

Micro Multinational Enterprises and the Internationalization of Small and Medium Sized Enterprises: Contextual and Organizational Factors

Joonho Shin

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DOCTORAL THESIS

Title **Micro Multinational Enterprises and the Internationalization of Small and Medium Sized Enterprises: Contextual and Organizational Factors**

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ABSTRACT

Core international business theory asserts that there is a positive relationship between a firm's degree of internationalization and its performance, given that internationalization offers firms the opportunity to grow and enhance their competitiveness. Despite resource constraints to expand geographically, SMEs have shown a high and growing propensity to internationalize, demonstrating that firms do not have to be large to be successful in foreign markets.

The overarching research question this thesis aims to respond is: *what contextual and organizational factors allow internationalizing SMEs overcome their size constraints, adopt higher commitment entry modes, and maximize performance?*

The thesis examines different contextual and organizational factors that influence the relationship between the degree of internationalization and performance in the specific context of SMEs and a particularly interesting subgroup among them, micro multinationals. Previous studies on the internationalization-performance (I-P) relationship have focused on large MNEs while very little attention has been paid to internationalizing SMEs using higher commitment entry modes. The thesis provides a theoretical and empirical explanation of the moderating effect of several contextual and organizational factors on the I-P relationship at different levels of internationalization. To do so, the theoretical framework of the thesis integrates the literature on internationalization/ multinationality research with the corresponding literatures related to the contextual (industry) and organizational (ownership types, geographical diversification strategies). Our findings confirm that the I-P relationship is context-specific and it is contingent on the studied organizational and industry characteristics.

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On behalf of Professor Núria Agell, please find attached the outcome of the evaluation of your profile as candidate for our PhD in Management Sciences.

With my best regards,

Pilar-Pilar Gállego, ESADE

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1

Introduction

Chapter 1: Introduction

1.1 Introduction

Small and medium-size enterprises (SME) are acknowledged as the engines of economic growth due to their important role in GDP growth, new job creation, and promoting innovation and knowledge spillovers (Audretsch, 2007; Chowdhury, 2011). A substantial amount of work suggests that SMEs are vitally important for economic health in both developed and developing economies although the literature on SMEs specifically is relatively limited (Ayyagari, Beck, & Demirguc-Kunt, 2007; G. A. Knight & Kim, 2009; Rwigema & Karungu, 1999; Smallbone, Welter, Isakova, & Slonimski, 2001).

1.2 Relevance and Gap

The increasingly active role of small and medium-sized enterprises (SMEs) in the international business arena has been attracting a great deal of academic attention in recent years (Child & Hsieh, 2014; Dominguez & Mayrhofer, 2017; Toulouva, Votoupalova, & Kubickova, 2015). Despite resource constraints to expand geographically, SMEs have shown a high and growing propensity to internationalize, even using high-commitment entry modes (Acedo & Jones, 2007; Dimitratos, Johnson, Slow, & Young, 2003; Hilmersson & Johanson, 2016), demonstrating that firms do not have to be large to be successful in foreign markets (Kalinic & Forza, 2012; Kuo & Li, 2003; Urata & Kawai, 2000).

Compared to large firms, SMEs have significant differences in ownership, resources, organizational structures and management systems (Bridge, O'Neill, & Cromie, 1998; Singla & George, 2013; Smith, Gannon, Grimm, & Mitchell, 1988). As a result, the patterns of internationalization of SMEs are different from the ones of large companies and these differences also affect firm performance during the internationalization process.

Internationalization provides benefits to SMEs by expanding the market for exploiting their competitive advantages and allowing them access to new markets, knowledge,

resources and innovation which are key motives of internationalization (Lu & Beamish, 2001). Successful internationalization allow SMEs to grow and realize economies of scale and scope, reduce fluctuations in revenues through geographic diversification (C. W. Kim, Hwang, & Burgers, 1989), arbitrage between different factor and product markets, access foreign knowledge that the firm lacks, or gain international experience (Farok J Contractor, 2012). In that sense, successful SME internationalization also contributes to economic development (Urata & Kawai, 2000).

Nonetheless, internationalizing SMEs face three types of liabilities when expanding abroad (Lu & Beamish, 2006). The first two, the liability of foreignness (Hymer, 1976; Zaheer, 1995) and the liability of newness (Stinchcombe & March, 1965), are commonly faced by all firms operating in foreign countries. The liability of foreignness stems from a lack of local knowledge and local business connections (Johanson & Vahlne, 2009) thus representing associated costs of learning and adaptation to the new business environment. For internationalizing SMEs, even if foreign markets are not very different to the home market, these costs are significant as most of them are less experienced in international operations. The liability of newness means that new firms in a market will face difficulties and added risks till they have established their reputation and be perceived as legitimate. This legitimizing process can be expensive and time consuming, particularly for small and young firms who need to build new relationships with customers and business partners (Sørensen & Stuart, 2000). The liability of smallness is a specific disadvantage faced by SMEs. In essence, it refers to the limited resources and capabilities that SMEs are able to commit to internationalization as compared to large firms (De Maeseneire & Claeys, 2012; Lu & Beamish, 2001). Research has shown that SMEs face internal and external constraints in their international development, such as limited capital and lack of time, international experience or managerial capabilities (Rialp & Rialp, 2007).

But there are also advantages in being a small organization. SMEs tend to have a faster and more transparent decision-making process and internal communication among employers and employees is easier, which facilitates alignment with company goals and strategies (M.-J. Chen & Hambrick, 1995). These organizational advantages allow SMEs

to be highly responsive, flexible and adaptable to market and technological changes (M.-J. Chen & Hambrick, 1995; Pla-Barber & Escribá-Esteve, 2006) and to the realities of foreign markets.

Nonetheless, till recently the literature has equated SME internationalization with the use of lower commitment entry modes such as licensing or exporting as means to overcome resource constraints and limit the risks associated to foreign operations (Dimitratos, Amorós, Etchebarne, & Felzensztein, 2014; Prashantham, 2011; Ripollés, Blesa, & Monferrer, 2012) . That is, the combined effect of the liabilities of internationalization and smallness, in terms of costs and risks, impact the internationalization strategies of SMEs (Lu & Beamish, 2006; Wiklund, Baker, & Shepherd, 2010) and constrain their choice of foreign market entry modes, especially those involving foreign direct investment (FDI) which represents a significant resource commitment and considerable amount of costs in terms of learning and adjusting to new markets (Goerzen & Beamish, 2003).

An increasingly globalized economy represents opportunities but also threats for SMEs. In markets open to international competitors, not to internationalize can be a riskier strategic option as it may lead to losing a firm's competitive advantage at home. Moreover, some scholars have observed that internationalizing SMEs may under-achieve if they confine themselves exclusively to exporting modes (Dimitratos, Plakoyiannaki, Pitsoulaki, & Tüselmann, 2010). In that regard, recent research has identified the emergence of micro-multinational enterprises (mMNEs), a new type of SMEs that, in addition to exporting, implement high-commitment market entry modes to exploit opportunities abroad (Dimitratos et al., 2014; Dimitratos et al., 2003; Ibeh, Johnson, Dimitratos, & Slow, 2004; Prashantham, 2011).

In summary. On the one hand, it is widely recognized in the literature that digital technologies, market liberalization and significant improvements in transportation and communication infrastructures greatly enhance internationalization opportunities for SMEs (Fernández & Nieto, 2006). On the other, SMEs are constrained by their size and limited resources to support internationalization efforts. As a consequence, the notion

that SMEs focus solely on exporting modes has prevailed in the literature and very little research has been done on the use of more advanced foreign market entry modes by SMEs (Dimitratos et al., 2014; Prashantham, 2011). However, the pattern of SME internationalization has evolved in recent years as demonstrated by the emergence of mMNEs which contradicts this traditional notion and opens up a whole new research agenda.

This dissertation aims to contribute to the SME internationalization literature by addressing the following overarching research question: *what contextual and organizational factors allow internationalizing SMEs overcome their size constraints, adopt higher commitment entry modes, and maximize performance?*

1.3 Literature Review

1.3.1 The emergence of Micro Multinational Enterprises (mMNEs)

Dimitratos et al. (2003, p5) define an mMNE as a “small- and medium-sized firm that controls and manages value-added activities in more than one country through a constellation [or combination] of contractual and investment modes”. mMNEs employ advanced foreign market entry modes, such as strategic alliances, joint ventures and foreign subsidiaries (Ibeh et al., 2004), as large multinational firms do. Their distinguishing characteristic – as compared to pure exporting SMEs – is their ability to manage what Benito, Petersen and Welch (2011) name as “mode combinations” encompassing both contractual and equity foreign operation modes.

