas (2012) | Host country 'Portugal' | Unspecified/ mixed | 325,114 |
| | Baroncelli & Manaresi (1997) | Parent firms | Unspecified/ mixed | 234 |
| | Greenaway, Gullstrand & Kneller (2008) | Parent firms | Unspecified/ mixed | 3,570 |
| | Cairns *et al.* (2008) | Parent firms | Retail | 32 |
| | Song (2014) | Subsidiary firms | Manufacturing | 1,560 |
| Restructuring and corporate strategy | Haynes et al., (2003) | Home country 'UK' | Unspecified/ mixed | 158 |
| | Berry (2004) | Home country 'USA' | Manufacturing | 190 |
| | Berry (2010) | Home country 'USA' | Unspecified | 190 |
| | Lieberman, Lee & Folta (2016) | Parent firm | Mixed | Conceptual |
| | Powell & Yawson (2005) | Home country 'UK' | Specified/mixed | 562 |
| | Owen & Yawson (2005) | Home country 'Australia' | Unspecified/ mixed | 345 |
| | Hoskisson, Johnson & Moesel (1994) | Parent firms | Unspecified/ mixed | 203 |
| | Cairns *et al.* (2010) | Parent firms | Retail | 200 |

### 2.3 The effect of the parent firm's industry on foreign subsidiary divestment

Our knowledge about strategy and international business divestments predominantly comes from studies that focused their research on divestment activities (both domestic and

international) in mixed industries and manufacturing parent firms (Table 2.2). As a result, the available knowledge about divestment influences and the actions of manufacturing parent firms outweigh those of non-manufacturing parent firms. While there has been a recent increase in research on international divestment in non-manufacturing industries, particularly in the retail and banking industry, there is still a need for a focus on divestments in non-manufacturing firms within the international business strategy context. A review of the relevant literature on divestment influences and processes suggests that there may be similarities and differences in the factors influencing a divestment action by a manufacturing and non-manufacturing parent firm. However, with the review of available literature (Barbieri *et al.,* 2018; Berry, 2010, 2013, Lieberman *et al.*, 2016; Norback *et al*., 2015; Song, 2014; Song & Lee, 2017; Soule *et al*., 2013), there is a need for an attempt to strategically re-conceptualise the influencing factors on the divestment of manufacturing multinational firms, and use these same factors towards non-manufacturing multinational firms to compare the similarities and differences associated with parent firms' divestments of their foreign subsidiaries. The effort towards this will provide advanced knowledge of the similarities and differences between manufacturing and non-manufacturing parent firms and their divestment actions based on the impact of the firm- and country-level factors on the parent-subsidiary relationships. This is because non-manufacturing parent firms may find it easy to make divestment decisions to redeploy or relocate a foreign subsidiary with no manufacturing activities, while manufacturing parent firms may have to consider a host of other factors because of their core operational activity in relation to that of the foreign subsidiary they intend to engage with divestment.

Studies by Barbieri et al. (2018), Hryckiewiczw & Kowalewski (2011), Kolev (2016), Nyuur & Debrah (2014), Procher & Engel (2018) and Sousa & Tan (2015) indicate that some factors relating to parent-subsidiary and home-host country factors are likely to influence and lead a parent firm towards divestment when it enters a foreign market that is culturally distant. However, a review of the available literature suggests that research has not adequately investigated the influences of parent-subsidiary relationships on parent firms' divestment actions. Likewise, research is also yet to understand whether or not parent firms, based on

their industry (i.e. manufacturing or non-manufacturing), decide on their divestments in the same way or differently. With knowledge from relevant literature indicating that as parent firms increase their foreign acquisitions, they are also likely to have an increased propensity towards engaging in foreign divestments (Anand *et al.,* 2005; Bergh, 1997; Casillas *et al.,* 2014; Mohr *et al.,* 2018). Nonetheless, this view is arguable because manufacturing firms that establish their foreign subsidiaries via a green-field venture into their host markets are not found to increase their divestment in current markets with an increase in entering into new markets (Chen *et al.,* 2013; Norback *et al.,* 2015). On the other hand, studies have also argued that while a non-manufacturing parent firm's increased internationalisation may impact on its divestment action because of factors relating to their flexible structure (Hryckiewiczw & Kowalewski, 2011), there is no study that has really compared divestments based on parent firms' industry, using the same influences. Moreover, some studies have argued contrarily that regardless of a parent industry, multinational firms are less likely to divest foreign subsidiaries which they have symmetrical linkages with and those with strong economic growth in their host countries (Greenaway *et al.,* 2008). Furthermore, in a study on foreignness and exit with regards to multinational firms' life cycles, Mata & Freitas (2012) argued that the difference or similarity in the industry of the parent firm and its subsidiary at the entry into its host market is most likely to impact on the life cycle of its foreign subsidiary. They argued further that a non-manufacturing parent firm that establishes a manufacturing operation in a foreign market, which the parent firm depends on the production from that operation, is less likely to be considered for a divestment action and thus significantly increases that manufacturing subsidiary's life cycle (Lee & Madhavan, 2010; Mata & Freitas, 2012). As a result, it can be argued that where there is a symmetrical linkage (i.e. product and industry) and not just industry relatedness between a parent and its foreign subsidiary, the parent firm is less likely to divest such a subsidiary. However, while previous studies had focused mainly on the relatedness aspect (e.g. Bergh, 1995; Lieberman *et al.,* 2016), this study focuses on the symmetrical linkages as a relational factor, as it is believed that this may provide increased knowledge of the factors influencing divestment actions as it takes into cognisance the

relationship between a parent and its subsidiary based on their product and industry relationship. This is because parent firms have been found to be related to their subsidiaries not only by industry but also products, as a parent firm may require the product from a subsidiary for its activities in a non-related industry (Anand, Capron, & Mitchell, 2005).

Further still, as discussed earlier, the literature on international divestments has indicated that where a multinational exit occurs, the important factors affecting such a decision are either profitability, performance, or failure. However, evidence from recent studies suggests that there have been changes in the multinational firm strategies on divestment influences from those that had previously established certain inferences on previous influences. For instance, previous strategic studies found and argued that the decisions of parent firms towards their foreign subsidiary divestments were significantly influenced by distance or locational differences between the parent firms and their subsidiaries, and changes in parent firms' centrality to their home market that facilitate new business opportunities (Benito, 1997; Ghemawat, 2001; Li, 1995; Lurkov & Benito, 2018; Mohr *et al.,* 2018). These findings may have to contend with new findings that have indicated otherwise (e.g. Belderbos & Zous, 2009; Cantwell, 2009; Dai *et al.,* 2013; Sousa & Tan, 2015). A typical example, with regards to new findings on the influence of distance and location differences between a parent and its foreign subsidiary on its strategic decision towards a divestment, is that parent firms have been found less likely to divest from a conflict zone if it was geographically exposed (i.e. geographic concentration and dispersion of other sister subsidiaries), and where remaining in such a market would not have any negative impact on the parent or the multinational firm's performance (Dai, Eden, & Beamish, 2013). Other studies argued along similar lines, that the influence on divestment of a foreign subsidiary is most likely to be a result of changes in the global strategies of multinational firms, as such changes have also influenced multinational firms' internationalisation and foreign investments (Lee & Madhavan, 2010; Miller & Yang, 2016; Nyuur & Debrah, 2014). Therefore, there is a need to advance the research into divestment antecedents, by investigating new influences and re-examining previous ones due

to changes in the global strategies of multinational firms (Pérez-Nordtvedt *et al.,* 2014; Wan *et al.,* 2015).

### 2.4 Parent-subsidiary relational factors and their influence on foreign subsidiary sell-offs

Some conceptual and empirical studies have examined factors within foreign subsidiaries that may have an impact on the strategic intents and decisions of parent firms towards their international divestments, based on their multinational firms' global strategies (Cairns *et al.,* 2008, 2010; Fisch & Zschoche, 2012). The suggestions and arguments in the relevant literature indicate that parent firms engage in the global divestment of their foreign subsidiaries in a bid to improve their multinational firms' growth prospects (Wan *et al.*, 2015). However, most previous studies had focused their investigations on the parent firm or the subsidiary firm only (Ferragina *et al.,* 2012, 2014; Garg & Delios, 2007; Gaur & Lu, 2007; Haynes *et al.,* 2003; Hryckiewicz & Kowalewski, 2011; Kronenberg, 2011; Lurkov & Benito 2018; Mulhenin & Boone, 2000; Sembenelli & Vannoni, 2003; Song 2014). The findings from these studies have shown that the influence on a divestment or sell-off decision by a parent firm is mainly based on the firm and its market characteristics. However, evidence from research in international business strategies has shown that multinational firms respond to competing pressures across their industry and market factors based on their parent-subsidiary relationships, as the parent firms and their subsidiaries' characteristics do not exist in isolation from each other, and as such the influence of their relationships on foreign subsidiary sell-off decisions may not be easily separated.

A recent study by Song & Lee (2017), however, focused its investigations on parent-subsidiary relationships. Nevertheless, knowledge from non-divestment literature on the global strategies of multinational firms has led researchers to an understanding about the influence of foreign subsidiaries' heterogeneity and their contributions based on their relationships with their parent firms, which impacts on the growth of the multinational firms (Arrighetti *et al.,* 2014; Chen & Moore, 2010; Tong *et al*., 2008; Verbeke & Kano, 2016).

Strategy studies have also continued to improve our knowledge of the sources of multinational firms' heterogeneity on their growth option value, by providing an understanding of how parent firms' strategic intents influence their decisions towards their subsidiaries (Alessandri *et al.*, 2012; Gunther-McGrath *et al.*, 2004).

Existing research has shown that multinational firms obtain their growth through different corporate strategic actions, based on their level of interaction and relationship with their subsidiaries (Bowman & Hurry, 1993; Tong, Reuer, & Peng, 2008). As a result, for a parent firm and a subsidiary to have a certain level of interaction and a relationship apart from the basic parent-subsidiary one, certain factors are most likely to influence their relationship. For instance, Yamawaki (2006), using the geography between the parent and their subsidiaries as a proxy for subsidiary heterogeneity, found that Japanese multinationals were more favourable to production cost-side factors than demand-side factors, which resulted in the divestment and relocation of EU subsidiaries to Japan. The discussions from Yamawaki's study indicated that the strategic intent of these Japanese parent firms was to have their foreign subsidiaries closer to them to manufacture, than being in Europe, as that would increase their multinational firm productivity and reduce the cost. The intention of the Japanese parent firms was not only to relocate their foreign manufacturing firms back to their home country to reduce their cost but also to improve their production capacity locally and within their home geography, as this would grant them increased competitive advantage to produce locally and export to Europe (Yamawaki, 2006). As a result, based on the study of Yamawaki (2006), it may be suggested that the Japanese multinational parent firms identified a significant difference in their parent-subsidiary relational factors between the foreign and local subsidiaries, that strategically influenced their intent towards divesting from Europe and relocating manufacturing processes back locally. Although, it could be easily assumed that these parent firms divested due to an increased cost-side factor based on the parent-subsidiary distance, as the subsidiaries were in Europe and relocating them to Japan would impact on the geographical benefits, such as reduced communication cost. However, cost is also likely to increase from the demand-side by having to export the manufactured goods to

Europe. Therefore, it is possible that other factors may have had to influence the parent decisions where the reason for reducing cost may have only been a benefit to justify the divestment action.

Additionally, contrary to arguments in Yamawaki (2006), Duanmu & Guney (2009) found US multinational firms divesting from their home country due to increased cost-side factors and relocating manufacturing to other geographical locations to increase the demand-side factor. As discussed with the Japanese firm divesting in Europe and relocating to their home country, many US multinational firms were found selling off their manufacturing subsidiaries at home and relocating them to Japan. Thus, it can be assumed and argued from a divestment study perspective, as in the case of the Japanese multinational firms, that a geographical linkage with their manufacturing subsidiaries may have been a major influence in their divestment decisions, while for the US multinational firms, the relocation of their manufacturing subsidiaries to Japan may not be connected to the parent-subsidiary geographical linkage but due to reducing production costs. This assumption indicates that there is a need for research to find a measure for the conceptualisation of these parent-subsidiary relational factors, to identify the extent of the discrete influences they have on parent firms' divestments within the international business strategy perspective. However, while the argument of this study aligns with the position that the heterogeneity of a multinational firm has an impact on its ability to achieve valuable growth (Alessandri, Tong, & Reuer, 2012), this study further argues that because of the global framework of multinational firms, their strategic intents will require an integrative and responsive approach towards uncertainties and opportunities, where there is an increased possibility that the parent-subsidiary relational factors are weighed to determine the needed strategic actions. Thus, the impact of certain firm- and country-level factors on the parent-subsidiary relationships contribute heterogeneously to a multinational firm's growth, based on the ability of the parent firm to identify a subsidiary that may be used as a resource tool towards its integrativeness and responsiveness to opportunities and uncertainties (Arrigetti *et al.,* 2013; Baaij & Slangen, 2013; Chen & Moore, 2010; Engel *et al.,* 2013; Tong, Reuer & Peng, 2008). It may, therefore,

be argued that such parent-subsidiary relational factors may significantly influence parent firms' decisions that may lead to the divestment of their foreign subsidiaries. For instance, within the portal view of international business research, Lurkov & Benito (2018) and Tong *et al*. (2008) argued that for multinational parent firms, it is their host countries' consumer tastes, preferences, productive factors, technologies, and institutions that make them vary their integrativeness and responsiveness towards opportunities and uncertainties.

Furthermore, it may be argued that for a parent firm to adequately take advantage of opportunities or uncertainties in its host market, it will most likely use resources closest to such an opportunity or uncertainty (i.e. the foreign subsidiary) to ensure immediate strategic action. It is, therefore, most likely that the relational differences and similarities between the parent firm and its subsidiaries will determine the type of strategic actions which the parent firm engages in with them. This argument aligns with those of Alessandri *et al*. 2012, Baaij & Slangen, 2013 and Tong *et al*. 2008, that parent firms, along with their subsidiaries, possess unique portfolios of growth options based on factors such as subsidiary size and age, host country growth, profitability, geography, and relatedness (or symmetry), which determine not only the robustness of their relationships but also their multinational firms' growth options. This is believed to have inspired some strategy studies on parent firms' influence on their foreign subsidiary divestment decisions, but many have predominantly focused on either the parent or the subsidiary level measures, while sometimes measures were contextualised using a combination of multiple factors rather than just an independent or discrete factor. For instance, a review of related studies indicates that investigations have been mostly based on a combination of multiple factors, such as the subsidiary ownership factor, its profitability or performance factor, the location/distance, and the industry/relatedness (e.g. Bandick 2010; Bergh, 1995; Cao *et al.,* 2008; Childow *et al.,* 2015; Colantone & Sleuwaegen, 2010; Delio & Beamish, 2001; Dhanaraj & Beamish, 2009; Ferragina *et al.,* 2014; Gaur & Lu, 2007; Georgopoulos & Preusse, 2006; Ghosh, 2008; Hamilton & Chow, 1993; Haynes *et al.,* 2003; Iwasaki, 2012; Johnston & Menguc, 2007; Kronenberg, 2011; Lee & Lin, 2008, Li & Liu, 2015; Lieberman *et al.,* 2016; Mata & Freitas, 2012; Norback *et al.,* 2015).

While these studies have provided valuable contributions to the literature, the influence of independent relational factors on foreign subsidiary divestments has not been properly conceptualised and investigated. This study believes that with its investigations on the independent influence of the identified firm- and country-level factors as relational factors towards a foreign subsidiary sell-off, it will provide an understanding of the impact these factors may have on multinational firms' strategic actions such as divestments or sell-offs of foreign subsidiaries.

Lastly, this study builds its arguments on the available knowledge on subsidiaries' heterogeneity and their contributive value to their multinational firms' growth based on the parent-subsidiary relational factors as previously conceptualised by Alessandri *et al.* (2012), Tong & Reuer (2007), Tong *et al*. (2008), and Yeaple (2009). This study also integrates previous studies evidence on foreign subsidiary contributions and their influence on the parent firms' international divestment decisions (Benito, 2005; Berry, 2010; Brauer, 2006; Coudounaris, 2017; Lieberman, Lee, & Folta, 2016) towards establishing the influence of the parent-subsidiary relationship. In essence, as highlighted in the previous chapter, the contribution of this study to foreign divestment literature, particularly within the international business and strategy dimension, will provide knowledge on how the parent-subsidiary relationship influences foreign subsidiary divestments.

## 2.5 Chapter summary

This chapter has reviewed the relevant literature in strategy and international business on foreign subsidiary sell-offs and the impact of the parent-subsidiary relationship on parent firms' strategic divestment decisions. The chapter discussed the need to advance research on multinational firms' divestment decisions, not only because of calls for improved research but also identified gaps in the literature, where previous findings have generated ambiguities to knowledge. The impact of the firm- and country-level factors on parent-subsidiary relationships have attracted a great deal of interest from strategy researchers but not towards the sell-off of foreign subsidiaries. The chapter highlights the limitations of previous research and

demonstrates this with its interest on the identified firm- and country-level factors as parent-subsidiary relational factors, to provide knowledge on resolving some of the identified ambiguities in previous studies (Brauer, 2006).

## Chapter 3: Theories and Hypotheses

### 3.1 Introduction

This chapter offers the review the theoretical approach or lenses for this study and discusses the contextualisation of the parent-subsidiary relationships. In particular, section 3.2 offers discussion on the integration and responsive (IR) framework, which focuses on the responsiveness and integrativeness of multinational firms operating within a global scope, towards identifying and understanding factors that may be of significant impact in terms of the multinational firm's growth. Section 3.3 focus on the second theoretical approach, the resource-based framework that places special emphasis on resources available to multinational firms within the global network in order to gain competitive advantage and growth. Section 3.3 through its sub-sections discusses on the firm- and country-level factors contextualised as parent-subsidiary relational factors, their impact on foreign sell-offs, and the study hypotheses. Finally, section 3.4 provides a summary of the theories and the contextualised parent-subsidiary relational factors.

### 3.2 Integration and responsive (IR) framework

The core perspective of the IR framework focuses on the responsiveness and integrativeness of multinational firms operating within a global scope, towards identifying and understanding factors that may be of significant impact in terms of the multinational firm's growth. The framework suggests that for the continued and increased growth of a multinational firm, it must be able to balance the need to be responsive to local demands and uncertainties with their need to exploit market imperfections for opportunities based on the strength of their multinational framework (Benito, 2005). While the integrativeness aspect of the framework projects on the multinational firm's ability to exploit benefits with their presence in different foreign markets, the responsiveness aspect suggests the firm's ability to ensure their foreign subsidiaries' presence and adaptations in their locations can respond adequately towards uncertainties and opportunities that may impact on their multinational firm's overall growth (Benito, 2005; Berry, 2010).

The IR framework has become rooted in firms' management of their parent-subsidiary relationships because integration has been shown to drive standardisation across the multinational network, splitting-up the range of value activities, and finding the optimal locations for establishing large scale operations for specific value activities. Responsiveness, on the other hand, has been shown to involve requiring local presence and adaptation to local conditions (Benito, 2005). Although, with most influences on the growth of multinational firms in the literature having both their positive and negative attributes, the negative attributes of the integrative and responsive factors identified are that they influence the parent firm to treat their foreign subsidiaries differently and unequally; as parent firms mostly consider their subsidiaries' roles as being receptive, active, quiescent, and non-autonomous. This is often because of some subsidiary factors, such as their size, profitability, geography and age, which may be unreceptive to their parent firm's demands and may cause friction between them. The integrativeness and responsiveness abilities of a multinational firm are seen through the effects and impacts of the relationships between the parent firm and its foreign subsidiaries (Lin & Hsieh, 2010). Thus, one can argue that parent firms will most likely attach value to their foreign subsidiaries based on the measure of their relationships. The influence of their measured relationships may therefore significantly influence the strategic decisions of parent firms' intents or actions that may have an impact on their multinational growth.

Furthermore, the justification for this theoretical approach to this foreign divestment study focuses on three primary conditions or barriers. For using the IR factor as its framework is based on the parent-subsidiary resource specificity, their industry specificity, and the cross-border flow of resources. It has been argued that a foreign subsidiary's sell-off propensity may depend on the type of strategy being pursued by the parent firm (Belderbos, 2005; Benito, 2005). As a result, the specific resources available to multinational firms may be immobile and lose value quickly, depending on the factors associated with the location of the exploited resources; for instance, cases of production processes of a parent firm's core input in a foreign market located within or around the input source, such as natural resources (e.g. oil rigs/wells) or a cheap cost of production (Belderbos, 2005; Benito, 2005; Duanmu & Guney, 2009). Thus,

for such a foreign subsidiary, where considered profitable by the parent firm, it provides the parent firm with a higher value of contribution heterogeneously derived based on the influence of its profitability as a parent-subsidiary relational factor. As such, the value to a subsidiary by a parent firm may influence decisions towards critical strategic actions that may have an impact on the overall multinational growth. However, where the foreign subsidiary is not within the parent firm's geography or their industry/product is unrelated, or they share no language commonality, these factors are most likely to have an impact on the transfer or the sharing of resources. As a result, this may have a negative impact on the parent firm's value towards such a foreign subsidiary, which may further influence its sell-off. Additionally, where a parent firm's attached value to its foreign subsidiary is low, as they have a weakened parent-subsidiary relationship due to no commonality, the subsidiary may also underperform and be unprofitable. The underperformance of such a foreign subsidiary may be due to its inability to maximise the potential of its available resource capability by itself or perhaps due to its unrelatedness with the parent for its positive performance. This may also influence the parent firm's strategic action towards selling it off, so as to direct increased attention towards those foreign subsidiaries with high-valued attachment.

Therefore, based on the IR framework and its justification of the influence of parent-subsidiary relationships or relational factors on parent firms' strategic actions, where a subsidiary is considered inactive towards its multinational firm's integrative and responsive approach concerning its multinational growth due to its resource specificity, such a subsidiary may be subjected to a divestment action. As a result, the focus of this study aligns with the argument of Liebermann *et al.* (2016) that a parent firm may sell-off a foreign subsidiary to redeploy valuable resources based on the influence of their relationship that may help to take advantage of potential opportunities. Therefore, the focal position of this study, contrary to those in other related studies, is that although the profitability factor of subsidiaries may be essential, it may not always be significant in the parent firm's strategic decisions towards a foreign subsidiary sell-off. As a result, based on the IR framework, where a parent firm engages in the sell-off of its foreign subsidiary, the decision towards such a strategic action is

most likely due to its assessment of its subsidiaries based on a total review of their resource portfolio. Such a portfolio assessment of available subsidiaries in the multinational firm's fold will enable the parent firm to assess each subsidiary based on the value attached to their relationship, which is also likely to influence the strength of the parent-subsidiary relationship (Arrighetti, Landini, & Lasagni, 2014). Accordingly, the contextualisation of the parent-subsidiary relationship as a relational factor is based on the fact that such a relationship either adds or does not add value to the multinational firm's growth and strengthens or weakens the relationship between the parent and the subsidiary (Alessandri *et al.*, 2012; Berry, 2010). Therefore, one of this study's main motivations and its contribution based on the resource specificity as a primary condition/barrier towards the use of the IR framework is towards identifying the level of impact which resource specificity, because of the influence the subsidiary's size, symmetrical linkage, profitability and age, may have on parent-subsidiary relationships and the parent firm's strategic decisions to sell-off a foreign subsidiary.

The second condition towards theorising with the IR factor is industry type or specificity. Related studies have identified that parent firms, especially those in consumer goods industries, where demand is a function of a custom, culture and local taste, tend to be responsive to uncertainties and opportunities that may influence parent firms' strategic actions such as divestment of their subsidiaries as resource tools (Solberg, 2000). Available literature indicates that parent firms, based on their industries, respond to uncertainties and opportunities differently, by reviewing their portfolios of relatedness within their multinational frameworks (Berry, 2010, 2013). As a result, a parent firm may divest a subsidiary not related to its industry as a reactive tool towards uncertainties which it is encountering in its industry. Alternatively, a parent firm may divest a subsidiary related to its industry to take advantage of an identified opportunity in its industry – i.e. resource redeployment or relocation (Liebermann *et al.,* 2016; Norback *et al.,* 2015). Accordingly, this study also aims to look not only at multinational firms as a whole but also to compare and contrast the differences between manufacturing and non-manufacturing parent firms. Therefore, this study will also be able to contribute to the literature on whether the integrative and responsiveness approaches towards

a foreign subsidiary sell-off differ when the same criteria of heterogeneous contributions are investigated with mixed, manufacturing and non-manufacturing multinational parent firms.

The third condition or barrier towards the use of the IR factor is on the cross-border flow of resources. Sui & Baum (2014) argued that where a multinational firm's strategy makes it easy for a parent firm to identify, share, redeploy, or relocate specific resources from a particular foreign subsidiary within its multiple locations, such a strategy increases not just the economic interdependence between the parent and its subsidiaries, but also increases the multinational's value and competitiveness. This argument has been elongated into studies with a similar framework to the IR perspective, that a parent firm is most likely to attach increased value to a foreign subsidiary when it can effortlessly identify, share, redeploy, or relocate specific resources within it and the sister operations to either improve the performance of that subsidiary or that of the parent firm (Karim & Capron, 2016; Lieberman *et al.,* 2016; Mohr *et al.,* 2018). As a result, where a parent firm is able to identify resources in a foreign subsidiary that it may transfer, share or redeploy easily because the subsidiary shares a common language or is geographically and symmetrically linked to it, such a subsidiary may have a stronger relationship with its parent firm than others. The reason for the consideration of this third condition to justify the theoretical framework of this study is that the cross-border flow of resources within a multinational framework may be affected by factors such as high tariffs and quotas, inconsistent changes in the form of technical requirements, preferential treatment practices, and government regulations. However, because of the influence of relational factors, the cross-border flow of resources may be argued to be of low significance if there are commonalities which the parent firm attaches value to based on the parent-subsidiary relationship. These factors may include the subsidiary size, host country growth, language, geography, or symmetry. It may be therefore suggested that multinational parent firms are more likely to respond to uncertainties and opportunities by engaging in divestments of their available subsidiaries that may be affected by barriers towards the cross-border flow of resources. Therefore, this study hopes to contribute to the literature from this IR perspective on the impact of the cross-border flow of resources, through its investigations of parent-

subsidiary relational factors and its influences on multinational firms' integrative and responsiveness approaches that may in turn influence foreign subsidiary sell-offs.

The identified knowledge gap in the foreign subsidiary divestment literature can be bridged by recognising the extent to which relational factors influence foreign subsidiary sell-offs. Furthermore, the rationale towards the use of the IR perspective as the ideal theoretical framework is centred on the contributions of relevant literature that regard it as a way of integrating the typology of the parent-subsidiary relationship (Haugland, 2010; Lin & Hsieh, 2010), which may be used towards the development of this study's aims and objectives. As a result, the motivation and rationale towards theorising using the IR factor discussed above is due to previous international strategy literature having indicated that activities pertaining to knowledge exchange, monitoring, and coordination are based on the relationship between the parent and the subsidiary (Baaij & Slangen, 2013; Slangen, 2011). Moreover, the parent-subsidiary relationship has been identified to contribute towards a multinational firm's strategic growth, which does not only enhance its multinational firm's value and growth advantage (Berry, 2010, 2013), but also influences the value which a parent firm attaches to individual subsidiaries in their fold (Verbeeten & Boons, 2009). This study hopes that, with its focus on parent-subsidiary relational factors, additional contributions will be made to knowledge about foreign subsidiary sell-offs.

### 3.3 The resource-based framework

The addition of the framework in this study is based on its focus on parent-subsidiary relationships as resources are important tools available to parent firms through the subsidiaries based on their firm, industry or country-level (Ambrosini & Bowman, 2009). The reason for the elongation and strengthening the use of the IR framework with the resource-based framework is because Barney (1991) assumed that "firms within an industry can be heterogeneous by using strategic resources they control". Based on the initial assumption of Barney (1991), scholars have also used the resource-based framework to posit that multinational firms shape their performance and growth base on the continued changes to

their resource bases by adding, deleting, and/or recombination of resource components to create new competitive advantages (Castaner *et al.,* 2014; Vidal & Mitchell, 2018). However, with traditional arguments in relevant literature highlighting that multinational firms' improvements to performance and growth are due to their availability of resources, it can be assumed that for integration and responsive of multinational firms to potential uncertainties and opportunities, multinational firms are most likely to free up resources to react with certain strategic actions such as divestments/sell-offs (Karim & Capron, 2016; Liebermann *et al.*, 2016).

Multinational firm resources in the international business strategy context are identified as a parent firm's "assets" that are owned or controlled and are either tangible or intangible. While tangible resources are associated with physical items, such as plant equipment and raw materials; intangible resources are associated with non-physical items such as experience, knowledge, decision-making skills, intelligence, culture, language, control systems (Amit & Schoemaker, 1993; Mohr *et al.,* 2018; Vidal & Mitchell, 2015; Wemerfelt, 1984). Therefore, for multinational firms, parent firms will consider certain resources valuable than others depending on the need and availability of that resource for use at a particular time, in addition to whether the resource is rare, difficult to imitate and difficult to substitute. This indicates that resources available to multinational firms may not always be important but their functionality and productiveness when employed bring about the level of importance and attached value (Butt *et al.,* 2019; Lin & Hsieh, 2010; Lockett *et al.,* 2009; Nachum *et al.,* 2008).

The resource-based framework also posits that while parent firms must be able to recognise the value of their resources and dispose off those that are not or less valuable, parent firms must be able to engage their resources in strategic actions that will have a positive effect on their competitive advantage (Karim & Capron, 2016; Vidal & Mitchell, 2018; Wiesmann *et al.,* 2017). For instance, a parent firm pushing to increase its global integration and markets responsiveness may engage in exiting or sell-off of a subsidiary where its resources will be redeployed to needed areas within the multinational network. Furthermore, it is suggested that because parent firms require distinctive resources from their subsidiaries

for growth and competitiveness, as a result, they are less likely to have a strengthened parent-subsidiary relationship with subsidiaries that do not have the ability to develop resources quickly, which can be used towards their multinational growth goals. On the other hand, those subsidiaries that are able to develop distinctive valuable resources through factors of their size, age, symmetrical linkage, culture, language, or geography may have better relationship with their parent firms, which may influence the parent firms' decisions towards a sell-off to redeploy the valuable resources to other areas within the multinational framework for their overall growth.

Another key postulation of the resource-based framework that makes it suitable for this study is that differences in product or service attributes within the multinational firms' framework are based on the social complexity of the resource environment which makes it less imitable (Kiessling et al., 2008). The social complexity of the resource environment has been found to make resources within a multinational firm heterogeneous and imperfectly mobile, which makes resource available in subsidiaries unique and firm-specific and create a sustained competitive advantage for the subsidiary in its environment and also impacts on its relationship with its parent firm (Alessandri *et al.*, 2012; Barney, 1991; Berry, 2010; Procher & Engel, 2018). Relevant studies have shown that resource immobility makes firms' resources uncommon and not readily exchangeable in their market but due to their discrete nature may provide an opportunity for parent firms' to redeploy and/or reconfigure for use in other areas within their network for competitive advantage (Butt *et al.,* 2019; Karim & Capron, 2016; Vidal & Mitchell, 2018). Therefore, as discussed above with the IR, the use of the resource based framework as an additional theoretical lens in this study aligns with the argument of Barbieri et al. (2018) and Liebermann et al. (2016) that parent firms may decide to sell-off or reshore (i.e. bring back to home country production activities that have been previously offshored) a foreign subsidiary to redeploy valuable resources based on the influence of their relationship and because of the uniqueness and specific nature of the resource to take advantage of potential opportunities.

## 3.4 Contextualisation of parent-subsidiary relational factors, their impact on foreign sell-offs, and the hypotheses

The discussions in this section are based on the contextualisation of the parent-subsidiary relationships, and how they may influence a parent firm's decision towards the sell-off of its foreign subsidiary. The framing of the literature on the contextualisation of these relational factors helped to establish the study's position and its hypotheses.

### 3.4.1 Subsidiary size

The size of a subsidiary has been shown to be a firm-level factor that significantly influencing parent firms' strategic intents, decisions, and actions towards improving their multinational growth value (Arrighetti *et al.*, 2014; Bandick, 2010; Barney, 1991; Bass & Chakrabarty, 2014; Bergh, 1995, 1997; Brauer, 2006; Bridoux *et al.*, 2013; Dellestrand & Kappen, 2012; Gaur & Lu, 2007; Greenaway *et al.*, 2008; Johnston & Menguc, 2007**;** Lee *et al.*, 2013; Li & Liu, 2015**;** Moschieri & Mair, 2008; Sakhartov & Folta, 2014). As a result, strategy-related studies have increasingly used this factor to investigate its influence on the various parent or multinational strategic actions, including international divestments. Hence, subsidiary firm size has been investigated in divestment studies as measured by the number of employees, market capitalisation, assets, revenue, or performance (Bergh, 1995; Chidlow *et al.*, 2015; Iwasaki, 2012; McDermott, 2010; McDermott & Luethge, 2013; Ryngaert & Scholten, 2010).

Since evidence about the actions of multinational firms has shown that they do not only engage in strategic decisions based on a review of their identified foreign subsidiaries, but rather a whole lot of foreign subsidiaries within their multinational networks, it will be of great importance to understand the level of influence which the subsidiary size has, as a parent-subsidiary relational factor, on the sell-off of foreign subsidiaries. This is because the from a resource-based perspective, the size of a foreign subsidiary may be considered as the amount or quantity of its endowed resources, which consequently may influence the level of a parent-

subsidiary relationship (Procher & Engel, 2018; Sakhartov & Folta, 2014; Zhou, 2018). Additionally, based on the integration and responsiveness perspective, from a parent firm's viewpoint, a large-sized foreign subsidiary may be given greater decision-making autonomy or act as a direct interface for the parent firm with smaller-sized foreign subsidiaries regarding the multinational firm's regional growth integration and responsiveness. While, from the subsidiary's viewpoint, a large-sized foreign subsidiary, with its increased autonomy and reduced dependence on the parent firm may also influence a negative parent-subsidiary relationship, as that foreign subsidiary may believe that it is endowed with an abundance of resources and may not need any support from the parent firm (Moradlou, Backhouse & Ranganathan, 2017).

Moreover, the inability of previous studies to investigate subsidiary size solely from the viewpoint of its workforce or assets seemingly left a knowledge gap in the literature, as there is no information available on how such factors influence parent firms' decisions to sell-off their foreign subsidiaries from a relational perspective. This is despite the knowledge that a firm's size is associated with performance and value – that is the larger the size of a firm, the greater the likelihood of it being highly valued (Vithessonthi & Tongurai, 2015). This study, therefore, investigates the influence of a subsidiary's size on its divestments by contextualising it as a parent-subsidiary relational factor, based on the total number of employees of the foreign subsidiary. The contextualisation of the subsidiary size as a relational factor, based upon its total number of employees, will provide the necessary understanding of the level of influence which the size of a foreign subsidiary may have on its parent firm's strategic intent to sell-off that foreign subsidiary. Furthermore, this study argues that the use of this approach will lead to a better understanding of the influence of subsidiary size by considering a subsidiary workforce as an asset and a resource available to the parent firm. Additionally, existing literature has indicated that subsidiaries, as either assets or resources within the fold of their multinational firm, are an important source of heterogeneity as they add value towards their multinational firm's growth, which in turn may be argued to influence the parent-subsidiary

relationship and the parent firm's strategic actions (Ambrosini & Bowman, 2009; Arrighetti, Landini, & Lasagni, 2014; Brauer 2006; Chen & Moore, 2010; Kaul, 2012).

Furthermore, and linked to the above, a parent firm may have a better relationship with a foreign subsidiary whose growth or size is largely factored by their dependence on the parent firm's coordination and input of its managerial services, with the necessary level of firm-specific and international experience and expertise (Johnston & Menguc 2007). This may be argued to suggest that a subsidiary size, as a relational factor, may have a significant influence towards and be positively associated with a foreign subsidiary's divestment because a parent firm will most likely explore its available options to consider the advantages and disadvantages of such increased coordinating complexity towards its multinational firm's growth. While subsidiary size is a significant influence on how a parent firm attaches value to their subsidiaries or operations, Johnston & Menguc (2007) argued that small-sized subsidiaries are attached less value compared to large-sized subsidiaries, because "increasing size is likely to correlate with increasing tangible and intangible resources". It may, therefore, be argued that, because small-sized subsidiaries have less value attached to them compared to large-sized subsidiaries, from a relational viewpoint, there will be a considerable inference based on the subsidiaries' size by parent firms when considering their strategic intents towards foreign divestments.

Similarly, international business strategy studies that have their frameworks built on the IR and other related frameworks, have argued that the larger the size of a subsidiary, the easier its integrativeness and responsiveness to uncertainties and opportunities (Ambos *et al*., 2010; Benito, 2005; Berry, 2010, 2013; Johnston & Menguc, 2007); which may in turn impact on the multinational or parent firm's responsiveness to global uncertainties and opportunities. The integrativeness and responsiveness of a multinational firm (i.e. the parent firm and its subsidiaries) to global uncertainties and opportunities, towards its continued growth through its foreign subsidiaries, is likely to influence the parent firm's decisions towards engaging in strategic actions, such as a foreign subsidiary sell-off (Berry, 2010, 2013). As a result, it is argued that parent firms are more likely to sell-off their small-sized subsidiaries

compared to the large-sized subsidiaries, to adequately integrate globally and to be more responsive to specific foreign market uncertainties and opportunities that may impact on their multinational competitive advantage. However, based on the review of multinational divestments, parent firms have been found to engage in the sell-off of both their large- and small-sized foreign subsidiaries. Thus, there is no justification in the literature on whether the subsidiaries' size discretely impacts on or is associated with the decisions on their sell-off. It may be easy to assume that the subsidiary size may have been identified to have a significant influence on parent firms' strategic decisions, such as divestments. However, this assumption may be debatable considering that the contextualisation of subsidiary size in previous studies had been based on just the sold-off unit's features such as its market capitalisation, performance through sales, revenue and profitability, but not on a consideration of the entire subsidiaries available to a parent firm (Bergh, 1995; Brauer, 2006; Coudounaris, 2017; Hamilton, 2010; Vithessonthi & Tongurai, 2015).

As a result, this study focuses on the entire foreign subsidiaries available to parent firms, as this may lead to a better understanding of their influence on foreign subsidiary sell-offs. The decision to focus on the size of foreign subsidiaries in the ownership of a parent firm will be significant towards a knowledge on divestment decisions and actions, because the subsidiary size, as well as their ownership structures, have been identified to influence the value attached to them and the growth structure of the internationalised firm (Fletcher & Prashantham, 2011). This is, in addition, to the evidence in the review of relevant literature that the subsidiary size is proportional to the size of its available resources (Ambrosini & Bowman, 2009; Jaafar & Halim, 2013; Johnston & Menguc, 2007). It may also be argued that the greater the number of foreign subsidiaries within the ownership structure of a parent firm, the more likely it is that resources, which may be strategic to a parent firm's decisions will be available. This may then influence the divestment of a foreign subsidiary in order to improve the multinational firm's growth and competitive advantage (Bridoux *et al.,* 2013; Jaafar & Halim, 2013). Furthermore, with evidence in the relevant literature indicating that the growth and survival of a multinational firm depends largely on its subsidiaries' productivity and

functionality (Ambos, Andersson, & Birkinshaw, 2010; Ambos & Mahnke, 2010; Lockett *et al.,* 2009), this study suggests that because small subsidiaries are less likely to have a robust parent-subsidiary relationship compared to large ones, the parent firm may more easily reach a decision towards a small foreign subsidiary sell-off than the sell-off of a large subsidiary. Hence, based on the preceding arguments, it is suggested that the size of a foreign subsidiary will be of importance in a parent-subsidiary relationship, which parent firms review before making decisions on a foreign subsidiary sell-off. Therefore, the following hypothesis posits that -

> **Hypothesis 1 –** Parent firms are more likely to sell off small-sized foreign subsidiaries than the large-sized ones.

### 3.4.2 Host country growth

The host country growth is a country-level factor as a relational factor may impact on the parent-subsidiary relationship. The discussions regarding the influence of host country growth on foreign subsidiary sell-offs are based on the knowledge that countries with favourable economic and market growth conditions tend to attract increased inward investments by multinational firms (Benito, 1997; Berry, 2013). Studies have also shown that the survival of subsidiaries is influenced by the growth rates of their host markets (Berry, 2013; Shaver, 1997). Benito (2005) argued that the economic growth in host countries was inversely related to multinational firms' foreign divestment decisions. This is because multinational firms pursue a global strategy that focuses on achieving world-wide efficiency. Therefore, the focus on a host country with a positive economic growth may be towards "attaining its lowest cost position or highest brand recognition for their products" (Benito, 2005). However, while previous studies have focused mainly on attractive market opportunities, there is no evidence on whether a multinational firm's presence in an attractive or a non-attractive market, based on its host country's growth, influences its decision to sell-off its foreign subsidiary.

Furthermore, based on available literature, it can be argued that growth in foreign markets does not only attract multinational operations but also increases the potential for more

investments by multinational firms, to consolidate the positive performances in the market or to improve on operations whose performances have been poor due to increased demands in the market, by selling off poorly performing foreign subsidiaries that are in growing and attractive markets. As a result, while there may be large incentives for managers to focus on turning around underperforming or unprofitable subsidiaries in particular foreign markets, parent firms are also likely to focus on their host markets' indicators in their strategic decisions that may influence a decision to sell-off a foreign subsidiary because of its unfavourable conditions towards the multinational firm's growth. Alternatively, the parent firm may decide to sell-off in a highly competitive attractive market to consolidate and focus resources in a less competitive attractive market in order to strengthen its competitive advantage.

Divestment studies on subsidiaries' foreignness have argued that certain factors within the home and host country make foreignness of subsidiaries influence the decisions of a parent firm to engage them in divestment (Cairns *et al*., 2008, 2010; Colantone & Sleuwaegen, 2010; Ferragina *et al*., 2014; Lurkov & Benito, 2018). This study aligns with such a position but also builds on knowledge that the host country's growth is one of the most significant factors in multinational firms' strategic decisions based on both the IR and resource-based perspectives because where there are new business opportunities in the home country and a parent firm considers to sell-off a foreign subsidiary to reshore or relocate its operation or redeploy resources home, there may be an increase in the likelihood that subsidiaries where the host country growth lags will be divested in contrast to a subsidiary with a rising host country growth (Ambrosini & Bowman, 2009; Barbieri *et al.,* 2018; Folta *et al.,* 2016; Haugland, 2010; Lurkov & Benito, 2018). However, as argued above with the influence of the subsidiary size, this study's contextualisation of a host country's growth as a parent-subsidiary relational factor takes a holistic approach by putting into consideration that a parent firm will have a robust parent-subsidiary relationship with a subsidiary in an attractive market, compared to that in an unattractive market. The position of this study is also a sequel of the fact that previous investigations of foreign subsidiary sell-offs focused either on the subsidiary or the parent-level perspective (Garg & Delios, 2007; Gaur & Lu, 2007; Ghertman, 1988; Hryckiewicz

& Kowalewski, 2011; Mata & Freitas, 2012; Mata & Portugal, 2000, 2002), and with less consideration on external relational factors that may influence the parent firms' decisions.

Consequently, this study aims to add to the available knowledge of the host country growth as a parent-subsidiary relational factor and to provide the needed understanding towards the justification of the parent firms' influence towards their foreign subsidiary sell-offs. It is believed that a divestment decision by a parent firm towards engaging in a foreign subsidiary sell-off will primarily be based on its relationship with its subsidiaries due to their host country growth factors. Higon & Antolin (2012) had argued that multinational firms are in better positions to obtain higher returns on their operational efforts from their foreign-based firms compared to their domestic-based firms. This argument may be used to justify that multinational firms obtain higher returns for their foreign-based operational efforts because they are attracted to markets that are favourable, which will provide the needed returns for their investments. In addition, this argument draws towards the focus of this study on investigating divestment influence differences and similarities in manufacturing and non-manufacturing multinational firms. This is because a parent firm in a related industry and product line with a foreign subsidiary in an increasingly growing and attractive market may divest in a foreign subsidiary in a related industry but unrelated product line in a less attractive market to redeploy the identified similar resources and knowledge, in order to quickly establish a stronger foothold in another attractive market to consolidate on its competitive edge in its global market. On the other hand, where the host country growth is unattractive and unfavourable to the multinational or to its parent firm's growth, the parent firm may decide to sell-off such a foreign subsidiary and relocate valuable resources to another foreign subsidiary, or redeploy the valuable needed resources back to its home market as a way of reshoring (Barbieri *et al.,* 2018).

Additionally, in one of the major studies that first conceptualised and investigated the influence of foreignness on multinational firms, Hitt *et al*. (1997) were of the view that multinational firms are more advantaged than multi-domestic firms, as multinational firms have higher capacities for innovation and strong appropriability regimes because of their

possession of foreign subsidiaries, which enables them to be endowed with a multinational workforce and a knowledge resource (Hitt *et al*., 1997). The advantage of having a multinational workforce was also identified to enhance the multinational firms' responsiveness towards opportunities in their host markets, and increased capacity for the multinational firms to learn and share from their global stock of knowledge, compared to multi-domestic firms (Higon & Antolin, 2012; Temourin *et al*., 2008). Therefore, it may be further added, as discussed earlier in this section, that host country's growth will have a significant impact on a parent-subsidiary relationship because when there is a need for additional workforce or resources, due to increasingly attractive host country growth, the parent firm will actively engage in activities towards ensuring transfers and redeployments based on their robust parent-subsidiary relationship. Likewise, where the host country growth is unattractive and unfavourable, the parent firm may pull out resources from subsidiaries in such a market and redeploy them to other attractive markets.

The findings of previous studies with regards to foreign subsidiary sell-off have generated some degree of ambiguity. Some studies focused their investigations on the disadvantages of foreignness, otherwise known as liabilities of foreignness, and argued that foreignness influences a foreign subsidiary divestment if the foreign subsidiary was underperforming and unrelated to its parent firm (Mata & Portugal, 2004; Mata & Freitas, 2012). Others focused on the foreign subsidiary sell-off from the perspective of cost implications of foreignness as a liability on a multinational firm's productivity, such as the cost associated with communication and distance, which might have influenced the parent firm's strategies towards their foreign subsidiary divestments (Berry, 2004; Bordonaba-Juste *et al*., 2007; Ferragina *et al*., 2012, 2014; Gaur & Lu, 2007; Matsuo, 2000). Further still, others have argued that the influence on the sell-off of a foreign subsidiary is dependent on the parent firm's entry method and post-entry strategies into its host market (Mata & Freitas, 2012; Mata & Portugal, 2000), or the subsidiary's performance in its host market (Berry, 2013). This, therefore, indicates that there is a need for future research to review what influences parent firms towards a foreign subsidiary sell-off based on the external factors that may influence

their parent-subsidiary relationships, to provide extended knowledge and understanding of their influence on foreign subsidiary divestments.

Finally, with the contextualisation of the host country growth as a parent-subsidiary relational factor, to justify that parent firms' foreign subsidiary sell-offs are a result of the influence of their relationships with their subsidiaries, based on the host country growth factors, there is also the need to bring the inference of multinational firms' innovativeness in growth economies to deepen the explanations of this study's position. Cuervo-Cazurra *et al.* (2007) and Annique-un (2011) argued that not all parent firms of multinational operations are attracted to growing economies because it adds more value to them, but also because it encourages them to be more innovative and increasingly build on their growth and competitive advantage. The ability of multinational firms to be highly innovative is based on their abilities to use their foreignness to engage external mechanisms such as the patent system along with their internal mechanisms towards reducing systemic complexities and causal ambiguities within their multinational networks (Cuervo-Cazurra *et al.,* 2007; Annique-un, 2011). As a result, increasing innovativeness may influence the parent firms' decisions towards their resources - about which subsidiary to hold on to, reconfigure, or sell off.

Additionally, this also suggests that the industry factors of parent firms may be of importance in foreign subsidiary sell-offs, as the level of innovativeness differs between manufacturing and non-manufacturing multinational firms, as it may impact differently on the parent-subsidiary relationships and the parent firms' strategic decisions on foreign subsidiary sell-offs. Therefore, it is believed that an investigation based on parent firms' industries, as manufacturing and non-manufacturing multinational firms, may reveal whether the influence of a host country's growth towards foreign subsidiary sell-offs differs or remains the same across the industry. Since available knowledge in the international business strategy literature indicates that manufacturing multinational firms are more innovative than non-manufacturing multinational firms, the investigations of this study may provide further knowledge about whether the innovativeness tendencies of manufacturing firms may influence their foreign subsidiary sell-offs, based on their host country's growth, or whether the non-innovativeness

in non-manufacturing firms may influence their foreign subsidiary sell-offs, based on their host country's growth (Cuervo-Cazurra *et al.,* 2007; Dach & Peters, 2014; Mudambi, 2008).

As compared to focusing the study analysis towards mixed industries only, which most previous studies have done already (as highlighted in Table 2.2)**,** the focus of this study includes the separation of multinational firms along their core industry, as manufacturing and non-manufacturing, to provide an increased understanding of the impact of host country growth on foreign subsidiary sell-offs by parent firms. Therefore, based on the above arguments, which have been focused on the influence of a host country's growth as a parent-subsidiary relational factor, the study posits that the sell-off of foreign subsidiaries will be influenced by the host country's growth.

**Hypothesis 2** – Parent firms are less likely to sell off foreign subsidiaries with higher host country growth.

### 3.4.3 The impact of subsidiaries' profitability

The subsidiaries' profitability is a firm-level factor that has been identified in relevant studies to impact on the parent-subsidiary relationships. The review of divestment studies within the international business strategy literature indicates that profitability, negative or positive, is a significant factor towards a decision to divest, hence making this study contextualise it as a relational factor (Alexander *et al.,* 2005; Brauer, 2006; Cao *et al.,* 2008; Damaraju *et al.,* 2015; Defren *et al.,* 2012; Delios & Beamish, 2001; Ghosh, 2008; Norback *et al.,* 2015; Soule *et al.,* 2013). Similarly, as discussed and argued with the two previous relational factors, the influence of subsidiaries' profitability also follows a related pattern with regards to the knowledge available in the literature. Many of the reviewed studies that investigated foreign divestments found both positive and negative profitability to have influenced parent firms' divestment decisions. While some of these studies indicated that the subsidiary's positive performance or profitability influenced the parent firm's decisions to engage in foreign divestments (Ryngaert & Scholten, 2010), others indicated that the subsidiaries' poor performance or unprofitability influenced the parent firms' foreign

divestment actions (Hryckiewicz & Kowalewski, 2011; Li & Liu, 2015; Norback *et al.,* 2015; Sousa & Tan, 2015). This signals one of the major ambiguities in divestment research, as it shows that while a subsidiary's poor performance or unprofitability is an indicator for its parent firm to make changes with regards to that particular subsidiary, a subsidiary's positive performance or profitability may also be an indicator for the parent firm to effect changes either to that particular subsidiary or to further consolidate its profitability.

As a result, the position of this study is to argue that a parent firm may not necessarily review an individual subsidiary's profitability based on its financial contributions towards effecting its divestment decision but rather as a factor that impacts on their relationship with subsidiaries. Evidence in the literature has shown that multinational firms do not only establish their subsidiaries for their profitability but mainly towards their overall contributions and strategic significance towards achieving the multinational firms' growth goals and objectives (Brauer, 2006; Nachum & Song, 2011; Peng *et al*., 2008). A foreign subsidiary that is profitable may be contributing its profitability towards its multinational firm's growth objectives. An unprofitable foreign subsidiary which may not have been established for its profitability may be contributing heterogeneously towards its multinational firm's growth objectives through its products or availability of valuable resources that may be used either by the parent firm or its sister subsidiaries.

Additionally, previous studies have failed to properly investigate the ways by which parent firms' strategic decisions may be influenced by their subsidiaries' profitability (Brauer, 2006; Engel *et al*., 2013; Moschieri & Mair, 2008; Sousa & Tan, 2015). Studies have only focused on and investigated divestment decisions concerning well-performing or underperforming subsidiaries separately, and failed to make adequate justifications for the reasons why they focused their investigations on only divested profitable or unprofitable subsidiaries; whereas in reality, multinational firms (i.e. parent firms and their subsidiaries) are known to engage in the divestment of both their profitable and unprofitable subsidiaries within the same period, depending on their parent firms' strategic intents towards achieving their

multinational firms' growth objectives (Coudounaris, 2017; Song *et al.,* 2015; Sousa & Tan, 2015).

Furthermore, a review of the relevant literature also indicates that the influence of profitability on divestment decisions has not been investigated discretely, because previous investigations have not clearly shown which factor influences the parent firm's divestment decision. For instance, findings in studies show that a parent firm's subsidiary divestment was influenced by the subsidiary being unprofitable and unrelated to its parent firm without being clear about whether the influence of the two factors was discrete or not (Bergh 1995, 1997; Boone & Mulherin, 2007; Brauer, 2006; Cairns *et al.,* 2008; Delios & Beamish, 2001; Lee & Lin, 2008; Lee & Madhavan, 2010; Moschieri & Mair, 2008). Similarly, previous studies have shown that parent firms are more likely to divest in a foreign subsidiary when unprofitable and in a different geographical location to the parent firm without clearly indicating what was influencing the subsidiary's profitability and that of its geographical location towards the parent firm's decision (Bandick, 2010; Belderbos & Zous, 2009; Boone & Mulherin, 2007; Dai *et al.,* 2013; Kronenberg, 2011; Li & Liu, 2015; McDermott, 2010; Mulherin & Boone, 2000; Owen & Yawson, 2005; Sousa & Tan, 2015). While this study does not disagree with the findings of these studies, the identified gap of not actually knowing whether these factors have discretely influenced the parent firms' decisions needs to be bridged.

Consequently, it is believed that a discrete investigation into the influence of subsidiaries' profitability will further deepen our knowledge of international divestments from a strategic perspective. Although, studies have also found that a parent firm may divest a subsidiary regardless of its positive or negative profitability because due to multinational spatial, far-flung foreign subsidiaries were found not to be established for their profitability but their ability to enhance the multinational firm's growth and competitive advantage (Berry, 2010; Demirbag *et al.,* 2010; Mukerjee, 2016; Sakhartov *et al.,* 2016). Therefore, if parent firms do not always establish their foreign subsidiaries exclusively for their profitability and yet divest them based on their profitability, it is necessary to investigate and provide knowledge on whether parent firms are more or less likely to divest their profitable or unprofitable foreign

subsidiaries to achieve their multinational firms' growth goals and objectives. As a result, it is argued that because parent firms engage their foreign subsidiaries with actions mainly because of their relationships with them, the profitability orientation of their foreign subsidiaries will allow the parent firms identify and understand the capabilities of their subsidiaries as resource tools (Engel *et al.,* 2013; Folta *et al.,* 2016; Helfat *et al.,* 2007; Karim & Capron, 2016; Rabbiosi, 2011). Therefore, it may be argued further that parent firms may be more likely to divest profitable foreign subsidiaries than unprofitable ones because of their strong parent-subsidiary relationships and the strategic benefit in divesting and redeploying valuable resources from profitable foreign subsidiaries, to maximize their multinational firms' global advantage.

The new knowledge on whether parent firms are more likely to divest profitable foreign subsidiaries than unprofitable ones may help remove the ambiguities on the influence of profitability (Bergh 1995; Berry 2010; Brauer, 2006; Engel *et al.,* 2013; Lee & Lin, 2008; Lee & Madhavan, 2010; Moschieri & Mair, 2008; Ryngaert & Scholten, 2010) from the perspective of subsidiaries' profitability orientation being a factor that may influence parent-subsidiary relationships. For instance, it may be argued using the resource-based perspective that parent firms are most likely to review their subsidiaries' profitability orientation, as such a review makes it able to assess the performance of certain resources inherent in such subsidiaries that may have made them profitable or otherwise (Ambrosini & Bowman, 2009; Bowman & Ambrosini, 2003). Therefore, as argued in studies that found parent firms to be most likely to divest their unprofitable subsidiaries (e.g. Bergh 1995, 1997; Brauer, 2006), it can be added that a decision to divest in those subsidiaries may not necessarily be due to their unprofitability but rather due to the effect of unprofitability on their parent-subsidiary relationships. Likewise, the sell-off of a profitable subsidiary may not necessarily be due to the fact that the subsidiary is profitable but rather because of the effect of its profitability on its parent-subsidiary relationship, which allows a parent firm to assess the performance of resources in its subsidiary to ensure that it provides the desired returns for the multinational firm's growth. However, due to the strategic importance of valuable resources to parent firms' global

objectives, there is an increased likelihood that such valuable resources in profitable foreign subsidiaries may have a strong influence on parent firms' divestment decisions, compared to divestment decisions on unprofitable foreign subsidiaries (Ambrosini & Bowman, 2009; Barney, 1991; Bass & Chakrabarty, 2014; Berry, 2013; Bowman & Ambrosini, 2003; Chen & Hsu, 2010; Delios & Beamish 2001; Dellestrand & Kappen, 2012). Therefore, the review of subsidiaries' profitability orientation as a relational factor based on both the IR and resource-based perspectives will afford parent firms with adequate knowledge of their subsidiaries' resource profile, where valuable resources in profitable subsidiaries are more likely to be used extensively by the parent firms through redeployment to other subsidiaries, where they may help their multinational firms become more profitable and valuable.

As discussed earlier, the position of this study is to argue that the profitability orientation of foreign subsidiaries influences and determines their parent-subsidiary relationships, which in turn is associated with a parent firm's scope and scale of decisions to sell off their profitable foreign subsidiary to focus attention on other growth opportunities for the multinational firm to achieve its objectives. As a result, it is assumed that based on the focus of this study, the identified knowledge gap regarding the influence of subsidiaries' profitability on parent firms' decisions in foreign subsidiary sell-offs will be bridged. Additionally, it is about time for a new study to explore and explain the association of parent-subsidiary relationships, based on their subsidiaries' profitability orientation to sell-off in either a profitable or unprofitable foreign subsidiary. As such, it is hoped that the findings from this study will lead to the needed understanding of how the parent-subsidiary relationships may influence parent firms' strategic intents towards their foreign subsidiary divestments. The fact that findings in the relevant literature indicate that parent firms do not establish all their subsidiaries for profitability, but engage them towards their strategic purposes that may be beneficial to their multinational growth through the aggregation of their individual performances, suggests that parent firms are more likely to associate their strategic intents and decisions towards engaging in the sell-off of foreign subsidiaries based on the subsidiaries' performance or profitability orientation (Delios & Beamish, 2001; Dossi & Patelli,

2008; Fisch & Zschoche, 2012; Ghosh, 2008; Grahovac & Miller, 2009; Harris & Moffat, 2013; Sousa & Tan, 2013; Verbeeten & Boons, 2009; Zhou & Wu, 2014).

Therefore, because parent firms are more likely to engage in the aggregation of their multinational firms' operational productivity towards their strategic actions, with divestment decisions more likely to be associated with and based on the parent-subsidiary relationship; there is an increased likelihood that a profitable foreign subsidiary, due to its stronger parent-subsidiary relationship than that of an unprofitable one, may have a bigger influence on it being sold off compared to an unprofitable foreign subsidiary (Levinthal & Wu, 2010; Steenhuis & de Bruijn, 2009). Furthermore, where a parent firm's goal is towards consolidating its improved performance, the divestment of an unprofitable foreign subsidiary may not be an option because it perhaps lacks the needed resources for such strategic action. Hence, a parent firm may favour the decision to engage in the sell-off of a profitable foreign subsidiary to redeploy its valuable resources that may provide a greater potential to further consolidate its improved performance and competitive advantage. Parent firms are therefore most likely to associate their subsidiaries' profitability with their relationships with them, and in their decisions to sell-off a foreign subsidiary to achieve their growth objectives. This study, therefore, hypothesises that –

> **Hypothesis 3** – Parent firms are more likely to sell off profitable foreign subsidiaries than unprofitable foreign subsidiaries.

### 3.4.4 The impact of language commonality

Language has become an important issue in the literature on international business strategy, and as a result, there has been an increase in studies of its impact on multinational firms' strategic actions (Andersen & Rasmussen, 2004; Barner-Rasmussen & Björkman, 2007; Brannen, Piekkari, & Tietze, 2014; Marschan-Piekkari, Welch, & Welch, 1999; Welch *et al.,* 2005). However, despite this increased interest, a study within the international business strategy is yet to investigate its impact on multinational firms' foreign divestment. This is despite the language factor having been found to contribute strategically towards a

multinational firm's growth (Piekkari & Tietze, 2011; Tietze, 2008). Consequently, it may be argued that the influence of language as a country-level factor will be of importance in a parent firm's decisions towards its divestments or sell-offs, based on the influence of language commonalities between a parent firm and its foreign subsidiaries (Brannen *et al*., 2014; Piekkari & Tietze, 2011).

The focus of this study on the influence of language commonality as a parent-subsidiary relational factor draws inferences from research that found language commonality to be a source of subsidiaries' contribution to their multinational firms' growth. The impact of language on the relationship between parent firms and their subsidiaries has also been identified to be of critical significance to multinational firms' global integration, development and growth (Andersen & Rasmussen, 2004; Barner-Rasmussen & Björkman, 2007), which may strategically influence parent firms' decisions on the sell-off of their foreign subsidiaries. Furthermore, because language has been identified as an important factor in the multinational parent-subsidiary and the host-home country relationships, as it affects a multinational firm's operation towards achieving its set goals and objectives based on communication within its network, it is believed that its impact may be associated with parent firms' decisions to sell-off certain foreign subsidiaries (Piekkari *et al*., 2014). The global nature of multinational firms and their ability to have operations in locations where there is no commonality in language between the parent and a foreign subsidiary firm, has contributed to the growing interest in business research towards understanding whether factors such as language commonality influence parent firms' strategic actions within their multilingual and multinational operational network. Multilingual multinational firms tend to use a 'common' language for standardising their activities. The use of a common language is used for formal reporting and to bring about ease in understanding a firm's documentation across its multinational network (Barner-Rasmussen & Bjorkman, 2005, 2007; Bjorkman & Piekkari, 2009; Blazejewski, 2006, cited in Geppert & Mayer, 2006; Welch *et al.,* 2005). In addition, the use of a common language has been identified to help parent firms minimise miscommunication and to regulate monitoring and control procedures within their foreign subsidiaries (Kangasharju *et al*., 2010; Tietze, 2008).

However, with the increased interest in the impact of language on multinational firms, very little is known about the association between a common language and a multinational firm's strategic decisions and actions. As a result, this study focuses its investigation on the influence of language, as a parent-subsidiary relational factor, on the sell-off of foreign subsidiaries.

Language commonality has been identified as an advantage within multinational firms (i.e. parent firms and their subsidiaries), as it ensures adequate internal processes, reduces the costs associated with communication and information flow, and enhances knowledge identification and sharing (Logemann & Piekkari, 2015). Therefore, the commonality in language within a multinational firm setting may be argued to serve either as a source of empowerment or disempowerment among foreign subsidiaries, which may result in the sell-off of a foreign subsidiary. Where subsidiaries that easily communicate with their parent firms, because of commonalities in language, see themselves closer and superior to subsidiaries that share no language commonality with their parent firms, this may stimulate inequality within their multinational frameworks (Piekkari *et al.,* 2014). Similarly, related studies that investigated the impact of language in a multinational firm setting have found that where a foreign subsidiary has a common language with its parent firm, they are both more likely to have a stronger relationship, leading towards a situation where their relationship and communication flow could become less formal (Tietze *et al.,* 2003; Usunier, 2011; Welch *et al.,* 2005). As a result, it could be argued that such a commonality, which may result in a strong relationship between a parent firm and its foreign subsidiary, may influence the parent firm's strategic decisions and be associated with certain actions the parent firm takes concerning the foreign subsidiary.

Additionally, in situations where language between a foreign subsidiary and its parent firm is not the same, studies have found that this encourages a highly formalised parent-subsidiary relationship (Tietze *et al*., 2003; Tietze & Dick, 2013; Welch *et al*., 2005). As a result, the effect of language commonality on the relationship between a parent firm and its foreign subsidiaries that do not share such language commonality has been argued to cause disempowerment and a feeling of inequity within a multinational setting, as foreign subsidiaries

that do not share a common language with their parent firms are made to feel ‘left-out’ or ‘less important’ within their multinational network (Griffith, 2002; Marschan-Piekkari *et al*., 1999; Piekkari *et al.*, 2014). Thus, the effect of disempowerment, inequity, or inferiority by a foreign subsidiary may have significantly unfavourable consequences for a multinational firm’s integration and responsiveness approach, as a parent firm may decide not to include such a foreign subsidiary in planning and development of its multinational strategies due to the difference and difficulty in communication. Likewise, it may also be that such a foreign subsidiary may not be able to communicate easily or directly to the parent firm to relay actions that may bring about positive outcomes to the multinational firm’s growth that are host market location-specific, and where there may need to be allocated additional resources for support. Therefore, it may be assumed that during divestment decisions, parent firms are most likely to associate language commonality with their decisions on the sell-off of their foreign subsidiaries, whereby foreign subsidiaries that share a common language with their parent firms are less likely to be divested compared to those that do not.

It has been found that parent firms of multinational companies, regardless of their control mechanisms, do not unilaterally impose decisions on their subsidiaries (Ang *et al.,* 2014). However, language commonality as a relational factor may be a means by which managers of foreign subsidiaries that share a common language with their parent firms, use it as a valuable resource tool in their attachment of value towards their foreign subsidiaries. This is because evidence indicates that parent firms attach more value to foreign subsidiaries with which they share a common language than with those they do not, as a commonality in language has been identified to have positive implications on their global management processes (Piekkari & Tietze, 2011; Welch *et al*., 2005). Additionally, related studies indicate that the value attached to a foreign subsidiary that shares a common language with its parent firm may be used to resist or negotiate the parent firm’s control mechanisms (Janssens & Steyaert, 2014; Piekkari & Tietze, 2011; Piekkari *et al.,* 2014).

As a result, the act of deciding on operational strategies of foreign subsidiaries by a parent firm, which involves discussions, consultations and bargaining with relevant managers

in the subsidiaries, may be difficult in terms of reaching a conclusive agreement due to the lack of commonalities in their language for communication (Ang, de Jong, & van der Poel, 2014; Benito, 2005). Therefore, it can be argued that the act of discussing and bargaining by a foreign subsidiary over the implementation of a control mechanism with its parent firm involves the need for interactions, which suggests that a commonality in language, as a parent-subsidiary relational factor, may influence the parent firm's decision to sell-off of its foreign subsidiary (Bjorkman & Piekkari, 2009; Marschan-Piekkari *et al.,* 1999). For instance, Marschan-Piekkari *et al*. (1999) highlighted the differences in control measures by a 'Finnish' parent firm with some of its foreign subsidiaries. They found that the Finnish parent firm operated different control measures in its foreign subsidiaries based on whether they shared a common corporate language with their parent firm. Those foreign subsidiaries that shared the parent firm's common corporate language had more informal communication and less stringent policies and mandates, and those that did not were found to have rather more stringent policies to adhere to, in addition to increased formal communications that inspire a weakened parent-subsidiary relationship (Marschan-Piekkari *et al.,* 1999). Therefore, it may be argued that regardless of a foreign subsidiary's performance or profitability measure, its geography, or relatedness to its parent firm, the influence of language commonality as a parent-subsidiary relational factor may be of independent significance towards a parent firm's strategic intents, decisions, or actions that may result in or be associated with the sell-off of its foreign subsidiaries.

Similarly, Andersen & Rasmussen (2004) and Usunier (2011) indicated that commonalities in language might not only be between the parent firm and its foreign subsidiary, but also between key executives in the parent firm and the executives in its subsidiary. These scholars found that a language commonality between a foreign subsidiary's senior executives and those in the parent firm lead to a stronger parent-subsidiary relationship. This strengthened parent-subsidiary relationship ensured that those subsidiaries whose manager had commonality in a language with their parent firm's managers applied similar favourable control measures as those foreign subsidiaries that shared a common language

with the parent firm (Brannen *et al.,* 2014; Usunier, 2011). This confirms that a language commonality is significantly associated with parent firms' strategic intents towards their foreign subsidiaries.

This study also builds its arguments from the available knowledge that a language commonality between a parent and its subsidiary may have a positive impact on a multinational firm's productivity and performance (Bjorkman & Piekkari, 2009). Bjorkman & Piekkari (2009) argued that parent firms insist on the incorporation of a common language across their multi-linguistic platforms, which is known as "company speak", to ensure that there is standardisation in communication, control and synergy across their network, which may lead to improved productivity and performance. However, the impact of parent firms standardising communication within their networks with a common language has been found to bring about the need for the competence of the common language as a performance factor, which became an avenue for concern and anxiety with foreign subsidiaries within the networks (Bjorkman & Piekkari, 2009). Additionally, Bjorkman & Piekkari (2009) found that some multinational parent firms insisted on the standardisation of language to bring about improvements in information and communication clarity, the understanding of company documents, and the creation of a stronger sense of belonging within the global corporate 'family'. However, it may be argued that where a foreign subsidiary is able to conform easily to the parent firm's language standardisation, such a subsidiary is likely to have a strong parent-subsidiary relationship, and the parent firm is more likely to attach significant value to contributions which are heterogeneously derived from such a subsidiary. On the other hand, those foreign subsidiaries that are not able to conform to the multinational firm's common language, and remain embedded within their respective language environment, are likely to have a weakened parent-subsidiary relationship. The impact of a weakened parent-subsidiary relationship due to language commonality may influence the parent firm towards engaging those foreign subsidiaries in a divestment action, to ensure uniformity in language across its multinational network (Welch *et al*., 2005). For instance, according to Jametelid (2002), the multinational firm 'Electrolux' used a corporate language termed as "bad English", which the average

Electrolux employee in any of its foreign locations could easily understand and use comfortably. However, while this echoed within the multinational firm's corporate culture towards embracing equal communication opportunities and informalities across its global operations, the acceptable "bad English" was not found to be equally embedded within the firm's multinational network, as it imposed an additional pressure on those foreign subsidiaries that found it difficult to use.

Therefore, this study argues that the inability of some foreign subsidiaries to conform with the use of a corporate common language may have a negative impact on the value which their parent firm attaches to them, based on their parent-subsidiary relationships, and may influence their sell-off. Furthermore, with a low-value attachment and a weakened parent-subsidiary relationship, it is also likely that where a parent firm's strategic intent considers a foreign subsidiary divestment as the needed strategic action, foreign subsidiaries that share no language commonality with the parent firm are more likely to be divested. Consequently, it is proposed that a parent firm is more likely to associate language commonality as a relational factor with their foreign subsidiaries in their divestment decisions in order to have a standardised language that will most likely bring about improved performance across all of its multinational networks. In light of these arguments, the study posits that -

**Hypothesis 4** – Parent firms are less likely to sell off foreign subsidiaries they share the same language with.

### 3.4.5 The impact of subsidiaries' age

Subsidiary's age, like language commonality, has not received much attention in the strategy and international business literature, and particularly in divestment studies. However, a subsidiary's age is known to strategically influence its parent firm's decisions on actions that may impact on their multinational growth and value (Autio *et al.,* 2000). Fort *et al.* (2013) found that parent firms tend to have a closer attraction to their young subsidiaries and consider them to be of high value because of the increased attention, interactions and learning effect they engage them with during their nurturing stage. However, while this may influence a strong

parent-subsidiary relationship, parent firms are found to be sceptical of their value attachment to their young subsidiaries because of uncertainties and other constraints (Fort *et al.*, 2013). Some of the uncertainties and constraints that may influence a parent firm's relationships with its young subsidiaries include the challenge towards building the young subsidiaries' customer base and product market, limited reputation, and difficulty in obtaining credit, thereby leading to reliance on the parent firm (Haltiwanger *et al.,* 2013; Hamilton, 2010; Westhead *et al.,* 2001). This may result in the parent firm having a low-value attachment to their young foreign subsidiaries compared to their older ones, as the latter would have had a well-defined customer base and product market, and less difficulty in obtaining and managing their credit without the need for support from their parent firm. Evidence from the studies that were built using the resource-based perspective indicates that a young subsidiary may not necessarily be small regarding its available resources or assets and an older subsidiary, even though it may have grown sufficiently profitable to cover its fixed costs, may not necessarily be big with regards its resources and assets (Dellestrand & Kappen, 2012; Fort *et al.*, 2013; Haltiwanger *et al.,* 2013; Lockett *et al.,* 2009). As a result, it is believed that subsidiaries' age will have significant influence and be associated with a parent firm's decision concerning the sell-off of its foreign subsidiaries.

Davis *et al.* (2007) investigated the effects of recession and monetary policy shocks on small and large firms and found that although small firms are more likely to be young while the large firms are much older, the small and young firms are more responsive to a recession and monetary policy shocks than the large and older firms. This identifies a need for studies to investigate the influence of age on parent firms' divestment decisions and actions as parent firms may be influenced towards a subsidiary divestment decision in a younger subsidiary since they are more responsive to shocks and the level of economic uncertainties they can absorb within a particular period. Likewise, both Fort *et al* (2013) and Haltiwanger *et al* (2013) found that the firm size and age are closely related, and there is a potential omitted variable bias that occurs when estimating the effect of a firm's size without the consideration of the firm's age. This is because while certain macroeconomic factors interact differently with firm

the firm's age and its size, these two characteristics of a firm influence on its decisions and actions towards its growth. Taking such advice into consideration, this study has focused its investigations on the influence and association of the age of foreign subsidiaries, as a relational factor, on their sell-off by their respective parent firms.

Furthermore, there is a consensus in the empirical internationalisation literature about the link between the growth of a multinational firm and its age. It has been argued that the growth rate of a firm declines as it ages, however, older firms have greater survival rates than the young firms do (Autio *et al.*, 2000; Zhou & Wu, 2014). Although, with such an association between age and the growth of a firm, there is yet to be seen a clearly established association between subsidiaries' age and their divestments in the literature. The only closely related finding, in the internationalisation literature, was that the age at which a parent firm internationalises impacts not only on its multinational growth but also the growth and survival of its foreign operation (Zhou & Wu, 2014). Additionally, Westhead (2001) indicated that the early internationalisation to establish new ventures by Chinese multinational firms contributed to their improved sales growth but not to their profitability. Therefore, it can be assumed that such an early internationalisation may impact on a parent-subsidiary relationship, which may in turn influence the parent firm's decision to divest in a subsidiary whose growth rate is declining because of its age, to redeploy its resource or to refocus the parent firm's attention to a younger subsidiary that has a higher survival rate. Studies have indicated that parent firms that internationalise only after being fully established in their home country, have problems overcoming issues in their international-domestic orientations and political ties, which did not only impact on the survival of their foreign subsidiaries, but also on their relationships with their foreign operations (McDougall & Oviatt, 2000; Ruzzier & Ruzzier, 2015; Westhead *et al.,* 2001). These studies found that the parent firms struggled to adjust their domestic operational mindset to their international operational mindset, which impacted on their relationships with their young foreign subsidiaries, as they attached little value to the older subsidiaries in their domestic markets (Autio *et al.,* 2000). However, while the parent firms that internationalised into new markets early were found to overcome the barriers to their international-domestic

orientation easily, grew quicker, had better parent-subsidiary relationships and higher survival rates than those that waited longer to study the new market before they internationalised (Autio *et al.,* 2000; Hamilton, 2010). Therefore, based on these discussions from relevant studies, it may be argued that depending on the internationalisation time-scale of a parent firm, there is an increased likelihood of the sell-off of young foreign subsidiaries compared to older foreign subsidiaries.