Conceptually, mMNEs are different from “born-global firms” or “international new ventures” (INV) because they are defined by the adoption of higher-commitment entry modes, including FDI, but they don’t have to be young firms nor have internationalized rapidly (Shin, Mendoza, Hawkins, & Choi, 2017). Thus, while those born-global firms or INVs that employ “mode combinations” will qualify as mMNEs, not all mMNEs will qualify as born-global or INVs because they may not be young firms nor have internationalized rapidly.

The use of higher commitment entry modes allows mMNEs to reduce their

dependency on agents and/or distributors and to better control their own international activities, to engage with international customers and suppliers in greater proximity and to provide superior customer service, to enable a deeper knowledge about foreign markets and, as a result, to attain a higher profit potential, although its use also increases risks and reduces flexibility (Lu & Beamish, 2001; Ruigrok & Wagner, 2003). While such benefits and risks are well known, the intriguing question is *how mMNEs, in spite of being SMEs and thus facing resource constraints, are able to employ higher commitment entry modes?*

Empirical studies on mMNEs show that they originate from a mixture of high and low technology firms in both manufacturing and service sectors across developed and developing countries (Dimitratos et al., 2003; Ibeh et al., 2004).

Given this diversity of origins, researchers have focused on the organizational characteristics that distinguish mMNEs from purely exporting SMEs. Their findings so far indicate that mMNEs seem to be more entrepreneurial in terms of international risk-taking) (Dimitratos et al., 2014; Prashantham, 2011), have developed superior marketing capabilities (Ripollés et al., 2012) and actively use their interorganizational networks to obtain relevant, in-depth foreign market knowledge (Dimitratos et al., 2014; Stoian, Rialp, & Dimitratos, 2016) relying largely on them to innovate and adapt their offer to the idiosyncrasies of foreign markets (Stoian et al., 2016). Furthermore, Prashantham (2011) found in his study on Indian software SMEs that cross-border ethnic social capital facilitates the adoption of higher-commitment entry modes by mMNEs.

Although the academic debate on what factors has enabled the emergence of mMNEs is attracting a growing number of contributions, it still remains a largely under-explored field in the SME internationalization and international entrepreneurship literatures (Dimitratos et al., 2014; Vanninen, Kuivalainen, & Ciravegna, 2017).

1.3.2 The Relationship between the Degree of Internationalization and Performance

The term “degree of internationalization” (DOI) refers to the level of involvement of the

firm in markets outside its home country (Kirca, Roth, Hult, & Cavusgil, 2012). It has been used extensively in the international business, finance, and management literatures and indicates the state of internationalization of a firm at a given point in time, rather than to the process of internationalization itself (cf. Johanson and Vahlne, 1977). The term “multinationality” (M) refers to the extent to which firms are multinational at a given point in time. While both terms are conceptually similar and often considered as equivalent, for the essays of this dissertation we choose the term that fits best the phenomenon studied, DOI for exporting SMEs (Essay 1) and Multinationality for mMNEs (Essays 2 and 3).

After 30 years of research on the relationship between the degree of internationalization (or multinationality) and performance (a.k.a. as DOI-P or M-P relationship), empirical findings continue to provide inconclusive results (Kirca et al., 2012; Li, Goerzen, & Verbeke, 2005; Ruigrok & Wagner, 2004). In recent years, based on the trade-off between costs and benefits, which determine the direction of the slope at different levels of the degree of internationalization (or multinationality), researchers have found various non-linear relationships. Namely, a squared relationship, U-shaped relationship in which firm performance decreases at low levels of internationalization, but increases as international expansion continues because benefits related to it offset the costs (Capar & Kotabe, 2003; Lu & Beamish, 2001; Ruigrok & Wagner, 2003), an inverted U-shaped relationship demonstrating the combined positive net effect of benefits and costs till a certain threshold of internationalization (M. J. Geringer, Beamish, & DaCosta, 1989; Gomes & Ramaswamy, 1999; Hitt, Hoskisson, & Kim, 1997), a cubic relationship, an S-shaped or inverted S-shaped relationship introducing the DOI-P relationship as a series of stages of benefits and costs along the internationalization continuum (S. C. Bae, Park, & Wang, 2008; Bowen, 2007; F. J. Contractor, Kundu, & Hsu, 2003) and, more recently a quadratic relationship, M-shaped or inverted M-shaped curve in the case of INVs combining an S-shaped and a U-shaped curves (Almodóvar & Rugman, 2014; Benito-Osorio, Colino, Guerras-Martín, & Zúñiga-Vicente, 2015; Lee, 2010, 2013).

The rationale for an inverted U-shaped relationship is that in the initial stages of

multinationality the benefits of international expansion exceed the costs incurred, however, as the firm increasingly enters dissimilar markets and grows in complexity, the costs of international activities escalate and beyond a point exceed the benefits of entering new foreign markets. This point is called the threshold of internationalization and occurs when international operations start to drain managerial and organizational capacity resulting in decreased performance (M. J. Geringer et al., 1989; Gomes & Ramaswamy, 1999; Hitt et al., 1997). On the other hand, the U-shaped relationship implies that performance first decreases at low levels of the degree of internationalization (or multinationality) due to the costs associated to the liabilities of internationalization. However, with continued internationalization, performance increases as the level of the degree of internationalization (or multinationality) increases because firm-specific advantages can be exploited at a greater scale and new knowledge and capabilities are developed (Ruigrok & Wagner, 2003) while liabilities and costs are reduced through accumulated experience in the host country (Lu & Beamish, 2004).

More complex models such a cubic relationship, S-shaped relationship, assume the same rationale of the U-shaped relationship for the first two stages (first a decrease in performance then followed by an increase) and then firms reach a tipping point, a third stage, where further increases in the degree of internationalization (or multinationality) yield negative results. Beyond that tipping point, the resulting complexity of doing business escalates coordination costs (Gomes & Ramaswamy, 1999) and, unless the firm develops superior coordination and control capabilities for its international operations, the costs of excessive internationalization will outweigh the benefits (Farok J Contractor, 2012; F. J. Contractor et al., 2003). Moreover, some authors consider that the risk to over-internationalize may only occur to large, highly internationalized firms (Farok J Contractor, 2007, 2012; F. J. Contractor et al., 2003), but not to internationalizing SMEs (Lu & Beamish, 2004). However, this view is controversial as it considers the threshold of internationalization as an absolute notion as a consequence of operating in too many and heterogeneous foreign markets. If we take into account that SMEs have to face the liability of smallness, the threshold of

internationalization may well be a relative notion depending on industry characteristics and on the firm's managerial and organizational capacities, which are largely related to its size.¹

These divergent results have been attributed to a poor conceptualization of the costs and benefits of internationalization, to incomplete measures of the main constructs, or deficient model specifications. In the latter case, a series of factors and/or moderators have been reported to explain the different findings (Kirca et al., 2012). Several researchers acknowledge that contextual factors are critical in internationalization (or multinationality) research (Andersen, 2008; Brock & Alon, 2009; Fleming & de Oliveira Cabral, 2016; Kirca, Fernandez, & Kundu, 2016; Kirca et al., 2012; Ruigrok, Amann, & Wagner, 2007; Singla & George, 2013). Anderson (2008) states that certain industrial conditions lead to different cost/benefit dynamics that display various M-P relationships across industries. In a similar vein, Kirca et al. (2012) state that a comprehensive contextual framework can contribute to resolving the contradictory and inconclusive results reported in the literature, by demonstrating that the effects firm-specific assets have on the DOI-P (or M-P) relationship depend on the industry context in the case of emerging market MNEs. Singla and George (2013) provide evidence of the moderating role of certain firm's organizational characteristics, such as age and business group affiliation, that positively moderate the DOI-P (or M-P) relationship. Accordingly, recent lines of research focus on understanding the factors underlying the DOI-P (or M-P) relationship in *specific contexts* rather than on finding a *generic shape* of the curve that can be generalizable across sectors (Hennart, 2007; Venzin, Kumar, & Kleine, 2008).

Although the literature on the relationship between the degree of internationalization (or multinationality) and performance is very broad, very little attention has been paid to internationalizing SMEs using higher commitment entry modes (Yang & Driffield, 2012) and only very few studies have been published examining the focal M-P

¹ Essay 2 in this dissertation provides empirical evidence about this point.

relationship (among them Lu & Beamish, 2001, 2006, and Rasheed, 2005).

1.3.3 Internationalization patterns of service industry firms

The service sector is the most dynamic and fastest growing segment in the world economy (Endo & Ozaki, 2011; Sanchez-Peinado, Pla-Barber, & Hébert, 2007). There is compelling evidence that service companies have been the most active driver of globalization in recent years (UNCTAD, 2014). The rapid emergence and growth of service internationalization has been facilitated by the liberalization of service markets, the declining costs of transportation and communication, and the remarkable development of information technologies (Ball, Lindsay, & Rose, 2008; Samiee, 1999). In spite of these facts, most of the extant research on firm internationalization focuses on manufacturing firms, leaving the service sector relatively unexplored (Capar & Kotabe, 2003; Endo & Ozaki, 2011; Pla-Barber, Sanchez-Peinado, & Madhok, 2010).

The literature on service management identifies inseparability, heterogeneity, intangibility and perishability, as the main characteristics that distinguish services from goods (Javalgi, Javalgi, & Martin, 2007; Venzin et al., 2008). Firstly, inseparability refers to the fact that production and consumption of services often occur simultaneously. Secondly, intangibility means that the content of a service is immaterial and cannot be evaluated like a good. Service intangibility is also related to the knowledge content embedded in the service, thus the higher the knowledge content is tacit the higher the level of client interaction and local adaptation will be required. Thirdly, heterogeneity means that services are usually tailored in order to meet each customer's needs and as a result more difficult to standardize, which make it less likely for service firms to benefit from economies of scale (F. J. Contractor et al., 2003; Kirca et al., 2012). Lastly, perishability means services cannot be easily stored for use at a later time. It is important to highlight that services are heterogeneous and vary in the degree in which they feature these characteristics.

Service firms face even tougher challenges than manufacturing firms to internationalize due to their distinctive characteristics. A high degree of inseparability increases the need to produce service outputs physically close to the client, as is the

case with hotels or restaurants. A high degree of intangibility usually requires a high level of buyer-seller interaction and local adaptation, increasing the need for a physical presence in host markets as it is the case for legal or auditing services (Capar & Kotabe, 2003; Ghoshal & Bartlett, 1990; G. Knight, 1999). Furthermore, service firms are more likely to choose high commitment entry modes in foreign countries when transferring intangible or tacit know-how (Luo, 2001; Madhok, 1998). Inseparability, intangibility, and heterogeneity lead to higher costs when the offering requires a physical presence and customization to particular customers' needs (J.-S. Chen, Tsou, & Ching, 2011). However, services are heterogeneous and the differences between sub-sectors have implications in their patterns of internationalization (Pla-Barber & Ghauri, 2012).

Among differentiating factors, capital intensity and knowledge intensity have attracted the attention of International Business scholars. Although service firms generally need less capital than manufacturing firms, capital intensity varies significantly across service sectors (M. K. Erramilli & Rao, 1993). Since a service firm's degree of capital intensity represents the relative magnitude of financial commitment, increasing capital intensity implies additional costs for engaging in internationalization activities (M. K. Erramilli, Srivastava, & Kim, 1999). Likewise, the degree of knowledge intensity varies significantly across service firms. Knowledge-intensive services embed a higher degree of intangible or tacit knowledge and require a higher level of client interaction and local adaptation, which implies higher costs in transferring and exploiting the firm's specific advantages in foreign markets.

For capital-intensive (CI) service firms such as hotel or retail chains, the establishment of a new subsidiary in a foreign market implies a significant financial commitment due to substantial investments in specialized fixed assets. The nature of these investments amplifies the costs associated with the liability of foreignness. Being foreign means that making mistakes in business decisions is more likely and, if these mistakes refer to investment decisions, they may have competitiveness-impairing consequences (Lu & Beamish, 2004) whose effects, in the case of CI service firms, may last for prolonged periods of time. Besides, most of these firms are likely to expand by exploring new markets by themselves, that is, they have to directly face the liabilities of

internationalization without established clients (Sherer & Lee, 2002).

By contrast, knowledge-intensive (KI) service firms such as advertising, accounting, and law firms do not need to implement considerable tangible investments in foreign markets, although they do require significant investments in their professional staff (Sanchez-Peinado et al., 2007). The source of value of a KI service firm lies in its intangible assets that to a large extent are embedded in their human resources (Muller & Doloreux, 2009; Von Nordenflycht, 2010). Mistakes in business decisions can be more easily fixed given the flexibility to re-allocate intangible assets (Kogut & Kulatilaka, 1994), thus diminishing the costs associated with the liability of foreignness. Besides, the international expansion of KI service firms is often driven by a follow-the-client strategy (F. J. Contractor et al., 2003; Greenwood & Empson, 2003).

Such features lower the costs of international expansion experienced by KI service firms in different and important ways: intangibility lowers the burden of financial investment, while customer-following reduces the initial uncertainty about the firm's ability to generate the minimum amount of revenues needed to cover operational costs, and at the same time diminishes associated experiential learning costs needed to adapt to a new foreign market (Brock & Alon, 2009; F. J. Contractor et al., 2003; K. M. Erramilli & D'Souza, 1995; Sanchez-Peinado et al., 2007). However, KI services often require a significant degree of customization. Customization is a learning process between KI service firms and their customers that requires a high degree of customer interaction during service delivery (Tsou, Ching, & Chen, 2007). As KI service firms enter new foreign markets, additional investments to acquire local-specific knowledge (Doz, Santos, & Williamson, 2001) and develop local business relations (Johanson & Vahlne, 2009) will be needed. In that regard, KI services are more difficult to standardize since customer preferences may differ across foreign countries (Rugman & Verbeke, 2002), making it less likely that KI service firms can benefit from economies of scale. Even though KI service firms may use service delivery models which do not require a high level of local production, allowing them to achieve some cost reductions in the separable parts of the service output through standardization or cost arbitrage, the business itself (client acquisition, account management, supervision) will still

heavily depend on personal relations, networks and trust (Abdelzaher, 2012). Interpersonal relations are hard to forecast, manage and control for inexperienced market entrants when the client does not share a similar cultural background (Kogut & Singh, 1988). Conversely, CI service firms are less sensitive to cultural distance than KI service firms and are better able to achieve economies of scale through expanding to foreign markets (Kogut, 1985; Porter, 1990).

While the extant literature on service internationalization recognizes the differences between KI and CI service, most of the studies have focused on examining either one type of service firm or the other and very few have compared both types (e.g. Capar & Kotabe, 2003; Contractor et al., 2003, 2007; Li et al., 2005; Elango, 2006; Endo & Okazi, 2011). Therefore, there are calls in the literature for further studies on the differences in the internationalization patterns of knowledge-intensive (KI) and capital-intensive (CI) service firms and the implications these differences have on their performance (Pla-Barber & Ghauri, 2012).

1.3.4 Ownership, International Diversification and Firm Performance: The effect of Business Group Affiliation

Although it is well established that owners' characteristics directly affect performance (Garengo, Biazzo, & Bititci, 2005), few studies have examined the relationship between internationalization strategies and types of ownership (Fernández & Nieto, 2006), and in particular corporate ownership or affiliation to a business group (Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011).

Business groups are a common organizational form in most developing and emerging economies. In the extant literature, the most widely accepted definition refers to a business group as *a gathering of formally independent firms under a single common administrative and financial control* (S. J. Chang & Choi, 1988; S. J. Chang & Hong, 2000; Chu, 2004; Khanna & Palepu, 2000). Business groups control affiliated firms through cross-shareholdings and ownership pyramidal structures, even though these affiliates are legally independent companies with their own shareholders and boards of directors (S.-J. Chang, 2003; S. J. Chang & Choi, 1988). Business groups form networks

in which the behavior of individual affiliates is intertwined through various formal and informal relationships (Granovetter, 2005). In that sense, important strategic decisions of group affiliates are usually taken at the group level rather than at the firm level (S. J. Chang, 1995; S. J. Chang & Choi, 1988), especially when they involve significant resource commitments as it is the case of internationalization strategies.