Building on the influence of subsidiaries' age on parent-subsidiary relationships on foreign subsidiary sell-offs, it is also logical to argue that parent firms may attach more value to their older subsidiaries than to the younger ones because the older foreign subsidiaries are used to their multinational firms' established processes, organisational norms, and routines that bring about increased productivity and operational efficiency. As a result, these characteristic advantages may impact positively on the parent-subsidiary relationships, which may, in turn, influence the parent firms' divestment decisions towards younger foreign subsidiaries with little or underdeveloped characteristic advantage on the multinational firms' productivity and efficiency. This argument corroborates with those found in the literature that older subsidiaries are sometimes given specialised positions in their multinational firm's value chain as they are seen to be important in the development of their multinational firm's intra-firm network; as the parent firm may use them for training, sharing, and the transfer of knowledge to their younger subsidiaries, to make internationalisation more rapid (Casillas *et al.,* 2014; Chen & Hsu, 2010; Gassmann & Kuepp, 2007; Hamilton, 2010). As a result, this study hypothesises that –

**Hypothesis 5** – Parent firms are more likely to sell off their young foreign subsidiary than their older ones.

### 3.4.6 The impact of symmetrical linkage

As discussed in the introductory chapter, this study will also build on the already established knowledge of a multinational firm's parent-subsidiary relatedness and symmetry, based on the linkage between a parent firm and it's subsidiary's industry and product with the

knowledge available in the international business strategy literature. The review of relevant divestment literature indicates that studies had investigated parent-subsidiary relatedness, which is only associated with industry similarities. However, this study elongates on relatedness to incorporate product linkage because a parent firm and its subsidiary may not always be in the same industry but may have a relationship and be linked by their products. As discussed by Anand *et al.* (1999), symmetrical and asymmetrical linkages are a sense of familiarity or unfamiliarity and balance in a parent firm and it's subsidiary's resources, which may be as a result of their industry or activities. For instance, a parent firm may be a manufacturing firm that uses its non-manufacturing subsidiary as its sales outlet. The knowledge from these relevant studies, including Anand, Capron & Mitchell (2005), Bergh (1995), Benito (2005), Brauer (2006), Bridoux *et al.* (2013), Coudounaris (2017), Georgopoulos & Preusse (2006), Lieberman *et al.* (2016), Moschieri & Mair (2008), Norback *et al.* (2015) and Sakhartov & Folta (2014), helped in the positioning of this study's argument on the influence and association of symmetrical linkage with foreign subsidiary sell-offs. The knowledge available in the relevant literature has indicated that the level of relatedness between a parent firm and its foreign subsidiaries influences the parent firm's decisions on strategic actions, which influences the multinational firm's integrative and responsive ability towards increasing its sustainability and growth (Belderbos & Zou, 2006). While previous studies have provided knowledge on the impact of relatedness between a parent and its foreign subsidiaries on international divestments, the knowledge of the impact of relatedness indicates that it was not based on discrete investigations of the relatedness factor, but rather on a combination of relatedness with other factors, such as performance and profitability, as discussed in subsection 3.4.3.

Furthermore, as discussed above with the ambiguity in findings on the influence of profitability factors, the findings of relevant studies on parent-subsidiary industry relatedness also indicated similar positions. Some studies have found that foreign subsidiaries that are unprofitable but related to their parent firm are less likely to be divested (e.g. Anand, Capron, & Mitchell, 2005; Bergh, 1995; Li & Liu, 2015), while others have indicated that a parent firm

may be influenced to sell off a profitable but unrelated foreign subsidiary to re-invest in or to restructure its multinational structure (e.g. Berry, 2010, 2013; Lieberman *et al.,* 2016). Another relevant finding in the literature is that a parent may be influenced to divest a profitable or an unprofitable subsidiary where there is the potential to redeploy valuable under-utilised resources to a sister subsidiary, where such resources may be used to increase the multinational firm's productivity (Lieberman *et al.,* 2016). However, regardless of the categorisation of previous findings on the influence of subsidiary relatedness towards their parent firm's divestment decisions, the divestment literature suggests that the type of economic benefit sought by a parent firm, based on its industry, will most likely influence its decision on which of its subsidiaries it may decide to divest in, whether it is related to it or otherwise (Kolev, 2016). Consequently, this study believes that finding a way to provide a better understanding of previous findings and resolving the ambiguities, is to investigate the influence of symmetrical linkage as a parent-subsidiary relational factor discretely. Such an investigation will provide the needed understanding of the influence of parent-subsidiary symmetry on a parent firm's decision in the sell-off of their foreign subsidiary, because as much as a parent firm may decide to sell-off an unprofitable unrelated foreign subsidiary, they may also strategically decide to sell off a foreign subsidiary, regardless of its profitability orientation, to relocate it to a location closer to other operations where its products are linked to their survival and productivity.

Additionally, the symmetrical linkage between a parent firm and its foreign subsidiary has the potential to influence the value that a parent firm may attach to its foreign subsidiary based on its contributions to their multinational's productivity. Likewise, a parent firm would most likely use its foreign subsidiaries that are both product- and industry-related towards its multinational firm's integrative and responsiveness approach for its global advancement and growth (Benito, 2005; Haugland, 2010). Moreover, parent firms have been found to associate with or provide increased attention to foreign subsidiaries which they are related to, as they are considered to contribute more value towards their multinational firms' growth than those foreign subsidiaries that are unrelated to their parent firms. As a result, it may be suggested

that the value attached to foreign subsidiaries by their parent firms based on symmetry will influence the parent firms' decisions on their strategic actions, considering the effect that symmetry has on the parent-subsidiary relationship. It is therefore argued that because parent firms assess their foreign subsidiaries' contributive values based on their integrative and responsive abilities towards uncertainties and opportunities (Belderbos & Zou, 2009; Benito, 2005; Berry, 2010), this may influence the strategic goals of their multinational firms to associate their decisions to sell-off their foreign subsidiaries based on the symmetrical linkage between the parent firms and the foreign subsidiaries.

The position of this study, with regards to symmetrical linkage based on knowledge of the IR and resource-based perspectives is that symmetrical linkage may influence the sharing, transfer, exchange, or redeployment of needed resources and knowledge between a subsidiary and the parent firm, towards achieving their multinational firm's goal (Lieberman *et al.,* 2016; Ruzzier & Ruzzier, 2015; Sakhartov & Folta, 2014; Vidal & Mitchell, 2015, 2018). It may, therefore, be suggested that the establishment of far-flung subsidiaries may be for providing resources or products that are needed within their multinational network. Additionally, the knowledge available on multinational firms' divestments indicates that a parent firm's sell-off decision in an unrelated foreign subsidiary may be largely influenced by its inability to share resource commonalities, which may have impacted the subsidiary's poor performance and unprofitability (McDermott, 2010). A parent firm may as well decide to divest in a well-performing and profitable foreign subsidiary because of their incompatibility with the sharing of common resources and if the parent firm sees the sell-off as an opportunity to increase its investment capital towards another project that may be of related significance. However, with non-divestment related studies indicating that relatedness between a foreign subsidiary and its parent firm has no impact on a subsidiary's performance but that of the multinational firm value (Rabbiosi, 2011; Sakhartov & Folta, 2014), the need for future research to re-examine the association of parent-subsidiary relatedness, particularly based on an improved context as symmetrical linkage may help towards resolving identified ambiguities in previous findings. Discretely investigating the association of symmetrical linkage, as a

parent-subsidiary relational factor, with the sell-off of a foreign subsidiary would lead to a better understanding of parent firms' divestment decisions, since the performance of a subsidiary may not necessarily be a result of its relatedness to its parent firm.

Further still, regardless of the ambiguities in the available knowledge, the arguments that a parent-subsidiary symmetrical linkage is a significant influencing factor that is positively associated with the sell-off of a foreign subsidiary may also be developed using the available knowledge within the international business strategy perspective. It is therefore suggested that because multinational firms operate within a global scope they are likely to engage in multiple market defined strategies within their multiple product industries to balance their need for integration and responsiveness towards the exploitation of their market imperfections (Benito, 2005; Berry 2010). There is the possibility that a parent firm may engage in a foreign subsidiary sell-off in a particular industry and market to either take advantage of an opportunity in another industry in either the same or a different market to reduce the effect of uncertainties on its multinational firm's performance and productivity. Moreover, because parent firms are also likely to identify global opportunities or uncertainties within their industries and markets, their responsiveness to such issues is most likely to be based on the resource capacity of their foreign subsidiaries, which they can only determine if they are symmetrically linked (Damaraju *et al*., 2015; Song, 2014). Therefore, the responsiveness of multinational firms towards any opportunities or uncertainties may be discretely dependent on the industry of the parent firm in relation to their subsidiaries, which may influence certain strategic decisions, such as a sell-offs. For instance, based on knowledge of the resource-based perspectives, where a manufacturing parent firm identifies an opportunity in its industry, it may be influenced by the need to deploy additional resources, and may decide to engage in a divestment of one of its related subsidiaries for resource redeployment regardless of the subsidiary's performance (Lieberman *et al.*, 2016; Sakhartov & Folta, 2014). As a result, and based on the argued positions on symmetrical linkage, as a parent-subsidiary relational factor, it is suggested that the sell-off of foreign subsidiaries by their parent firms is positively associated with their symmetrical linkage with these foreign subsidiaries. Thus, it is hypothesised that –

**Hypothesis 6** – Parent firms are less likely to sell off foreign subsidiaries they share a symmetrical linkage with.

### 3.4.7 The impact of geographical linkage

The arguments in this final section are built based on knowledge found in both divestment and non-divestment literature on the influence of parent-subsidiary distance, location and environment on parent firms' strategic decisions regarding their foreign subsidiaries (Berry, 2010; Cairns *et al.,* 2008; Nyuur & Debrah, 2014). The influence of geography in international business strategy research is a well-investigated area but advances in the literature on the impact of geography on multinational firms' strategic actions have highlighted considerable gaps in our knowledge. The identified gaps, like those identified with previous parent-subsidiary relational factors, are a result of earlier studies failing to be clear about the influence of geographical related factors on parent firms' foreign divestment decisions and actions towards their foreign subsidiaries. As a result, this study's focus is on the association between the geographical linkage of a parent firm and its foreign subsidiary, based on their regional linkage, and the sell-off of the foreign subsidiary. Furthermore, available knowledge in the relevant literature suggests that strategic decisions and the actions of parent firms are tailored towards their objectives based on independently reviewing the portfolio of their multiple subsidiaries along their parent-subsidiary relational differences and similarities (Ambo & Mahnke, 2010; Baaij & Slangen, 2013; Bass & Chakrabarty, 2014; Cairns *et al.,* 2010; Cantwell, 2009; Cantwell & Mudambi, 2011; Dai *et al.,* 2013; Dellestrand & Kappen, 2012; Dhanaraj & Beamish, 2009; Ghertman, 1988; Li & Liu, 2015; Mudambi, 2008; Mudambi & Swift 2012). Previous studies investigations on geography in divestments were been mainly based on the influence of identified geographical factors such as space, environment and location, and their roles in foreign subsidiary survival (Dai *et al.,* 2013; Demirbag *et al.,* 2011). While the findings of previous studies suggest a relationship between geographically related factors and divestment decisions, there has been no clear finding that geographical linkage was associated with foreign subsidiary sell-offs. As a result, there is a

need to improve our knowledge through investigations of the influence of parent-subsidiary relational factors to identify whether geographical linkage as a country-level factor may be associated with the sell-off of foreign subsidiaries. This study aims to bridge the identified gap in knowledge, with its argument that a geographical linkage between a parent firm and its subsidiaries, based on the integrative and responsive framework of the parent-subsidiary regional scope and environment, is positively associated with the sell-off of a foreign subsidiary.

Beugelsdijk *et al.* (2010) described the geography and its impact on the home-host country relationship of a multinational firm as the degree of similarities based on their geographical location (i.e. place and space). These scholars argued, based on their description of the geography and its impact, that it is important to establish an understanding of the reason multinational firms choose to operate their global operations in certain geographical locations even when those locations are not like their home country. In addition, studies have shown that multinational parent firms engage in the establishment of their far-flung subsidiaries regardless of the distance or its linkage to the parent, to take advantage of opportunities that may result in increased growth and competitiveness (Beugelsdijk *et al.*, 2010; Dellestrand & Kappen, 2012). Dai *et al.* (2013), in their study on the impact of geography on multinational enterprise survival, found that the geographical exposure of a multinational enterprise impacted on its ability to respond to certain geographically defined threats, which enhanced the foreign subsidiary's survival. They also recognised that parent firms establish subsidiaries in geographical locations that are not similar to their home countries, and which they are not familiar with, to gain geographical exposure and experience on how they will be able to cope and be responsive to geographical threats and opportunities (Baaij & Slangen, 2013; Beugelsdijk, McCann, & Mudambi, 2010; Dai *et al.,* 2013).

The integrative and responsive framework, which has been discussed above, with these conceptualised relational factors, is focused on the integrativeness and responsiveness of parent firms towards opportunities and uncertainties, based on the geographical similarities and distance between multinational operations as a major determining factor (Baaij & Slangen,

2013; Benito, 2005; Beugelsdijk, McCann, & Mudambi, 2010; Mudambi & Swift, 2012). As a result, research within the strategy and international business literature on the impact of differences and similarities of location, space, and environment on multinational firms' host-home markets and parent-subsidiary factors had indicated that these factors influence the performance of foreign subsidiaries due to the effect of the monitoring and coordination of activities, and the increased cost of communication and resource sharing (Belderbos, 2003; Beugelsdijk *et al.,* 2010). This suggests that the parent-subsidiary relationship will be dependent on distance or geographical linkage, based on their regional closeness and the ease with which a parent firm may be able to use resources available in foreign subsidiaries to share and transfer within their multinational network towards ensuring that their strategic goals and objectives are achieved (Dellestrand & Kappen, 2012; Rose & Ito, 2008; Slangen, 2011). As a result, it may be argued that while a multinational firm's internationalisation strategies towards global integration are focused increasingly on being geographically exposed to gain increased competitive advantage, value and growth; the impact of distance and geographical linkage between the parent and its subsidiaries may influence the parent firm's actions towards its desired growth, goals and objectives.

However, despite the strength of multinational firms with increased geographical spatial and exposure on their competitiveness (Beugelsdijk *et al.,* 2010; Dai *et al.,* 2013), it could be assumed that the geographical spatial and exposure of a multinational firm will vary the relationship between foreign subsidiaries and their parent firm. The variation in relationship type between a parent firm and its foreign subsidiaries will most likely be due to the proximity (i.e. regional distance) between the parent firm and the subsidiary. As a result, parent firms may have strong relationships with foreign subsidiaries that are within the same region or geography, as they may be able to easily communicate and share resources, compared to those foreign subsidiaries that are not. This argument aligns with that of Dai, Eden, & Beamish (2013), who found that the concentration and dispersion of subsidiaries, based on the geography of the parent and its subsidiaries, impacts on subsidiary survival. They suggested that subsidiaries that are of less proximity to their parent firms were less likely to share benefits

which closer subsidiaries have with their parent firms, leading to weakened parent-subsidiary relationships (Dai, Eden, & Beamish, 2013). While Dai, Eden, & Beamish (2013) focused on the effect of geography on the differences in the institutional and political framework between a parent and its subsidiary, they found that it impacts on the survival of a multinational firm's foreign subsidiary.

The literature suggests that for a multinational firm's strategic growth, the choice of its geographical location is based on their need for integration and responsiveness to increased productivity and competitiveness. However, with the need for increased global integration and responsiveness by parent firms, the geographical differences between a parent and its subsidiaries may influence the strategic actions towards certain foreign subsidiaries, which may impact on the survival and sell-off of some subsidiaries. This is because multinational parent firms are most likely to focus their strategic actions, along with their need for integration and responsiveness, towards uncertainties and opportunities to achieve their multinational goals and objectives. Consequently, a parent firm is more likely to consider the geographical distance or the linkage between itself and its foreign subsidiaries in its decisions towards strategic actions that may impact on their multinational growth (Berry, 2010, 2013; Colantone & Sleuwaegen, 2010; Dellestrand & Kappen, 2012). As a result, foreign subsidiaries whose distance and location become unstrategic to the multinational growth goals are likely to be sold off. Additionally, the literature indicates that the operations of multinational firms in their geographical locations are based on a variety of location-specific factors that may enhance the parent-subsidiary relationship, where such factors bring about an increase in heterogeneous contributions to the multinational's growth and value (Cantwell, 2009; Cantwell & Mudambi, 2011). However, where the geographical linkage between a parent and its foreign subsidiary is given very little value by the parent firm due to its heterogeneously derived regional contributions, this will not only influence the parent-subsidiary relationship but may also significantly influence the sell-off of that foreign subsidiary.

Additionally, knowledge from studies built on the resource-based perspective suggests that location-specific factors do influence parent firms' intents and decisions towards their

multinationals' growth goals to engage in divestments so as to redeploy certain resources from one subsidiary to another, and to allow the parent firms to give more attention to subsidiaries that are within their regions (Bridoux *et al.,* 2013; Karim & Capron, 2016; Lieberman *et al.,* 2016; Wernerfelt, 1984; Westhead *et al.,* 2001). Therefore, as argued earlier, it may be construed that the exploitation of benefits within a multinational firm, based on geographical linkage as a parent-subsidiary relational factor, provides an advantage to the parent firm to identify, transfer, share and exchange valuable resources easily with foreign subsidiaries that are within its geographical region and to divest outside of its region. In addition, the decision to sell-off foreign subsidiaries that are not geographically or regionally linked with the parent firm may not necessarily be as a result of any other factors relating to the subsidiaries' performance or industry but as a result of the parent firm's decision to reduce regional asymmetries in its multinational network (Cairns *et al.,* 2008; Lieberman *et al.,* 2016; Piscitello, 2011; Soule *et al.,* 2013). Hence, with the geographical linkage between a parent firm and its foreign subsidiary being able to influence the strength of their relationship, it may also stimulate and ease the identification and moveability of valuable resources by influencing decisions to engage in the sell-off of foreign subsidiaries. As parent firms are likely to positively associate geographical linkage between them and their foreign subsidiaries with their strategic decisions and actions, this study posits that -

> **Hypothesis 7 –** Parent firms are less likely to sell off foreign subsidiaries they share a geographical linkage with.

### 3.5 Chapter summary

This chapter discussed the two relevant theoretical frameworks for this study, the integration and responsive framework and the resource-based perspective. While the integration and responsive framework stress the importance of multinational firms' global integration and responsive towards reacting to uncertainties and opportunities, the resource-based perspective stresses on the importance of valuable resources controlled by the parent

firm in its subsidiaries to use strategically towards uncertainties and opportunities to gain competitive advantage and growth.

This chapter also provided a comprehensive view of the identified concepts and the importance of contextualising the identified firm- and country-level factors as parent-subsidiary relational factors (i.e. the subsidiaries' size, age and profitability, host country growth, language commonality, symmetrical linkage and geographical linkage). Additionally, this literature review indicates that previous investigations into the use of combined measures (e.g. profitability and relatedness) as an influence on the parent or the subsidiary, in determining divestment decisions, might have left a gap in knowledge on the level of the independent influence of the factors. As a result, this study is necessary to advance our knowledge about foreign divestments, as it addresses the decisions of parent firms to sell-off their foreign subsidiaries as a strategic action, towards their multinational firms' goals and objectives.

## CHAPTER 4: Methodology

### 4.1 Introduction

This chapter discusses all aspects of the research design for this study and the data collection process. The chapter, through its sections, presents and discusses the research design, methodology and methods. The other areas this chapter discusses are the research philosophy and paradigm, the research population and sample size, operationalisation of study variables including the control variables, the choice of statistical analysis, hypothesis testing, and interpretation of the statistical analysis.

### 4.2 Research design and methodology

The literature on research methodology indicates that various approaches can be taken to determine the appropriate design of a study. Nevertheless, the research questions and objectives are the critical determinants in the choice of the methodological design of a study (Bryman & Bell, 2007). Sekaran and Bougie (2010) indicated that the research design identifies the purpose of a study through the type of chosen investigation, the analysis, measures and measurements, and the sampling design. The elements of the research design are said to determine the appropriateness of the research methodology. The design of a research is the overall strategy that facilitates the process of data collection and analysis. Particularly in the social sciences, three major types of research designs are used - namely the exploratory, the descriptive, and the causal (Ghauri *et al.,* 2005).

The exploratory design of research is used in studies where the details towards the primary ideas and insights are explained as the research problem. The exploratory research design is particularly useful for clarification of concepts that are poorly understood or developed. The exploratory design methods are not appropriate for testing hypotheses but are suitable where the literature and experience surveys are the sources of preliminary data (Aaker *et al*., 2007). The descriptive research design is used in situations where a study tries to characterise the substance of a group or multiple groups of data, to approximate a percentage to the subjects' behavioural pattern, or to predict the results of specific contexts of

the research (Collis & Hussey, 2009). The use of the descriptive research design in a study allows for data to be organised and analysed for hypothesis testing to lay the ground of the theory (Sekaran & Bougie, 2010). Lastly, the causal research design separates the cause(s) of a problem or a situation and determines the extent to which the cause(s) relates to an effect. Furthermore, the causal design approach dictates that the researchers use one or more measures (the independent variables) to determine the effect(s) (the dependent variable) (Collis & Hussey, 2009; Sekaran & Bougie, 2010).

However, regardless of the definitions leading to the determination of the most appropriate methodology for a study, scholars have argued that the choice is affected by a number of factors (Easterby-Smith *et al*., 2008; Saunders *et al*., 2009). Saunders *et al*. (2009) suggested that the main criterion in the selection of research methods should be the research topic, the time factor, and most importantly, the researcher. As a result, based on these inferences, the causal research approach was chosen as the most appropriate research design for the nature and the type of this study. The diagrammatic flow of this research is specified in Figure 3.1. The purpose of this study is geared toward investigating and understanding the level of influence that various parent-subsidiary relational factors have on the sell-offs of foreign subsidiaries. It is believed that the findings of this study will contribute to an increased understanding of the influences on multinational firms' foreign divestment decisions.

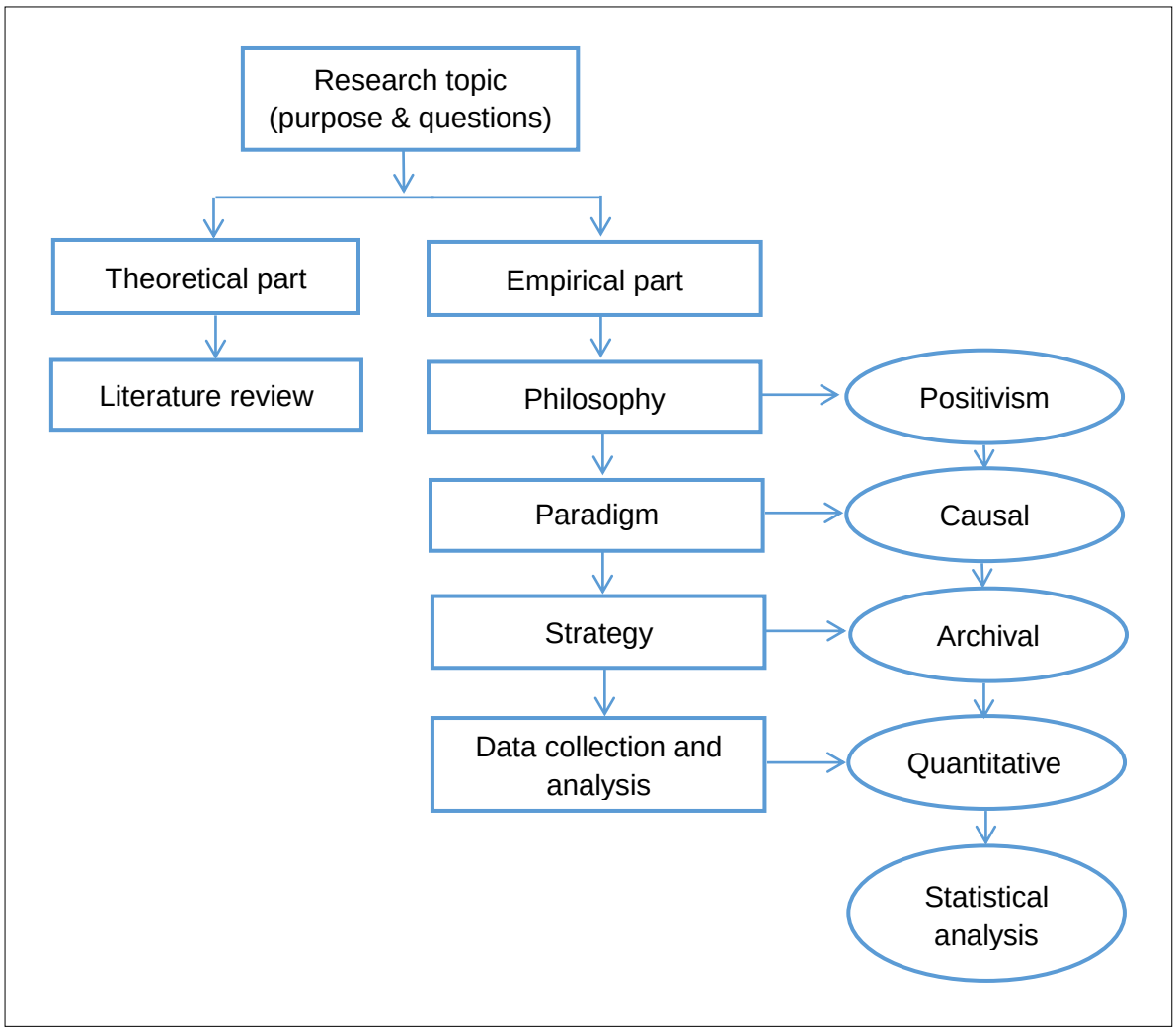


**Figure 4.1** Overview of the study's methodology

### 4.2.1 Research design

The research design is one of the critical aspects of the methodology because it guides the researcher towards the process of data collection, analysis and interpretation (Collis & Hussey, 2009). The research design also guides the researcher in their procedures and steps in the commencement of the research, and in defining the study's purpose, the type of investigation, and the unit of analysis. Saunders *et al*. (2009) indicated that business research is categorised, based on its purpose, as exploratory (i.e. exploring the effect of something new), descriptive (i.e. describing a social phenomenon), or explanatory (i.e. testing hypotheses towards explaining an occurrence). Based on the aims and objectives of this study, this research is classified as causal, as it seeks to investigate the level of influence the

identified parent-subsidiary relational factors have on foreign subsidiary sell-offs using hypotheses.

Sekaran and Bougie (2010) indicated that an investigation is causal when it is concerned with the association of variables that influence the relationship between a cause and an effect. However, classifying a study based on it being either causal or correlational depends on the type of research questions (Sekaran & Bougie, 2010). As a result, based on the type of research questions in this study, which seeks an understanding of the level of significance of a cause (i.e. parent-subsidiary relational factor) on an effect (i.e. a foreign subsidiary sell-off), the study can be classified as causal.

Lastly, the unit of analysis refers to the level of aggregation or the combination of the data collected for the data analysis – e.g. individuals, groups, or organisations (Hussey & Hussey, 1997). This study's unit of analysis is an organisation (multinational firms) as it looks at the effect of the parent-subsidiary relationships on the sell-off of a foreign subsidiary.

### 4.2.2 Research methodology

As discussed above, the selection of a research methodology decides not only the research validity but also the reliability of the research results. Furthermore, as Saunders *et al.* (2009) argued, the research methodology refers to the manner in which the theoretical and philosophical assumptions of the research knowledge are modelled towards the adoption of the research method. However, the available knowledge in the research literature shows that knowledge development through conducting a social research attained by coupling multiple research methodologies, philosophies, paradigms or approaches are described using terms such as positivist versus phenomenological philosophies, inductive versus deductive paradigms, and quantitative versus qualitative approaches. For instance, a research is classified to be either qualitative or quantitative based on its process, such as the way the data is collected and analysed. However, when the purpose of the research is based on logic (that is, whether the researcher is moving from a general to a specific level or otherwise), it is said that the research is either deductive or inductive (Saunders *et al.*, 2009).

#### 4.2.2.1 Research philosophy and paradigm

This section considers the relevant philosophical issues pertinent to foreign divestment research from the social science perspective, and particularly within the international business and strategy paradigm. The purpose of dwelling on these philosophical issues is to establish a better understanding of the contexts relating to the epistemology of this study and the relevant theories. Given that the primary purpose of undertaking research involves exploring something novel, or perhaps confirming or refuting previous findings, there is a need to establish relating concepts and constructs that best explain the surveyed events from the researcher's perspective.

Research can be classified as either empirical or theoretical (Miller & Tsang, 2010). A study or research is said to be empirical when it relies on observations or experiments and when the research analyses are based on concrete and specific works of evidence (i.e. the empirical data). Theoretical research is described as an intellectual interpretation of constructs and their relationships, and such studies are also known to be hypothetical and use no empirical data (Miller & Tsang, 2010). However, there has been an increase in studies arguing that it is impossible to rely just on either a theoretical or empirical research approach, especially in the field of business. The view of this particular line of thought is that a researcher may decide to use both the empirical or theoretical approach, where the empirical approach is meant to refine and validate the theoretical approach or model. As a result, researchers are increasingly trying to improve and validate previous theoretical studies with their empirical approaches to research. Where the research develops its theory and validates it, it is then said to be using a mixed method, which is the combination of both the empirical and theoretical approaches (Gioia, Corley, & Hamilton, 2013). This study, however, is considered to be empirical as it focuses on validating the theory that parent-subsidiary relational factors influence parent firms' strategic decisions towards the sell-off of their foreign subsidiaries because of the value parent firms attach to the heterogeneous contributions in their relationship with their foreign subsidiaries (Alessandri *et al*., 2012; Arrighetti *et al*., 2013; Chen & Moore, 2010).

Although the aim of this study is not to discuss elaborately *Philosophy*, but rather to just identify and explain the different positions within the philosophy of science in relation to management studies. The identification and classification of the various positions of this study, based on the literature of Kilduff *et al*. (2011), has led to the philosophical classification of this study's ontology (the question of the meaning) and the epistemology (knowledge) towards the understanding of the perspective of this study. According to Corbetta (2003), ontology is the part of philosophy that studies the essence of being (i.e. the essence of the research), while epistemology relates to the science or knowledge that emanates from the study. Kilduff *et al.* (2011) further added that epistemology is not only about knowledge from an objective or substance perspective, but also an understanding of the relationship between the knowledge known before and the knowledge known after – as the truth gained on the object or substance. As a result, management studies have considered knowledge in Kilduff *et al*. (2011), in addition to that of Miller & Tsang (2010), to provide clarity on the pathway towards understanding their research perspectives. Therefore, based on the suggestion by Miller & Tsang (2010) that "the most important philosophies of science about ontology and epistemology in management studies that a researcher can employ revolves around critical realism, positivism, constructivism, interpretivism and pragmatism".

Critical realism is expanding the advancement that alters the intellectual scene based on three assertions. Firstly, the reality that scientific theories and not empirical events represent the structure and mechanisms of the world. Based on this assertion, available knowledge defines a structure as groups of internally related objects that are the instruments of the action. The connection between the groups of internally related objects and the structure indicates the identity of their relationship with other components within the structure (Miller & Tsang, 2010; Tsang & Kwan, 1999). Secondly, without certainty, the principal structures and mechanisms are only liable to occur due to observable empirical events. Lastly, given the unpredictability of scientific knowledge of reality, there is still a possibility of acquiring such knowledge via creative constructions and the critical testing of theories (Miller & Tsang, 2010; Tsang & Kwan, 1999).

Positivism is the “study of social reality by employing a conceptual framework, the techniques of observation and measurement, the instruments of mathematical analysis, and the procedures of inference of the natural sciences” (Corbetta, 2003). Shah and Corley (2006) described the positivist approach to epistemology as the pursuit of regularities and causal relationships between the essential components that are usually derived from the methodological procedures of quantitative data collection and statistical analysis. The relevant studies have argued that for social science research to be able to reach the accomplishments of natural science in their explanations, predictions and controls, they must enforce the methods of natural science (Lee, 1991). Likewise, Sandberg (2005) argued that the positivistic paradigm is a criterion for validity and reliability and is employed to measure the extent to which the theories and instruments correspond to objective reality.

Constructivism, according to Mir and Watson (2000), is considered a school of philosophical thought that disputes that research is primarily theory-dependent. Constructivists argue that the philosophical view considered by researchers not only directs their primary position but at the same time pre-determines the interpretation of the research problem and the analytical procedures utilised are what creates the observations and evidence (Boyd, 1991). Constructivism does not question the presence of phenomena, but the researcher’s ability to comprehend it without a specific theory or knowledge. As a result, the constructivist questions the notion of research being impartially detached, with value-neutral subjects aimed at uncovering clear, distinct objects or phenomena (Mir & Watson, 2000).

Interpretivism is a school of thought that believes that people, and the physical and social artefacts they generate, are in effect dissimilar from the physical reality investigated by natural science (Lee, 1991). In interpretivism, the objective of theory building is to develop descriptions, perceptions and explanations of events to be able to provide interpretations and meaning towards revealing the methods of organising and structuring (Gioia & Pitre, 1990). As with the positivistic paradigm, the interpretive approach criteria also ensure validity and reliability. However, the recognition and status of validity and reliability do not equate with the level associated with positivist research (Heil & Whittaker, 2007).

Finally, the interpretation of pragmatism is said to be in accord with the anti-positivists, which is - that it fundamentally rejects the privileged status of science; while science is beneficial and powerful, it is only just an approach towards advancing knowledge within the world (Wicks & Freeman, 1998). The pragmatist theory, according to Powell (2002), states that "if a strategy proposition stimulates results on the dimensions we value, then we make it our own" (pp.879). As a result, the theory construction is an ongoing pragmatic process, which entails the puzzling out knowledge, which could be used as a factor towards resolving problems that utilise ways of understanding a phenomenon (Timmermans & Tavory, 2012; Winship 2006).

Following the above analyses of the philosophical paradigms in the science of management, they have different individual virtues and vices. However, based on their interpretations, it is certain that they can be used to decide the ontological and epistemological paradigm of this study, as they are vital embodiments of the philosophical basis of knowledge that this study is pursuing to provide. This study, therefore, argues that its empirical and ontological framework is based on principles of positivism, as it seeks to test the influence of parent-subsidiary relationships within a construct. Furthermore, the study's pursuit of regularities and causal relationships between the essential components, realised through the methodological procedures of the quantitative data collection and statistical analysis, ensures that the influence of parent-subsidiary relational factors on the sell-offs of foreign subsidiaries may be considered as an external reality that exists in the world, with the realities of understanding the investigations of parent firms' foreign divestment phenomena.

#### 4.2.2.2 The research strategy

A research strategy refers to how a researcher engages the identified problem and meets the research objectives (Saunders *et al*., 2007). While research scholars have classified research based on their strategies – such as survey, archival, case study, history, experiment, grounded theory, action research and ethnography (Saunders *et al.* 2007), scholars have argued that the choice of a particular research strategy is dependent on the research paradigm

adopted in undertaking the research (Saunders *et al*., 2009). Collis and Hussey (2003) stated that a research paradigm based on the adoption of an inductive approach tends to lead the researcher towards strategies such as a case study, grounded theory, or action research. By contrast, the adoption of a deductive approach usually leads the researcher towards engaging in an archival, survey, or experimental research (Collis & Hussey, 2003).

Based on the knowledge available in the relevant literature, Norback *et al.* (2015) indicated that the reliance on a dataset, as an archival strategy, allows for the development of new knowledge and an understanding of previous strategies engaged by multinational firms. This is because compared to multi-business domestic firms, multinational firms have been found to change and modify their operational strategies more often due to their exposure to different foreign markets (Ambo & Mahnke, 2010; Casillas *et al.,* 2014; Norback *et al.,* 2015; Sui & Baum, 2014). This study, which uses an archival strategy for obtaining its datasets from the Bureau van Dijk database packages (i.e. Osiris and Zephyr), hopes to present increased knowledge and understanding of the divestment actions of multinational firms. The motivation for this choice was that data archives are not only consistent with the deductive paradigm but enable the researcher to collect a relatively large amount of data of a sizeable population, which can be economically based on associated benefits, such as time, effort, and resource saving. Furthermore, obtaining data such as this brings about ease in analysing the obtained data and providing a broad foundation for the generalisation of the findings (Saunders *et al.*, 2009). As the archival strategy refers to the use of archives to extract needed information, its use in research allows the researcher to have a significant degree of control in undertaking the research process (Sekaran & Bougie, 2010). As a result, this study engaged in the use of this strategy to take advantage of the benefits associated with the use of data collected from database archives.

### 4.3 Research methods

Research methods are the techniques used for data collection and analyses based on the research questions or hypotheses. Creswell *et al.* (2003) suggested that the two main

types of research approach used in data collection and analysis are qualitative and quantitative. The critical difference between these two approaches is that while the qualitative approach relies on non-numerical data, the quantitative approach relies on numerical data. Quantitative data is collected in a numerical form and analysed using statistical techniques, while qualitative data is collected using questionnaires or interview surveys, which can also be interpreted or described to yield quantitative data (Collis & Hussey, 2003).

### 4.3.1 The quantitative approach

This study adopted the quantitative approach because it allows for objectivity as it seeks to confirm the study hypotheses through its analysis, with somewhat higher precision and provide a clear implication towards the study outcomes (Tobi & Amaratunga, 2010). Haegeman *et al.* (2013) argued that data is quantitative when it consists of statistical or numerical information and the analysis of such data is by statistical tools. As indicated in Table A1 in the Appendix, this study uses secondary sources for data collection, primarily the use of Bureau van Dijk packages (Osiris and Zephyr), as its means of obtaining quantitative data. The Zephyr package was used to identify all the 100% completed wholly-owned foreign subsidiary sell-offs by their respective parent firms in 2016. The Osiris package, on the other hand, was used to obtain necessary information about the parent firms' subsidiaries with regards to their industry and products, the size of subsidiaries based on the workforce, age, geographical location, profitability, and operating revenue/turnover for 2015. The other sources of data such as the subsidiaries countries' official languages, was a publication by the British Council that provided the list of countries and their official languages (British Council, 2013), the country growth based on the annual World Development Indicators (World Bank, 2015) and country risk factors (Euler Hermes, 2015). The decision to use 2015 data is that multinational firms' decisions to engage in sell-off of a foreign subsidiary in 2016 would have been based on influencing factors of at least the previous periods or year, as divestment decisions take a long process and time (EY, 2013; Soule, Swaminathan, & Tihanyi, 2014). Based on the available and collected information, this study adopted the quantitative strategy

as the most appropriate method, given the circumstances of the research context, its research design, and the large-sized data that may provide a strong defence for result generalisation. Additionally, the use of the quantitative strategy allowed for the potential to explore the possibility of conceptualising the firm- and country-level factors as parent-subsidiary relational factors based on already available knowledge in the relevant literature (Bryman & Bell, 2007; Easterby-Smith, Thorpe, & Lowe, 2002; Song & Lee, 2017).

### 4.4 Research population and sample size

A research population is a group of data that share similar characteristics, while the sample size is a subset of that population that represents a study's primary area of focus (Collis & Hussey, 2003). The sample size is meant to be a representation of the whole research population. However, there is no agreement in the literature regarding the ideal sample size to be used in research. As a result, researchers have argued differently, based on their study area and focus. While some have suggested that the minimum of a sample size should be 30 units for the statistical analysis to have meaningful and significant results (Saunders *et al.*, 2009), others have claimed that depending on the field of research, a large sample size should consist of more than 30 units (MacCallum *et al*., 2001; MacCallum, 2003).