Business groups are a common organizational form in most developing and emerging economies. Being affiliated to a business group may be beneficial to performance. One of the most common arguments to join a business group is that market inefficiencies and institutional voids can be overcome more efficiently by affiliated firms than by independent ones (Carney et al., 2011; Guillen, 2000; Khanna & Palepu, 2000; Ma, Yao, & Xi, 2006; Wan & Hoskisson, 2003). Researchers argue that business groups function as efficient internal capital and labor markets (Belderbos & Sleuwaegen, 1996; Khanna & Palepu, 2000) and share specific resources and information, which is positively related to the profitability of affiliates (Almeida & Wolfenzon, 2006; S. J. Chang & Hong, 2000; Mahmood & Mitchell, 2004). For example, in Japan and Korea, a general trading company within the group functions as the export window and as the supplier of raw materials and intermediate goods which cannot be acquired in domestic market (S. J. Chang & Choi, 1988). This resource-sharing allows affiliated firms to access and deploy valuable resources at a lower cost compared to the external market (S. J. Chang & Choi, 1988; S. J. Chang & Hong, 2000)

However, market imperfections and institutional voids are less prominent in advanced economies, thus the scope for group affiliation benefits narrows down significantly (Carney et al., 2011; Khanna & Palepu, 1997). Nonetheless, affiliation allows firms to tap into the knowledge and business connections of sister affiliates in foreign markets (S. J. Chang, 1995; Lamin, 2012) as well as their experience on different forms of internationalization such as joint ventures and international alliances (B Elango & Pattnaik, 2007; B. Elango & Pattnaik, 2011; Khanna & Palepu, 1997). This enables affiliated firms to attract more clients from foreign markets and to attain higher international sales than independent, unaffiliated firms can (Lamin, 2012).

On the other hand, researchers have also shown that there are various costs associated to business group affiliation that may offset its benefits (Ferris, Kim, & Kitsabunnarat, 2001; Khanna & Palepu, 2000; H. Kim, Hoskisson, & Wan, 2004) and negatively affect affiliates' profitability (Khanna & Yafeh, 2007; Scharfstein & Stein, 2000). Agency theorists argue that disagreements between majority and minority owners may be a cause of significant agency costs and diseconomies (Morck, Wolfenzon, & Yeung, 2005). Thus, affiliated firms are often operated by controlling shareholders (e.g. an owner including his/her family) for their private benefits at the expense of minority shareholders, which is considered a major source of agency problems (K. H. Bae, Kang, & Kim, 2002; Bertrand, Mehta, & Mullainathan, 2000). Further, business groups tend to promote stability rather than profit maximization. Affiliation acts as an "insurance policy" through the norms and expectations of mutual assistance which reduce bankruptcy risks but also impose costs such as the obligation to cross-subsidize weaker members of the group (Carney et al., 2011; Ferris, Kim, & Kitsabunnarat, 2003). All these factors lead to inefficient resource allocation and lower performance relative to independent firms.

Empirical consensus has yet to be reached in regards to the benefits and costs of group affiliation. Besides, there are not many studies that directly examine the effect of group affiliation on SME performance (Woo, Chung, Chun, & Seo, 2014). This dissertation explores the effect of business group affiliation on SME internationalization and its performance implications in Korea and Spain, two advanced economies with quite a different make up regarding the prevalence of business groups.

1.3.5 The Importance of Geography in International Diversification Strategy

International diversification provides opportunities to gain competitive advantages and increase performance (Hitt et al., 1997). Recent research has shown that the geographical dimension of multinationality matters. In their seminal article, Rugman and Verbeke (2004) analyzed the geographical distribution of the sales of the world's largest companies. They classified MNEs into four types: home-region oriented, bi-regional, host-region oriented and global. They found that the sales of most MNEs take

place largely in their home region and that only in very few cases the world's largest firms operate globally. These authors (Rugman, 2005; Rugman & Verbeke, 2004; Rugman & Verbeke, 2007) provided several reasons why multinational firms tend to be regional rather than global in their geographical scope. Firstly, on top of geographical closeness, institutional and cultural proximity makes it easier to do business in countries within the same region (informal determinants). Secondly, intensification of regional trade agreements provides formal, intra-regional mechanisms to facilitate more business between proximate countries.

Their findings can also be interpreted as a reflection of the limits that MNEs have to transfer and deploy their firm-specific advantages internationally (Rugman & Verbeke, 2004, p. 6). The fact that countries within a region are culturally close and firms face similar market demands and similar or even the same competitors, facilitates that the experience and knowledge of one country can be applied to another country within that region. However, when multinational companies diversify across regions they do not benefit from such sharing and face the costs of 'inter-regional' distance and the 'liability of inter-regional foreignness' (Rugman & Verbeke, 2007).

Qian et al. (2013, p. 635) note that there is an intense debate among international strategy researchers on the merits of intra- and inter-regional diversification. However, the empirical literature presents inconclusive results because some authors conclude that intra-regional diversification is more effective than inter-regional diversification (Arregle, Beamish, & Hébert, 2009; Asmussen, 2009; Rugman & Verbeke, 2004), while others arrive at opposite conclusions (Delios & Beamish, 2005; Osegowitsch & Sammartino, 2008; Qian, Li, Li, & Qian, 2008). Ruigrok et al. (2013) summarize the theoretical arguments to explain the superior performance of firms with a regional focus as follows: by mainly expanding within their home region, firms can significantly reduce managerial and administrative costs related to cultural and geographic distance (Rugman, 2005) and benefit from legal, economic, and customer-related proximity across countries in the same region (Qian et al., 2008). Accordingly, costs related to coordination, employee travel, and physical product or asset transportation are reduced when the geographical distance is minimized among subsidiaries (Rugman &

Oh, 2010). On the other hand, inter-regional diversification increases a firm's growth potential because it helps to maximize market opportunities, leverages economies of scale derived from dispersed operations (K. Kim, Park, & Prescott, 2003) and allows to arbitrage production factors and consumer market differences across regions (Wan & Hoskisson, 2003). However, expanding beyond the home-region and entering into new regions and dissimilar markets will require a greater level of resource commitments and most probably will increase operational costs and risks due to the liabilities of regional foreignness (J. M. Geringer, Tallman, & Olsen, 2000; Rugman, 2005; Rugman, Oh, & Lim, 2012) which at some point may erode firm performance.

The trade-off between regional or multi-regional geographical scope has been the subject of substantial debate; however, extant research typically has focused on large multinationals (Degraev, 2017; Pisani, Caldart, & Hopma, 2017), while studies with samples of SME firms have basically focused on exporting SMEs (Almodóvar, 2012). This dissertation aims to contribute to fill this knowledge gap by examining the performance implications of the geographical diversification strategies (regional or multi-regional) pursued by mMNEs.

1.3.6 Summary of the Literature Review

The present dissertation leverages several different literatures within the domain of International Business; namely, SME internationalization and mMNEs, internationalization-performance relationship, and literatures related to contextual and organizational factors (Figure 1). Each of these fields represents an area of scholarship on its own right; however, their intersection and cross-fertilization provide opportunities to study unexplored or emerging phenomena as this dissertation does.

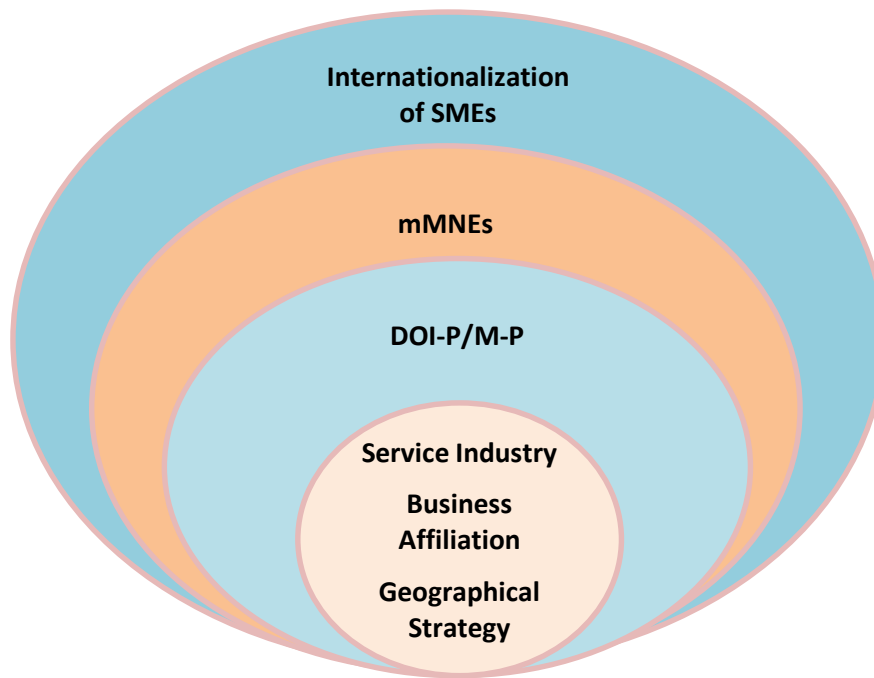


Figure 1-1: Summary of the Literature Review

1.4 Theoretical Perspectives Leveraged

Globalization has changed the competitive landscape for many SMEs, allowing them to enter distant foreign markets and exposing themselves to the associated competitive pressures. Therefore, identifying sources of competitive advantage and nurturing them are critical activities to their long-term success. In pursuit of answers to the central question of strategic management, “why do some firms perform better than others?” (Penrose, 1995), we analyze the patterns of internationalization and related performance differences, in order to highlight the potential source of competitive advantage for SMEs. Combining the transaction-cost and the resource-based perspectives, we study how industry characteristics (manufacturing or services) and firm’s organizational characteristics such as size or group affiliation shape the relationship between the degree of internationalization and performance.