The process of choosing the samples used in this study was by identifying through the secondary data sources, the engaged actions of foreign subsidiaries sold off by their parent firm that had been 100% completed in 2016. Out of over 60,000 divestments recorded in the Zephyr database of the Bureau van Dijk package, a total of 642 completed sell-offs of wholly-owned foreign subsidiaries were identified from a total of 447 multinational firms (Bureau van Dijk, 2017). This 2016 sell-off data in the Zephyr database was then reviewed with information in the Osiris database to obtain the multinational firms' status along with their subsidiaries prior to divestments in 2016. Furthermore, because this study also aims to identify the difference between the level of influence on the sell-off actions taken by manufacturing and non-manufacturing parent firms, the study dataset was grouped accordingly.

While Table 1A in the Appendix shows a summary of the extracted information on multinational firms and their foreign subsidiary sell-offs in 2016, Table 4.1 specifies the categorisation of the multinational firms based on their industry; a total of 243 manufacturing (54.4%) and 204 non-manufacturing (45.6%) parent firms were in the sample. Due to this study's dataset, the findings of this study conform to the notion that the "larger the sample size - the higher the validity of the research results" (Saunders *et al.*, 2009). Furthermore, as mentioned previously, one of the core reasons for the focus on current wholly-owned foreign subsidiary sell-offs by multinational parent firms is because previous international divestment studies have focused their investigations on historical data that have been published over 8-10 years before being used for the research. However, while the use of aged data may not necessarily impact deleteriously the findings of these studies, it is suggested that perhaps additional or new knowledge may be gained through the use of relatively newer or current foreign sell-off information.

**Table 4.1** Summary of the research sample

| **Manufacturing companies** | **Sample size** | **Non-manufacturing companies** | **Sample size** |
|---|---|---|---|
| Oil & gas | 26 | Financial, banking & real estate | 63 |
| Construction & building material | 63 | Transportation & logistics | 47 |
| Engineering, iron, plastics, & electrical | 45 | Communications & utilities | 36 |
| Agriculture, fishing & mining | 31 | Medical & hospitality services | 19 |
| Food, chemical & pharmaceutical | 38 | Others (e.g. tourism) | 39 |
| Others (e.g. textile, paper, furniture) | 41 | | |
| **Total** | 243 (54.4%) | **Total** | 204 (45.6%) |

The reason why this study combined the two databases from the Bureau van Dijk package was that the Zephyr database could only provide information regarding the parent firms and the foreign subsidiaries sold, while the Osiris database was able to provide in-depth information about the parent firms and all of their wholly-owned foreign subsidiaries. The information from these two Bureau van Dijk databases on parent firms and their subsidiaries includes multinational/parent firm size based on the total number of subsidiaries, their names, locations, product and industry, sales, number of employees, and the profitability of the foreign wholly-owned subsidiaries. However, the information extracted from the Osiris database enabled the conceptualisation of the information needed with regards to the relational factors between the parent firms and their foreign subsidiaries, which may influence any international divestment decisions.

In order to investigate adequately whether these relational factors had influenced the sell-off of wholly-owned foreign subsidiaries, this study focused on the independent influence of the relational factors and not a combination of multiple factors, which previous studies that had investigated divestment antecedents had done. This is aimed at removing ambiguities that have been found associated with these previous studies finding (Brauer, 2006). The details obtained from the databases enabled the conceptualisation of the measure of parent-subsidiary relational factors based on knowledge of the relevant literature on parent-subsidiary relationships (e.g. Haugland, 2010; Song & Lee, 2017; Wahab *et al.,* 2011).

Based on the summary of observations (Table 4.2), 0.93%, 0.86%, 0.98% of wholly-owned foreign subsidiaries were divested in the samples/observations of the all multinational firms, manufacturing and non-manufacturing firms respectively from their total number of wholly-owned foreign subsidiaries. From the samples, about two-thirds of the foreign subsidiaries (that is, 70.3% of subsidiaries of all multinational firms, 72% of subsidiaries of all manufacturing multinational firms and 68.6% of subsidiaries of non-manufacturing multinational firms) were profitable. Additionally, 52.1% of the foreign subsidiaries of the total observed multinational firms were symmetrically linked (product and industry relatedness) with their parent firms, while 51.7% of foreign subsidiaries of manufacturing firms and 52.6% of

non-manufacturing firms were symmetrically linked. Furthermore, 38% of the foreign subsidiaries of the total observed multinational firms were geographically linked with their parent firms, while 36.4% of foreign subsidiaries of manufacturing firms and 40.2% of non-manufacturing firms were geographically linked. 37.8% of the foreign subsidiaries of the total number of multinational firms shared a common language with their parent firms, while 32.7% of foreign subsidiaries of manufacturing firms and 44.6% of non-manufacturing firms shared a common language with their parent firms.

**Table 4.2** Summary of observations

| | Total % of wholly-owned foreign subsidiaries (all multinational firms) | Total % of wholly-owned foreign subsidiaries (manufacturing firms) | Total % of wholly-owned foreign subsidiaries (non-manufacturing firms) |
|---|---|---|---|
| Divested foreign subsidiaries | 0.93 | 0.86 | 0.98 |
| Total number of profitable foreign subsidiaries | 70.3 | 72 | 68.6 |
| Total number of foreign subsidiaries with language commonality | 37.8 | 32.7 | 44.6 |
| Total number of subsidiaries with symmetrical linkage | 52.1 | 51.7 | 52.6 |
| Total number of subsidiaries with geographical linkage | 38.0 | 36.4 | 40.2 |

### 4.5 Operationalisation of variables

This section and its subsequent subsections discuss the conceptualisation and operationalisation of this study's variables and how each of the variables is measured. In finding a suitable operational definition for each variable, this study reviewed the relevant literature in international business strategies that focused on international divestments and parent-subsidiary relationships. This study aimed to advance the strategic management literature on parent-subsidiary relationships by taking this approach to investigate the influence of parent-subsidiary relational factors on a parent firm's strategic decision to sell-off a foreign subsidiary. As a result, this study followed similar studies on subsidiary survival (e.g. Dai, Eden, & Beamish, 2013; Chung, Lu, & Beamish, 2008), which used the binary dependent variable in denoting their subsidiary divestment. The variables were measured on an ordinal scale, as variables measured in such a manner are categorical ones, in which their possible values are ordered. Furthermore, Agresti (2010) indicated that ordinal variables could be considered "in between" categorical and quantitative variables. The ordinal scale can be used to measure ordered, meaningless differences between units and attitudes with the use of dichotomous or binary data (Agresti, 2010). As a result, this study used an ordinal scale to measure the dependent variable and some of the independent and control variables. The discrete, numerical natural scale of measurement was used for the other independent and control variables such as the subsidiaries' size, host country growth, age, country risk factor and the subsidiaries' operating revenue/turnover.

As discussed above, because the dependent variable of this study was based on dichotomous or binary data, it engaged the use of a binomial logistic regression model. A logistic regression model, according to Wooldridge (2013), is a special case of the binomial regression model in which the dependent variable for an observation is measured in binary values – either '1' or '0'. As a result, the probability of observing a '1' or '0', as in the case of this study's dependent variable, is treated as depending on multiple explanatory/independent variables. Among the key advantages of the logistic regression model that make it most suitable for this study are its robustness and the study's large data size, which the logistic

regression model requires to achieve stability (Agresti, 2010; Greene, 2012; Wooldridge, 2016).

As discussed in subsections 4.5.1, 4.5.2, 4.5.3 and Table 4.3, the dependent and most of the explanatory variables are binary and measured on an ordinal level, which is because of the use of binary value or dichotomous data to classify observations that are not only mutually exclusive and exhaustive but also have an explicit relationship, influencing the choice of the logistic regression. Additionally, the choice of use of the logistic regression for this study assumes that there is no linear relationship between the independent and dependent variables, which also does not require the independent variables to be of certain intervals and be unbounded (Greene, 2012; Hellevik, 2009; Hosmer 2013).

### 4.5.1 The dependent variable

*The sold-off wholly-owned foreign subsidiary* (***Y***) is the study's dependent variable. Following previous studies on subsidiary divestments, the conceptualisation approach of this study follows a similar use in previous studies of foreign divestments (e.g. Belderbos and Zous, 2009; Chung *et al.,* 2008; Dai *et al.,* 2013). The data conceptualised as the dependent variable was obtained from the 642 sell-offs by 447 parent firms within the specified period and modelled using an ordinal level measurement based on binary values, as there can only be two possible values of a parent firm. As a result, '1' indicated that the wholly-owned foreign subsidiary was sold off by its parent firm, and a '0' indicate a non-sold-off wholly-owned foreign subsidiary.

### 4.5.2 The independent variables

*Subsidiary size* ***($X_1$)*** is the first of the independent variables and a relational factor because the relationship between a parent firm and its subsidiaries is central towards understanding the impact or influence of the subsidiary size (Johnston & Megnuc, 2007). Since one of the focal objectives of this study is to investigate the influence of a foreign subsidiary size, it is important to examine whether subsidiary size could influence decisions towards a

foreign subsidiary sell-off. The subsidiary size impacts on a parent firm's coordination complexity based on an increased need for managerial and other resource inputs, and growing interdependence between other subsidiaries within the ownership structure of the multinational firm (Baumann-Pauly *et al.,* 2013). The conceptualisation of this independent variable was modelled following Johnston & Megnuc (2007), using the discrete, numerical natural scale of measurement of the number of employees (workforce) available to a subsidiary as provided by the Bureau van Dijk service in the Osiris database.

*The host country growth* ***($X_2$)*** was used as the second independent variable. Since previous studies had only investigated host country growth as a country-level factor but not conceptualised as a relational factor, this study's conceptualisation of the variable was based on knowledge in Berry (2013). Consequently, to determine the host country growth rate, Berry's (2013) approach was followed by using the host country's GDP growth for the pre-sell-off period/year using the annual World Development Indicators (World Bank, 2015).

*The foreign subsidiaries' profitability orientation factor (**$X_3$**)* was chosen as the third of this study's independent variables. The relevant literature has suggested that subsidiary profitability as a performance factor may influence the relationship between a parent firm and its foreign subsidiaries (Alexander *et al.,* 2005; Delios & Beamish, 2001; Ghosh, 2008; Verbeeten & Boons, 2009). However, from a relational viewpoint, an investigation into the influence of profitability, as a relational factor, on parent firms' foreign subsidiary sell-off actions may improve the knowledge available on international divestments. The variable was measured in the same manner as with the dependent variable, as a foreign subsidiary will either be shown to be profitable or not. Therefore, '1' indicated the foreign subsidiary as profitable and '0' as unprofitable.

*The foreign subsidiary's language commonality factor (**$X_4$**)* was conceptualised based on Piekkari *et al.* (2010), Piekkari & Tietze (2011) and Logemann & Piekkari (2015). As a result, this study employed the use of the guide on countries' official languages (British Council, 2013) to establish the linkages in language commonality in the parent firm and its foreign subsidiary official languages. The language commonality was also measured by an

ordinal level measurement using binary values, as a foreign subsidiary will either share a common language with its parent firm or not. Thus, '1' indicated that the foreign subsidiary shares a common language with its parent firm and '0' was accorded to foreign subsidiaries that share no language commonality with their parent firm.

*The foreign subsidiary's symmetrical linkage factor ($X_5$)* was based on Miller & Yang (2016), which focused on the impact of relatedness on the parent-subsidiary relationship. The use of the NAICS (North American Industry Classification System) code and the description of business activities are provided in the Bureau van Dijk packages (i.e. Zephyr and Osiris) to identify symmetrical linkages in product and industry relatedness between the respective parent firms and their wholly-owned foreign subsidiaries/operations. The NAICS code has been used widely for classifying and organising firms based on their industries and their operational processes for their products or services. This variable was measured by the ordinal level measurement using the binary values – '1' indicated that the wholly-owned foreign subsidiary is symmetrically linked to its parent firm and '0' that the foreign subsidiary is asymmetrically linked to its parent firm.

*The foreign subsidiary's geographical linkage factor ($X_6$)* was also modelled and measured by an ordinal level measurement using binary values – '1' was accorded to a geographically linked foreign subsidiary with its parent firm and '0' to those foreign subsidiaries which are not geographically linked to their parent firm. The conceptualisation of geographical linkage follows Baaij & Slangen (2013), Piscitello (2011), and Zaheer & Hernandez (2011), and focuses on the impact of geography on the parent-subsidiary relationship. Using the information in the Osiris database package, with regards to the countries of the parent firms and their foreign subsidiaries, the United Nations statistical guide (UNSD, n.d) on countries and their geographical regions was used to indicate the parent-subsidiary geographical linkage.

*The subsidiaries' age ($X_7$)* variable was based on the subsidiaries' age information within its multinational network, as provided by the Bureau van Dijk service in the Osiris

database. The interval level measurement scale for the subsidiaries' age was based on their natural numerical scale measurement.

### 4.5.3 The control variables

Freedman *et al.* (2007) described the control variable as other than the independent and the dependent variable, which is used only to help make a valid conclusion but is not of primary interest in the research analysis. For this study, two control variables are used – the country risk factor and the subsidiaries' operating revenue/turnover. These control variables were chosen because they may have a significant influence on parent-subsidiary relationships and thereby may impact on the parent firms' decisions towards their foreign subsidiary divestment.

Evidence in the relevant literature indicates that the country risk factor is a fundamental characteristic of the multinational firm's home and host countries, which multinational firms use in deciding on internationalisation into new markets (Meschi & Riccio, 2008; Xu *et al.,* 2011). The approach of this study to control the country risk factor was based on its influence on multinational firms' internationalisation decisions, which may be argued, could strategically influence the multinational firms' de-internationalisation or divestment processes (Benito & Welch, 1997; Diego *et al.*, 2007; Xu *et al.,* 2011). The country risk factor has also been identified as one of the most influential variables in internationalisation decisions as it is interrelated with other factors that may influence a firm in its host market to make decisions regarding demand, cost, competition, and market conditions (Diego *et al*., 2007; Westhead *et al.,* 2001). Therefore, it can be argued that the country risk factor may be interrelated with other factors, which may impact on parent firms' decisions to divest. The country risk factor as a control variable was derived from the Euler Hermes (2015) Economic research report of country risk ratings which are marked as 4 (high), 3(sensitive), 2(medium) and 1(low).

By including the subsidiaries' operating revenue/turnover values as the second control variable, the impact of the parent-subsidiary relationship was controlled based on the subsidiaries' performance in terms of their operating revenue/turnover; as a parent firm's

relationship with its subsidiaries may differ based on this factor (Berry, 2013; Chatterjee *et al.,* 2003; Damaraju *et al.,* 2015; Shaver *et al.,* 1997). The subsidiaries' operating revenue/turnover for the period prior to the focus period, that is 2015, was used because parent firms' decisions towards a foreign subsidiary sell-off are most likely to be a result of a subsidiary's operating revenue/turnover from a previous year. This variable was derived from the Osiris database and measured based on its available natural numerical scale. These two control variables were included to monitor their possible influence over the independent variables.

**Table 4.3** Summary of variables, their measures and sources

| **Variable** | **Measure** | **Source** |
|---|---|---|
| Sold-off foreign subsidiaries (Dependent) | Binary; '1' indicates that a subsidiary was sold off and '0' indicates that a subsidiary was not sold off | Zephyr database |
| Subsidiary size (Independent) | Discrete/ordinal; the number of employees in a subsidiary | Osiris database |
| Host country growth (Independent) | Discrete/ordinal; the host country's GDP per capita | World Development Indicators, World Bank (2015) |
| Subsidiaries' profitability (Independent) | Binary; '1' designates a profitable and '0' an unprofitable foreign subsidiary | Osiris database |
| Language commonality (Independent) | Binary; '1' indicates that the parent and its subsidiary share a common language, '0' indicates no commonality in a language shared. | Guide of countries' official languages, BritishCouncil.org |
| Symmetrical linkage (Independent) | Binary; '1' indicates that the parent and its subsidiary share a relatedness in | NAICS (North American Industry Classification |

| | | |
|---|---|---|
| | product and industry, ‘0’ indicates no relatedness in product and industry. | System) in the Zephyr and Osiris database |
| Geographical linkage (Independent) | Binary; ‘1’ indicates that the parent and its subsidiary are in the same geographical region, ‘0’ indicates that they are not in the same geographical region | United Nations statistical guide on countries and their geographical regions |
| Subsidiaries’ age (Independent) | Discrete/ordinal; based on natural numerical scale measurement of the subsidiaries’ age | Osiris database |
| Country risk factor (Control) | Continuous/Interval; based on an economic research report of country risk ratings | Euler Hermes (2015) |
| Subsidiaries’ operating revenue/turnover (Control) | Discrete/ordinal; subsidiaries’ performance based on the operating revenue/turnover | Osiris database |

### 4.6 Data analysis

This section discusses the statistical methods used to analyse the data obtained and the rationale for the use of these particular tests. Based on the nature of this study and as discussed in preceding sections, the dependent variable for each observation took on categorical dichotomous outcomes with the use of binary values (1 or 0), which brought about the decision in using the binomial logistic regression model to analyze the obtained data. The binomial logistic regression model was used to assess the influence or the impact of the identified independent variables to predict the dependent variable which is dichotomous, having only a limited number of possible values, i.e. 1 or 0 (Hellevik, 2009). It is one of the popular statistical models used in divestment research along with the probit regression models

(e.g. Belderbos & Zous, 2009; Dai *et al.,* 2013; Damaraju *et al.,* 2015; Delios & Beamish, 2001).

Furthermore, the binomial logistic regression model assumes a binomial distribution in the response and as a result, the decision to use the binomial logistic regression was because the dependent variable does not need to be normally distributed, but typically assumes a distribution from an exponential family. In addition, the logistic regression model assumes that there is no linear relationship between the dependent variable and the independent variables; rather it assumes there is a linear relationship between the logit of the response and the explanatory variables i.e. $logit(\pi) = \beta_0 + \beta x$ (Hilbe, 2009; Hosmer, 2013). Another factor considered with regards to the use of the binomial logistic regression model was that the errors of the logistic model are independent and not normally distributed. The logistic model also uses the maximum likelihood estimation (MLE) rather than ordinary least squares (OLS) to estimate the parameters, thereby relying on large-sample approximations (Hilbe, 2009). In addition, the Goodness-of-fit measure of the logistic model relies on sufficiently large samples, where the heuristic rule is that not more than 20% of the expected cells counts are less than 5 (Hellevik, 2009; Woodridge, 2002, 2016).

The model specification employed for analyses of the data is described by the equation:

$$\pi_i = Pr\ (Y_i = 1 \mid X_i = x_i) = exp\ (\beta_0 + \beta_1 x_i) / 1 + exp\ (\beta_0 + \beta_1\ x_i)$$

Additionally as discussed above*, 'Y',* the dependent variable is a binary response variable and where it is 1, this indicates the foreign subsidiary was sold off and where it is 0, then the foreign subsidiary was not sold. $X = (X_1, X_2 \ldots X_9)$ is the set of explanatory variables.

### 4.6.1 Descriptive statistics

This is a summary statistic based on the multivariate analysis used in quantitatively describing or summarising the features of the collected information on the multinational firms' subsidiaries. The purpose for the descriptive statistics is to distinguish the data analysis from

the inferential statistics (or inductive statistics), which is to summarize a sample to deduce important facts about the population that the sample of data is representing (Babbie, 2009). The measures that are used to describe the data set in this study within the univariate analysis are measures of the central tendency and variability or dispersion, while correlation analysis, as a bivariate analysis, is used to measure the linear correlation between the X and Y variables. The measures of central tendency include the mean, median and mode, that of variability include the standard deviation (or variance), and the minimum and maximum values of the variables (Achen, 1982; Crayen *et al.,* 2011; Mendenhall & Sincich, 2014).

Correlation is a measure of the linear correlation between two variables *X* and *Y*. It has a measured value between -1 and +1, where +1 is a total positive linear correlation, 0 indicates no linear correlation, and −1 indicates a total negative linear correlation.

### 4.6.2 Hypothesis testing and interpretation of statistical analysis

Hypothesis testing allows the study to establish inferences about population parameters using the sample data. The choice of a logistic regression model, which is a form of multiple regression analysis, also referred to in the statistical medium as inferential statistics, is to infer or deduce the alignment of the hypotheses as either 'true' or 'false' (Hellevik, 2009; Hosmer, 2013). Similarly, as discussed earlier, the logistic model has been found to analyse statistical relationships in different ways, based on three distinct characteristics. These include the ability to estimate multiple and interrelated relationships where the dependent and independent variables do not have to be normally distributed or have equal variance in their group; it does not assume there is a linear relationship between the independent and dependent variables; and it may handle non-linear effects (Hair *et al.,* 2010; Hellevik, 2009; Wooldridge, 2016).

For this study, the *p-value* (also known as the calculated probability), was chosen as it is the standard method which statisticians use in measuring the level of significance in their empirical analyses. The main reason for using this approach, in addition to the logistic model, is because of the robustness of the model with which this study's large data size will be able

to achieve stable and meaningful results (Branch, 2014; Frost, 2015; Hair *et al.,* 2010). While this study focused mainly on the *p-value* approach, with its regression based on the logistic model, there are other key factors that are of significant relevance, with regards to explaining and understanding the interpretation of the analysis within the context of this thesis.

The first of these 'other' factors is the descriptive analysis or summary statistics. As discussed previously, the descriptive analysis was used to summarize the set of variables in order to provide or to communicate the information of the sample in more depth using a measure of statistical dispersion, like the standard deviation, and because more than one variable is measured - a measure of statistical dependence such as a correlation coefficient was used (Achen, 1982; Crayen *et al.,* 2011; Mendenhall & Sincich, 2014).

The Chi-square test for testing goodness-of-fit is used to decide whether there is any difference between the observed (experimental) value and the expected (theoretical) value or simply to determine whether the sample data are consistent with a hypothesized distribution (Crayen *et al.,* 2011; Hosmer, 2013). The calculated value of Chi-Square goodness-of-fit test is compared with the table value. When the calculated value of the Chi-Square goodness-of-fit test is greater than the table value, the null hypothesis is rejected, and it is concluded that there is a significant difference between the observed and the expected frequency. However, where the calculated value of the Chi-square goodness-of-fit test is less than the table value, the null hypothesis is accepted, and it is concluded that there is no significant difference between the observed and the expected value.

### 4.6.3 Reliability of results

It is indicated in the statistical literature that a multicollinearity/collinearity occurs when there is a high correlation among predictor variables, which may lead to unreliable and unstable estimates of the individual regression coefficients (Goldberger, 1991; Wooldridge, 2013). The inclusion of two subsidiary size-related variables as predictors, the subsidiary size based on the number of employees (explanatory) and the subsidiary revenue/turnover (control), which were both measured in the natural numerical scale may lead to high

correlation ‘collinearity’ between them, thereby affecting the reliability of the findings of this study. The general rule to test for multicollinearity/collinearity is that if the correlation of two independent variables is between ‘-0.70 and 0.70’, there is likely to be no collinearity and both independent variables can be used (Belsley *et al.,* 1980; Chatterjee *et al.,* 2000; Wooldridge, 2013). However, Chatterjee *et al.* (2000) and Wooldridge (2013) indicated that in the absence of correlations between the independent variables, the variance inflation factor (VIF) can be calculated for each predictor by obtaining the $R^2$ from the linear regression for each predictor against all the other predictors, and then using the VIF formula “1 / (1 – $R^2$)” to estimate how much the variance of a coefficient is ‘inflated’ by, because of its linear dependence on the other predictors. The VIF has a lower bound of 1 but no precise upper bound, as available evidence of its upper bound differs in the literature. While some studies recommend that a VIF greater than 10 is unsatisfactory (Belsley *et al.,* 1980; Chatterjee *et al.,* 2000), others have recommended that lower values between 5 and 8 are unsatisfactory - as they likely to have multicollinearity problems and such an independent variable should be removed. However, the closer the VIF is to 1, the more likely the predictors are to be uncorrelated (Allison, 1995; Belsley *et al.,* 1980; Chatterjee *et al.,* 2000; Hosmer & Lemeshow, 2003).

### 4.7 Chapter summary

This chapter has provided the conceptual definitions of all the research variables following the research hypotheses that were developed from the literature review and the research objectives. The chapter also justified the choice of research methodology and discussed its data collection and analysis procedures. A positivist approach has been employed, which is concerned with a deductive paradigm and a quantitative methodology. Subsequently, the chapter discussed the quantitative approach employed in this study and the methods of data collection and data analysis. Secondary data were collected using the Bureau van Dijk service packages such as the Osiris and Zephyr database. Other secondary sourced information/data were used towards the conceptualisation of other variables. For instance, in the conceptualisation of the language commonality factor, information was

obtained from a publication by the British Council that provided the list of countries and their official languages. The British Council publication was used to source and identify commonalities in the parent firms' home countries and their subsidiaries' host country. Additionally, the World Bank (2015) report was used to identify the host country growth index of multinational firms' foreign subsidiaries, while the Euler Hermes (2015) economic research report on country risk ratings was employed to conceptualise the relational factor of the parent-subsidiary country risk used and to control the analysis of the explanatory variables.

Lastly, this chapter included explanations about the research population and sample, the variables and data. The chapter also discussed the choice of the logistic regression model – which is a statistical model usually applied towards predicting the outcome of a binary dependent variable in testing the hypothesis and the interpretation of the analysis. The predicted values in the logistic regression model are probabilities restricted to '0 and 1' because the logistic distribution function only predicts the probability of an outcome rather than the outcome itself.

## CHAPTER 5: Data analysis

### 5.1 Introduction

The focus of this chapter is on the data analysis, by the use of descriptive statistics and a binomial logistic regression, in order to estimate the probability that a characteristic is present (i.e. estimate the probability that a parent firm sells off its foreign subsidiary), given the values of the explanatory variables. In the case of this study, as discussed in the previous chapter, there is only one dependent categorical variable that has only a limited number of possible values. The chapter is based on the study's aims and objectives to investigate the influence which the identified relational factors have on foreign subsidiary sell-offs, and whether such influence varies, based on the multinational firms' parent industry (i.e. manufacturing and non-manufacturing firms).

### 5.2 Analysis for all multinational firms (Model 1)

#### 5.2.1 Descriptive statistics and correlations

Table 5.1 summarises the results of the descriptive statistics and correlations for the described variables, *'n = 68973'.* From the results of the correlation, there is no collinearity between the two related predictors, as the correlation coefficient between the subsidiary size based on the number of employees (explanatory) and the subsidiary revenue/turnover (control) is 0.069, which is within the multicollinearity/collinearity general rule of -0.70 and 0.70. The correlation between these two predictors indicates no collinearity between them, showing that they can be used together and that the findings are reliable.

Table 5.1 Descriptive statistics and correlation output for all multinational firms

| Variable | Mean | Median | SD | Minimum | Maximum | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Divested foreign subsidiary** | 0.01 | 0 | 0.01 | 0 | 1 | 1 | | | | | | | | |
| **Subsidiary size** | 165.9 | 101.9 | 228.2 | 0 | 7555 | 0.173 | 1 | | | | | | | |
| **Country growth** | 2.8 | 2.5 | 1.7 | 0.1 | 34.3 | -0.004 | -0.012 | 1 | | | | | | |
| **Subsidiary profitability** | 0.4 | 0 | 0.5 | 0 | 1 | 0.063 | 0.014 | 0.154 | 1 | | | | | |
| **Language commona-lity** | 0.2 | 0 | 0.4 | 0 | 1 | 0.041 | -0.005 | 0.012 | 0.299 | 1 | | | | |
| **Symmetri-cal linkage** | 0.3 | 0 | 0.5 | 0 | 1 | 0.036 | 0.003 | 0.124 | 0.711 | 0.241 | 1 | | | |
| **Geographi-cal linkage** | 0.2 | 0 | 0.4 | 0 | 1 | 0.035 | -0.012 | 0.005 | 0.387 | 0.163 | 0.310 | 1 | | |
| **Subsidiary age** | 10.8 | 10 | 7.1 | 1 | 30 | 0.005 | 0.011 | 0.004 | 0.013 | -0.010 | 0.010 | -0.003 | 1 | |
| **Country risk factor** | 1.3 | 1 | 0.7 | 1 | 4 | 0.005 | -0.009 | 0.177 | 0.094 | -0.025 | 0.079 | -0.005 | 0.006 | 1 |
| **Rev./ turnover** | 4154.4 | 490 | 17713.6 | 0 | 592897 | -0.008 | 0.069 | -0.017 | 0.015 | -0.024 | 0.004 | -0.001 | 0.003 | -0.005 | 1 |

### 5.2.2 Regression analysis for all multinational firms (Model 1)

The association of the relational factors with foreign subsidiary sell-offs in this model were explored using the mixed industry specification, which is based on all multinational firms. The output for this all multinational firms' 'mixed industry' specification, with and without the control variables in the regressions in Tables A2 and A3 of the Appendix, is summarised in Table 5.2 below.

Table 5.2 Regression output summary for all multinational firms

| Variable | Coefficient (without controls) | Coefficient (with controls) | VIF |
|---|---|---|---|
| **Intercept** | -6.453*** (0.134) | -6.582*** (0.152) | 1.023 |
| **Subsidiary size** | 0.003*** (0) | 0.003*** (0) | 1.000 |
| **Country growth** | -0.043* (0.245) | -0.059** (0.025) | 1.001 |
| **Profitability** | 1.478*** (0.123) | 1.508*** (0.124) | 1.016 |
| **Language commonality** | 0.509*** (0.087) | 0.526*** (0.088) | 1.008 |
| **Symmetrical linkage** | -0.216** (0.092) | -0.238** (0.096) | 1.009 |
| **Geographical linkage** | 0.273*** (0.089) | 0.284*** (0.089) | 1.008 |
| **Subsidiaries' age** | 0.002 (0.006) | 0.003 (0.006) | 1.000 |
| **Country risk** | | 0.116** (0.058) | 1.003 |
| **Subsidiaries' operating rev./turnover** | | 0.000*** (0.000) | 1.000 |
| **Chi-square** | 1182 | 1270 | |
| **Observations** | 68973 | 68973 | |

*Significant at 10%
**Significant at 5%
***Significant at 1%

The chi-square test values for the goodness-of-fit of the model with and without the control variables are 1270 and 1182 respectively, which is less than the table value of 68973. This thereby indicates that the model is a good fit and is correctly classified in the outcome as

there is no significant difference between the observed and the expected values. As discusses in the previous chapter, to diagnose the potential for multicollinearity among the variables, their variation inflation factor (VIF) was checked. A VIF in excess of 10 is indicative of a multicollinearity problem and values for the predictors that are uncorrelated should either be 1 or close to 1. The results from the table above reveal that the VIF for the predictors are either 1 or close to 1, and it is concluded that the sample is devoid of multicollinearity. Where the controls were not included in the model, all but one (the subsidiaries' age) of the seven explanatory variables had a significant association with the sell-off of foreign subsidiaries by their parent firms. Furthermore, four of the six significant variables were positively associated at the 0.01 level. These include subsidiary size, profitability orientation, language commonality and geographical linkage at 0.3%, 147.8%, 50.9% and 27.3% respectively. Country growth was negatively associated at the 0.1 level with a coefficient of 4.3%, and the symmetrical linkage was also negatively associated at the 0.05 level with a coefficient of 21.6%. The results of the model without control variables indicate that the subsidiaries' profitability orientation was strongly associated with the foreign subsidiary sell-offs, with a coefficient of 147.8%. Language commonality with a coefficient at 50.9%, had the second strongest level of association with the foreign subsidiary sell-offs, followed by the geographical linkage, symmetrical linkage and country growth with coefficients of 27.3%, 21.6% and 4.3% respectively. Subsidiary size, though positively associated, was found to have a weak influence on the sell-off of foreign subsidiaries with its coefficient at 0.3%.

Furthermore, where the controls were included in the model, the results mirrored those without the controls. All but one of the seven explanatory variables were found to have significant associations, with the subsidiaries' age remaining insignificant. The same four variables were positively associated at the 0.01 level - subsidiary size, profitability orientation, language commonality and geographical linkage; while the same two remained negatively associated - host country growth and symmetrical linkage - both at the 0.05 level. However, the effect of the controls was noticed through increased coefficients of all the explanatory variables, except for the subsidiary size, which remained at 0.3%. The host country growth

increased from 4.3% to 5.9%, the profitability orientation from 147.8% to 150.8%, language commonality from 50.9% to 52.6%, symmetrical linkage from 21.6% to 23.8%, and geographical linkage also increased from 27.3% to 28.4%. Additionally, the effect of the controls raised the negatively associated country growth significance level from 0.1 to 0.05. Both control variables showed a positive association, with the country risk factor at 11.6% at the 0.05 level and the subsidiaries' operating revenue/turnover having an unnoticeable significance at 0% at the 0.01 level.

Therefore, based on the findings of this model for "all multinational firms" specification with and without the controls, the study finding supports its hypotheses on the subsidiary size and profitability orientation, as these conceptualised parent-subsidiary relational factors are positively associated with the sell-off of foreign subsidiaries. The study finding also supports its hypotheses on the influence of host country growth and symmetrical linkage, although, the findings indicate that their influences are negatively associated, thereby confirming that the higher the host country growth, the less likely it is that a subsidiary will be sold-off. Additionally, the findings indicate that parent firms are also less likely to sell-off foreign subsidiaries which they share symmetrical linkage with. However, the findings do not support the hypotheses on language commonality, geographical linkage and subsidiary age. This is because while language commonality and geographical linkage were found to have positive significance indicating that the parent firms were more likely to sell off foreign subsidiaries that shared these relational factors with them, subsidiary age was found to have no association with the sell-off of foreign subsidiaries.

### 5.3 Analysis for manufacturing multinational firms (Model 2)

#### 5.3.1 Descriptive statistics and correlations

Table 5.3 summarises the results of the descriptive statistics and correlations for the described variables, **'***n = 37644'.* From the results of the correlation, there is no collinearity between the two related predictors, as the correlation coefficient between the subsidiary size based on the number of employees (explanatory) and the subsidiary revenue/turnover

(control) is 0.084, which is within the multicollinearity/collinearity general rule of -0.70 and 0.70. As a result, the correlation coefficient indicates no collinearity between these two predictors, showing that the variables can be used together and the findings being reliable.

Table 5.3 Descriptive statistics and correlation output for manufacturing multinational firms

| Variable | Mean | Median | SD | Minimum | Maximum | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Divested foreign subsidiary** | 0.01 | 0 | 0.09 | 0 | 1 | 1 | | | | | | | | | |
| **Subsidiary size** | 175.2 | 102.3 | 249.8 | 0 | 7555 | 0.201 | 1 | | | | | | | | |
| **Country growth** | 2.8 | 2.5 | 1.7 | 0 | 34.3 | -0.010 | -0.011 | 1 | | | | | | | |
| **Subsidiary profitability** | 0.4 | 0 | 0.5 | 0 | 1 | 0.058 | 0.017 | 0.163 | 1 | | | | | | |
| **Language commona-lity** | 0.2 | 0 | 0.4 | 0 | 1 | 0.036 | 0.015 | -0.011 | 0.245 | 1 | | | | | |
| **Symmetri-cal linkage** | 0.3 | 0 | 0.5 | 0 | 1 | 0.040 | 0.006 | 0.139 | 0.697 | 0.186 | 1 | | | | |
| **Geographi-cal linkage** | 0.2 | 0 | 0.4 | 0 | 1 | 0.034 | 0.010 | -0.008 | 0.399 | 0.121 | 0.289 | 1 | | | |
| **Subsidiary age** | 12.1 | 11 | 7.3 | 1 | 30 | 0.006 | -0.000 | 0.000 | 0.005 | 0.156 | 0.126 | -0.006 | 1 | | |
| **Country risk factor** | 1.4 | 1 | 0.7 | 1 | 4 | -0.002 | -0.009 | 0.227 | 0.112 | -0.052 | 0.112 | -0.003 | -0.005 | 1 | |
| **Rev./ turnover** | 4868.7 | 645 | 20102.8 | 0 | 592897 | -0.008 | 0.084 | -0.027 | 0.025 | -0.019 | 0.004 | 0.006 | -0.006 | 0.007 | 1 |

### 5.3.2 Regression analysis for manufacturing multinational firms (Model 2)

Next, the association of the relational factors on the foreign subsidiary sell-offs were explored using data for the manufacturing multinational firms' specification. The output for this manufacturing multinational firms' specification, with and without the control variables in the regression in Tables A4 and A5 of the Appendix, is summarised in Table 5.4 below.

Table 5.4 Regression output summary for manufacturing multinational firms

| Variable | Coefficient (without controls) | Coefficient (with controls) | VIF |
|---|---|---|---|
| **Intercept** | -6.341*** (0.182) | -6.419*** (0.204) | 1.043 |
| **Subsidiary size** | 0.003*** (0) | 0.003*** (0) | 1.000 |
| **Country growth** | -0.077** (0.034) | -0.089** (0.035) | 1.001 |
| **Profitability** | 1.255*** (0.167) | 1.344*** (0.168) | 1.029 |
| **Language commonality** | 0.435*** (0.117) | 0.456*** (0.118) | 1.014 |
| **Symmetrical linkage** | 0.046 (0.132) | -0.006 (0.132) | 1.018 |
| **Geographical linkage** | 0.236** (0.102) | 0.244** (0.121) | 1.015 |
| **Subsidiaries' age** | 0.007 (0.007) | 0.007 (0.007) | 1.000 |
| **Country risk** | | 0.048 (0.078) | 1.006 |
| **Subsidiaries' operating rev./turnover** | | -0.000*** (0.000) | 1.000 |
| **Chi-square** | 725 | 798 | |
| **Observations** | 37644 | 37644 | |

*Significant at 10%
**Significant at 5%
***Significant at 1%

The results presented in Table 5.4 indicate that the chi-square values for the goodness-of-fit of the model, with and without the control variables are 798 and 725 respectively, which is less than the table value of 37644. This indicates, as stated above for all multinational firms' specification, that the model is fit and correctly classified in the outcome

as there is no significant difference between the observed and expected values because the value of the chi-square goodness-of-fit test is less than the table value. Likewise, the VIF values for the predictors in this sample indicate they are either 1 or closer to 1, concluding that all the predictors are uncorrelated and devoid of multicollinearity. The regression results where the controls were not included in the model indicated that five of the seven explanatory variables were significantly associated with the sell-off of foreign subsidiaries', namely subsidiary size, country growth, profitability orientation, language commonality and geographical linkage. The other two variables - the symmetrical linkage and subsidiary age were found to be insignificant, as they had no association with the foreign subsidiary sell-offs. It was also noticed, in this model for the manufacturing multinational firms, that the association of the symmetrical linkage joined that of the subsidiaries' age to become insignificant, in contrast to its significant association with foreign subsidiary sell-offs observed in the previous model of the all multinational firms. Additionally, with the variables found to have a significant association with the sell-off of foreign subsidiaries, three of the variable remained positive at the 0.01 level, which was akin to the previous model. These were the subsidiary size (0.3%), profitability orientation (125.5%), and language commonality (43.5%); while geographical linkage was positive at 23.6% but at the 0.05 level. The country growth factor was the only relational factor found to be negatively associated with the foreign subsidiary sell-offs in this model, with a coefficient of 7.6% at the 0.05 level.