In the dissertation we draw on several theoretical perspectives and literatures. In first place, the literature on service internationalization. The unique characteristics of service offerings make the pattern of internationalization of service firms different from that of manufacturing firms, which in turn shapes the relationship between the

degree of internationalization and performance differently. Moreover, there are important differences between capital-intensive and knowledge-intensive service firms in terms of their underlying resource base. Consequently, the characteristics of knowledge-intensive service firms will lead to different patterns of internationalization than those from capital-intensive service firms.

Secondly, we draw on the multinationality-performance literature whose foundations can be found on transaction cost economics (TCE) and the resource based view of the firm (RBV). The RBV considers a firm as a unique bundle of resources which may generate sustained competitive advantages (Barney, 1991). RBV researchers have argued that the resources owned by a firm, especially if they are valuable, rare and inimitable, will determine the economic performance of the firm (Peteraf, 1993; Peteraf & Bergen, 2003) and provide particular conditions to shape the patterns of internationalization (Keith D Brouthers, Brouthers, & Werner, 2008; Huett, Baum, Schwens, & Kabst, 2014). From the perspective of transaction cost theory, the uniqueness of the firm's bundle of resources can reduce or increase the transaction costs of internationalization (Keith D. Brouthers, Brouthers, & Werner, 2003; Gomes & Ramaswamy, 1999). Combining RBV and TCE, we show how industry characteristics affect the pattern of internationalization and the shape of the M-P relationship.

Thirdly, the literature on business groups. Certain organizational characteristics also reduce or increase the costs of internationalization (M. K. Erramilli & Rao, 1993; Khanna & Rivkin, 2001; Khanna & Yafeh, 2007). In that regard, group affiliation may facilitate the internationalization process of affiliated SMEs (and mMNEs) through resource sharing, but it can also limit organizational flexibility. Drawing insights from the resource-based view (RBV) of the firm, we focus on the benefits of business group affiliation such as resource sharing through internal markets which put affiliated mMNEs in a better position to deal with the liabilities of internationalization than independent firms (S. J. Chang & Hong, 2000). Based on transaction cost economics, the economic perspective conceives of business groups as responses to market failures in emerging economies (Khanna & Palepu, 1997), while in developed economies business groups are seen as "functional (market) substitutes" (Guillen, 2000, p. 363) in

transferring and sharing resources among the different group affiliates. Therefore, their efficiency in internally transferring and exploiting resources is a key factor to enhance the competitive advantage of affiliated SMEs in a globalized and highly competitive environment.

1.5 Methodology

We use a quantitative research approach to answer the different research questions of the three essays that conform this dissertation. For each essay we have developed well-grounded and clearly defined hypotheses, collected the data and built panel data sets, used appropriate measures for the different variables and robust statistical methods to test the hypotheses.

When using panel data, heteroscedasticity should be checked. In order to minimize potential heteroscedasticity in the panel data (Greene, 2003), all three essays use a feasible generalized least square (FGLS) regression method to analyze the relationship between the degree of internationalization and performance.

Further in Essay 3, we used the two-step approach described in Shaver (1998) and adopted by Brouthers et al. (2013) to compare the relationships between the degree of internationalization and performance derived from two different strategic decisions (regional and multi-regional diversification) eliminating the problem of endogeneity. In the first stage, we conducted the probit regression to see if the geographical diversification strategy is predicted based on hypotheses and to divide mMNEs into four groups. In stage two, a feasible generalized least square (FGLS) regression model was used.

1.6 Structure of the Dissertation

This dissertation is prepared as a monograph, following a three-essay format. In this section, we provide a brief overview of the three essays that make up my dissertation. All the references and the additional tables and figures that support each essay are provided at the end of each respective chapter.

Table 1-1: Titles and Authorship of Essays

Title	Authorship	Target Journal	Status
Internationalization and firm performance of manufacturing SMEs: Does business group affiliation matter?	Joonho, Shin Mendoza, Xavier Donghang, Lee Changbum, Choi	Asian Pacific Journal of Management	Submitted
The relationship between multinationality and performance: Knowledge-intensive vs. capital intensive service micro-multinational enterprises	Joonho, Shin Mendoza, Xavier Hawkins, Matthew A. Changbum, Choi	International Business Review	Published
Geographical diversification strategy of micro-multinationals: The effects of industry and group affiliation	Joonho, Shin Mendoza, Xavier Kalafatoglu, Tugba	Journal of Small Business Management	Submitted

Essay 1: Internationalization and firm performance of manufacturing SMEs: Does business group affiliation matter?

The aim of Essay 1 is to explore the moderating effect of business group affiliation on SME internationalization for two dimensions. More specifically, the main research question refers to *whether the benefits of being an affiliated mMNEs lead to better performance than being an independent mMNE when expanding internationally*. Furthermore, we also inquire whether the effect of resource sharing among affiliates varies according to the technology intensity in manufacturing sectors. To answer these questions, we bring together two important academic streams: the literature on the degree of internationalization and performance (DOI-P) relationship and the literature on value creation by business groups. We analyze the performance and degree of internationalization of 143 Korean manufacturing SMEs operating over a five-year period.

Essay 2: The relationship between multinationality and performance: Knowledge-intensive vs. capital intensive service micro-multinational enterprises

Essay 2 examines the relationship between multinationality and firm performance in the context of mMNEs operating in the service sector. More specifically, our research question is to determine *whether the degree of capital or knowledge intensity of a service mMNE may lead to different dynamics of costs and benefits of internationalization which in turn determine the shape and direction of the observed M-P relationship*. To answer this question, we bring together two important academic streams: the literature on the M-P relationship and the literature on service sector internationalization. In order to do so, we built a data set composed of 1,082 Spanish micro-multinational enterprises operating over an eight-year period and examined the moderating impacts of two types of mMNE service firms: knowledge-intensive (KI) and capital-intensive (CI).

Essay 3: Geographical Diversification Strategy of Micro-Multinationals: The Effects of Industry and Group Affiliation

In Essay 3 we explore whether the geographical diversification strategies (regional or multi-regional) pursued by mMNEs differ by industry (manufacturing, services) and ownership type (independent, business group affiliated) and their performance implications. Based on a sample of 523 Spanish mMNEs over an eight-year period, we use a two-stage approach developed by Shaver (1998) and adopted by Brouthers et al. (2013). In the first stage, we conduct a probit regression to see if the geographical diversification strategy is predicted based on industry and ownership characteristics. In stage two, we use a feasible generalized least square (FGLS) regression model to assess the performance differences between mMNEs that pursue the predicted geographical diversification strategy (Fit group) and those that do not (Non-Fit group).

* * *

Next, the three dissertation essays are elaborated upon in Chapters 2, 3 and 4. Each chapter provides a comprehensive account of the gap in the literature, the research

question/s addressed, research methods employed, and a discussion of the findings and conclusions. Chapter 5 presents a synthesized discussion of the conclusions of the dissertation and proposes avenues for future research.

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2

Internationalization and firm performance of manufacturing SMEs: Does business group affiliation matter?

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Chapter 2: Internationalization and firm performance of manufacturing SMEs: Does business group affiliation matter?

2.1 Abstract

In this paper, we explore the degree of internationalization and performance (DOI-P) relationship of small and medium-sized enterprises (SMEs) in manufacturing sectors. This study extends prior literature by examining the moderating impacts of business group affiliation and industry characteristics on the DOI-P relationship. Using a dataset of Korean SMEs over a five-year period, our findings present an S-shaped DOI-P relationship in which business group affiliation has different moderating effects on performance according to the degree of internationalization. In addition, group-affiliated SMEs perform better than independent ones at low and high levels of internationalization. Further, we have also found that affiliation to a business group enhances the performance of affiliated high-tech SMEs. Overall, we conclude that business group affiliation has a net positive effect on the DOI-P performance because it helps mitigate the liabilities of foreignness and smallness, typical of SMEs. This net positive effect also shows that business groups continue to provide benefits to their affiliates in the context of an advanced economy.