The results without the control variables also show that subsidiaries' profitability orientation had the strongest level of influence on foreign subsidiary sell-offs in manufacturing multinational firms, with a coefficient of 125.5%. Language commonality, with its coefficient of 43.5%, had the second strongest level of influence on the sell-off of foreign subsidiaries. These two variables were followed by geographical linkage, country growth and the subsidiary size, with their coefficients at 23.6%, 7.7% and 0.3% respectively. Additionally, while the negative association of the country growth factor was at the 0.1 level in the "all multinational firms" model, its negative association in this manufacturing multinational firms' model was at the 0.05 level, suggesting that the level of association of the country growth factor on the foreign

subsidiary sell-offs is stronger. Furthermore, the coefficient for the subsidiaries' size remained consistent with that of the previous model, which still indicates a weak but positive association of subsidiary size with the sell-off of foreign subsidiaries.

When the controls were included in the model, the results also mirrored those without the controls. The association of the same five explanatory variables remained significant, and those of the symmetrical linkage and subsidiary age maintained their insignificance. However, the effect of the inclusion of the control variables was noticed in the increased values of the coefficients, except for subsidiary size. The coefficient for country growth, which was negatively associated with foreign subsidiary sell-offs, increased from 7.7% to 8.9%; and that of profitability orientation which was positively associated increased from 125.5% to 134.4%. The coefficient for language commonality and geographical linkage factors, also with their positive associations, increased from 43.5% to 45.6% and from 23.6% to 24.4% respectively. However, in contrast with the previous model for all multinational firms' specification where the effect of the inclusion of the control variables brought about an upward movement for the level of significance of country growth from 0.1 to 0.05, no changes was observed with the level of significant of the relational factors with and without the control variables with the manufacturing multinational firms' specification.

Therefore, based on the findings in this model for the manufacturing multinational firms' specification, with and without the control variables, the study hypotheses on subsidiary size, profitability orientation, and host country growth are supported and accepted, as these parent-subsidiary relational factors are positively associated with the foreign subsidiaries' sell-off. The study findings do not support its hypotheses on language commonality, geographical linkage, symmetrical linkage and subsidiary age. This is because while language commonality and geographical linkage were found to have positive significance indicating that the parent firms were more likely to sell off foreign subsidiaries that shared these relational factors with them, symmetrical linkage and subsidiary age were found to have no association with the sell-off of foreign subsidiaries with manufacturing multinational firms.

### 5.4 Analysis for non-manufacturing multinational firms (Model 3)

#### 5.4.1 Descriptive statistics and correlations

Table 5.5 summarises the results of descriptive statistics and correlations for the described variables, **'***n = 31329'.* From the results of the correlation, like the results of the previous two models, there is no collinearity between the two related predictors. This is also because the correlation coefficient between the subsidiary size based on the number of employees (explanatory) and the subsidiary revenue/turnover (control) in this model is 0.032, which is within the multicollinearity/collinearity general rule of -0.70 and 0.70. Therefore, the correlation coefficient indicates no collinearity between these two predictors, and that these variables can be used together and that the findings are reliable.

Table 5.5 Descriptive statistics and correlation output for non-manufacturing multinational firms

| Variable | Mean | Median | SD | Minimum | Maximum | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Divested foreign subsidiary** | 0.01 | 0 | 0.09 | 1 | 0 | 1 | | | | | | | | |
| **Subsidiary size** | 154.7 | 100.5 | 198.4 | 0 | 2515 | 0.129 | 1 | | | | | | | |
| **Country growth** | 2.8 | 2.7 | 1.5 | 0.1 | 34.3 | 0.004 | -0.015 | 1 | | | | | | |
| **Subsidiary profitability** | 0.4 | 0 | 0.5 | 0 | 1 | 0.069 | 0.002 | 0.142 | 1 | | | | | |
| **Language commona-lity** | 0.3 | 0 | 0.4 | 0 | 1 | 0.047 | -0.028 | 0.042 | 0.373 | 1 | | | | |
| **Symmetri-cal linkage** | 0.3 | 0 | 0.5 | 0 | 1 | 0.031 | -0.008 | 0.105 | 0.728 | 0.311 | 1 | | | |
| **Geographi-cal linkage** | 0.2 | 0 | 0.4 | 0 | 1 | 0.038 | -0.016 | 0.021 | 0.372 | 0.213 | 0.336 | 1 | | |
| **Subsidiary age** | 9.4 | 8 | 6.4 | 1 | 30 | 0.000 | 0.008 | 0.006 | -0.009 | -0.021 | -0.009 | -0.000 | 1 | |
| **Country risk factor** | 1.3 | 1 | 0.7 | 1 | 4 | 0.014 | -0.019 | 0.232 | 0.109 | -0.018 | 0.065 | -0.034 | 0.003 | 1 |
| **Rev./ turnover** | 3296 | 365 | 14278.2 | 0 | 592897 | -0.008 | 0.032 | 0.000 | -0.009 | -0.027 | 0.001 | -0.013 | -0.005 | -0.033 |

### 5.4.2 Regression analysis for non-manufacturing multinational firms (Model 3)

Lastly, the association of the relational factors with foreign subsidiary sell-offs for the non-manufacturing multinational firms were explored. The output for this non-manufacturing multinational firms' specification, with and without the control variables in the regression in Tables A6 and A7 of the Appendix is summarised in Table 5.6.

Table 5.6 Regression output summary for non-manufacturing multinational firms

| Variable | Coefficient (without controls) | Coefficient (with controls) | VIF |
|---|---|---|---|
| **Intercept** | -6.727*** (0.205) | -6.920*** (0.234) | 1.058 |
| **Subsidiary size** | 0.003*** (0) | 0.003*** (0) | 1.000 |
| **Country growth** | -0.006 (0.036) | -0.022 (0.036) | 1.001 |
| **Profitability** | 1.806*** (0.186) | 1.745*** (0.187) | 1.036 |
| **Language commonality** | 0.550*** (0.133) | 0.570*** (0.134) | 1.018 |
| **Symmetrical linkage** | -0.547*** (0.144) | -0.526*** (0.143) | 1.021 |
| **Geographical linkage** | 0.302** (0.134) | 0.332** (0.134) | 1.018 |
| **Subsidiaries' age** | 0.000 (0.009) | 0.000 (0.009) | 1.000 |
| **Country risk** | | 0.202** (0.088) | 1.008 |
| **Subsidiaries' operating rev./turnover** | | -0.000* (0.000) | 1.000 |
| **Chi-square** | 480 | 490 | |
| **Observations** | 31329 | 31329 | |

*Significant at 10%
**Significant at 5%
***Significant at 1%

The findings from the results (Table 5.6) indicate that the chi-square test value for the goodness-of-fit for this model with and without the control variables are 490 and 480 respectively, which is akin to the previous models and is also less than the table value of 31329. The result for the chi-square goodness-of-fit indicates that the model is fit and correctly

classified in the outcome, as there is no significant difference between the observed and expected value because the value of the chi-square goodness-of-fit test is less than the table value. The VIF values for the predictors in this sample indicate they are, like with other two samples either 1 or closer to 1, concluding that all the predictors are uncorrelated and devoid of multicollinearity. The regression results where the controls were not included in the model indicate that five of the seven explanatory variables had a significant association, like the manufacturing multinational firms' model. Subsidiary size, profitability orientation, language commonality, symmetrical and geographical linkages were found to be significantly associated with the sell-offs of foreign subsidiaries; while the other two variables (country growth and subsidiary age) were insignificant. It was noticed that in this model for non-manufacturing multinational firms, the country growth and the subsidiaries' age relational factors were of insignificant influence, this is in contrast to the model for manufacturing firms where it was the factors of symmetrical linkage and subsidiary age that were found to be insignificant. Additionally, the same three relational factors – subsidiary size (0.3%), profitability orientation (180.6%), and language commonality (55%) - remained positive at the 0.01 level – which is akin to the previous model for manufacturing multinational firms; while geographical linkage was positive at the 0.05 level with a coefficient of 30.2%. Symmetrical linkage was found to be negatively associated with the sell-off of foreign subsidiaries with a coefficient of 54.7% at the 0.05 level, which is akin to the specification for the mixed multinational firms.

The results for this model without the control variables indicate that the profitability orientation of the subsidiaries had the strongest level of association with foreign subsidiary sell-offs in non-manufacturing multinational firms, which is akin to the other two models (Tables 5.2 and 5.4). A coefficient of 180.6% for the subsidiary profitability orientation indicates that this factor is associated with foreign subsidiary sell-offs more strongly in non-manufacturing multinational firms than their manufacturing counterparts, where the coefficient for this factor was found to be at 125.5%. Language commonality, with a coefficient of 55%, was also found to be positively associated with foreign subsidiary sell-off in non-manufacturing multinational firms, compared to 43.5% in manufacturing multinational firms. Geographical

linkage was also found to be associated with foreign subsidiary sell-offs more strongly in non-manufacturing (with a coefficient of 30.2%) than in manufacturing multinational firms (with a coefficient of 23.6%). This relational factor remained significant for both non-manufacturing and manufacturing specifications at the 0.05 level. The symmetrical linkage, as indicated earlier, was not of any significance in manufacturing multinational firms, but was found to be negatively associated with the sell-off of foreign subsidiaries in non-manufacturing firms with its coefficient at 54.7% and 0.01 significant level.

Additionally, and unlike in the model for manufacturing multinational firms' model, where country growth was negatively associated with foreign subsidiary sell-off at the 0.05 level and symmetrical linkage was found to be insignificant, host country growth was insignificant and symmetrical linkage was found to be negatively associated with foreign subsidiary sell-off at the 0.01 level in this model. As a result, the findings for country growth and symmetrical linkage indicate that while non-manufacturing multinational firms may not consider a foreign subsidiary's country growth in their divestment decisions, their decisions are mostly likely inclusive of the symmetrical linkage between them and the foreign subsidiary. On the other hand, the findings show that manufacturing multinational firms do not consider a foreign subsidiaries' symmetry with their parent firm but are more interested in the host country's growth at the point of making their decisions to divest. Lastly, in the non-manufacturing multinational firms' model without the inclusion of the control variables, the coefficient for subsidiary size was significant at 0.3% and the 0.01 level, akin to the two previous models, which indicates that there is a positive association between the subsidiary size and their divestment.

Furthermore, when the controls were included in the model, the results mirrored those without the controls. The same five explanatory variables remained significantly associated with the divestment, while both country growth and subsidiary age remained insignificant. The inclusion of the control variables only resulted in the varied values of the coefficient with the relational factors apart from the subsidiary size that had remained consistent at 0.3%, even with the two previous models. Subsidiary profitability, which showed a positive association

when the control variables were not included, remained positive but its influence fell to 174.5% with the controls. However, both the language commonality and geographical linkage factors had their positive influence and coefficients increased from 55% and 30.2% without controls to 57% and 33.2% respectively with the controls. Only symmetrical linkage was found to be negatively associated with the sell-off of foreign subsidiaries and had its influence level lowered from 54.7% without the controls to 52.6% with the controls.

Consequently, based on the results from this model for the non-manufacturing multinational firms, with and without the controls, the study hypotheses on the subsidiary size and profitability orientation are supported and accepted, since these parent-subsidiary relational factors are positively associated with foreign subsidiary divestment. The findings indicate that both language commonality and geographical linkage are positively associated with the foreign subsidiary sell-offs showing that the study hypotheses on these relational factors are not supported. Additionally, the findings indicate of a negative association between the foreign subsidiary sell-offs and symmetrical linkage which supports the study hypothesis that parent firms are less likely to sell off foreign subsidiaries which they share a symmetrical linkage with. The hypotheses on the country growth and subsidiary age are rejected because no association is found between age and foreign subsidiary sell-off.

### 5.3 Chapter summary

This chapter presented the findings of the data analysis on the influence of parent-subsidiary relational factors on the sell-off of foreign subsidiaries. A logistic regression model was used to estimate the probability of the categorically-based independent variables, as it allows the determination of whether a relational factor is associated with the sell-off of the foreign subsidiaries. The findings of the study are considered reliable as the correlation coefficient between the two related predictors in all the models indicates no collinearity, as they align with the multicollinearity/collinearity general rules.

Table 5.7 shows the summary of the findings from the three models, while Table 5.8 summaries the findings based on the acceptance or rejection of the study's hypotheses. The

study found that although four of the seven conceptualised relational factors were positively associated with foreign subsidiary sell-offs across the three model specifications of the mixed, manufacturing and non-manufacturing multinational firms; only two supports the study hypotheses (i.e. subsidiary size and profitability orientation), while the other two shows no support towards the hypotheses (i.e. language commonality and geographical linkage) but indicative of having significant influences. Subsidiary age, on the other hand, was found to have no association with the divestment of foreign subsidiaries across the three models. Country growth and symmetrical linkage were found to be negatively associated with foreign subsidiary divestment with the multinational firms' specifications thereby supporting the study hypotheses. However, while both country growth and symmetrical linkage were found to be negatively associated with foreign subsidiary sell-off and shows support towards the hypotheses for the mixed multinational firms' specification, only the hypothesis on host country growth was accepted for the manufacturing multinational firms' specification, as it was found to be negatively associated with foreign subsidiary divestment. Also, only the hypothesis on symmetrical linkage was accepted for the non-manufacturing multinational firms' specification, as it was found to be negatively associated with foreign subsidiary divestment.

Table 5.7 Output summary for estimated models

| Variable | All firms (Model 1) | | Manufacturing firms (Model 2) | | Non-manufacturing firms (Model 3) | |
|---|---|---|---|---|---|---|
| | Without controls | With controls | Without controls | With controls | Without controls | With controls |
| **Intercept** | -6.453*** (0.143) | -6.582*** (0.152) | -6.341*** (0.182) | -6.419*** (0.204) | -6.727*** (0.205) | -6.920*** (0.234) |
| **Subsidiaries' size** | 0.003*** (0) | 0.003*** (0) | 0.003*** (0) | 0.003*** (0) | 0.003*** (0) | 0.003*** (0) |
| **Host country growth** | -0.043* (0.245) | -0.059** (0.025) | -0.077** (0.034) | -0.089** (0.035) | -0.006 (0.036) | -0.022 (0.036) |
| **Profitability** | 1.478*** (0.123) | 1.508*** (0.124) | 1.255*** (0.167) | 1.344*** (0.168) | 1.806*** (0.183) | 1.745*** (0.187) |
| **Language commonality** | 0.509*** (0.087) | 0.526*** (0.088) | 0.435*** (0.117) | 0.456*** (0.118) | 0.550*** (0.144) | 0.570*** (0.134) |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Symmetrical linkage** | -0.216** (0.092) | -0.238** (0.096) | 0.046 (0.132) | -0.006 (0.132) | -0.547*** (0.144) | -0.526*** (0.134) |
| **Geographical linkage** | 0.273*** (0.089) | 0.284*** (0.089) | 0.236** (0.102) | 0.244** (0.121) | 0.302** (0.134) | 0.332** (0.134) |
| **Subsidiaries' age** | 0.002 (0.006) | 0.003 (0.006) | 0.007 (0.007) | 0.007 (0.007) | 0.000 (0.009) | 0.000 (0.009) |
| **Country risk** | | 0.116** (0.415) | | 0.048 (0.078) | | 0.202** (0.088) |
| **Subsidiaries' operating rev./turnover** | | 0.000*** (0.000) | | -0.000*** (0.000) | | -0.000* (0.000) |
| **Chi-square** | 1182 | 1270 | 725 | 798 | 480 | 490 |
| **Observations** | 68973 | 68973 | 37644 | 37644 | 31329 | 31329 |

* Significant at 10%
** Significant at 5%
*** Significant at 1%

Table 5.8 Output summary based on hypotheses

| Variable | All firms | Manufacturing firms | Non-manufacturing firms |
|---|---|---|---|
| **Subsidiaries' size** | Hypothesis supported | Hypothesis supported | Hypothesis supported |
| **Host country growth** | Hypothesis supported | Hypothesis supported | Hypothesis not supported / influence insignificant |
| **Profitability** | Hypothesis supported | Hypothesis supported | Hypothesis supported |
| **Language commonality** | Hypothesis not supported / influence significant | Hypothesis not supported / influence significant | Hypothesis not supported / influence significant |
| **Symmetrical linkage** | Hypothesis supported | Hypothesis not supported / influence insignificant | Hypothesis supported |
| **Geographical linkage** | Hypothesis not supported / influence significant | Hypothesis not supported / influence significant | Hypothesis not supported / influence significant |
| **Subsidiaries' age** | Hypothesis not supported / influence insignificant | Hypothesis not supported / influence insignificant | Hypothesis not supported / influence insignificant |

The findings from these models highlight not only key similarities in the factors influencing decisions towards foreign subsidiary sell-offs in manufacturing and non-manufacturing multinational firms, but also indicate that there are significant differences in multinational firms' divestment decisions based on their industry affiliations. Lastly, the chi-square test values for the goodness of fit of the three models indicate that the models are fit and correctly classified in the outcomes.

## CHAPTER 6: Discussion of results

### 6.1 Introduction

This chapter discusses the findings of the regression analysis based on the study's aims and objectives and the hypotheses developed from them. The discussions are based on the results of analyses for the mixed industry (i.e. all the multinational firms), and both the manufacturing and non-manufacturing multinational firms. This chapter highlights the influence or association of each of the firm- and country-level factors conceptualised as parent-subsidiary relational factors on the sell-offs of foreign subsidiaries. The discussion is based on the findings of the analysis of the models that include the control variables, the country risk factor and the subsidiaries' operating revenue/turnover, as they may have a significant influence on parent-subsidiary relationships that may impact on the parent firms' divestment decisions.

### 6.2 The impact of subsidiaries' size

The findings on the influence of the subsidiary size indicate that this firm-level factor has an influence on foreign subsidiary sell-offs across all investigated subsamples/specifications (i.e. the mixed industry multinational firms, and both manufacturing and non-manufacturing multinational firms). This finding, therefore, supports the first hypothesis of this study, which states that parent firms are more likely to sell off small-sized foreign subsidiaries than the large-sized ones. As a result, it is argued that multinational firms, regardless of their industry affiliation, consider the size of a foreign subsidiary before they engage in a divestment action. This finding aligns with the findings in related studies that found firm size to have a significant impact on its value and that of its multinational scope because of the contributions of factors, such as the workforce or employees, market capitalisation, assets, revenue and performance, which are fundamental to their growth (Arrighetti *et al*., 2014; Bergh 1995; Chidlow *et al*., 2015). This study's finding suggests that parent firms match their intents towards strategic actions based on the resources (the workforce or number of employees) available in their subsidiaries, which is consistent with the argument and findings

of Chang (1996). Consequently, this finding adds to divestment knowledge in areas which previous studies have overlooked or have not yet considered in terms of the relational significance of a subsidiary's size on parent firms' strategic divestment decisions (e.g. Baaij & Slangen, 2013; Bandick, 2010; Chang, 1996; Johnston & Menguc, 2007; Lee *et al.*, 2013; Li & Liu, 2015; Moschieri & Mair, 2008; Sakhartov & Folta, 2014).

In order to justify this finding, it can be argued that because multinational firms are found to be more knowledge and technologically endowed than indigenous firms in their foreign locations, increased competition and absorptive capacity by other foreign and indigenous operations in a foreign location requires that multinational firms consistently review their competitive advantage towards ensuring that they have the needed workforce for the required knowledge and technological skills, and the capacity for growth (Bandick, 2010). Therefore, with the finding on the influence of subsidiaries' size based on their workforce, it may be assumed in justification that parent firms consider their subsidiaries' size because of their associated knowledge capabilities and technological skills which are needed for the multinational to achieve its growth objectives. Where a parent firm reviews a foreign subsidiary and finds that the foreign subsidiary does not have the needed workforce for their required knowledge and technological capability, to ensure its growth and that of the multinational establishment, the parent firm may decide to redeploy certain resources to itself or other subsidiaries and sell off that foreign subsidiary. Additionally, in line with this study's finding, Mata & Portugal (2002) found that a firm's survival is positively related to its size, as they indicated that the firm's size makes it easier to adopt advanced technologies and new production methods for increased productivity and their chances of survival. However, because the workforce is associated with high price-cost margins, parent firms will have to review their foreign subsidiaries by their sizes to ensure that the latter is able to provide the required productivity for their growth in the industry. Therefore, where the dynamics of a foreign subsidiary based on its workforce cannot guarantee the parent firm's need, the subsidiary is most likely to be sold off.

Furthermore, studies on multinational firms' strategic decisions that had indicated that parent firms consider their subsidiaries' size, specifies that subsidiaries' size influences whether parent firms engage their subsidiaries in any form of strategic action (Chang, 1996; Johnston & Menguc, 2007). It may be argued, in line with Ambrosini & Bowman (2009) and Kaul (2012), that the reason why multinational firms consider the sizes of their foreign subsidiaries is because they may want to divest them if the subsidiaries are considered not only as an asset but also resources that the parent firms may use towards achieving their strategic objectives. Consequently, a parent firm's strategic intents towards actions that will have an impact on their multinational productivity will most likely be focused on the size of a subsidiary as a resource towards its productivity and matched with an identified intent for improvement at the multinational or parent firm level. As discussed earlier, the knowledge of multinational firm strategies indicates that parent firms identify their global growth needs by constantly reviewing their subsidiaries' productivity and performance, to identify areas that may need increased focus and attention in bringing about the desired improvement towards their growth process (Vithessonthi & Tongurai, 2015). The need for such desired improvement in a multinational firm's growth process will involve knowledge of the foreign subsidiary's workforce capabilities and whether it aligns with the goals and objectives of the parent firm. As a result, the size of a foreign subsidiary, depending on its industry affiliation, may influence the parent-subsidiary relationship - because where a foreign subsidiary (based on its workforce) is found to exhibit strategies not in alignment with its parent firm, the relationship between the parent firm and the subsidiary is most likely to be weakened as it is seen to be unlikely to contribute heterogeneously towards its multinational's growth, thereby influencing its sell-off. However, where the foreign subsidiary's workforce is found to align with its parent firm's strategies, the parent-subsidiary relationship is strengthened and considered a valuable resource as it is seen to actively contribute towards its multinational's growth, where the inherent knowledge in the workforce will be used for sharing, transfer and redeployment with other operations within the multinational's operation.

Likewise, it can be argued based on available knowledge in the literature that had used the integrative and responsive framework to justify a multinational firm's integrative and responsive abilities to global markets based on its subsidiaries' ownership structures (Benito, 2005; Belderbos & Zous, 2006), that the responsiveness and integrative ability of a foreign subsidiary is largely dependent on its workforce. As a result, the size of a foreign subsidiary's workforce will influence its parent firm's use of the subsidiary as a resource towards being responsive to certain host market uncertainties and opportunities (Ambos *et al*., 2010; Benito, 2005; Berry, 2010). It is argued that where a parent firm identifies an uncertainty or an opportunity that may have an impact on its global market competitiveness, there is an increased possibility that its strategic intent will be towards being responsive by engaging with the use of resources in its closest foreign subsidiary to achieve its objective. However, where such a foreign subsidiary does not have the required resources (workforce) to ensure that the parent firm either takes advantage of the opportunity or mitigates the threat of the uncertainty, the parent firm's alternatives may be to either sell-off and exit from that market or to sell-off operations in other locations to redeploy and focus more resources at the identified opportunity.

On the other hand, based on the finding that large foreign subsidiaries (in terms of their workforce) are less likely to be sold off, as they may have a positive impact on their parent firm's integrative and responsive capabilities, the largeness of a foreign subsidiary may also be detrimental, as the parent firm may simply decide on the sell-off of a small subsidiary without adequately reviewing the capability of the resources in the large subsidiary. This is because while the parent firms may consider a foreign subsidiary with a large size workforce to have needed resources that will be of increased growth potential to the subsidiary and its entire multinational firm, the foreign subsidiary with a small size workforce may only seen as a resources to match with other specific goals and objectives towards their increased productivity which may influence their resource redeployment and eventual sell-off. Additionally, the identification and recognition of valuable and skilled resources may be difficult for the parent firm with its foreign subsidiaries with a large workforce, but valuable and skilled

resources in foreign subsidiaries with a small workforce are more likely to be easily identified, recognised and considered for use and redeployment, which may leave the subsidiary towards being considered for a sell-off.

Lastly, studies have also shown that parent firms have closer relationships with foreign subsidiaries whose growth and size are factored by their dependence on their parent firms (Johnston & Menguc, 2007). However, since multinational operations are widely diverse and dynamic, parent firms are most likely to move and use their resources or workforce in multiple locations by constantly moving and relocating them from one location to another. Therefore, in justification of this study's finding, the relational dependence of a foreign subsidiary based on its size, may influence the depth of the parent firm's assessment of the subsidiary's capabilities towards its strategic decisions and actions. As a result, a parent firm is most likely to engage and redeploy the resources of its smaller foreign subsidiaries towards other multinational objectives, which may lead to their sell-off more easily compared to their large foreign subsidiaries.

### 6.3 The impact of host country growth

The findings on the influence of host country growth, as a country-level parent-subsidiary relational factor, revealed that it was negatively associated with the sell-off of foreign subsidiaries with the mixed industries and manufacturing multinational firms' specifications, and had no association with the sell-off of foreign subsidiaries in non-manufacturing firms' specification. It can be said therefore that the finding does support this study's hypotheses on the host country growth with the mixed industry and manufacturing multinational firms, as a higher host country growth of a foreign subsidiary reduces the likelihood of it being sold off. Additionally, based on the findings, the study rejects its hypothesis based on non-manufacturing multinational firms. This finding of this study indicates that the host country GDP growth allows multinational firms to assess their host markets in line with their economic fundamentals, based on whether there are increases and improvements in the market potential. Therefore, from the generalised multinational firms'

point of view, it may be argued, in alignment with Berry (2013) that the growth in a host country provides more attractive locations and opportunities for foreign operations and their parent firms, and it may influence their decisions towards being actively responsive to taking advantage of such opportunities for their multinational growth. As a result, parent firms may decide to sell-off foreign subsidiaries with unfavourable or lagged growth to relocate resources towards markets with increasing country growth, which aligns with the findings of Shaver *et al.* (1997) who argued that subsidiaries' survival is influenced by their host-market growth rates. Additionally, in the justification of this study's finding, also from a generalised multinational firm's viewpoint, in-growth markets are not only of great potential and opportunities for multinational firms with poor operational performance in such markets but also those with good performances (Berry, 2013). This is because there is the renewed opportunity for parent firms to improve the performance of poor operations as there is a possibility of increasing their market shares by taking from other firms due to the increasing country growth, while those operations with already good performances may further opportunity to increase their profitability.

Furthermore, the finding that host country growth is negatively associated with the sell-off of foreign subsidiaries aligns with the finding of Berry (2013) - that "the country growth offsets the parent firm's influence on their divestment decisions in poorly performing operations in these markets"; that is a parent firm may not engage in the divestment of a foreign subsidiary if there is an increased growth in its market. However, with this study's finding showing that host country growth was negatively associated with the sell-offs of foreign subsidiaries in manufacturing and not the non-manufacturing multinational firms, it indicates that the offset does not apply equally based on the multinational firms' industry affiliations. This finding is novel, as it has not been found in the available literature, as most studies seem to have concentrated on foreign divestments from the foreign and domestic subsidiaries' survival viewpoint (Cairns *et al.,* 2008; Garg & Delios, 2007; Gaur & Lu, 2007; Ferragina *et al.,* 2014; Kronborg & Thomsen, 2009; Mata & Freitas, 2012). Furthermore, a review of the literature on differences in multinational firms' strategies, goals, and decisions revealed that

there are fundamental dissimilarities between manufacturing and non-manufacturing multinational firms, particularly based on their internationalisation and exit strategies. The differences identified in the literature between manufacturing and non-manufacturing multinational firms, based on their internationalisation and exit strategies (Meschi & Riccio, 2008; Xu *et al.,* 2011) influenced the position of this study to separate multinational firms based on their industry affiliations in order to investigate their effect on subsidiary sell-offs. This finding, therefore, bridges the identified knowledge gap with regards to the influence of host country growth on divestment decisions in multinational firms with different industry affiliations.

Additionally, while competitiveness and innovativeness have been identified as key drivers in multinational firms' internationalisation and exit strategies, which are factored by both the multinational firms' risk exposure based on their host countries and cost-related factors (Meschi & Riccio, 2008; Xu *et al.,* 2011), studies have shown that the innovativeness and competitiveness of a multinational firm is a factor in its industry affiliation, where manufacturing multinational firms were found to be more innovative and competitive than their non-manufacturing counterparts (Annique-un, 2011; Cuervo-Cazurra *et al.,* 2007). It is, therefore, assumed that the effect of differences in innovativeness and competitiveness between the manufacturing and non-manufacturing multinational firms resulted in a disparity in the findings on the influence of host country growth on multinational firms' foreign subsidiary sell-offs. Likewise, scholars have argued that because manufacturing multinational firms have less diversified and related operational structures than their non-manufacturing counterparts (e.g. Bandick, 2010; Jayanthi *et al.,* 2009; Norback *et al*., 2015), it makes them prefer to be in countries with similar markets, regulations and politics, and regions that are geographically linked to their home markets. However, in justification of this study's finding, having less diversified and more related operational structures, which has an impact on the parent-subsidiary relationships in manufacturing multinational firms, may be argued to be the reason the host country growth is negatively associated with foreign subsidiary sell-offs. This may be due to the fact that with less diversified and more related operational structures, manufacturing multinational firms' operational factors are more likely to be significantly influenced by a foreign

subsidiary's host country growth compared to non-manufacturing multinational firms, which have highly diversified and less related operational structures. As a result, where the host country growth of a manufacturing multinational firm's foreign subsidiary is on a downward trend, there is an increased likelihood for the parent firm to engage in resource redeployment, to transfer or relocate related resources, experiences and knowledge to subsidiaries with an upward market growth which may influence the subsidiary sell-off.

Furthermore, it may be added that the reason why the host country growth may not influence non-manufacturing multinational firms' foreign subsidiary sell-offs is that parent firms are found to respond differently to subsidiaries whose operational structures are dissimilar to their own. When an unrelated foreign subsidiary is underperforming in a host country with either a declining or increasing growth, it can be difficult for the parent firm to identify what is wrong and how to turn things around because their managerial experiences, knowledge, resources and capabilities are unrelated. Therefore, rather than review decisions towards a foreign subsidiary sell-off based on the impact of host country growth, the divestment decisions of parent firms are most likely to be based on the unrelatedness between them and their foreign subsidiaries. As a result, this study's finding that there is no association between the host country growth and foreign subsidiary sell-offs in non-manufacturing multinational firms aligns with previous studies (Berry, 2013; Hitt *et al.,* 1997; Zaheer & Hernandez, 2011). Thus, indicating that due to the highly diversified and less related structures of non-manufacturing firms, managing their unrelated foreign subsidiaries will be difficult and a high host country growth may not be able to offset a divestment influence where a subsidiary is underperforming.

### 6.4 The impact of subsidiaries' profitability

This study's finding supports its hypothesis that parent firms are more likely to sell off their profitable foreign subsidiaries than their unprofitable foreign subsidiaries in all the multinational firms' specifications. This finding aligns with the findings of studies which found that parent firms review their subsidiaries' performance or profitability, and that this influence

their divestment decisions (Alexander *et al.,* 2005; Brauer, 2006; Cao *et al.,* 2008; Damaraju *et al.,* 2015; Defren *et al.,* 2012; Delios & Beamish, 2001; Ghosh, 2008; Norback *et al.,* 2015; Soule *et al.,* 2013). It may, therefore, be argued that the reason why profitable foreign subsidiaries are more likely to be sold off compared to unprofitable ones is that although multinational firms do not establish all their foreign subsidiaries for profitability, profitable foreign subsidiaries provide for parent firms more opportunities to further broaden and strengthen their multinational firms' global market and competitiveness. In addition, subsidiaries' performance and profitability guide their parent firms towards making sure adequate focus and attention are given to subsidiaries whose productivity and performance may lead to increased profitability and growth of their multinational firm. As a result, a parent firm's review of its subsidiaries' profitability ensures that they provide the needed resources and attention to subsidiaries that may provide them with the required performance and profitability, to further consolidate the multinational firm's improved growth. Hence, where a foreign subsidiary is profitable, its performance may be seen as an opportunity to enhance the multinational firm's overall performance, the divestment or sell-off of such a subsidiary will allow for its resources to be redeployed to other operations where those resources will bring about the desired improved performance and growth for the multinational firm. Therefore, a parent firm after its review of its subsidiaries' performance, will most likely sell-off such a profitable foreign subsidiary that will bring about the needed positive synergy or funds for future investment towards achieving its multinational firm's strategic growth.

Hanson & Song (2003) argued that parent firms, regardless of their subsidiaries' performances, may engage in subsidiary divestments to realign themselves based on their core objectives and values, or towards correcting previous poor investment decisions. While the argument of this study aligns with Hanson & Song (2003) that regardless of a foreign subsidiary's profitability or performance, a parent firm may decide to engage in a subsidiary sell-off to realign its core objectives or to correct previous unfavourable poor investment decisions thereby making it more likely to engage in the divestment of their profitable foreign subsidiaries than their unprofitable counterparts. Such decisions towards the sell-off of a

profitable foreign subsidiary will allow parent firms to realign themselves towards their multinational firms' core objectives and values, or towards correcting their previous poor investment decisions. Additionally, it was noticed that recent divestment studies focused separately on the influence of a subsidiary's negative or positive profitability on its divestment, not only neglecting the fact that multinational firms are made up of both profitable and non-profitable subsidiaries but also that sometimes parent firms engage in the sell-off of both profitable and unprofitable subsidiaries within the same period, as noticed in the study sample (Appendix, Table 1). However, based on the finding of this study, it may be argued that it aligns with Lang*et al's.* (1995) finance-related study, by justifying that parent firms review their subsidiaries' profitability to decide on the sell-off of both their profitable or non-profitable foreign subsidiaries; but are most likely to sell-off their profitable foreign subsidiaries for reasons such as to gain more control on their growing multinational networks, to raise investment capital, or to reduce managerial costs and asymmetries, which will further increase their multinational firms' overall productivity.

The finding of this study indicates that the individual performance or profitability of a divested foreign subsidiary was of significance in its parent firm's decision making, in alignment with the studies of Bandick (2010), Hanson & Song (2003), Jayanthi *et al*. (2009), and Norback *et al*. (2015). Additionally, from a parent-level strategic point of view, the sell-off of a profitable foreign subsidiary may have superior effects on their decision if the intent is towards pursuing a growth goal for the multinational firm based on an efficient resource redeployment objective. As a result, parent firms may decide to sell off a profitable foreign subsidiary because at that point - they will be able to maximise proceeds from the sell-off, which may be used and deployed towards a strategic purpose. Likewise, a parent firm may decide to sell off a profitable foreign subsidiary for the redeployment of its valuable resources to another foreign subsidiary towards their multinational firm's long-term performance improvement. Therefore, the overall significance of parent firms reviewing their subsidiaries' profitability orientation and their likelihood to sell-off a profitable foreign subsidiary rather than

an unprofitable one is most likely to be towards providing needed resources for future investments and cash-flow, and the relative efficiency of the use of their resources.

A significant observation in the finding of this study was that the subsidiaries' profitability orientation had different levels of influence on sell-offs in manufacturing and non-manufacturing multinational firms. The results indicate that while the likelihood of the for sell-off of profitable foreign subsidiaries in both non-manufacturing and manufacturing multinational firms was highly significant and positive, the likelihood for sell-off of profitable foreign subsidiaries in non-manufacturing multinational firms was considerably higher compared to their manufacturing counterparts. This suggests that non-manufacturing multinational firms are more responsive towards their review and decisions on foreign subsidiary sell-offs from the viewpoint of their subsidiaries' profitability orientation than their manufacturing counterparts, which may largely be because of the less diversified and more related operational structures of manufacturing multinational firms compared to non-manufacturing multinational firms. Additionally, while both non-manufacturing and manufacturing multinational firms are likely to be influenced towards strategic actions that will consolidate their multinational productivity, the highly diverse and unrelated operational structures make the non-manufacturing multinational firms more responsive to certain influences, such as cash-flow needs, which may influence them more towards the sell-off of their profitable foreign subsidiaries, compared to manufacturing multinational firms. The weakened responsiveness of manufacturing multinational firms towards the strategic sell-off of their profitable foreign subsidiaries indicates that this may be due to their highly interwoven and interdependent structures, which make them have closer parent-subsidiary relationships and have more knowledge of their subsidiaries' resource capabilities, compared to their non-manufacturing counterparts. Therefore, a manufacturing multinational firm with an increased knowledge of its resource capabilities in a profitable foreign subsidiary will be less likely to sell off that foreign subsidiary, as it is less open to multiple potential industry risks compared to its non-manufacturing counterpart. The non-manufacturing multinational firm, on the other hand, will be more likely to sell-off a profitable foreign subsidiary not only because it is open to

multiple potential industry risks, but also because its operational structure makes it easy to identify strategic options for creating and increasing their base value (Sakhartov *et al*., 2016). It may be argued, therefore, that because non-manufacturing multinational firms are more reactive towards new investments and cash flow requirements, they are more likely to sell off their profitable foreign subsidiaries compared to their manufacturing counterparts.