2.2 Introduction

In recent years the internationalization of small and medium-sized enterprises (SMEs) has been receiving a great deal of academic attention (Child & Hsieh, 2014; Dominguez & Mayrhofer, 2017; Toulova, Votoupalova, & Kubickova, 2015). Despite resource constraints to expand geographically, SMEs have shown a high and growing propensity to internationalize, even using high-commitment entry modes (Acedo & Jones, 2007; Dimitratos, Johnson, Slow, & Young, 2003; Hilmersson & Johanson, 2016), demonstrating that firms do not have to be large to be successful in foreign markets (Kalinic & Forza, 2012; Kuo & Li, 2003; Urata & Kawai, 2000). However, it is still highly risky for SMEs to enter foreign markets given their resource and capability constraints

(Evangelista, 2005; Mudambi & Zahra, 2007). Accordingly, the costs of internationalization and how they can be reduced or mitigated should be considered more carefully in the case of SMEs.

Previous studies show that certain organizational characteristics can increase cost or enhance benefits of internationalization (Erramilli & Rao, 1993; Khanna & Rivkin, 2001; Khanna & Yafeh, 2007). The benefits and costs of doing business in a host country impact directly a firm's performance and often decide the depth and breadth of internationalization (Anderson & Gatignon, 1986; Johanson & Vahlne, 1977). Compared to large enterprises, SMEs have organizational advantages such as more transparent decision-making process and ease of internal communication among employers and employees (M.-J. Chen & Hambrick, 1995) which allows SMEs to be highly responsive, flexible and adaptable. However, resource deficiency is still a major barrier to SMEs. On the other hand, the affiliation of a firm to a business group may facilitate access to critical group resources thus enhancing its internationalization process which enables affiliated firms to achieve higher performance than unaffiliated firms can (B Elango & Pattnaik, 2007; B. Elango & Pattnaik, 2011; Khanna & Palepu, 1997). However, it can also limit decision-making autonomy and organizational flexibility (Lamin, 2012). Therefore, being an affiliated or independent firm may lead to different dynamics of costs and benefits of internationalization which in turn determine the shape and direction of the observed M-P relationship.

Although the literature on the relationship between the degree of internationalization and performance in the case of SMEs is quite broad, empirical consensus has yet to be reached in regards to the benefits and costs of group affiliation. Moreover, there are not many studies that directly examine the effect of group affiliation on SME performance (Woo, Chung, Chun, & Seo, 2014). Therefore, the aim of this paper is to explore the effect of business group affiliation on SME internationalization. More specifically, our main research question refers to whether affiliated SMEs perform better than independent ones when expanding internationally. Furthermore, we also inquire whether the effect of business group affiliation on SME internationalization varies according to the technology intensity of a firm's industry.

To answer these questions, we bring together two important academic streams: the literature on the DOI-P relationship and the literature on business groups. We first hypothesize an S-shaped internationalization–performance relationship as the baseline and then investigate the moderating effects of business group affiliation. In order to do so, we analyzed data from 143 Korean manufacturing SMEs operating over a five-year period. Korea provides a unique and interesting context for analyzing the relationship between business group affiliation and the performance of affiliated firms, for two main reasons. First, Korean manufacturing firms have successfully internationalized over the past three decades. Second, family ownership and tight control through cross shareholdings are features of the Korean business groups.

Our findings present an S-shaped relationship between international diversification and firm performance in which business group affiliation has different moderating effects on performance according to the degree of internationalization. Thus, group-affiliated SMEs perform better than independent ones at low and high levels of internationalization. Further, we have also found that affiliation to a business group enhances the performance of affiliated high-tech SMES. Overall, we conclude that business group affiliation has a net positive effect on the DOI-P performance because it helps mitigate the liabilities of foreignness and smallness, typical of SMEs.

This paper contributes to the extant literature on SME internationalization and on business groups in several ways. Firstly, by integrating into a theoretical framework both literature streams we provide a theoretical and empirical explanation of the moderating effect of group affiliation on the DOI-P relationship at different levels of internationalization. Secondly, we demonstrate the overall positive effect of group affiliation in the context of an advanced economy, as business groups continue to provide benefits to group-affiliated SMEs in more developed, market-oriented institutional settings.

This paper is organized as follows. The next section reviews the relevant literature, which leads to the development of hypotheses. In the following section, the paper describes the methodological aspects of the study. Next, the results of the statistical

analysis are presented, followed by a discussion of the findings. The paper concludes by outlining its main contributions and the limitations of the study and pointing to future research directions.

2.3 Literature review and hypothesis development

The relationship between the degree of internationalization and performance (DOI-P) has International diversification involves benefits and costs (Farok J Contractor, 2012; Lu & Beamish, 2004). Among other benefits, international expansion allow firms to leverage their firm-specific resources across multiple foreign markets and generate economies of scale and scope, reduce risk through geographic diversification, offer an opportunity to arbitrage between different factor and product markets, access foreign knowledge that the firm lacks, or gain international experience (Farok J Contractor, 2012). But international expansion also entails costs for the expanding firm, which arise from the challenges of operating in unknown foreign environments, due to the lack of local knowledge and local business connections often referred to as the liabilities of foreignness and outsidership (Johanson & Vahlne, 2009), as well as from the additional administrative and coordination costs derived from operating in foreign countries (Farok J Contractor, 2012; Lu & Beamish, 2004). Benefits and costs of internationalization do not occur simultaneously, on the contrary it is their differentiated dynamics over time as the firm expands internationally that shapes the DOI-P relationship (Farok J Contractor, 2012; Lu & Beamish, 2004; Thomas & Eden, 2004).

However, the relationship between international diversification and performance is not straightforward. Researchers have found various relationships: a) a linear one, either positive emphasizing the benefits of internationalization (Grant, 1987) or negative emphasizing the costs (Kumar, 1984; Siddharthan & Lall, 1982); b) an inverted U-shaped relationship demonstrating the combined positive net effect of benefits and costs till a certain threshold of internationalization (M. J. Geringer, Beamish, & DaCosta, 1989; Gomes & Ramaswamy, 1999; Hitt, Hoskisson, & Kim, 1997); c) a U-shaped relationship in which firm performance decreases at low levels of

internationalization, but increases as international expansion continues because benefits related to it offset the costs (Capar & Kotabe, 2003; Lu & Beamish, 2001; Ruigrok & Wagner, 2003); d) an S-shaped relationship introducing the DOI-P relationship as a series of stages of benefits and costs along the internationalization continuum (Bowen, 2007; F. J. Contractor, Kundu, & Hsu, 2003; Thomas & Eden, 2004). Furthermore, a four-phased M curve combining S-shaped and U-shaped relationships was found in the case of international new ventures (Almodóvar & Rugman, 2014; I. H. Lee, 2010, 2013).

While these diverse findings have been attributed to an incomplete conceptualization of the costs and benefits of internationalization or to incomplete measures of the main constructs, more recently researchers have acknowledged that contextual factors are critical in internationalization-performance research (Kirca, Fernandez, & Kundu, 2016; Kirca, Roth, Hult, & Cavusgil, 2012; Singla & George, 2013). Contextual factors can either enhance or reduce the effects of internationalization on performance and a contextual framework can provide a deeper understanding of the DOI-P relationship (Kirca et al., 2012). Thus, in this study we examine the DOI-P relationship in the context of manufacturing SMEs.

Internationalization provides benefits to SMEs by expanding the market for their goods and allowing them access to the other benefits mentioned above. Compared to large enterprises, SMEs have organizational advantages such as more transparent decision-making process and ease of internal communication among employers and employees (M.-J. Chen & Hambrick, 1995). Organizational advantages allow SMEs to be highly responsive, flexible and adaptable. Thus, SMEs have the ability to react quickly and efficiently to both market and technological changes (M.-J. Chen & Hambrick, 1995; Pla-Barber & Escribá-Esteve, 2006). However, it is still highly risky for SMEs to enter foreign markets given their resource and capability constraints (Evangelista, 2005; Mudambi & Zahra, 2007).

When entering new markets, SMEs often suffer from two main types of liabilities. On one hand, the liabilities of foreignness and outsidership, already mentioned, which

commonly apply to all firms operating in foreign countries. On the other, the liability of smallness that only small firms face, given their limited resources and capabilities (Aldrich & Auster, 1986). Liability of smallness explains why small firms are more disadvantaged relative to their established rivals and show a higher rate of failure (Buckley, 1989). In the case of manufacturing SMEs, the liability of smallness is more pronounced given that manufacturing firms generally are more capital intensive than service firms (Erramilli & Rao, 1993). Moreover, investment in R&D and physical assets amplifies the costs and financial burden associated with internationalization.