The finding of this study may have also resolved the ambiguities in the divestment literature associated with the notion that parent firms review and decide separately on divestments of their profitable and unprofitable subsidiaries (Brauer, 2006; Moschieri & Mair, 2008). The finding justifies that the ownership of subsidiaries confers on a multinational firm series of potential benefits, which are akin to the subsidiaries' size, is evaluated based on the strategic review of their subsidiaries' performance on their parent-subsidiary relationship, as compared to focusing only on the financial impact of a subsidiary's performance on its sell-off by its parent firm. It is argued, therefore, that the benefit of owning multiple subsidiaries is not just for their individual high or low profitability and financial contributions to their parent firms but also for other relational generic benefits, such as the knowledge sharing and use of valuable resources, that may be of advantage to their multinational firms because of the subsidiary's profitability. Studies which have found that profitability or unprofitability of a subsidiary influenced its sell-off (Lee & Madhavan, 2010; Liebermann *et al*., 2016; Ryngaert & Scholten, 2010), did not consider the fact that a sell-off requires a buyer, and a buyer is not likely to buy a product which will not result in a growth advantage. As a result, a parent firm selling off an unprofitable foreign subsidiary is less likely to attract a buyer, as compared to selling off a profitable foreign subsidiary. Additionally, a parent firm may only decide to sell off a profitable foreign subsidiary if it is able to provide an advantage to its multinational growth, compared to other subsidiaries in its ownership structure. Therefore, since this study is focused on subsidiaries' profitability orientation, as a parent-subsidiary relational factor, it presents the needed knowledge to resolve the identified ambiguities in investigating the influence of subsidiaries' profitability towards their sell-off separately, since investigating either profitable or unprofitable subsidiaries does not take into consideration the impact of the other

on the parent firm's decision. As a result, this study's finding supports its hypothesis that parent firms do not make decisions separately to either sell-off a profitable or an unprofitable foreign subsidiary but review their subsidiaries' profitability, which allows them to constantly develop their strategic plans and actions towards maintaining and improving their multinational growth, which makes it more likely that a profitable rather than an unprofitable subsidiary will be sold off.

### 6.5 The impact of language commonality

This study finds that parent firms in all the investigated multinational firms' specifications are more likely to sell-off foreign subsidiaries they share a commonality in language with. An assessment of divestment literature indicated that there has been no study that had investigated language commonality as a relational factor, which may influence foreign subsidiaries' sell-off, suggesting that there is a considerable gap in our knowledge about the influence of this factor on parent firms' decisions to divest. However, with this finding indicating no support to this study's hypothesis, it may be argued that parent firms review their foreign subsidiaries in relation to their commonality in a language and that those foreign subsidiaries that share commonality in a language with their parent firm are more likely to be sold off than those that do not. Nonetheless, in justification of this study's findings, and in alignment with findings from related studies, it may be argued that parent firms review their relationships with their subsidiaries, based on their commonality in language to decide on their multinational growth strategies, which may influence their sell-off decisions on foreign subsidiaries they share commonality in language (Björkman & Piekkari, 2009; Brannen *et al*., 2014; Piekkari & Tietze, 2011; Tietze, 2008). While this finding may affirm the findings of related studies on the influence and importance of a common language within a multinational firm's network, and its implications for parent firms' strategic actions on their foreign subsidiaries (Brannen *et al*., 2014; Piekkari & Tietze, 2011; Tietze, 2008), it was necessary for a new study to extend its investigations into other strategic actions and also along the industry affiliations of multinational firms. This is important because most divestment studies have focused on the

mixed industry specification of multinational firms and not on unravelling whether there are any differences in the foreign divestment influencing factors or determinants between manufacturing and non-manufacturing multinational firms. Likewise, a review of the available literature on the significance and influence of language also indicates that the focus of previous studies was tailored to multinational firms in general, and was not industry specific.

Based on the findings of this study, and in alignment with the evidence from previous studies, it is argued that the commonality in language between parent firms and foreign subsidiaries plays an important role in multinational firms' strategic decisions and actions through their control mechanisms, information and resource dependence (Björkman & Piekkari, 2009; Ferner 2000). However, because strategic decisions and actions through control mechanisms are seldom imposed unilaterally by a parent firm on its subsidiaries, the implementation of a foreign subsidiary control mechanism involves the interaction between a parent firm and its subsidiary, which is affected by their similarities or differences in language. Additionally, studies have shown that multinational firms prefer to have a 'common' language across their multinational networks to improve their productivity through effective communication, and to standardise regulating, monitoring and controlling procedures within their multinational networks (Andersen & Rasmussen, 2004; Marschan-Piekkari *et al.,* 1999; Piekkari *et al.,* 2014). However, it is unlikely that all foreign subsidiaries may comply easily with their parent firm's language commonality standardisation, especially where a foreign subsidiary is acquired in a far-flung geographical region which is different to that of its parent firm. As a result, this may have an impact on their parent-subsidiary relationship as it becomes increasingly difficult for the parent firms to assess their foreign subsidiaries' internal processes because of increased cost of communication and information flow due to having always to translate or interpret, which increases the difficulty of knowledge identification and sharing; thereby influencing the decision to sell off that foreign subsidiary (Kangasharju *et al*., 2010; Logemann & Piekkari, 2015; Usunier, 2011). The finding of this study on language commonality, however, may be argued to indicate that the sell-off of a foreign subsidiary that shares a commonality in language with their parent firm is most likely to be due to relocation

of resources in the divested subsidiary to those foreign subsidiaries that do not share language commonality with their parent firms. The intent and decision to sell-off foreign subsidiaries that share a common language with the parent firm after the redeployment or relocation of valuable resources may help increase the parent firms' ability to assess more easily the internal processes of those subsidiaries that had previously been difficult to assess due to language non-commonality which may enhance their multinational growth.

Furthermore, it could also be argued that the reason why language commonality appears to be positively associated with foreign subsidiary sell-offs is that foreign subsidiaries that cannot adjust and adhere to their parent firm's standardised language are most likely to have difficulties in their dealings with the parent firm, as well as understanding its control requirements. From the parent firm's perspective, a foreign subsidiary's inability to adjust towards a standardised language will be noticed through its limited contribution to the multinational firm's corporate activities, and miscommunications between the parent and the subsidiary. A parent firm may also consider the subsidiary as difficult to control as it may not be able to easily scrutinise its activities. Therefore, as discussed earlier, a parent firm may decide to divest in a foreign subsidiary that it shares a commonality in language with so as to relocate specific resources to the foreign subsidiary its shares no language commonality, in order to gain needed control and effectively scrutinise such foreign subsidiary's activities. Additionally, foreign subsidiaries with low competencies in their parent firms' language are most likely to ignore formal procedural rules that are communicated in the standardised language of their parent firms. With the standardisation of language in multinational firms having been found to influence their network cohesion, and increased productivity and performance through sharing of knowledge and human resources, parent firms may be influenced to divest mostly in foreign subsidiaries with language commonality to relocate or redeploy their resources to those foreign subsidiaries that are isolated and disconnected - which may result in their improved performance.

With regards to the finding of this study about the multinational firms' industry affiliation, it is suggested that the reason why the level of influence of language commonality on foreign

subsidiary sell-offs is higher in non-manufacturing multinational firms than in their manufacturing counterparts is because of their highly diverse and unrelated operational structures which makes them have operations easily in different regions. Non-manufacturing multinational firms are more likely to engage in the scrutiny of their foreign subsidiaries to ensure that regardless of their industry relatedness, they are able to derive maximum profitability from their investments; while manufacturing multinational firms may not be as detailed in the scrutiny of their foreign subsidiaries due to their related operational structures. However, with non-manufacturing multinational firms placing more scrutiny on their subsidiaries with unrelated industry affiliations, where the parent firms find it difficult to understand and cannot influence such a foreign subsidiary's procedures, the parent firm may decide to relocate certain resources from a foreign subsidiary it shares language commonality it, in order to influence the foreign subsidiary's procedure and scrutiny. The decision to redeploy or relocate resources from a foreign subsidiary that shares a common language with the parent firm to that which do not - may influence the parent firm's decision to sell off the foreign subsidiary with a common language, if the resource redeployment and relocation will bring about improved synergy within its multinational operational structures.

Additionally, it has been found that it is difficult or impossible for a parent firm to adequately assess and make decisions on the continued value of a resource or a subsidiary that it shares no commonality in a language with (Bordia & Bordia, 2014). Therefore, in the justification of the finding of this study regarding the differences in the level of influence of language commonality in manufacturing and non-manufacturing multinational firms, it is argued that due to the less related structures of non-manufacturing multinational firms, the available resources in unrelated foreign subsidiaries' that share no commonality in language with their parent firms are most likely to be undervalued. This may, therefore, influence the parent firms' strategic decisions to the sell-off of foreign subsidiaries that they share a common language with, to relocate and redeploy resources with foreign subsidiaries they share no language commonality with and are undervalued, in order to be able to adequately evaluate the value of their foreign operations. However, for manufacturing multinational firms, it is

argued that the association of language commonality with their foreign subsidiary sell-offs is lower because their related structures may afford them adequate knowledge of resources and industry performance expectations. For a parent firm to be in the same industry with its foreign subsidiary, this may provide the parent firm with the understanding of certain constraints which a foreign subsidiary may be facing regardless of any difficulty in communication due to language complexities; therefore resulting in the lowered association of the commonality in language with foreign subsidiary sell-offs in manufacturing multinational firms.

### 6.6 The impact of subsidiaries' age

The study showed that the subsidiaries' age does not have a significant influence on foreign subsidiary sell-offs across all the investigated multinational firms' specifications. As discussed in the literature review section, there is no evidence in the literature on the influence of subsidiary age on multinational firms' strategic decisions to divest their foreign subsidiaries. However, with the finding of this study on the subsidiary age, it can be argued, contrary to the findings of Autio *et al.* (2000), that a subsidiary's age influences its relationship with its parent firm, but such a relationship have no influence towards the sell-off of a foreign subsidiary. Consequently, based on the available assertions on the influence of a firm's age, it may be added from the foreign subsidiary divestment perspective that it might be expected that a subsidiary's age would influence a parent-subsidiary relationship, as parent firms may have a closer affinity and familiarity with their young subsidiaries because of the depth of involvement in early stages of their life-cycles. However, parent firms are also likely to have much closer relationships with their older subsidiaries because they have been built and managed over a period, which makes them have the needed knowledge and expertise that may be used and transferred towards new investments and opportunities. In addition to the argument about young subsidiaries' relationships with their parent firms, the knowledge about the growth cycles of firms suggests that young subsidiaries are most likely to be small and this may impact their parent firms' attachment to them, compared to older subsidiaries that are most likely larger and more profitable making them have strong attachments to their parent firms (Fort *et*

*al.*, 2013; Haltiwanger *et al.,* 2013; Westhead *et al.,* 2001). Therefore, while parent firms may not want to sell off their young subsidiaries because of their involvement in the subsidiaries' development and growth, they are also more likely to decide not to sell off subsidiaries that are old because not only are older subsidiaries more profitable, they are also more independent by being able to manage themselves and supporting other young subsidiaries within the multinational network.

Furthermore, previous studies have shown that plant and subsidiary survival is positively related to both their age and size, and that firms using advanced technologies and having high productivity are more likely to adopt new production methods towards increasing their chances of survival (Bandick 2010; Hamilton, 2010; Norback *et al.,* 2015). It may be argued, however, in justification of this study's findings that the age of subsidiaries is not associated with the sell-off of foreign subsidiaries in multinational firms because multinational firms are more likely to acquire the knowledge and expertise towards adopting advanced technologies through increasing the productivity and survival of their young subsidiaries, which makes them unlikely to be sold off. Likewise, older foreign subsidiaries may not be sold based on their age because they would have grown large and have bigger economic impacts on the value of their multinational firms, which may ensure smoother growth and survival paths for younger foreign subsidiaries.

A previously established consensus on firms' growth cycles and survival indicates that as firms grow older their growth rate declines and that older firms have higher survival rates than the young ones (Autio *et al.*, 2000; Zhou & Wu, 2014). Therefore, it may also be argued in justification of the findings of this study that multinational firms need to have a balanced figure of both old and young subsidiaries to maintain their development and growth objective. Resultantly, the subsidiary age was found not to have any influence on the sell-off of foreign subsidiaries because as the growth rate of old subsidiaries declines, the need of parent firms for proportional increases in their growth would have brought about the development of young subsidiaries to sustain their multinational growth. Likewise, because of the lowered survival rates of young subsidiaries, as argued earlier, parent firms may not fully rely on them and

dispose or sell-off their older subsidiaries because older subsidiaries will have acquired the tacit knowledge and expertise for specialised skills that are required and may be used to nurture and train younger subsidiaries within their multinational firms' ownership structures (Hamilton, 2010).

### 6.7 The impact of symmetrical linkage

As with the finding on the influence of host country growth, the influence of symmetrical linkage as a parent-subsidiary relational factor also appears to be negatively associated with the sell-off of foreign subsidiaries within the mixed and non-manufacturing multinational firms' specifications. The finding with regards to the impact of symmetrical linkage, though negatively associated with the foreign subsidiary sell-offs, supports this study's position that parent firms are less likely to sell off foreign subsidiaries with which they share a symmetrical linkage. Although, this study's position on symmetrical linkage is about both product and industry relatedness, its finding aligns with others in the literature that a subsidiary's industry unrelatedness to its parent firm influences the parent firm's decision to engage it in a sell-off (Bergh, 1995; Berry, 2010, 2013; Brauer, 2006; Coudounaris, 2017; Moschieri & Mair, 2008). As discussed earlier, the reason this study has taken a step further to investigate symmetrical linkage in terms of both industry and product relatedness, is because while there may not be a linkage between a foreign subsidiary and a parent firm, in terms of their industry, there may be a linkage between them based on their products. This is because evidence in the literature has shown that while a parent firm's industry may be manufacturing, it could be producing products for use in its non-manufacturing units/subsidiaries and vice versa. Therefore, it is argued that the elongation of relatedness into symmetrical linkage may have led to a distinct difference in this study's findings between divestment influences of manufacturing and non-manufacturing multinational firms. While non-manufacturing parent firms are less likely to sell off their symmetrically linked foreign subsidiaries, the symmetrical linkage between parent firms and their foreign subsidiaries in their manufacturing counterparts has no influence on parent firms' decisions to sell-off of their foreign subsidiaries.

Additionally, the finding on symmetrical linkage may also help to resolve ambiguities in the divestment literature associated with relatedness from previous studies. This is because the investigation of this study was from a parent-subsidiary level perspective, while the earlier studies were focused on the subsidiary-level perspective. Furthermore, as explained above with the subsidiaries' profitability orientation, previous investigations on subsidiary relatedness were mostly concerned with the influence of the profitability and performance of related or unrelated subsidiaries on their parent firms' divestment decisions, rather than being focused discretely on the influence of the relatedness factor itself. For instance, in their review of divestment literature, Brauer (2006), Moschieri & Mair (2008) and Kolev (2016) pointed out that the findings in most divestment literature were not distinctive enough about whether it is the relatedness/unrelatedness or the performance factor that influenced the parent firms' decisions to divest. This is because some findings indicated that the unrelatedness between a parent firm and its unprofitable subsidiary influenced their decisions to divest the subsidiary, or that the relatedness between a parent firm and its unprofitable subsidiary influenced their decision to divest in the subsidiary to redeploy resources (Brauer, 2006; Moschieri & Mair, 2008; Kolev, 2016). Further still, some studies have also indicated that a highly diversified parent firm is more likely to engage in the sell-off of a related or an unrelated subsidiary, even if profitable (Lieberman *et al*., 2016). A review of studies by Brauer (2006), Bergh (1995), Berry (2010, 2013), Liebermann *et al*. (2016), Mata & Portugal (2002) and Moschieri & Mair (2008) indicated that they were not categorical enough to show whether it is the relatedness or unrelatedness that discretely influenced subsidiary divestments. The findings of this study, on the other hand, have been able to identify discretely that non-manufacturing parent firms are less likely to sell off foreign subsidiaries that are symmetrically linked to them, while there was no relationship between symmetrical linkage and foreign subsidiary sell-offs in manufacturing firms.

The justification, therefore, for the finding on the influence of this relational factor on foreign subsidiary sell-offs in non-manufacturing multinational firms is that the high diversification likelihood of non-manufacturing multinational firms, which makes them have

less related operational multinational structures, might have resulted in the negative association of this factor with the sell-off of foreign subsidiaries. However, as for the manufacturing multinational firms, it is argued that the reason for there being no influence between the symmetrical linkage and the sell-off of foreign subsidiaries is due to the fact that they are more likely to internationalise via green-field ventures, thereby having less diversified and mostly related operational structures where resources are easily shared and transferred within their multinational networks (Chen *et al*., 2013; Norback *et al*., 2015). Additionally, non-manufacturing multinational parent firms, and due to their high levels of diversification, are known to internationalise mostly by acquisitions of foreign firms (Oesterle *et al*., 2013). Therefore, it may be argued in justification of this study's findings that because the internationalisation method of non-manufacturing multinational parent firms is mostly through acquisitions and have highly diversified structure, they have weakened relationships with their foreign subsidiaries, which is the reason why they are more likely to be influenced in their sell-off decisions by symmetrical linkage. Their manufacturing counterparts, on the other hand, are not influenced by symmetrical linkages with their foreign subsidiaries because they internationalise mostly by green-field ventures, have more related structures and with little or no diversified structures, which makes them have a stronger relationship with their foreign subsidiaries.

### 6.8 The impact of geographical linkage

This study revealed that geographical linkage was positively associated with the sell-off of foreign subsidiaries across all the investigated multinational firms' specifications. The finding, therefore, did not support the hypothesis of this study that parent firms are less likely to sell off foreign subsidiaries they share a geographical linkage with, but foreign subsidiaries that share geographical linkage with their parent firms are more likely to be sold off. However, this finding aligns with those of Baaji & Slangen (2013), Bandick (2010), and Norback *et al.* (2015) that the geographical or locational difference between a parent firm and its foreign subsidiary influences the parent firm's strategic decisions and actions towards such a

subsidiary. Therefore, regardless of the difference in the industry affiliation between a parent firm and its foreign subsidiary, the geography or the region in which the foreign subsidiary is located influences its parent firm's decisions towards the divestment of that foreign subsidiary, whereby those foreign subsidiaries that share geographical linkage with their parent firms are more likely to be sold off than those with which they share no geographical linkage.

As discussed in the literature review, the strength of multinational firms in terms of their competitiveness is in their global geographical spatial and exposure, and this impacts positively on their growth (Beugelsdijk *et al.,* 2010; Dai *et al.,* 2013). However, a multinational firm's geographical spatial is also most likely to impact on the relationships between a parent firm and its subsidiaries, as foreign subsidiaries that share geographical linkage (i.e. which are located in the same region) are more to have a stronger parent-subsidiary relationship than those that do not. The finding of this study indicates a strong correlation between the geographical linkage of foreign subsidiaries with their parent firms and the subsidiaries' profitability and symmetrical linkage, which is consistent with the finding of Baaji & Slangen (2013) that the parent-subsidiary distance impacts positively on subsidiaries' performance. Therefore, where a foreign subsidiary is not geographically linked with its parent firm, there is an increased possibility of the subsidiary having low performance and a weakened parent-subsidiary relationship because its parent firm may find it difficult to share or transfer resources that may help improve the subsidiary's performance. This study's finding that foreign subsidiaries that are geographically linked to their parent firms are more likely to be sold off indicates that parent firms use divestment as a strategic tool and not as a reactive tool because foreign subsidiaries that are geographically linked are more likely to be profitable than those that are not. As a result, selling off a geographically linked foreign subsidiary will most likely be to consolidate the multinational's overall performance, in order to redeploy or relocate valuable high performing resources that have been easily identified because of their regional linkage to other foreign subsidiaries that have increased the potential for improved performance.

Foreign subsidiaries of multinational firms are sometimes faced with the hazard of state expropriation, “the infringement of a firm’s property by the host country and its agent” in emerging markets (Jia & Meyer, 2017). The effect of state expropriation which takes different forms, including dramatic events such as political regime shifts, violence, and the direct and indirect expropriation of private assets, has an adverse impact on multinational firms’ revenue streams (Jia & Meyer, 2017). While it may be argued, in justification of this study’s findings, that the impact of state expropriation may result in multinational firms strategically deciding to sell-off their foreign subsidiaries in such locations to avoid or reduce adverse impacts on their overall performance and growth, the influence of the parent-subsidiary geographical linkage may impact on the parent firm’s decision. As a result, parent firms may be reactive in their decision to sell off those foreign subsidiaries they are geographically linked with - where the effect of state expropriation is more likely to impact on their multinational growth, than the sell-off of those they are not geographically linked with.

Furthermore, as indicated in the literature review, the geographical distance between a parent firm and its subsidiaries may influence the subsidiaries’ performance and productivity due to the impact of monitoring, coordination of activities, and the increased cost of communication and resource sharing between the parent firm and its non-geographically linked foreign subsidiaries. However, because multinational firms may want to take advantage of new opportunities and markets regardless of the geographical distance (Mata & Portugal, 2002; Mata & Freitas, 2012), there is an increased likelihood that a multinational firm may strategically decide in the sell-off of foreign subsidiaries they are geographically linked to, having known the valuability of its resources, to redeploy or relocate to other locations they are not geographically linked, to take advantage of new opportunities. This is also because the literature indicates that multinational firms are driven to geographical locations with greater opportunities and advantages towards their global integration and responsiveness; such as improved labour quality and knowledge base, infrastructure, and proximity to key stakeholders, such as customers and competitors (Baaji & Slangen 2013; Berry, 2010; Beugelsdijk *et al.*, 2010; Dellestrand & Kappen, 2012). Additionally, location-specific factors

have been found to influence the decisions of parent firms towards their multinational structure objectives and goals (Karim & Capron, 2016; Lieberman, Lee, & Folta, 2016). It is, therefore, argued in justifying the finding of this study that because multinational firms are likely to look-out for locations that will offer them increased integration and responsiveness, and impact favourably on their productivity and growth, where a parent firm finds such a location, there is an increased likelihood that the parent firm will likely review those foreign subsidiaries that it shares geographical linkage with, to divest and redeploy or relocate its resources to those locations that the parent firm may not be geographically linked to but affords the multinational firm with increased global integration and responsiveness.

This study affirms the findings of previous studies that investigated the influence of geographical factors, such as space and location, on foreign subsidiary survival. Dai *et al.* (2013) indicated that the survival of a foreign subsidiary in a conflict zone is dependent on its proximity to its parent firm or other sister subsidiaries. Therefore, based on Dai *et al.* (2013), where there is a geographical linkage between a parent firm and its foreign subsidiary in a conflict zone, there is a reduced likelihood of the parent firm selling off such foreign subsidiary. As a result, in justification of the finding of this study, a parent firm will most likely sell-off a foreign subsidiary that is geographically linked to its parent firm or other sister subsidiaries as a strategic tool to consolidate its multinational performance or competitive edge in its global market. Furthermore, multinational firms are known to expand and stay in certain locations if they are unfamiliar and dissimilar to their home regions to learn and gain new experiences in spite of the geographical uncertainties or threats that may impact on their competitiveness and long-term growth objectives (Baaij & Slangen, 2013; Beugelsdijk, McCann, & Mudambi, 2010). Therefore, for parent firms to gain such experience towards withstanding geographical uncertainties and threats, they will most likely sell-off those foreign subsidiaries they are geographically linked to, to push globally outwards to gather sufficient knowledge and experience in regions that are not within their geography.

## 6.9 Chapter summary

This chapter discussed the study's findings on the influence of various parent-subsidiary relational factors on the sell-off of foreign subsidiaries. The inclusion of the control variables enabled the study to provide a better understanding of parent firms' influences on their foreign subsidiary sell-offs. The findings support only two of the study's hypotheses on all the investigated multinational firms' specifications (i.e. subsidiary size and profitability). The findings also indicated partial support for another two of the study's hypotheses which is because of the multinational firms' industry affiliations (i.e. the host country growth and symmetrical linkage). However, the findings indicate of no support for the three of study's hypotheses on any of the investigated multinational firms' specifications (i.e. language commonality and geographical linkage because they are positively associated with foreign subsidiary sell-offs, while subsidiary age indicated to have no association with the foreign subsidiary sell-offs).

Additionally, the discussions of the findings in this chapter provided the answers to this study's research questions with reference to its aims and objectives on the extent to which parent-subsidiary relational factors influence the sell-offs of foreign subsidiaries and the differences or similarities based on the multinational firms' core industries (manufacturing and non-manufacturing). The findings improve our understanding of the influence of these discrete independent factors on foreign subsidiary divestments, rather than combinations of multiple factors.

## CHAPTER 7: Conclusion

### 7.1 Introduction

This chapter reviews the findings and discussions in chapters 5 and 6, and provides a summary of the influence of parent-subsidiary relational factors on foreign subsidiary sell-offs, and the differences in their associatedness in manufacturing and non-manufacturing multinational firms. The study developed its arguments using the integrative and responsive (IR) and resource-based theoretical frameworks to provide an understanding of the parent-subsidiary relationship in a multinational firm setting. The use of the theoretical framework in building this study's argument was based on its use in previous divestment and related parent-subsidiary relational studies (e.g. Alessandri *et al.,* 2012; Ang *et al.,* 2014; Baaij & Slangen, 2013; Bandick, 2010; Benito, 2005; Berry, 2010, 2013; Björkman & Piekkari, 2009; Cantwell, 2009; Chen & Moore, 2010; Chidlow *et al.,* 2015; Chung & Beamish, 2005; Chung *et al.,* 2010; Dai *et al.,* 2013; Delios & Beamish, 2001; Dhanaraj & Beamish, 2009; Diego *et al.,* 2007; Dossi & Patelli, 2009; Engel *et al.,* 2013; Fort *et al.,* 2013; Gates & Egelhoff, 1986; Gaur & Lu, 2007; Ghemawat, 2007; Haugland, 2010; Johnston & Menguc, 2007, Piekkari *et al.,* 2014; Procher & Engel, 2018; Song & Lee, 2017; Vidal & Mitchell, 2018), as they have provided evidence that parent-subsidiary relationships influence parent firms' strategic decisions and actions leading to their foreign subsidiary sell-offs.

An extensive review of the relevant theoretical and empirical literature was carried out in order to develop the study's research objectives (Chapter 1) into reviewing relevant literature (Chapter 2) and then a series of hypotheses (Chapter 3). As indicated in the methodology chapter (Chapter 4), the data were collected using Bureau van Dijk packages (Osiris and Zephyr). 642 foreign subsidiaries from 447 multinational parent firms were found to be sold-off in 2016. The data were then processed and analysed to identify the influence of parent-subsidiary relationships on divestment. The data analysis employed the use of a binomial logistic regression model to determine the influence of these parent-subsidiary relational factors on the sell-off of foreign subsidiaries (Chapter 5). The findings of the data analysis are discussed in Chapter 6. The following sections are dedicated to presenting the

study's contributions to knowledge, as well as the study's implications and limitations, and directions for further research. First of all, however, a summary of the main findings is provided.

## 7.2 Overview of study findings

The motivation of this study was to provide an increase in the body of knowledge on foreign subsidiary sell-offs, specifically from the purview of the parent-subsidiary relationship, and to highlight any differences and similarities in parent firms' divestment influences based on their core industry (i.e. manufacturing and non-manufacturing). The study extended previous findings and provided a number of new findings with regards to the influence of parent-subsidiary relational factors on foreign subsidiary sell-offs.

### 7.2.1 Study overview on subsidiary size

This study's hypothesis on subsidiary size was that parent firms are more likely to sell off small-sized foreign subsidiaries than the large-sized ones. While there is evidence that subsidiary size may impact on a multinational firm's strategic decisions (Johnston & Menguc, 2007), and also that subsidiaries' ownership concentration and parent firm size may influence a parent firm's decision to divest a subsidiary (Bergh, 1995). Importantly, no study has been identified to investigate the influence of subsidiary size (based on workforce) on foreign divestments or sell-offs. This study finds that the size of a foreign subsidiary is positively associated with the sell-off of foreign subsidiaries, which indicates that the larger the subsidiary size, the less likely will the parent firm engage it with a sell-off. The study also showed that there is no difference in the divestment influence between manufacturing and non-manufacturing multinational firms in relation to subsidiary size.

### 7.2.2 Study overview on host country growth

This study's hypothesis on host country growth was that parent firms are less likely to sell off foreign subsidiaries with higher host country growth. Available knowledge about the

influence of host country growth indicates that the host country growth of a poorly performing subsidiary offsets its parent firm's divestment decisions (Berry, 2013). However, there is no indication whether this parent-subsidiary relational factor influences parent firms' divestment decisions of their foreign subsidiaries. This study's finding indicates support for its hypothesis that the greater the host country growth of a foreign subsidiary, the less likely it is to be sold off in mixed industries' and in manufacturing multinational firms, but no influence was found for non-manufacturing multinational firms.

### 7.2.3 Study overview on subsidiaries' profitability

This study's hypothesis on subsidiaries' profitability was that parent firms are more likely to sell off profitable foreign subsidiaries than unprofitable foreign subsidiaries. Evidence from previous literature on the influence of subsidiaries' profitability is inconclusive and no previous knowledge of its influence as a parent-subsidiary relational factor was identified. This is because while most of the previous studies that focused on profitability and performance indicated that the subsidiaries' unprofitability and poor performance significantly influenced their divestment (Berry, 2010; Duhaime & Grant, 1984; Chang, 1996; Hamilton and Chow, 1993; Hoskisson *et al.,* 1994; Li & Liu, 2015; Markides, 1992; Montgomery & Thomas, 1988; Quigley & Hambrick, 2012; Shimizu & Hitt, 2005; Sousa & Tan, 2015); others identified the subsidiaries' profitability influence on their divestment (Lee & Lin, 2008; Pashley & Philippatos, 1990; Powell & Yawson, 2005; Ryngaert & Scholten, 2010). The study's finding presents support for the influence of subsidiaries' profitability as a relational factor on foreign subsidiary sell-offs. The study found that parent firms are more likely to sell off their profitable foreign subsidiaries than unprofitable ones and that a subsidiary's profitability was positively associated with the foreign subsidiary sell-offs across all investigated multinational firms' specifications.

### 7.2.4 Study overview on language commonality

The hypothesis of this study on language commonality was that parent firms are less likely to sell off foreign subsidiaries they share the same language with. No evidence on the influence of language commonality, as a parent-subsidiary relational factor, on foreign divestment/sell-offs was found in the literature. However, studies that had investigated the influence of language within a multinational firm setting found that it influences the parent firm's strategic decisions and actions (Andersen & Rasmussen, 2004; Barner-Rasmussen & Björkman, 2007; Björkman & Piekkari, 2009; Brannen *et al.,* 2014; Janssens & Steyaert, 2014; Kangasharju *et al*., 2010; Logemann & Piekkari, 2015; Marschan-Piekkari *et al.,* 1999; Piekkari *et al.,* 2014; Tietze *et al*., 2003; Usunier, 2011). This study's finding did not support its hypothesis but presented support for the influence of language commonality on foreign subsidiary sell-offs across all the multinational firms' specifications, indicating that parent firms are more likely to sell-off foreign subsidiaries with which they share the same language.

### 7.2.5 Study overview on subsidiaries' age

The hypothesis of this study on subsidiary age was that parent firms are more likely to sell off their young foreign subsidiary than their older ones. No previous evidence about the influence of subsidiary age on foreign divestment/sell-off has been found in the literature. Studies that focused on age in strategic management were mainly focused at the parent firm-level or specifically at the subsidiary-level, and as a result, indicated that young businesses/firms are typically small and exhibit very different cyclical dynamics than older businesses/firms do. The findings present no support for the influence of subsidiary age, as a relational factor, towards foreign subsidiary sell-offs. This study found that subsidiary age was not associated with foreign subsidiary sell-offs across all the multinational firms' specifications.

### 7.2.6 Study overview on symmetrical linkage

The hypothesis of this study on symmetrical linkage was that parent firms are less likely to sell off foreign subsidiaries they share a symmetrical linkage with. No knowledge or evidence on the influence of symmetrical/asymmetrical linkage, based on industry and product similarities and differences, as a parent-subsidiary relational factor, towards divestment/sell-offs of foreign subsidiaries was found in the literature. Previous studies focused on the influence of relatedness and unrelatedness factors based on their industry similarities and differences, though many of them may be considered inconclusive. While most of the studies that focused on subsidiaries' relatedness indicated that the subsidiaries' unrelatedness to their parent firms significantly influenced their divestment (Bergh, 1995; Berry, 2010; Chang & Singh, 1999, Harrigan, 1981, 1985; Hoskisson & Johnson; 1992; Woo *et al.,* 1992), others indicated that even their relatedness had a significant influence on their divestment (Berry, 2013; Lieberman *et al.,* 2016). The study's findings show support for its hypothesis as it found that the influence of symmetrical linkage is negatively associated with the sell-offs of foreign subsidiaries, which means that parent firms are less likely to sell off foreign subsidiaries with which they share symmetrical linkage, in the mixed industries and non-manufacturing multinational firms' specifications. This study's finding indicated however that no influence of this factor was found in manufacturing multinational firms.

### 7.2.7 Study overview on geographical linkage

The hypothesis of this study on geographical linkage was that parent firms are less likely to sell off foreign subsidiaries they share a geographical linkage with. No evidence on the influence of the geographical linkage as a parent-subsidiary relational factor was found in the literature. Additionally, there have been more studies on the influence of a parent-subsidiary distance on the subsidiary's performance, the parent-subsidiary relationships, and on some parent firm's strategic intents (Ambos & Mahnke, 2010; Baaij & Slangen, 2013; Beugelsdijk *et al.,* 2010; Beugelsdijk, 2010, cited in Asmussen *et al*., 2011; Cuervo-Cazurra *et al.,* 2007; Ghemawat, 2001; Mudambi & Swift, 2012; Nachum *et al.*, 2008; Piscitello, 2011;

Porter, 2000), than on foreign subsidiary divestments (Belderbos, 2003, 2005; Belderbos & Zou, 2006, 2009; Chidlow *et al.,* 2015, Colantone & Sleuwaegen, 2010; Dai *et al*., 2013). The study's findings present no support for its hypothesis as it was found that geographical linkage was positively associated with the sell-off of foreign subsidiaries indicating that parent firms are more likely to sell off foreign subsidiaries they share a geographical linkage with.

### 7.3 Contribution to knowledge

This study extends our knowledge of foreign subsidiary sell-offs and highlights the importance of investigating divestment influence from the path dependency of parent-subsidiary relationships perspective, as compared to focusing solely on the parent firm- or the subsidiary-level. The study also highlights the importance of investigating multinational firms' divestments based on the parent firms' industry affiliations through its empirical analyses to present a better understanding of the similarities and differences in the factors that may influence their foreign subsidiary divestments in manufacturing and non-manufacturing multinational firms. As a result, this study's first contribution to knowledge is indicating that while there are similarities in multinational firms' divestment decisions, however, there are also differences in divestment decisions of multinational firms due to parent firms' core industry affiliations, which previous studies have not identified. Furthermore, the study's analyses of parent-subsidiary relationships within an international divestment perspective reveal its second important contribution to knowledge, which is that foreign subsidiary sell-offs are interdependent and dynamic processes for intertemporal adjustment within a multinational resource network, for increased integration and responsiveness towards achieving the multinational firms' growth objective. Therefore, by using subjective measures of parent-subsidiary relationship, the study covers a major research gap as far as the impact of the firm- and country-level factors on parent-subsidiary relationships.

Although, the IR framework and the resource-based perspective have both been used in studies to expand on knowledge relating to multinational firms' responsiveness towards uncertainties and opportunities that may influence their multinational growth and objectives.

The IR framework, unlike the resource-based perspective, has not been well explored within the divestment paradigm. Therefore, thirdly, this study contributes to knowledge with its extension of the IR framework with the resource-based perspective into the divestment paradigm to increase understanding of the impact of factors that impact parent-subsidiary relationships, and further providing justifications that these factors influence the decisions of parent firms concerning the sell-off of their foreign subsidiaries because of the multinational firms' need and use of their resources for integration and responsiveness within the multinational network. Additionally, the fourth contribution of this study through its findings is reducing the ambiguities from previous studies by engaging its investigations and analyses using discrete and not a combination of factors. Thereby indicating discretely, the level of influence an individual factor have on parent firms' decisions towards changes to their resource bases via addition, deletion, reconfiguration and/or recombination on whether to engage in foreign subsidiary sell-offs or not. This also shows that intersecting analysis of divestment decisions with multiple factors may not always present a clear understanding of the factors and their level of influence.

This is the first empirical study to have investigated these firm- and country-level factors from a position of their impact on the parent-subsidiary relationships towards a parent firm's decision to sell off its foreign subsidiaries. Hence, as its fifth contribution, this study presents a unique input to the divestment literature by explaining the significance of these factors and the levels of influence they have on parent firms' decisions in the divestment of their foreign subsidiaries. For instance, language commonality and geographical linkage between a parent firm and its subsidiaries cannot be a safeguard for foreign subsidiaries that they cannot be sold off, as both factors make it easy for parent firms to identify resources that can be used to increase their global integration and responsive. Likewise, this study's finding that parent firms are more likely to sell-off profitable foreign subsidiaries contributes to increasing knowledge that such actions by multinational firms are towards freeing resources for increased their integration and responsive to strengthen other subsidiaries within the network or focus on new opportunities.

Finally, the last contribution of this study to knowledge is based on the impact of subsidiaries' age on parent-subsidiary relationships and its influence on foreign subsidiary sell-offs. Having found no influence of this factor on foreign subsidiary sell-offs, it indicates that opportunities and uncertainties that affect multinational growth make it difficult for them to engage in sell-offs because of the foreign subsidiaries' age. Multinational firms need their old and young foreign subsidiaries as an opportunity to learn and improve on their managing of foreign markets and selling off a subsidiary due to age will most likely hamper their opportunity to learn and improve their competitiveness in their global markets.

### 7.4 Implications for practitioners

Based on the findings, there are some useful practical implications and recommendations for practitioners in the multinational firm environment. The study has indicated that the parent-subsidiary relationship based on the identified factors is not only critical towards ensuring relation-specific investment or internationalisation opportunities, but also in deciding on divestments that may have a significant impact on the multinational firm's growth goals and objectives. Additionally, this study will add considerably to the understanding that parent-subsidiary relationships are of significance and strategic importance towards a multinational firm's growth. Therefore, just as much as host-home country relational factors are significant to multinational firms' strategic decisions, so are the firm- and industry-level specific relational factors in strategic decisions that may influence them towards a foreign subsidiary sell-off. The findings of this study also indicate that parent firms structure their subsidiaries' portfolio review with regards to their divestment decisions based on their relationships with their foreign subsidiaries, which suggests that these foreign subsidiary sell-offs may be opportunistic strategies rather than reactive strategies, as previous divestment studies have indicated. For instance, with regards to profitability orientation, a parent firm may decide to sell off a profitable foreign subsidiary because it provides the multinational firm with an opportunity to improve its overall performance and growth. Otherwise, a parent firm may decide to sell off an unprofitable foreign subsidiary because of an opportunity to relocate its

resources to another location, which may bring about improved performance and growth. Likewise, a parent firm may decide to sell-off a foreign subsidiary to which it is symmetrically or asymmetrically linked and redeploy or reconfigure its resources, which may be used to take advantage of an opportunity for growth in its global market.

As a result, the first implication of this study to practitioners is that in their multinational firm's strategic plans and decisions, where a foreign subsidiary sell-off is identified as an option, decisions should prioritise strategies that demonstrate a tight strategic fit based on the parent-subsidiary relationship. A tight strategic fit based on the parent-subsidiary relationship will enable multinational firms to achieve better progress towards their overall strategic goals, in both the short- and long-term because of easy identification and access to valuable resources for integration and responsiveness. Furthermore, to avoid strategic misfits that may lead to a foreign subsidiary sell-off, managers should emphasise evaluations based on parent-subsidiary relationships, as these may increase the level of trust and commitment between parent firms and their subsidiaries towards building future relationships and interactions for the growth and sustainability of their multinational firms. Lastly, an implication of this study to practitioners, is increasing parent firms' awareness and understanding that they can use their relationships with foreign subsidiaries to build high-performing resources that may later be used to reinvest or strengthen other operating activities through divestment for their future integration and responsiveness to opportunities and uncertainties that may affect their multinational firms' growth. In addition, managers who are responsible for formulating foreign divestment decisions should also be aware of the potential decision trap – that is not taking their specific industry into deep consideration in their decision processes. As such, divestment decisions by managers should focus and be built around their multinational firms' core industry, and the relational differences with their subsidiaries, as this will most likely bring about the desired improvements to multinational growth and productivity.

### 7.5 Research limitations and directions for further research

This study, like any other research study, is subject to a number of limitations and it is believed that these limitations will open up new directions for future research. As a result, this section presents a summary of the identified limitations observed during the course of this research journey. Firstly, this study might not have investigated all the factors that may influence parent-subsidiary relationships. The study focused mainly on seven factors – namely the subsidiaries' size, host country growth, the subsidiaries' profitability orientation, language commonality, subsidiaries' age, and the symmetrical and geographical linkages. Two other relational factors, that is the country risk factor, and the subsidiaries' operating revenue/turnover, were included in the investigations to only control the bias effects of the interested relational factors. The study's statistical analyses were based on data that had revealed approximately 1% of the wholly-owned subsidiaries that were sold off across the investigated multinational firms' specifications during the identified period were foreign, and the results aligned with the findings from related studies. Therefore, future research should investigate other relevant relational factors and interactions that may be of importance to parent-subsidiary relationships, in order to gain a wider understanding and provide deeper explanations of how and why these influences are likely to be associated with foreign subsidiary divestments. Additionally, based on the findings on the factors of symmetrical linkage and host country growth, there is a need for future studies to be more specific with their multinational specifications and identifications in their research findings, as this may have been the cause of the ambiguities observed in previous divestment studies.

The measurement of some factors that impact on parent-subsidiary relationships using a binary scale and others in rating scale can be subject to criticism in terms of validity or reliability. For instance, subsidiary profitability in rating scales and not in binary scales may help uncover at what level of subsidiaries' profitability with the parent firm be influenced to sell-off. However, these measurement approaches have been used previously in the relevant literature (e.g. Berry, 2013; Sousa & Tan, 2015). Accordingly, the search for other adequate methods to tackle issues of measurement may be an interesting path for further research. The

quantitative conceptualisation of the measures of parent-subsidiary relational factors without ensuring the participation of individuals from the relevant parent firms and their foreign subsidiaries limits the knowledge that may improve our understanding of how these relational factors influence the actual parent-subsidiary relationships. The non-participation of individuals and key executives from multinational firms might have led to an overlooking of vital information and knowledge that could be relevant to future literature and knowledge on the impact of these relational factors, and their contribution to their overall multinational growth value. However, the large sample size is a strong point towards the validity of this study. Additionally, the extension of the study period to a number of years by accumulating more data in future studies may enhance our understanding of the factors influencing divestment decisions.

Finally, the use of newer data in a study of multinational divestments, compared to previous studies which used older data, may further influence future studies, as some of the findings of this study contradict those of previous studies. This may be due to changes in global international business strategies over the years. Furthermore, to deepen knowledge, future studies may be qualitative or with the use of mixed or advanced quantitative approaches to identify whether or not there may be significant additions to our knowledge on divestments, particularly with regards to the influence of parent-subsidiary relationships. Such advances in knowledge may lead to an increased understanding of changes in multinational firms' strategic decisions with regards to their foreign divestments based on parent-subsidiary relational factors. For instance, such a study may provide a clearer perspective of current events in international divestment with regards to when and why parent firms' strategic actions are favourable towards the sell-off of unprofitable or profitable foreign subsidiaries, and when or why subsidiaries' profitability may not influence their decision to divest.

### 7.6 Study summary

This study has provided several important insights into issues relating to parent-subsidiary relationships and, the relational factors influencing parent firms' foreign subsidiary

sell-offs. The most important motive of this study was towards bridging the identified knowledge gap in the foreign divestment literature, particularly with regards to divestment determinants where the influence of a parent-subsidiary relationship had yet to be investigated. Additionally, it is believed that investigating the foreign subsidiary divestment influence from a parent-subsidiary relationship perspective may have helped to resolve some of the ambiguities identified in previous divestment studies. This study provides clarity on previous findings and adds to the limited body of knowledge on foreign subsidiary divestments, in particular with its differentiation between manufacturing and non-manufacturing multinational firms. The differentiation of multinational firms based on their parent firms' industry affiliations helped to provide clarity on the similarities and the differences in parent-subsidiary relationships that may have influenced the parent firms' divestment decisions, and which have not been established previously. Furthermore, this study has been able to take the advice of previous studies, such as Brauer (2006), Berry (2013), Moschieri & Mair (2008) and Kolev (2016), which called for future research to resolve some of the ambiguities of previous studies. This is true particularly in reaction to the significance of unprofitability and profitability factors, as most studies have not discretely investigated these factors to determine their influence on parent firms' divestment decisions. Nonetheless, this study's data and its conceptualisation of measures are believed to have provided the needed explanation towards a better understanding of why multinational firms are likely to divest their foreign subsidiaries regardless of whether they have positive or negative profitability.

To conclude, despite the limitations identified in section 6.5, this study is considered distinctive, as it provides a valuable contribution to divestment literature, and offers guidance for future foreign divestment and related studies' research. Furthermore, the study provides a better understanding of how parent firms are influenced towards their foreign subsidiary divestments based on their parent-subsidiary relationships, in view of the integrative and responsiveness framework in both manufacturing and non-manufacturing multinational firms. As a result, it is believed that this study may assist researchers and practitioners in generating

ideas for future research within and outside of the international business strategy study dimension.

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## Appendix

**Table A1: Summary of the extracted information on multinational firms and their foreign subsidiary sell-offs in 2016**

| Multinational firm name | Country code | Parent firm industry | No. of divested subsidiaries | Total no. of subsidiaries | No. of wholly-owned foreign subs. (pre-sell-off) | No. of profitable foreign subs. (pre-sell-off) | Geographically linked subsidiaries (pre-sell-off) | Symmetrically linked subsidiaries (pre-sell-off) | Subsidiaries with a common language (pre-sell-off) |
|---|---|---|---|---|---|---|---|---|---|
| 3I GROUP PLC | GB | Non-manufacturing | 3 | 156 | 93 | 58 | 43 | 20 | 16 |
| 360 CAPITAL GROUP | AU | Non-manufacturing | 1 | 50 | 1 | 1 | 0 | 0 | 0 |
| 8TELECOM INTERNATIONAL HOLDINGS CO., LTD | BM | Non-manufacturing | 1 | 5 | 3 | 2 | 0 | 0 | 1 |
| AAR CORPORATION | US | Non-manufacturing | 1 | 32 | 3 | 2 | 0 | 1 | 0 |
| ABB LTD | CH | Manufacturing | 1 | 351 | 337 | 197 | 82 | 168 | 45 |
| ABEONA THERAPEUTICS INC. | US | Manufacturing | 1 | 7 | 1 | 1 | 0 | 0 | 0 |
| ABBOTT LABORATORIES INC. | US | Manufacturing | 2 | 450 | 318 | 152 | 18 | 120 | 49 |
| ABENGOA SA | ES | Non-manufacturing | 1 | 448 | 213 | 134 | 11 | 112 | 68 |
| ABN AMRO GROUP NV | NL | Manufacturing | 2 | 66 | 20 | 13 | 8 | 10 | 5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ACCEL S.A.B. DE C.V. | MX | Manufacturing | 1 | 11 | 2 | 1 | 0 | 0 | 1 |
| ACCENTURE PLC | IE | Non-manufacturing | 4 | 349 | 311 | 219 | 103 | 176 | 91 |
| ACCOR SA | FR | Non-manufacturing | 2 | 231 | 115 | 70 | 44 | 56 | 12 |
| ADVANCED MICRO DEVICES INC | US | Manufacturing | 2 | 44 | 21 | 15 | 1 | 12 | 5 |
| AEGON NV | NL | Manufacturing | 5 | 421 | 53 | 29 | 13 | 27 | 2 |
| AEI CORPORATION LTD | SG | Manufacturing | 1 | 3 | 1 | 1 | 0 | 0 | 0 |
| AIR PRODUCTS AND CHEMICALS INC. | US | Manufacturing | 1 | 222 | 183 | 118 | 5 | 106 | 20 |
| AKZO NOBEL NV | NL | Manufacturing | 2 | 490 | 442 | 277 | 111 | 225 | 49 |
| ALBEMARLE CORPORATION | US | Manufacturing | 1 | 88 | 68 | 43 | 3 | 34 | 15 |
| ALKERMES PHARMA IRELAND LTD | IE | Manufacturing | 1 | 21 | 12 | 8 | 1 | 8 | 8 |
| AKTSIONERNOE OBSCHESTVO MAIKUBEN VEST KHOLDING | KZ | Manufacturing | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| ALLIANZ SE | DE | Manufacturing | 1 | 4052 | 1198 | 648 | 380 | 443 | 89 |
| ALTICE NV | NL | Manufacturing | 1 | 4 | 4 | 4 | 3 | 3 | 2 |

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|---|---|---|---|---|---|---|---|---|---|
| ALSTOM SA | FR | Manufacturing | 2 | 173 | 141 | 97 | 50 | 84 | 15 |
| AMAYA INC. | CA | Manufacturing | 1 | 43 | 37 | 21 | 6 | 14 | 17 |
| ANHEUSER-BUSCH INBEV NV | BE | Manufacturing | 4 | 481 | 483 | 317 | 82 | 249 | 66 |
| ANGLO AMERICAN PLC | GB | Manufacturing | 2 | 564 | 493 | 198 | 43 | 106 | 114 |
| ANTIBE THERAPEUTICS INC. | CA | Manufacturing | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| APACHE CORPORATION | US | Non-manufacturing | 3 | 65 | 12 | 11 | 5 | 6 | 9 |
| APOLLO GLOBAL MANAGEMENT LLC | US | Non-manufacturing | 2 | 816 | 298 | 44 | 20 | 30 | 31 |
| AON PLC | GB | Non-manufacturing | 2 | 884 | 814 | 454 | 148 | 377 | 284 |
| ARDAGH GROUP SA | LU | Non-manufacturing | 1 | 5 | 4 | 4 | 2 | 3 | 1 |
| AREVA ENERGIES RENOUVELABLES SAS | FR | Manufacturing | 1 | 37 | 25 | 18 | 6 | 12 | 1 |
| ARTEMIS RESOURCES LTD | AU | Non-manufacturing | 1 | 12 | 3 | 2 | 0 | 1 | 2 |
| ARYZTA AG | CH | Non-manufacturing | 1 | 46 | 38 | 28 | 18 | 22 | 11 |
| ASCOM HOLDING AG | CH | Non-manufacturing | 1 | 25 | 21 | 15 | 10 | 15 | 4 |

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|---|---|---|---|---|---|---|---|---|---|
| ASHMORE INVESTMENT MANAGEMENT LTD | GB | Non-manufacturing | 2 | 185 | 49 | 18 | 2 | 14 | 11 |
| ASIAN DEVELOPMENT FRONTIER INC. | US | Non-manufacturing | 1 | 2 | 1 | 1 | 0 | 0 | 1 |
| ASSICURAZIONI GENERALI SPA | IT | Non-manufacturing | 1 | 839 | 450 | 251 | 199 | 193 | 14 |
| AP (THAILAND) PLC | TH | Non-manufacturing | 1 | 26 | 1 | 1 | 0 | 0 | 1 |
| ADX ENERGY LTD | AU | Non-manufacturing | 1 | 6 | 4 | 3 | 0 | 1 | 1 |
| AUSTRALIAN PACIFIC COAL LTD | AU | Non-manufacturing | 1 | 15 | 1 | 1 | 0 | 0 | 0 |
| AV THERAPEUTICS, INC. | US | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| AXA SA | FR | Non-manufacturing | 3 | 3903 | 142 | 91 | 39 | 73 | 12 |
| AXIOM PROPERTIES LTD | AU | Non-manufacturing | 1 | 21 | 1 | 0 | 0 | 0 | 0 |
| BAE SYSTEMS PLC | GB | Manufacturing | 1 | 571 | 308 | 189 | 37 | 97 | 142 |
| BALL CORPORATION | US | Non-manufacturing | 1 | 143 | 106 | 75 | 12 | 49 | 28 |
| BALTIC INTERNATIONAL USA, INC. | US | Non-manufacturing | 1 | 2 | 2 | 2 | 0 | 1 | 0 |
| BANCO BTG PACTUAL SA | BR | Non-manufacturing | 1 | 121 | 69 | 48 | 11 | 38 | 16 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BANCO COMERCIAL PORTUGUES SA | PT | Non-manufacturing | 1 | 166 | 40 | 25 | 16 | 12 | 3 |
| BANCO BILBAO VIZCAYA ARGENTARIA SA | ES | Non-manufacturing | 2 | 655 | 298 | 170 | 37 | 104 | 95 |
| BANK of CHINA LTD | CN | Non-manufacturing | 2 | 88 | 35 | 28 | 13 | 18 | 9 |
| BANK LEUMI LE-ISRAEL BM | IL | Non-manufacturing | 1 | 61 | 13 | 11 | 0 | 7 | 0 |
| BANKIA INVERSIONES FINANCIERAS SA | ES | Non-manufacturing | 1 | 97 | 10 | 7 | 4 | 4 | 1 |
| BARCLAYS PLC | GB | Non-manufacturing | 7 | 2235 | 545 | 213 | 50 | 141 | 154 |
| BERJAYA ASSETS BERHAD | MY | Non-manufacturing | 2 | 16 | 5 | 3 | 1 | 2 | 3 |
| BAYER AG | DE | Manufacturing | 2 | 541 | 281 | 202 | 73 | 150 | 18 |
| BAYWA RE RENEWABLE ENERGY GMBH | DE | Manufacturing | 1 | 296 | 166 | 113 | 77 | 40 | 22 |
| BHARTI AIRTEL LTD | IN | Non-manufacturing | 2 | 33 | 22 | 14 | 6 | 13 | 10 |
| BAXTER INTERNATIONAL INC. | US | Non-manufacturing | 4 | 96 | 31 | 14 | 9 | 11 | 10 |
| BEIJING ENTERPRISES HOLDINGS LTD | HK | Non-manufacturing | 1 | 38 | 38 | 32 | 19 | 17 | 25 |
| BELMOND LTD | BM | Non-manufacturing | 1 | 35 | 27 | 19 | 3 | 19 | 13 |

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|---|---|---|---|---|---|---|---|---|---|
| BELMONT RESOURCES INC. | CA | Non-manufacturing | 1 | 9 | 2 | 1 | 0 | 0 | 1 |
| BERKSHIRE HATHAWAY INC. | US | Non-manufacturing | 4 | 1235 | 491 | 137 | 41 | 76 | 101 |
| BITTIUM OYJ | FI | Manufacturing | 1 | 7 | 5 | 5 | 0 | 3 | 0 |
| BITAUTO HOLDINGS LTD | KY | Manufacturing | 1 | 18 | 19 | 11 | 11 | 9 | 1 |
| BLACKROCK, INC | BM | Non-manufacturing | 2 | 9714 | 99 | 58 | 14 | 43 | 37 |
| BLACK DIAMOND INC. | US | Non-manufacturing | 1 | 17 | 5 | 4 | 0 | 4 | 0 |
| BLACKSTONE GROUP LP, THE | US | Non-manufacturing | 3 | 1032 | 331 | 112 | 34 | 66 | 83 |
| BLUELINX HOLDING INC. | US | Non-manufacturing | 2 | 60 | 4 | 4 | 2 | 2 | 4 |
| BNP PARIBAS WEALTH MANAGEMENT SA | FR | Non-manufacturing | 1 | 2472 | 514 | 329 | 193 | 234 | 47 |
| BP PLC | GB | Manufacturing | 1 | 1058 | 739 | 452 | 152 | 313 | 217 |
| BRAMBLES LTD | AU | Non-manufacturing | 1 | 74 | 40 | 27 | 0 | 19 | 19 |
| BULOVA TECHNOLOGIES GROUP, INC | US | Manufacturing | 1 | 7 | 1 | 0 | 0 | 0 | 0 |
| BRIDGEPOINT EDUCATION, INC. | US | Non-manufacturing | 3 | 7 | 3 | 1 | 0 | 0 | 0 |
| BRILLIANT AG | DE | Non-manufacturing | 1 | 9 | 8 | 5 | 2 | 3 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| CALEDONIA INVESTMENTS PLC | GB | Non-manufacturing | 3 | 157 | 21 | 12 | 3 | 5 | 9 |
| CARGILL PLC | LK | Non-manufacturing | 1 | 6 | 1 | 1 | 0 | 1 | 0 |
| CARLYLE GROUP LP | US | Non-manufacturing | 5 | 1317 | 733 | 339 | 141 | 232 | 221 |
| CASINO GUICHARD-PERRACHON SA | FR | Non-manufacturing | 2 | 149 | 58 | 42 | 17 | 29 | 15 |
| CANADA COAL INC. | CA | Manufacturing | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| CAMPINE NV | BE | Non-manufacturing | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| CELLO GROUP PLC | GB | Non-manufacturing | 1 | 46 | 15 | 10 | 0 | 3 | 10 |
| CEMEX SAB DE CV | MX | Manufacturing | 2 | 52 | 30 | 22 | 8 | 14 | 3 |
| CENIT AG | DE | Non-manufacturing | 1 | 8 | 7 | 4 | 1 | 4 | 1 |
| CDS CO., LTD | JP | Non-manufacturing | 1 | 7 | 3 | 3 | 0 | 0 | 0 |
| CLEAR CHANNEL OUTDOOR HOLDINGS INC. | US | Non-manufacturing | 2 | 128 | 47 | 34 | 4 | 25 | 13 |
| CHINA HANKING HOLDINGS LTD | KY | Non-manufacturing | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| CITIGROUP INC. | US | Non-manufacturing | 5 | 2024 | 197 | 133 | 50 | 108 | 50 |
| CITIC LTD | HK | Manufacturing | 1 | 55 | 50 | 36 | 29 | 18 | 28 |

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|---|---|---|---|---|---|---|---|---|---|
| CHANCELLOR GROUP INC | US | Non-manufacturing | 1 | 4 | 1 | 1 | 0 | 0 | 1 |
| CHANGE INC. | JP | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| CLOUDCOMMERCE, INC. | US | Non-manufacturing | 1 | 4 | 1 | 1 | 0 | 0 | 0 |
| CHEVRON CORPORATION | US | Manufacturing | 1 | 279 | 73 | 57 | 16 | 44 | 42 |
| CHONGQING DAMEI THREE GORGES | CN | Non-manufacturing | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| CHINA ELECTRONICS CORPORATION | BM | Non-manufacturing | 1 | 7 | 8 | 6 | 0 | 5 | 0 |
| CNOVA NV | NL | Non-manufacturing | 1 | 20 | 19 | 9 | 6 | 7 | 5 |
| COLRUYT NV | BE | Manufacturing | 2 | 64 | 39 | 19 | 12 | 11 | 8 |
| COBHAM PLC | GB | Manufacturing | 2 | 178 | 131 | 89 | 23 | 72 | 63 |
| COMMERZBANK AG | DE | Non-manufacturing | 2 | 1047 | 219 | 123 | 64 | 51 | 22 |
| CORPORACION EMPRESARIAL MATERIALES DE CONSTRUCCION S.A. | ES | Manufacturing | 1 | 12 | 5 | 3 | 3 | 3 | 0 |
| COMPAGNIE FINANCIERE RICHEMONT SA | CH | Non-manufacturing | 1 | 52 | 31 | 24 | 15 | 12 | 13 |
| COMPAGNIE DE SAINT-GOBAIN SA | FR | Non-manufacturing | 1 | 289 | 255 | 185 | 96 | 142 | 18 |

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|---|---|---|---|---|---|---|---|---|---|
| COMPAGNIE DES ALPES SA | FR | Manufacturing | 1 | 58 | 16 | 11 | 8 | 7 | 4 |
| COMPANHIA SIDERURGICA NACIONAL SA | BR | Manufacturing | 1 | 56 | 30 | 14 | 1 | 11 | 9 |
| CONCORDIA INTERNATIONAL CORP. | US | Manufacturing | 2 | 10 | 10 | 8 | 4 | 7 | 6 |
| CONOCOPHILLIPS COMPANY | US | Manufacturing | 1 | 165 | 83 | 51 | 17 | 43 | 42 |
| CONSTELLATION BRANDS INC. | US | Manufacturing | 1 | 139 | 89 | 56 | 19 | 40 | 32 |
| COOPER TIRE & RUBBER CO | US | Manufacturing | 1 | 36 | 20 | 14 | 7 | 13 | 7 |
| COSCO SHIPPING DEVELOPMENT CO., LTD. | CN | Manufacturing | 2 | 133 | 41 | 34 | 23 | 32 | 23 |
| CRH PLC | IE | Manufacturing | 2 | 1166 | 1066 | 671 | 520 | 391 | 333 |
| CCL INCUSTRIES INC | CA | Manufacturing | 1 | 86 | 82 | 56 | 18 | 38 | 26 |
| DAEWOO SHIPBUILDING&MARINE ENGINEERING CO., LTD | KR | Manufacturing | 2 | 22 | 9 | 5 | 1 | 5 | 1 |
| DANONE | FR | Manufacturing | 2 | 376 | 163 | 49 | 25 | 33 | 34 |
| DCC PLC | IE | Manufacturing | 1 | 82 | 45 | 32 | 30 | 12 | 13 |
| DXP ENTERPRISES INC | US | Manufacturing | 1 | 45 | 6 | 5 | 4 | 3 | 4 |

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|---|---|---|---|---|---|---|---|---|---|
| DELPHI ENERGY CORP. | CA | Manufacturing | 2 | 0 | 2 | 2 | 1 | 0 | 1 |
| DEUTSCHE BANK AG | DE | Non-manufacturing | 3 | 5324 | 756 | 416 | 134 | 279 | 45 |
| DEVON ENERGY CORPORATION | US | Manufacturing | 1 | 37 | 8 | 4 | 4 | 4 | 4 |
| DIAGEO PLC | GB | Manufacturing | 3 | 406 | 317 | 172 | 59 | 109 | 91 |
| DIGITAL CHINA HOLDINGS LTD | BM | Non-manufacturing | 1 | 48 | 45 | 34 | 5 | 28 | 9 |
| DIRECT LINE INSURANCE GROUP PLC | GB | Non-manufacturing | 1 | 24 | 2 | 2 | 0 | 1 | 1 |
| DONG ENERGY A/S | DK | Manufacturing | 2 | 161 | 108 | 75 | 69 | 36 | 40 |
| DOW CHEMICAL COMPANY, THE | US | Manufacturing | 2 | 373 | 192 | 139 | 16 | 96 | 54 |
| DISCOVERY HARBOUR RESOURCES CORP. | CA | Non-manufacturing | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| DUKE ENERGY CORPORATION | US | Manufacturing | 1 | 421 | 84 | 49 | 12 | 29 | 18 |
| DUNDEE PRECIOUS METALS INC. | CA | Manufacturing | 1 | 7 | 5 | 4 | 0 | 4 | 0 |
| EASTERN MEDIA INTERNATIONAL CORPORATION | TW | Non-manufacturing | 1 | 45 | 20 | 15 | 13 | 10 | 13 |
| EDF INTERNATIONAL SA | FR | Manufacturing | 1 | 77 | 61 | 49 | 35 | 33 | 12 |

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|---|---|---|---|---|---|---|---|---|---|
| EDRASIS C PSALLISAS SA | GR | Non-manufacturing | 1 | 6 | 3 | 1 | 1 | 1 | 0 |
| EIFFAGE SA | FR | Manufacturing | 3 | 395 | 128 | 74 | 68 | 44 | 18 |
| EMIRATES TELECOMMUNICATIONS CORPORATION | AE | Non-manufacturing | 3 | 32 | 20 | 19 | 5 | 14 | 9 |
| E ON SE | DE | Manufacturing | 4 | 787 | 387 | 232 | 165 | 171 | 13 |
| EMERA INC. | CA | Non-manufacturing | 1 | 17 | 11 | 8 | 7 | 5 | 8 |
| ENDO INTERNATIONAL PLC | IE | Manufacturing | 1 | 46 | 42 | 26 | 1 | 20 | 23 |
| ENEL SPA | IT | Manufacturing | 4 | 748 | 678 | 446 | 180 | 371 | 0 |
| EP ENERGY CORPORATION | US | Manufacturing | 1 | 5 | 1 | 1 | 0 | 1 | 0 |
| ESSENTRA PLC | GB | Non-manufacturing | 2 | 160 | 125 | 83 | 34 | 59 | 46 |
| EURASIAN MINERALS INC. | CA | Manufacturing | 1 | 17 | 18 | 10 | 3 | 8 | 5 |
| EUTELSAT COMMUNICATIONS SA | FR | Non-manufacturing | 1 | 37 | 32 | 26 | 14 | 23 | 2 |
| EQUINITI GROUP PLC | GB | Non-manufacturing | 2 | 43 | 5 | 4 | 3 | 2 | 1 |
| EQUINIX INC. | US | Non-manufacturing | 2 | 95 | 70 | 46 | 2 | 27 | 17 |

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|---|---|---|---|---|---|---|---|---|---|
| EVERMOUNT VENTURES INC. | CA | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| EXPEDIA, INC. | US | Non-manufacturing | 1 | 245 | 173 | 135 | 14 | 90 | 61 |
| EXCELSIOR MINING CORP. | CA | Manufacturing | 1 | 2 | 3 | 2 | 2 | 2 | 2 |
| FAIRFAX FINANCIAL HOLDINGS LTD | CA | Manufacturing | 1 | 75 | 44 | 34 | 19 | 26 | 26 |
| FIAT CHRYSLER AUTOMOBILES NV | NL | Manufacturing | 1 | 208 | 203 | 148 | 91 | 120 | 23 |
| FORTEC ELECTRONIK AG | DE | Manufacturing | 1 | 6 | 2 | 1 | 1 | 1 | 1 |
| FIDELITY NATIONAL INFORMATION SERVICES, INC. | US | Non-manufacturing | 2 | 415 | 2 | 1 | 0 | 1 | 1 |
| FIRST DATA CORPORATION | US | Non-manufacturing | 1 | 229 | 99 | 81 | 9 | 68 | 43 |
| FORESIGHT AUTONOMOUS HOLDINGS LTD. | IL | Manufacturing | 2 | 7 | 2 | 1 | 0 | 0 | 0 |
| FU YU CORPORATION LIMITED | SG | Manufacturing | 1 | 11 | 8 | 6 | 5 | 4 | 5 |
| FONTERRA CO-OPERATIVE GROUP LTD | NZ | Non-manufacturing | 1 | 54 | 37 | 31 | 4 | 26 | 19 |
| FORTUM OYJ | FI | Manufacturing | 1 | 118 | 98 | 75 | 70 | 48 | 17 |
| FOSHAN ELECTRICAL AND LIGHTING CO., LTD | CN | Manufacturing | 2 | 17 | 2 | 2 | 2 | 0 | 2 |

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|---|---|---|---|---|---|---|---|---|---|
| FRANKLIN RESOURCES INC. | US | Non-manufacturing | 1 | 2369 | 86 | 71 | 20 | 62 | 42 |
| FRASER AND NEAVE LTD | SG | Non-manufacturing | 1 | 108 | 57 | 45 | 28 | 2 | 43 |
| FUGRO NV | NL | Manufacturing | 1 | 272 | 229 | 169 | 49 | 125 | 16 |
| FIH MOBILE LIMITED | KY | Non-manufacturing | 1 | 48 | 47 | 40 | 13 | 36 | 18 |
| FORTUNE NG FUNG FOOD LTD | CN | Manufacturing | 1 | 3 | 1 | 1 | 0 | 0 | 0 |
| G4S PLC | GB | Non-manufacturing | 1 | 765 | 587 | 441 | 94 | 353 | 228 |
| GALAXY ENTERTAINMENT GROUP LIMIED | HK | Non-manufacturing | 1 | 74 | 43 | 39 | 21 | 6 | 38 |
| GAMMA COMMUNICATION PLC | GB | Non-manufacturing | 2 | 3 | 2 | 2 | 2 | 0 | 0 |
| GERRESHEIMER GLAS AG | DE | Manufacturing | 1 | 55 | 40 | 32 | 10 | 29 | 2 |
| GIBSON ENERGY INC. | US | Manufacturing | 1 | 97 | 34 | 26 | 25 | 10 | 25 |
| GEMINI INVESTMENTS LTD | HK | Non-manufacturing | 1 | 80 | 64 | 49 | 0 | 5 | 6 |
| GENERAL ELECTRIC COMPANY | US | Manufacturing | 9 | 378 | 208 | 120 | 88 | 108 | 106 |
| GEPIC ENERGY DEVELOPMENT CO., LTD. | CN | Manufacturing | 1 | 12 | 1 | 1 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|
| GETTY REALTY CORP | US | Manufacturing | 1 | 15 | 1 | 0 | 0 | 0 | 0 |
| GIGGLES N' HUGS, INC. | US | Manufacturing | 1 | 4 | 1 | 1 | 0 | 0 | 1 |
| GFI GROUP INC. | US | Non-manufacturing | 1 | 55 | 38 | 30 | 2 | 19 | 22 |
| GIMV NV | BE | Manufacturing | 2 | 170 | 99 | 72 | 66 | 41 | 55 |
| GLAXOSMITHKLINE PLC | GB | Manufacturing | 3 | 451 | 368 | 302 | 117 | 268 | 149 |
| GLENCORE PLC | AU | Manufacturing | 1 | 143 | 109 | 75 | 15 | 51 | 40 |
| GLOBAL MOBILETECH, INC. | US | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| GLOBAL MEDICAL REIT INC. | US | Non-manufacturing | 1 | 5 | 1 | 0 | 0 | 0 | 0 |
| GLOBAL TELECOM HOLDING SAE | EG | Non-manufacturing | 2 | 75 | 56 | 42 | 7 | 36 | 32 |
| GLOBALTEC FORMATION BHD | MY | Non-manufacturing | 1 | 5 | 3 | 2 | 2 | 2 | 2 |
| GKN PLC | GB | Manufacturing | 1 | 311 | 214 | 177 | 45 | 148 | 68 |
| GOLDCORP INC. | CA | Non-manufacturing | 1 | 18 | 4 | 3 | 2 | 3 | 1 |
| GOLDMAN SACHS GROUP INC. | US | Non-manufacturing | 4 | 5556 | 680 | 495 | 26 | 408 | 288 |
| GOME FINANCE TECHNOLOGY CO., LTD | BM | Non-manufacturing | 1 | 10 | 11 | 7 | 2 | 6 | 2 |

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|---|---|---|---|---|---|---|---|---|---|
| GORES HOLDINGS II, INC. | US | Non-manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| GRAINGER PLC | GB | Non-manufacturing | 1 | 201 | 8 | 4 | 4 | 3 | 0 |
| GREAT CHINA HOLDINGS LTD | HK | Non-manufacturing | 1 | 25 | 12 | 9 | 3 | 8 | 8 |
| GRAINCORP LIMITIED | AU | Non-manufacturing | 1 | 67 | 39 | 32 | 3 | 28 | 24 |
| GROUPE UNIMAR SA | MA | Non-manufacturing | 1 | 28 | 4 | 2 | 2 | 2 | 0 |
| GROUPE EUROTUNNEL SE | FR | Non-manufacturing | 1 | 29 | 26 | 20 | 18 | 16 | 1 |
| GRUPO BIMBO, S.A.B. DE C.V. | MX | Non-manufacturing | 1 | 30 | 14 | 11 | 6 | 10 | 3 |
| GENERAL MILLS INC. | US | Manufacturing | 1 | 288 | 123 | 87 | 72 | 66 | 82 |
| GUGGENHEIM S&P 500 EQUAL WEIGHT ETF | US | Non-manufacturing | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| HANISON CONSTRUCTION HOLDINGS LTD | KY | Manufacturing | 1 | 34 | 35 | 24 | 5 | 13 | 23 |
| HARJU ELEKTER AS | EE | Manufacturing | 1 | 9 | 6 | 4 | 4 | 2 | 2 |
| HARRIS CORP | US | Non-manufacturing | 1 | 204 | 79 | 62 | 8 | 49 | 33 |
| HANA FINANCIAL GROUP INC. | KR | Non-manufacturing | 1 | 16 | 6 | 5 | 3 | 3 | 4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| HAP SENG CONSOLIDATED BHD | MY | Non-manufacturing | 1 | 25 | 4 | 4 | 3 | 1 | 4 |
| HANWHA CORP. | KR | Manufacturing | 1 | 28 | 17 | 13 | 5 | 8 | 0 |
| HEALTHCARE & MEDICAL INVESTMENT CORPORATION | JP | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| HEIDELBERGCEMENT AG | DE | Manufacturing | 3 | 1186 | 948 | 779 | 496 | 429 | 61 |
| HEIJMANS NV | NL | Manufacturing | 2 | 35 | 6 | 2 | 2 | 1 | 2 |
| HEINEKEN NV | NL | Manufacturing | 1 | 75 | 39 | 30 | 14 | 27 | 9 |
| HELVETIA HOLDING AG | CH | Non-manufacturing | 1 | 59 | 44 | 32 | 32 | 28 | 24 |
| HG METAL MANUFACTURING LTD | SG | Manufacturing | 2 | 5 | 4 | 4 | 2 | 2 | 2 |
| HIGHLAND GOLD MINING LIMITED | GB | Manufacturing | 1 | 12 | 13 | 8 | 8 | 7 | 0 |
| HIGHLAND COPPER COMPANY INC. | CA | Manufacturing | 1 | 2 | 3 | 3 | 2 | 2 | 3 |
| LAFARGEHOLCIM LTD | CH | Manufacturing | 4 | 141 | 131 | 106 | 44 | 76 | 28 |
| HOLOGIC INC. | US | Manufacturing | 1 | 67 | 43 | 35 | 7 | 32 | 14 |
| HONG FOK CORPORATION (HK) LTD | HK | Manufacturing | 1 | 26 | 9 | 6 | 1 | 5 | 6 |

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|---|---|---|---|---|---|---|---|---|---|
| HSBC HOLDINGS PLC | GB | Manufacturing | 1 | 2693 | 489 | 360 | 57 | 294 | 227 |
| HYDRATEC INDUSTRIES N.V. | NL | Manufacturing | 1 | 23 | 13 | 9 | 3 | 9 | 2 |
| INDOFOOD SUKSES MAKMUR TBK, PT | ID | Manufacturing | 1 | 41 | 14 | 11 | 10 | 8 | 10 |
| INEOS STYROLUTION INDIA LIMITED | IN | Non-manufacturing | 1 | 3 | 3 | 2 | 1 | 2 | 1 |
| IMPRESSION HEALTHCARE LTD | AU | Non-manufacturing | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| ING GROEP NV | NL | Non-manufacturing | 2 | 414 | 46 | 35 | 12 | 32 | 10 |
| INNITY CORPORATION BERHAD | MY | Non-manufacturing | 1 | 4 | 2 | 2 | 1 | 2 | 0 |
| INNOGY SE | DE | Manufacturing | 1 | 132 | 8 | 8 | 8 | 6 | 2 |
| INTEL CORPORATION | US | Manufacturing | 2 | 99 | 49 | 44 | 9 | 26 | 15 |
| INTER RAO LIETUVA | LT | Non-manufacturing | 1 | 5 | 4 | 3 | 3 | 3 | 3 |
| INTERCONTINENTAL HOTELS GROUP PLC | GB | Non-manufacturing | 1 | 355 | 315 | 260 | 39 | 236 | 152 |
| INTERMEDIATE CAPITAL GROUP PLC | GB | Non-manufacturing | 2 | 175 | 84 | 57 | 42 | 21 | 17 |
| INTESA SANPAOLO SPA | IT | Non-manufacturing | 1 | 682 | 97 | 80 | 65 | 66 | 8 |

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|---|---|---|---|---|---|---|---|---|---|
| INVESTCORP BANK BSC | BH | Non-manufacturing | 1 | 54 | 23 | 15 | 8 | 10 | 3 |
| INVESTEC PLC | GB | Non-manufacturing | 2 | 1136 | 100 | 81 | 28 | 56 | 65 |
| INVESTMENTOS BEMGE S/A | BR | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| INVESTOR AB | SE | Non-manufacturing | 3 | 44 | 32 | 18 | 12 | 17 | 7 |
| ITOCHU CORPORATION | JP | Manufacturing | 3 | 594 | 276 | 213 | 114 | 148 | 0 |
| JAFCO CO., LTD | JP | Manufacturing | 1 | 223 | 18 | 8 | 5 | 5 | 0 |
| JERONIMO MARTINS SGPS SA | PT | Non-manufacturing | 1 | 42 | 15 | 11 | 10 | 9 | 0 |
| JOHNSON CONTROLS INTERNATIONAL PLC | IE | Manufacturing | 1 | 442 | 366 | 300 | 100 | 150 | 167 |
| JOHNSON MATTHEY PLC | GB | Non-manufacturing | 1 | 145 | 120 | 99 | 32 | 78 | 45 |
| JP MORGAN | US | Non-manufacturing | 4 | 5869 | 259 | 192 | 32 | 156 | 121 |
| KERRY GROUP PLC | IE | Manufacturing | 1 | 162 | 110 | 98 | 44 | 91 | 58 |
| KESKO OYJ | FI | Manufacturing | 1 | 110 | 51 | 41 | 40 | 15 | 5 |
| KDDI CORPORATION | JP | Manufacturing | 1 | 184 | 62 | 47 | 28 | 45 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| KINGSWAY FINANCIAL SERVICES INC. | CA | Non-manufacturing | 1 | 12 | 4 | 4 | 2 | 1 | 3 |
| KINNEVIK AB | SE | Non-manufacturing | 1 | 112 | 48 | 33 | 27 | 31 | 7 |
| KINGSTON FINANCIAL GROUP LIMITED | BM | Non-manufacturing | 1 | 20 | 21 | 13 | 7 | 12 | 10 |
| KKR & CO LP | US | Non-manufacturing | 5 | 861 | 471 | 321 | 176 | 248 | 249 |
| KTL GLOBAL LIMITED | SG | Non-manufacturing | 1 | 5 | 1 | 1 | 1 | 0 | 0 |
| KONECRANES OYJ | FI | Manufacturing | 2 | 142 | 106 | 78 | 63 | 55 | 11 |
| KONINKLIJKE KPN NV | NL | Manufacturing | 1 | 45 | 5 | 5 | 4 | 3 | 3 |
| KONINKLIJKE VOPAK NV | NL | Non-manufacturing | 2 | 134 | 88 | 62 | 15 | 41 | 7 |
| KING'S BAY GOLD CORPORATION | CA | Non-manufacturing | 1 | 2 | 1 | 1 | 0 | 0 | 1 |
| L-3 COMMUNICATIONS HOLDINGS INC. | US | Non-manufacturing | 1 | 170 | 59 | 47 | 5 | 31 | 25 |
| LANDING INTERNATIONAL DEVELOPMENT LTD | BM | Non-manufacturing | 1 | 39 | 35 | 24 | 10 | 11 | 22 |
| LACTO JAPAN CO LTD | JP | Non-manufacturing | 1 | 5 | 4 | 2 | 1 | 1 | 0 |
| LAGARDERE SCA | FR | Manufacturing | 2 | 323 | 131 | 104 | 45 | 74 | 19 |