Consequently, we expect that the costs associated with the initial stages of international expansion of manufacturing SMEs will likely outweigh the benefits as they learn to compete in foreign markets. Declining performance at low levels of internationalization finds support in prior studies on SME internationalization (Lu & Beamish, 2001, 2006). However, performance will likely improve with continued internationalization. The economies of scale from expanding into foreign markets start to outweigh the costs of expansion because new knowledge and capabilities are developed (Ruigrok & Wagner, 2003) and the liabilities of internationalization are reduced through accumulated experience in the host countries (Lu & Beamish, 2004). As a result, performance will increase.

The literature also indicates that further expansion beyond a desirable level, or over-internationalization, may be detrimental to firm performance (F. J. Contractor et al., 2003), because the coordination and governance costs associated to higher complexity of foreign operations may exceed the benefits of further expansion (Li, 2005). Some authors consider that the risk to over-internationalize may occur to large, highly internationalized multinational firms (Farok J Contractor, 2007, 2012; F. J. Contractor et al., 2003), but not to internationalizing SMEs (Lu & Beamish, 2001). Recent studies have challenged this notion. Shin, Mendoza, Hawkins & Choi (2017) found that internationalizing SMEs also may encounter a threshold of internationalization because such a threshold is a relative notion dependent on industry characteristics and on the firm's managerial and organizational capacities, which are largely related to its size. Therefore,

Hypothesis 1: *The degree of international diversification of manufacturing SMEs will likely show an S-shaped relationship with firm performance*

The above hypothesis assumes that all manufacturing SMEs will experience the same performance implications from internationalization, although this may not be the case. We next examine how business group affiliation may have a moderating effect on the DOI-P relationship.

Empirical consensus has yet to be reached in regards to the benefits and costs of group affiliation. Moreover, there are not many studies that directly examine the effect of group affiliation on SME performance (Woo et al., 2014). In the extant literature, the most widely accepted definition refers to a business group as *a gathering of formally independent firms under a single common administrative and financial control* (S. J. Chang & Choi, 1988; S. J. Chang & Hong, 2000; W. Chu, 2004; Khanna & Palepu, 2000). Business groups control affiliated firms through cross-shareholdings and ownership pyramidal structures, even though these affiliates are legally independent companies with their own shareholders and boards of directors (S.-J. Chang, 2003; S. J. Chang & Choi, 1988). Business groups form networks in which the behavior of individual affiliates is intertwined through various formal and informal relationships (Granovetter, 2005). In that sense, important strategic decisions of group affiliates are usually taken at the group level rather than at the firm level (S. J. Chang, 1995; S. J. Chang & Choi, 1988), especially when they involve significant resource commitments as it is the case of internationalization strategies.

Business groups are a common organizational form in most developing and emerging economies. Being affiliated to a business group may be beneficial to performance. One of the most common arguments to join a business group is that market inefficiencies and institutional voids can be overcome more efficiently by affiliated firms than by independent ones (Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011; Guillen, 2000; Khanna & Palepu, 2000; Ma, Yao, & Xi, 2006; Wan & Hoskisson, 2003). Researchers argue that business groups function as efficient internal capital and labor markets (Belderbos & Sleuwaegen, 1996; Khanna & Palepu, 2000) and share specific

resources and information, which is positively related to the profitability of affiliates (Almeida & Wolfenzon, 2006; S. J. Chang & Hong, 2000; Mahmood & Mitchell, 2004). For example, in Japan and Korea, a general trading company within the group functions as the export window and as the supplier of raw materials and intermediate goods which cannot be acquired in domestic market (S. J. Chang & Choi, 1988).

However, market imperfections and institutional voids are less prominent in advanced economies, thus the scope for group affiliation benefits narrows down significantly (Carney et al., 2011; Khanna & Palepu, 1997). Nonetheless, affiliation allows firms to tap into the knowledge and business connections of sister affiliates in foreign markets (S. J. Chang, 1995; Lamin, 2012) as well as their experience on different forms of internationalization such as joint ventures and international alliances (B Elango & Pattnaik, 2007; B. Elango & Pattnaik, 2011; Khanna & Palepu, 1997). This enables affiliated firms to attract more clients from foreign markets and to attain higher international sales than unaffiliated firms can (Lamin, 2012).

As we have seen, SMEs that start expanding internationally face costs associated with learning and adapting to new environments, which at low levels of internationalization tend to exceed the benefits of entering new foreign markets. Additionally, SMEs often suffer from resource constraints. Since business group affiliates share resources and information, being affiliated will most likely mitigate these disadvantages, especially in the initial stages of internationalization (Birkinshaw, Morrison & Hulland, 1995; Guillen, 2000; Almeida & Wolfenzon, 2006). Conversely, independent SMEs will have to directly face the costs associated with the liabilities of internationalization and smallness. Thus, we expect that business group affiliation will have a positive moderating effect on the performance of SMEs at the start of their international expansion. Therefore,

Hypothesis 2. *Affiliated SMEs will likely experience a lesser decrease in performance than non-affiliated SMEs at low levels of internationalization.*

Researchers have shown that there are also various costs associated to business group affiliation that may offset its benefits (Ferris, Kim, & Kitsabunnarat, 2001; Khanna &

Palepu, 2000; H. Kim, Hoskisson, & Wan, 2004) and negatively affect affiliates' profitability (Khanna & Yafeh, 2007; Scharfstein & Stein, 2000).

Agency theorists argue that disagreements between majority and minority owners may be a cause of significant agency costs and diseconomies (Morck, Wolfenzon, & Yeung, 2005). Affiliated firms are often operated by controlling shareholders (e.g. an owner including his/her family) for their private benefits at the expense of minority shareholders, which is considered a major source of agency problems (K. H. Bae, Kang, & Kim, 2002; Bertrand, Mehta, & Mullainathan, 2000). Further, business groups tend to promote stability rather than profit maximization. Affiliation acts as an "insurance policy" through the norms and expectations of mutual assistance which reduce bankruptcy risks but also impose costs such as the obligation to cross-subsidize weaker members of the group (Carney et al., 2011; Ferris, Kim, & Kitsabunnarat, 2003). All these factors lead to inefficient resource allocation and lower performance relative to independent firms.

Moreover, coordination demands of internal transactions may create conforming pressures (Cuervo-Cazurra, 2006), which may generate a structural inertia among affiliated firms and become less reactive to changes outside their own business networks (Carney et al., 2011). In that regard, the internationalization of an affiliate may require a business group to rearrange its business portfolio which will likely raise the costs of coordination and adjustment of resources among affiliates to reach the desired level required to compete effectively in foreign markets (Prange & Verdier, 2011). As a result, affiliated SMEs should experience increasing costs of doing business abroad due to both organizational and environmental complexity. In short, as the degree of internationalization increases operational and agency costs will likely increase and offset the benefits of expansion.

On the other hand, independent SMEs are more flexible in terms of strategic and operational decision making (M.-J. Chen & Hambrick, 1995) and are not constrained by social norms and reciprocal obligations common among affiliates of a business group, so they can more readily invest in promising international projects which translates

into a more efficient resource allocation (Carney et al., 2011). Besides, once independent firms have established their presence in foreign markets and develop local business connections and knowledge about the idiosyncrasies of these markets, the information advantage of group affiliates relative to independent firms will likely diminish. As a result, we expect that independent SMEs will show better performance as they progress towards higher levels of internationalization. Therefore,

Hypothesis 3. *Independent SMEs will likely experience a greater increase in performance than affiliated SMEs at intermediate and high levels of internationalization*

High-tech industries are characterized by rapid changes and high risks. Manufacturing firms operating in high-tech industries have a large proportion of their resources committed to product development (S. C. Bae, Park, & Wang, 2008), which increases the production cost per unit. Therefore, international expansion is indispensable in these industries to gain economies of scale and be able to recover product development investments in short periods of time (Calori, Atamer, & Nunes, 2000b; Farok J Contractor, 2007).

For SMEs from high-tech industries, internationalization is a dynamic and complicated process (Qian & Li, 2003). To be successful, these firms require continuous R&D efforts to be competitive, which pose a serious challenge given their resource constraints (Oviatt & McDougall, 1994; Zou & Ghauri, 2010). When it comes to exploit new opportunities abroad, the risks associated to the frequent obsolescence of technology are aggravated by the liabilities of foreignness and SME's resource constrains (Calori, Atamer, & Nunes, 2000a; Calori et al., 2000b; Jones & Coviello, 2005; Kuivalainen et al., 2012).