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|---|---|---|---|---|---|---|---|---|---|
| LEGAL & GENERAL GROUP PLC | GB | Non-manufacturing | 2 | 2255 | 27 | 18 | 4 | 17 | 16 |
| LEYOU TECHNOLOGIES HOLDINGS LIMITED | KY | Manufacturing | 1 | 6 | 4 | 2 | 1 | 1 | 1 |
| LIFESTYLE INTERNATIONAL HOLDINGS LTD | KY | Non-manufacturing | 1 | 33 | 30 | 23 | 2 | 22 | 13 |
| LUEN THAI HOLDINGS LTD | KY | Non-manufacturing | 1 | 31 | 30 | 22 | 5 | 16 | 17 |
| LVMH MOET HENNESSY - LOUIS VUITTON SE | FR | Non-manufacturing | 2 | 827 | 691 | 582 | 219 | 510 | 85 |
| MACQUARIE INFRASTRUCTURE CORP. | US | Manufacturing | 1 | 223 | 2 | 2 | 1 | 0 | 2 |
| MACQUARIE GROUP LTD | AU | Non-manufacturing | 2 | 1252 | 94 | 71 | 2 | 59 | 66 |
| MCDONALD'S CORPORATION | US | Non-manufacturing | 1 | 107 | 81 | 70 | 4 | 51 | 17 |
| MCIG, INC. | US | Non-manufacturing | 1 | 5 | 1 | 1 | 0 | 0 | 0 |
| MAGICJACK VOCALTEC LTD | IL | Non-manufacturing | 1 | 12 | 11 | 6 | 0 | 3 | 0 |
| MAGNUM MINING AND EXPLORATIONS LTD | AU | Manufacturing | 2 | 2 | 4 | 3 | 0 | 1 | 1 |
| MEGA URANIUM LTD | CA | Manufacturing | 1 | 10 | 6 | 4 | 0 | 3 | 3 |

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|---|---|---|---|---|---|---|---|---|---|
| MALAYAN BANKING BHD | MY | Non-manufacturing | 1 | 132 | 60 | 48 | 41 | 44 | 43 |
| MALLINCKRODT PLC | IE | Non-manufacturing | 2 | 103 | 91 | 71 | 29 | 61 | 48 |
| MARFRIG GLOBAL FOODS SA | BR | Manufacturing | 1 | 20 | 20 | 17 | 7 | 14 | 7 |
| MATRIX SERVICE CO | US | Non-manufacturing | 1 | 134 | 7 | 4 | 1 | 3 | 3 |
| MAXIM POWER CORPORATION | CA | Manufacturing | 1 | 10 | 2 | 2 | 1 | 2 | 0 |
| MEDCAP AB | SE | Non-manufacturing | 1 | 8 | 2 | 2 | 2 | 1 | 2 |
| MERCURY LIMITED | NZ | Non-manufacturing | 1 | 40 | 19 | 13 | 0 | 8 | 11 |
| MEDIATEK INC. | TW | Non-manufacturing | 1 | 123 | 25 | 19 | 13 | 14 | 12 |
| MEDIPHARCO-TENEMYD CENTRAL PHAMARCEUTICAL JSC | VN | Manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| MELROSE INDUSTRIES PLC | GB | Manufacturing | 1 | 37 | 14 | 9 | 2 | 7 | 7 |
| METRO AG | DE | Non-manufacturing | 4 | 1364 | 719 | 635 | 533 | 505 | 176 |
| MICROSOFT CORPORATION | US | Non-manufacturing | 3 | 196 | 111 | 91 | 9 | 82 | 33 |
| MILLICOM INTERNATIONAL CELLULAR SA | LU | Non-manufacturing | 1 | 33 | 31 | 18 | 9 | 14 | 4 |

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|---|---|---|---|---|---|---|---|---|---|
| MISC BHD | MY | Non-manufacturing | 1 | 79 | 10 | 7 | 0 | 6 | 2 |
| MITSUI & CO., LTD | JP | Manufacturing | 2 | 804 | 432 | 337 | 118 | 249 | 0 |
| MITSUBISHI CORPORATION | JP | Manufacturing | 3 | 862 | 380 | 331 | 122 | 93 | 0 |
| MKS INSTRUMENTS INC. | US | Manufacturing | 1 | 27 | 21 | 15 | 2 | 13 | 6 |
| MONDELEZ INTERNATIONAL INC. | US | Manufacturing | 3 | 576 | 516 | 404 | 26 | 336 | 145 |
| MODERN TIMES GROUP MTG AB | SE | Non-manufacturing | 1 | 51 | 35 | 24 | 20 | 18 | 8 |
| MORGAN STANLEY | US | Non-manufacturing | 6 | 5874 | 258 | 194 | 32 | 157 | 122 |
| MINNOVA CORP. | CA | Non-manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| NABORS INDUSTRIES LTD | BM | Manufacturing | 1 | 47 | 37 | 26 | 24 | 26 | 25 |
| NASPERS LTD | ZA | Manufacturing | 1 | 54 | 45 | 34 | 1 | 20 | 13 |
| NATIONAL BANK of GREECE SA | GR | Non-manufacturing | 1 | 78 | 40 | 30 | 29 | 27 | 12 |
| NEWFIELD RESOURCES LIMITED | AU | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| NESSCAP ENERGY INC. | CA | Manufacturing | 1 | 3 | 2 | 1 | 1 | 0 | 1 |
| NEW FLYER INDUSTRIES INC. | CA | Non-manufacturing | 1 | 19 | 18 | 11 | 11 | 5 | 11 |

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|---|---|---|---|---|---|---|---|---|---|
| NEW PACIFIC HOLDINGS CORP. | CA | Non-manufacturing | 1 | 11 | 7 | 4 | 3 | 3 | 3 |
| NEWMONT MINING CORPORATION | US | Manufacturing | 4 | 99 | 69 | 58 | 15 | 49 | 37 |
| NEW HOPE CORPORATION LTD | AU | Non-manufacturing | 1 | 35 | 2 | 1 | 0 | 0 | 1 |
| NEWALTA CORP. | CA | Non-manufacturing | 1 | 2 | 3 | 3 | 2 | 1 | 3 |
| NEW WORLD DEVELOPMENT COMPANY LIMITED | HK | Non-manufacturing | 1 | 430 | 254 | 202 | 115 | 103 | 199 |
| NICCO CORPORATION LIMITED | IN | Non-manufacturing | 1 | 4 | 1 | 1 | 0 | 1 | 1 |
| NIPRO CORPORATION | JP | Non-manufacturing | 1 | 68 | 51 | 40 | 20 | 34 | 0 |
| NIPPON SHARYO LTD | JP | Non-manufacturing | 2 | 30 | 6 | 4 | 2 | 3 | 1 |
| NOBLE GROUP LTD | BM | Non-manufacturing | 2 | 66 | 64 | 52 | 15 | 36 | 47 |
| NOKIA OYJ | FI | Manufacturing | 1 | 59 | 57 | 47 | 19 | 40 | 0 |
| NOVARTIS AG | CH | Manufacturing | 4 | 273 | 244 | 212 | 92 | 169 | 41 |
| NOVO A/S | DK | Manufacturing | 1 | 104 | 89 | 75 | 32 | 57 | 3 |
| NXP SEMICONDUCTORS NV | NL | Manufacturing | 1 | 91 | 85 | 69 | 19 | 55 | 10 |

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|---|---|---|---|---|---|---|---|---|---|
| OAKTREE CAPITAL GROUP, LLC | US | Non-manufacturing | 2 | 499 | 253 | 178 | 150 | 173 | 160 |
| OI SA | BR | Non-manufacturing | 1 | 356 | 30 | 18 | 3 | 14 | 11 |
| OKABE CO., LTD | JP | Non-manufacturing | 1 | 17 | 8 | 6 | 0 | 4 | 0 |
| OLD MUTUAL PLC | GB | Non-manufacturing | 3 | 4081 | 725 | 558 | 25 | 337 | 513 |
| ONEX CORPORATION | CA | Non-manufacturing | 3 | 72 | 58 | 44 | 37 | 30 | 41 |
| ORKLA ASA | NO | Manufacturing | 1 | 83 | 43 | 32 | 28 | 1 | 14 |
| OUE LTD | SG | Non-manufacturing | 1 | 34 | 4 | 3 | 1 | 2 | 3 |
| ORIGIN ENERGY LTD | AU | Non-manufacturing | 1 | 88 | 37 | 28 | 20 | 22 | 22 |
| ORYX PETROLEUM CORPORATION LTD | CA | Manufacturing | 1 | 5 | 6 | 3 | 1 | 3 | 2 |
| OUTOKUMPU OYJ | FI | Manufacturing | 2 | 141 | 118 | 83 | 48 | 69 | 9 |
| PAITO SHIH HOLDINGS CORPORATION | KY | Non-manufacturing | 1 | 3 | 4 | 2 | 0 | 1 | 1 |
| PALACE CAPITAL PLC | GB | Non-manufacturing | 1 | 9 | 1 | 1 | 1 | 0 | 0 |
| PANTHEON RESOURCES PLC | GB | Non-manufacturing | 1 | 1 | 2 | 2 | 0 | 1 | 2 |
| PARAMOUNT RESOURCES LTD | CA | Non-manufacturing | 1 | 13 | 4 | 2 | 2 | 2 | 2 |

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|---|---|---|---|---|---|---|---|---|---|
| PARTNERS GROUP HOLDING AG | CH | Non-manufacturing | 3 | 97 | 56 | 37 | 28 | 31 | 7 |
| PAYTON PLANAR MAGNETICS LTD | IL | Non-manufacturing | 1 | 3 | 3 | 2 | 0 | 1 | 0 |
| PENTAIR PLC | IE | Non-manufacturing | 3 | 338 | 332 | 253 | 87 | 165 | 119 |
| PETROLEO BRASILEIRO SA | BR | Manufacturing | 4 | 299 | 21 | 17 | 6 | 16 | 7 |
| PEAK RESORTS, INC. | US | Non-manufacturing | 1 | 18 | 1 | 0 | 0 | 0 | 0 |
| PIONEER GLOBAL GROUP LIMITED | BM | Non-manufacturing | 1 | 20 | 21 | 14 | 2 | 10 | 14 |
| PIRAEUS BANK SA | GR | Non-manufacturing | 2 | 209 | 101 | 74 | 60 | 32 | 22 |
| PLATINUM ASSETS MANAGEMENT LIMITED | AU | Non-manufacturing | 1 | 110 | 4 | 3 | 0 | 2 | 2 |
| PLASTEC TECHNOLOGIES LTD | KY | Non-manufacturing | 1 | 6 | 7 | 4 | 4 | 3 | 4 |
| PPHE HOTEL GROUP LIMITED | GB | Non-manufacturing | 1 | 84 | 65 | 48 | 41 | 28 | 4 |
| PREMIER OIL PLC | GB | Non-manufacturing | 2 | 64 | 24 | 15 | 9 | 9 | 3 |
| PRESCO PLC | NG | Manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| PRIZE MINING CORPORATION | CA | Manufacturing | 1 | 3 | 1 | 1 | 0 | 0 | 1 |

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| PROCTER & GAMBLE COMPANY, THE | US | Manufacturing | 2 | 332 | 219 | 161 | 11 | 127 | 54 |
| PROFOUND MEDICAL CORP. | CA | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| PROVIDENCE RESOURCES PLC | IE | Non-manufacturing | 1 | 11 | 9 | 6 | 1 | 5 | 6 |
| PUBLIC SERVICE PROPERTIES INVESTMENTS LTD | VG | Non-manufacturing | 1 | 1 | 2 | 0 | 0 | 0 | 0 |
| QBE INSURANCE GROUP LTD | AU | Non-manufacturing | 3 | 213 | 164 | 119 | 12 | 111 | 105 |
| QUALITY CARE PROPERTIES, INC. | US | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| QUANTUM ENERGY LIMITED | AU | Non-manufacturing | 1 | 12 | 6 | 5 | 0 | 3 | 2 |
| REACH ENERGY BHD | MY | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| REDROW PLC | GB | Non-manufacturing | 1 | 12 | 1 | 1 | 0 | 1 | 0 |
| REDE ENERGIA S.A. | BR | Manufacturing | 1 | 18 | 1 | 1 | 0 | 0 | 1 |
| RESERVE CAPITAL REIT | BG | Non-manufacturing | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| RESTORE PLC | GB | Non-manufacturing | 1 | 24 | 2 | 1 | 1 | 0 | 0 |
| REPSOL SA | ES | Manufacturing | 1 | 219 | 148 | 116 | 56 | 72 | 42 |

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|---|---|---|---|---|---|---|---|---|---|
| REYNOLDS AMERICAN INC. | US | Non-manufacturing | 1 | 39 | 9 | 5 | 1 | 5 | 1 |
| REXEL SA | FR | Manufacturing | 1 | 156 | 138 | 102 | 38 | 77 | 9 |
| RICHTER GEDEON VEGYESZETI GYAR RTN LTD | HU | Non-manufacturing | 1 | 86 | 70 | 51 | 38 | 30 | 13 |
| RIGHT ON CO LTD | JP | Non-manufacturing | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| RIO TINTO PLC | GB | Manufacturing | 1 | 443 | 376 | 284 | 34 | 187 | 214 |
| RIVERSIDE RESOURCES INC. | CA | Non-manufacturing | 1 | 4 | 4 | 4 | 3 | 3 | 1 |
| RHON-KLINIKUM AG | DE | Non-manufacturing | 1 | 36 | 2 | 1 | 0 | 1 | 0 |
| RHONE MA HOLDINGS BHD | MY | Non-manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| ROCKET INTERNET SE | DE | Non-manufacturing | 2 | 115 | 34 | 24 | 17 | 12 | 10 |
| RONSON EUROPE NV | NL | Manufacturing | 1 | 80 | 74 | 48 | 48 | 45 | 0 |
| ROTHSCHILD & CO | FR | Non-manufacturing | 1 | 565 | 130 | 94 | 65 | 57 | 25 |
| ROYAL DUTCH SHELL PLC | GB | Manufacturing | 2 | 1194 | 904 | 686 | 261 | 505 | 323 |
| ROYAL BANK of SCOTLAND GROUP PLC, THE | GB | Non-manufacturing | 1 | 435 | 254 | 188 | 58 | 132 | 128 |
| ROYAL BANK of CANADA | CA | Non-manufacturing | 4 | 2207 | 60 | 47 | 32 | 38 | 43 |

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|---|---|---|---|---|---|---|---|---|---|
| RSA INSURANCE GROUP PLC | GB | Non-manufacturing | 1 | 149 | 80 | 57 | 25 | 50 | 28 |
| RWE AG | DE | Non-manufacturing | 1 | 948 | 313 | 238 | 210 | 163 | 16 |
| SABRE HOLDINGS CORPORATION | US | Manufacturing | 1 | 162 | 119 | 62 | 56 | 24 | 43 |
| SBERBANK OF RUSSIA OAO | RU | Non-manufacturing | 1 | 217 | 72 | 49 | 47 | 28 | 11 |
| SAFRAN SA | FR | Non-manufacturing | 1 | 194 | 145 | 110 | 21 | 72 | 14 |
| SANOFI SA | FR | Manufacturing | 2 | 125 | 108 | 81 | 26 | 69 | 7 |
| SCHOUW & CO A/S | DK | Non-manufacturing | 1 | 42 | 28 | 21 | 14 | 6 | 0 |
| SCHRODERS PLC | GB | Manufacturing | 2 | 2905 | 80 | 55 | 27 | 44 | 20 |
| SCHNEIDER ELECTRIC SE | FR | Manufacturing | 1 | 456 | 425 | 323 | 98 | 176 | 39 |
| SCHMOLZ + BICKENBACH AG | CH | Non-manufacturing | 1 | 88 | 85 | 57 | 30 | 55 | 16 |
| SEQUANA SA | FR | Non-manufacturing | 3 | 98 | 85 | 63 | 39 | 32 | 4 |
| SEQUOIA FINANCIAL GROUP LTD | AU | Non-manufacturing | 2 | 12 | 2 | 1 | 0 | 1 | 1 |
| SHANGHAI INDUSTRIAL HOLDINGS LTD | HK | Manufacturing | 1 | 24 | 21 | 17 | 11 | 0 | 16 |

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|---|---|---|---|---|---|---|---|---|---|
| SINOPEC SHANGHAI PETROCHEMICAL CO., LTD | CN | Manufacturing | 1 | 21 | 1 | 1 | 1 | 1 | 1 |
| SHARP CORPORATION | JP | Manufacturing | 1 | 138 | 72 | 55 | 31 | 42 | 0 |
| SHENZHEN INTERNATIONAL HOLDINGS LTD | BM | Non-manufacturing | 1 | 68 | 67 | 43 | 1 | 15 | 3 |
| SHEPHERD NEAME LIMITED | GB | Non-manufacturing | 1 | 8 | 1 | 1 | 0 | 0 | 0 |
| SHOUGANG CONCORD INTERNATIONAL ENTERPRISES CO., LTD | HK | Non-manufacturing | 1 | 43 | 33 | 23 | 6 | 13 | 22 |
| SIEMENS AG | DE | Manufacturing | 6 | 902 | 707 | 550 | 220 | 336 | 44 |
| SIMMTECH HOLDINGS CO., LTD | KR | Non-manufacturing | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| SINOFERT HOLDING LTD | BM | Non-manufacturing | 1 | 29 | 30 | 20 | 1 | 19 | 5 |
| SILVER BASE GROUP HOLDINGS LTD | KY | Non-manufacturing | 1 | 8 | 9 | 5 | 2 | 5 | 4 |
| SIX FLAGS ENTERTAINMENT CORPORATION | US | Non-manufacturing | 1 | 69 | 10 | 6 | 4 | 4 | 3 |
| SKANSKA AB | SE | Manufacturing | 3 | 32 | 26 | 21 | 11 | 12 | 1 |
| SKF AB | SE | Manufacturing | 2 | 131 | 122 | 88 | 38 | 39 | 76 |

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| SPEARHEAD INTEGRATED MARKETING COMMUNICATION GROUP CO., LTD. | CN | Non-manufacturing | 1 | 10 | 2 | 1 | 0 | 0 | 0 |
| SPX CORPORATION | US | Non-manufacturing | 2 | 272 | 198 | 142 | 16 | 81 | 52 |
| SOLVAY SA | BE | Manufacturing | 2 | 329 | 304 | 202 | 91 | 130 | 45 |
| SOUTHEASTERN BANKING CORPORATION | US | Non-manufacturing | 1 | 3 | 1 | 1 | 0 | 0 | 0 |
| STANDARD LIFE PLC | GB | Non-manufacturing | 2 | 925 | 130 | 85 | 50 | 78 | 28 |
| STARBUCKS CORP | US | Non-manufacturing | 2 | 171 | 82 | 66 | 4 | 43 | 22 |
| STENTYS SA | FR | Non-manufacturing | 1 | 2 | 3 | 2 | 1 | 2 | 0 |
| STELLUS CAPITAL INVESTMENT CORPORATION | US | Non-manufacturing | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| STANDARD BANK GROUP LTD | ZA | Non-manufacturing | 3 | 251 | 30 | 22 | 10 | 22 | 17 |
| STAR ENTERTAINMENT GROUP LIMITED (THE) | AU | Non-manufacturing | 1 | 29 | 7 | 5 | 0 | 2 | 3 |
| STATE STREET CORPORATION | US | Non-manufacturing | 4 | 5669 | 40 | 28 | 3 | 25 | 17 |
| STATOIL ASA | NO | Manufacturing | 1 | 105 | 31 | 23 | 17 | 15 | 2 |

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| STRABAG SE | AT | Manufacturing | 1 | 667 | 630 | 460 | 416 | 230 | 186 |
| SOFINA SA | BE | Manufacturing | 3 | 64 | 47 | 31 | 25 | 1 | 21 |
| SOCO INTERNATIONAL PLC | GB | Non-manufacturing | 1 | 23 | 19 | 11 | 1 | 10 | 10 |
| SUMITOMO CORPORATION | JP | Manufacturing | 3 | 648 | 388 | 288 | 126 | 126 | 0 |
| SUN HUNG KAI & CO., LTD | HK | Non-manufacturing | 1 | 76 | 51 | 32 | 21 | 28 | 28 |
| SUNEDISON INC. | US | Manufacturing | 1 | 117 | 38 | 30 | 4 | 17 | 15 |
| SUNTORY BEVERAGE & FOOD LIMITED | JP | Manufacturing | 1 | 25 | 15 | 13 | 6 | 12 | 0 |
| SYMANTEC CORPORATION | US | Manufacturing | 1 | 42 | 25 | 17 | 1 | 11 | 5 |
| TATTS GROUP LTD | AU | Manufacturing | 2 | 54 | 21 | 12 | 0 | 1 | 12 |
| TCM BIOSCIENCES INC. | KR | Non-manufacturing | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| TE CONNECTIVITY LTD | CH | Non-manufacturing | 4 | 435 | 434 | 309 | 96 | 237 | 47 |
| TEREX CORPORATION | US | Non-manufacturing | 3 | 247 | 186 | 144 | 8 | 92 | 65 |
| TENCENT HOLDINGS LTD | KY | Non-manufacturing | 1 | 139 | 133 | 99 | 32 | 63 | 41 |
| TELEFONICA SA | ES | Non-manufacturing | 1 | 100 | 52 | 40 | 19 | 29 | 15 |

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|---|---|---|---|---|---|---|---|---|---|
| TELEMASTERS HOLDINGS LIMITED | ZA | Non-manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| TELEPHONE WORLD GROUP COMPANY LTD | CH | Non-manufacturing | 1 | 8 | 1 | 1 | 0 | 1 | 0 |
| TESCO PLC | GB | Non-manufacturing | 2 | 421 | 159 | 127 | 78 | 54 | 51 |
| TREVISA INVESTIMENTOS SA | BR | Non-manufacturing | 1 | 4 | 1 | 1 | 0 | 1 | 0 |
| TEVA PHARMACEUTICAL INDUSTRIES LTD | IL | Manufacturing | 1 | 81 | 58 | 41 | 4 | 32 | 16 |
| TRASTOR REAL ESTATE INVESTMENT COMPANY S.A. | GR | Non-manufacturing | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| THALES SA | FR | Manufacturing | 1 | 352 | 296 | 224 | 119 | 142 | 24 |
| TENAX THERAPEUTICS, INC. | US | Manufacturing | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| TIGER BRANDS LTD | ZA | Manufacturing | 1 | 30 | 14 | 10 | 8 | 9 | 6 |
| TONGWEI CO., LTD. | CN | Manufacturing | 1 | 123 | 2 | 2 | 2 | 1 | 2 |
| TOTAL SA | FR | Manufacturing | 4 | 952 | 802 | 609 | 206 | 340 | 111 |
| TPG SPECIALTY LENDING, INC. | US | Non-manufacturing | 1 | 23 | 1 | 1 | 0 | 0 | 0 |
| TRELLEBORG AB | SE | Manufacturing | 3 | 101 | 75 | 59 | 38 | 38 | 1 |

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| TRICAN WELL SERVICE LTD | CA | Non-manufacturing | 2 | 16 | 11 | 7 | 5 | 7 | 6 |
| TRITON INTERNATIONAL LIMITED | BM | Non-manufacturing | 1 | 40 | 41 | 29 | 15 | 9 | 21 |
| TUI AG | DE | Non-manufacturing | 3 | 535 | 467 | 366 | 215 | 270 | 22 |
| UBM PLC | GB | Non-manufacturing | 1 | 309 | 145 | 97 | 36 | 60 | 54 |
| U BANQUET GROUP HOLDING LTD | KY | Non-manufacturing | 1 | 22 | 23 | 15 | 4 | 12 | 11 |
| UCB SA | BE | Non-manufacturing | 1 | 58 | 52 | 38 | 16 | 30 | 4 |
| UNICAFE INC. | JP | Non-manufacturing | 1 | 2 | 1 | 1 | 1 | 1 | 0 |
| UNICREDIT SPA | IT | Non-manufacturing | 4 | 1938 | 758 | 553 | 504 | 309 | 16 |
| UNILEVER PLC | GB | Manufacturing | 1 | 341 | 172 | 131 | 22 | 100 | 94 |
| UNITED OVERSEAS BANK LTD | SG | Non-manufacturing | 1 | 167 | 21 | 15 | 11 | 11 | 12 |
| UNITED ENGINEERS LTD | SG | Non-manufacturing | 1 | 110 | 72 | 53 | 50 | 17 | 49 |
| VALE SA | BR | Manufacturing | 3 | 306 | 177 | 133 | 9 | 85 | 17 |
| VECTOR LTD | NZ | Manufacturing | 1 | 16 | 1 | 1 | 1 | 0 | 1 |
| VERTEX PHARMACEUTICALS INC. | US | Manufacturing | 1 | 24 | 14 | 9 | 4 | 4 | 6 |

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|---|---|---|---|---|---|---|---|---|---|
| VEON LTD | BM | Non-manufacturing | 1 | 157 | 143 | 99 | 8 | 69 | 35 |
| VIMETCO N.V. | NL | Non-manufacturing | 1 | 38 | 16 | 8 | 0 | 7 | 3 |
| VESTAS WIND SYSTEMS A/S | DK | Manufacturing | 2 | 110 | 95 | 67 | 30 | 45 | 1 |
| VIETNAM INFRASTRUCTURE LTD | VN | Manufacturing | 1 | 8 | 1 | 1 | 1 | 0 | 1 |
| VIVENDI SA | FR | Non-manufacturing | 2 | 56 | 28 | 20 | 16 | 10 | 6 |
| VOGOGO INC. | CA | Non-manufacturing | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| VONTOBEL HOLDING AG | CH | Non-manufacturing | 2 | 335 | 23 | 17 | 8 | 13 | 4 |
| WALLENIUS WILHELMSEN LOGISTICS ASA | NO | Non-manufacturing | 1 | 25 | 22 | 5 | 4 | 4 | 2 |
| WALVAX BIOTECHNOLOGY CO., LTD | CN | Non-manufacturing | 1 | 21 | 1 | 0 | 0 | 0 | 0 |
| WATERS CORP | US | Non-manufacturing | 1 | 21 | 5 | 4 | 1 | 3 | 0 |
| WESTPAC BANKING CORPORATION | AU | Non-manufacturing | 3 | 379 | 79 | 55 | 24 | 43 | 36 |
| WHITE MOUNTAINS INSURANCE GROUP LTD | BM | Non-manufacturing | 2 | 88 | 43 | 31 | 19 | 26 | 26 |
| WILLIAMS COMPANIES INC., THE | US | Non-manufacturing | 1 | 176 | 25 | 19 | 15 | 15 | 14 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| WISTRON CORP. | TW | Non-manufacturing | 1 | 101 | 80 | 57 | 35 | 49 | 31 |
| WOLSELEY PLC | GB | Non-manufacturing | 1 | 204 | 88 | 68 | 26 | 57 | 40 |
| YAGEO CORPORATION | TW | Non-manufacturing | 1 | 39 | 31 | 19 | 12 | 15 | 11 |
| YAHOO JAPAN CORPORATION | JP | Non-manufacturing | 1 | 63 | 7 | 5 | 0 | 4 | 0 |

**Table A2. Regression summary output for all multinational firms without controls**

| SUMMARY OUTPUT | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Regression statistics | | | | | | |
| Chi square | 1182.211463 | | | | | |
| Residual dev. | 6100.910795 | | | | | |
| # of iterations | 9 | | | | | |
| Observations | 68973 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.453820189 | 0.134506844 | 0 | 0.001574 | 0.00121 | 0.002049 |
| Subsidiary size (number of employees) (X1) | 0.002756959 | 8.90968E-05 | 3.1E-210 | 1.002761 | 1.002586 | 1.002936 |
| Real GDP Country growth % (X2) | -0.042708834 | 0.024647503 | 0.083134 | 0.95819 | 0.913002 | 1.005615 |
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.477803551 | 0.123316021 | 4.32E-33 | 4.383307 | 3.442192 | 5.581729 |
| Language commonality between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | 0.509336295 | 0.08705297 | 4.89E-09 | 1.664186 | 1.403144 | 1.973793 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | -0.215716684 | 0.096708033 | 0.025708 | 0.805964 | 0.666803 | 0.974167 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.273682644 | 0.089331236 | 0.002186 | 1.314797 | 1.103621 | 1.566382 |
| Subsidiary age 'X7' | 0.001975762 | 0.005740968 | 0.730732 | 1.001978 | 0.990767 | 1.013316 |

**Table A3. Regression summary output for all multinational firms with controls**

| SUMMARY OUTPUT | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Regression statistics | | | | | | |
| Chi square | 1270.193316 | | | | | |
| Residual dev. | 6012.928942 | | | | | |
| # of iterations | 9 | | | | | |
| Observations | 68973 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.58275695 | 0.151533763 | 0 | 0.001384 | 0.001028 | 0.001863 |
| Subsidiary size (number of employees) (X1) | 0.002997318 | 9.29882E-05 | 6E-228 | 1.003002 | 1.002819 | 1.003185 |
| Real GDP Country growth % (X2) | -0.058763263 | 0.025396783 | 0.020678 | 0.94293 | 0.897143 | 0.991054 |
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.508378778 | 0.1241312 | 5.63E-34 | 4.519398 | 3.543398 | 5.764229 |
| Language commonality between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | 0.526146435 | 0.087707741 | 1.99E-09 | 1.692398 | 1.425101 | 2.009831 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | -0.237911854 | 0.096478502 | 0.013665 | 0.788272 | 0.652459 | 0.952355 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.284968918 | 0.089710345 | 0.00149 | 1.329721 | 1.115318 | 1.585339 |
| Subsidiary age 'X7' | 0.002463351 | 0.005765401 | 0.669187 | 1.002466 | 0.991202 | 1.013858 |
| Parent-subsidiary country risk factor (1 = same / 0 = different) (Control variable) | 0.116582434 | 0.058160321 | 0.045016 | 1.12365 | 1.002594 | 1.259323 |
| Operating rev./turnover GBP (Control variable) | -3.72553E-05 | 5.02587E-06 | 1.24E-13 | 0.999963 | 0.999953 | 0.999973 |

**Table A4. Regression summary output for manufacturing multinational firms without controls**

| Regression statistics | | | | | | |
|---|---|---|---|---|---|---|
| Chi square | 725.922148 | | | | | |
| Residual dev. | 3440.246677 | | | | | |
| # of iterations | 10 | | | | | |
| Observations | 37644 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.341392021 | 0.181951281 | 3.951E-266 | 0.001761848 | 0.001233364 | 0.002516782 |
| Subsidiary size (number of employees) (X1) | 0.002599103 | 0.000105848 | 3.8258E-133 | 1.002602484 | 1.002394507 | 1.002810504 |
| Real GDP Country growth % (X2) | -0.076624667 | 0.034040842 | 0.024387896 | 0.926237436 | 0.866456398 | 0.990143058 |
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.255548175 | 0.167089509 | 5.72533E-14 | 3.509761811 | 2.52959385 | 4.869725616 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Language commonality between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | 0.434642546 | 0.117190265 | 0.000208193 | 1.544410905 | 1.227468413 | 1.943190569 |
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | 0.046364816 | 0.131974857 | 0.725351651 | 1.04745647 | 0.808721113 | 1.356666765 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.236634691 | 0.120316077 | 0.049209118 | 1.266978195 | 1.00081985 | 1.603918775 |
| Subsidiary age 'X7' | 0.006818162 | 0.007302011 | 0.350439311 | 1.006841458 | 0.992534489 | 1.021354657 |

**Table A5. Regression summary output for manufacturing multinational firms with controls**

| Regression statistics | | | | | | |
|---|---|---|---|---|---|---|
| Chi square | 798.5449992 | | | | | |
| Residual dev. | 3367.623825 | | | | | |
| # of iterations | 10 | | | | | |
| Observations | 37644 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.41992536 | 0.204064569 | 3.0383E-217 | 0.001628778 | 0.001091847 | 0.002429752 |
| Subsidiary size (number of employees) (X1) | 0.002917356 | 0.000113864 | 8.7926E-145 | 1.002921616 | 1.00269782 | 1.003145462 |
| Real GDP Country growth % (X2) | -0.089654817 | 0.035272851 | 0.011029861 | 0.914246714 | 0.853176928 | 0.97968783 |
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.343815976 | 0.168401271 | 1.46525E-15 | 3.833644724 | 2.755931643 | 5.332799855 |
| Language commonality between parents & wholly | 0.456342429 | 0.11823045 | 0.000113493 | 1.578290704 | 1.25184067 | 1.989871081 |

| | | | | | | |
|---|---|---|---|---|---|---|
| -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | | | | | | |
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | -0.006416365 | 0.131683598 | 0.961137958 | 0.993604176 | 0.767580842 | 1.286182777 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.244382147 | 0.120808754 | 0.043085064 | 1.276832174 | 1.007630304 | 1.617954913 |
| Subsidiary age 'X7' | 0.006976766 | 0.007354015 | 0.342772438 | 1.00700116 | 0.992590745 | 1.021620785 |
| Parent-subsidiary country risk factor (1 = same / 0 = different) (Control variable) | 0.048553855 | 0.078356327 | 0.535485237 | 1.049751905 | 0.900304965 | 1.224006425 |
| Operating rev./turnover GBP (Control variable) | -3.98358E-05 | 6.41243E-06 | 5.22198E-10 | 0.999960165 | 0.999947597 | 0.999972733 |

**Table A6. Regression summary output for non-manufacturing multinational firms without controls**

| SUMMARY OUTPUT | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Regression statistics | | | | | | |
| Chi square | 480.7906647 | | | | | |
| Residual dev. | 2633.45627 | | | | | |
| # of iterations | 8 | | | | | |
| Observations | 31329 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.727247348 | 0.205990308 | 6.154E-234 | 0.001197826 | 0.0008 | 0.001794 |
| Subsidiary size (number of employees) (X1) | 0.003216805 | 0.000163215 | 1.80661E-86 | 1.003221984 | 1.002901 | 1.003543 |
| Real GDP Country growth % (X2) | -0.006109041 | 0.035681715 | 0.864059214 | 0.993909582 | 0.926776 | 1.065907 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.806157043 | 0.186305461 | 3.17884E-22 | 6.087010308 | 4.22494 | 8.769756 |
| Language commonality between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | 0.550214848 | 0.133488708 | 3.7591E-05 | 1.733625443 | 1.334533 | 2.252066 |
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | -0.547228656 | 0.143712146 | 0.000140202 | 0.578550954 | 0.43653 | 0.766778 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.302300688 | 0.133978652 | 0.024049675 | 1.352967987 | 1.040506 | 1.759261 |
| Subsidiary age 'X7' | 0.000465161 | 0.009791902 | 0.962111015 | 1.000465269 | 0.981448 | 1.019851 |

**Table A7. Regression summary output for non-manufacturing multinational firms with controls**

| SUMMARY OUTPUT | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Regression statistics | | | | | | |
| Chi square | 490.696573 | | | | | |
| Residual dev. | 2623.550362 | | | | | |
| # of iterations | 8 | | | | | |
| Observations | 31329 | | | | | |
| | | | | | | |
| | Coefficients | Standard Error | P-value | Odd Ratio | Lower 95% | Upper 95% |
| Intercept | -6.920401781 | 0.233572972 | 6.4312E-193 | 0.000987433 | 0.000625 | 0.001561 |
| Subsidiary size (number of employees) (X1) | 0.003257944 | 0.000164349 | 1.87463E-87 | 1.003263257 | 1.00294 | 1.003586 |
| Real GDP Country growth % (X2) | -0.021661603 | 0.036534989 | 0.55324794 | 0.978571325 | 0.910949 | 1.051214 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Wholly-owned foreign subsidiary profitability (1 = profitable / 0 = unprofitable) 'X3' | 1.744635222 | 0.187121184 | 1.12505E-20 | 5.723813173 | 3.966501 | 8.259681 |
| Language commonality between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X4' | 0.570664194 | 0.134036433 | 2.06698E-05 | 1.769441913 | 1.360643 | 2.301062 |
| Symmetrical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X5' | -0.526086719 | 0.14379545 | 0.00025362 | 0.590912859 | 0.445784 | 0.78329 |
| Geographical linkage between parents & wholly -owned foreign subsidiaries (1 = same / 0 = different) 'X6' | 0.331847119 | 0.13478383 | 0.0138138 | 1.393539786 | 1.070018 | 1.814879 |
| Subsidiary age 'X7' | 3.32452E-05 | 0.009796639 | 0.997292359 | 1.000033246 | 0.981015 | 1.01942 |
| Parent-subsidiary country risk factor (1 = same / 0 = different) (Control variable) | 0.202098024 | 0.087832255 | 0.021394201 | 1.223967981 | 1.030403 | 1.453895 |
| Operating rev./turnover GBP (Control variable) | -1.674E-05 | 9.30864E-06 | 0.072124898 | 0.99998326 | 0.999965 | 1.000002 |