In that regard, the benefits commonly associated to business group affiliation (access to valuable resources such as capital, specialized talent, accumulated knowledge about foreign markets by sister affiliates, and shared specialized resources such as central R&D or a trading company) become much more critical in supporting the successful internationalization of high-tech firms, especially if they are SMEs. Thus, we argue that

in the case of high-tech SMEs the benefits from being affiliated to a business group will likely outweigh the disadvantages and translate into higher performance relative to independent firms. Therefore,

Hypothesis 4. *In the case of SMEs from high-tech industries, those affiliated are likely to benefit more from internationalization than independent SMEs at any level of internationalization*

2.4 Methodology

2.4.1 Data and Sample

2.4.1.1 Empirical setting

Korea provides a unique and interesting empirical setting for testing the moderating effect of business group affiliation on the relationship between internationalization and performance, for two main reasons. First, Korean manufacturing firms have successfully internationalized over the past three decades, making Korea the eight largest exporter economy in the world by 2016 (WTO, 2017). Second, family ownership and tight control through cross-shareholdings and ownership pyramidal structures, as well as reciprocal cross-debt guarantees, are features of Korean business groups or *chaebols* (S. J. Chang & Hong, 2000). Even though corporate governance reforms were implemented and cross-shareholdings were limited by law after the 1997 Asian financial crisis, Korean business groups are still known for intensified family control, while other Asian business groups absorbed more professional managers (Claessens, Djankov, & Lang, 2000; Hwang, Kim, Park, & Park, 2013; Tsui-Auch & Lee, 2003). Korean business groups control their affiliates through interlocking ownership under which each affiliate functions as an operating division of a multi-business company (S. J. Chang & Choi, 1988; S. J. Chang & Hong, 2000; D. W. Kim, 2003). Like the business groups in India and Taiwan, business group affiliates in Korea are typically members of only one business group (W. Chu, 2004).

2.4.1.2 Data sources and sample

The sample of SMEs considered in our study was extracted from the Korean Investors Service-Value database (KIS-Value), which provides a comprehensive accounting and financial information service including DART (Data Analysis, Retrieval and Transfer) system that is supervised by the Korean Financial Supervisory Service. All listed Korean firms are required to disclose their annual reports in the DART system that then becomes available to investors and other users.

We sampled firms from 2011 to 2015 listed on the Korean Stock Exchange. To eliminate any effect of different fiscal year ends, we only used firms with fiscal year ending in December. For sample homogeneity, we specifically selected manufacturing firms, which is the single largest industry of listed firms. KIS-Value provides the classification of SMEs and large enterprises based on annual turnover, total assets and number of employees across industries. In Korea, a manufacturing SME is defined as a firm under 300 employees and less than 70 billion Korean won of fixed assets in accordance with the Small Business Fundamental Act. Before sorting out SMEs from total Korean manufacturing firms, we averaged the number of employees and fixed assets, and selected only firms with average below 300 employees and below 70 billion won fixed assets. We, then, collected data on firm age, size, capital intensity, advertising expenditure and accounting performance measured by return on assets (ROA). The number of firms that makes up our sample amounts to 143 for which we have accounting data for the 5-year period resulting in a total of 602 observations, that is, a nearly balanced panel data.

2.4.2 Econometric Model

The estimated empirical equation between DOI and firm performance is:

$$ROA_i = \beta_0 + \sum(\beta_c * Control\ Variables_{ci}) + \beta_1 * DOI_i + \beta_2 * DOI_i^2 + \beta_3 * DOI_i^3 + \varepsilon_i$$

Where i represents the time period, ROA_i is the return on assets; DOI_i is the degree of internationalization; and $ControlVariables_{ci}$ represent four control variables.

In order to determine if affiliated SMEs show higher performance, the cubic fit between DOI and ROA moderated by the business group affiliation ($Affiliat_i$) is estimated as follows:

$$ROA_i = \beta_0 + \sum(\beta_c * ControlVariables_{ci}) + \beta_1 * (DOI_i * Affiliat_i) + \beta_2 * (DOI_i^2 * Affiliat_i) + \beta_3 * (DOI_i^3 * Affiliat_i) + \varepsilon_i$$

$Affiliat$ is a dummy variable of business group affiliation (1 for affiliated SMEs and 0 otherwise).

Likewise, to determine if SMEs from high-tech industries show higher performance, the cubic fit between DOI and ROA moderated by the high-tech industries ($HighTech_i$) and business affiliation ($Affiliat_i$) is estimated as follows:

$$ROA_i = \beta_0 + \sum(\beta_c * ControlVariables_{ci}) + \beta_1 * (DOI_i * HighTech_i * Affiliat_i) + \beta_2 * (DOI_i^2 * HighTech_i * Affiliat_i) + \beta_3 * (DOI_i^3 * HighTech_i * Affiliat_i) + \varepsilon_i$$

$HighTech$ is a dummy variable of industry characteristics (1 for SMEs from high-tech industries and 0 otherwise).

When using panel data, heteroskedasticity should be checked. A feasible generalized least square (FGLS) regression minimizes potential heteroskedasticity in cross-sectional data (Greene, 2003). Test results show that heteroskedasticity exists in cross-sectional data sets, in this case OLS (ordinary least squares) estimators may be statistically inefficient resulting in misleading inferences of the estimators, which justifies the use of a feasible generalized least square (FGLS) regression method.

2.4.3 Variable measurement

2.4.3.1 Performance

It is the dependent variable in our study. Following many previous studies on the relationship between the degree of internationalization and performance, we operationalize firm performance as ROA (Capar & Kotabe, 2003; Farok J Contractor, Kumar, & Kundu, 2007; Gomes & Ramaswamy, 1999; Kotabe, Srinivasan, & Aulakh, 2002; Vissa, Greve, & Chen, 2010; Zhang, Ma, Wang, & Wang, 2014). We choose ROA for three main reasons. Firstly, ROA reflects how efficiently a firm is generating income from the assets employed (Lin, 2014), which is important to measure performance of manufacturing firms (Pehrsson, Svensson, & Elango, 2011). Secondly, ROA is an appropriate measure for the study of internationalizing firms, especially in technology intensive industries because ROA measures captures both the costs of technology and new product development and the value of technical and foreign assets (K. C. Chen & Lee, 1995). Thirdly, ROA is widely used to evaluate financial performance in the internationalization-performance literature (Banalieva & Sarathy, 2011; B Elango, 2010; Lu & Beamish, 2004), which allow us to be consistent with prior studies.

2.4.3.2 Degree of internationalization

The independent variable for our study is the ratio of foreign sales to total sales (FSTS). It is the most widely used proxy for the degree of internationalization in the DOI-P literature (Buckley, 1997; Farok J Contractor et al., 2007; B. Elango & Pattnaik, 2011; Ficici, Lingling, Aybar, & Bo, 2014; Ruigrok & Wagner, 2003; Siddharthan & Lall, 1982). Previous studies have found that FSTS correlates highly with other DOI alternatives such as foreign assets-to-total assets and foreign subsidiaries-to-total subsidiaries (Gomes & Ramaswamy, 1999; Ruigrok, Amann, & Wagner, 2007; Tallman & Li, 1996). FSTS captures firms' revenue dependence on foreign markets (Capar & Kotabe, 2003; Farok J Contractor et al., 2007; J. M. Geringer, Tallman, & Olsen, 2000; Hsu & Boggs, 2003; Tallman & Li, 1996). FSTS reflects the relative size and importance of international operations to a firm and is a reasonable measure of internationalization (Grant, 1987). Although it has been suggested the use of a multidimensional measures

of DOI (Sullivan, 1994; Thomas & Eden, 2004), we could not consider this option due to lack of available data.

2.4.3.3 Business group affiliation

The main moderating variable of our study. Korean business law defines a “business group” as a group of companies that are under the common control of one person (either legal or natural, in that latter case may include relatives) that through direct or indirect means holds -at the top of the group hierarchy- at least 30% of the voting rights of each group company. Any companies under direct or indirect control of the top company are considered affiliates of the same business group (H.-j. Kim, 2012, p. 224). KIS-Value provides information on who are the shareholders of listed Korean companies and the percentages of direct and total voting rights controlled by each of them. It also provides information on the family membership of controlling shareholders and calculates the percentages of total voting rights owned by a particular family. Based on the above definition of business group, we categorize the firms of our sample as: a) “non-affiliated or independent”, when no single legal person or family controls more than 30 % of a firm’s total voting rights; and b) “affiliated to a business group”, when one legal person or family controls more than 30 % of a firm’s total voting rights. Our sample consists of 93 non-affiliated SMEs (424 observations) and 50 affiliated SMEs (178 observations) which belong to 30 different business groups, none of them ranked among the top 30 business groups in Korea.

2.4.3.4 Industry technology intensity

The second moderating variable of our study. Due to the lack of firm-level data on R&D intensity in the KIS-Value data base, we use the OECD classification of industries according to their technology intensity. This classification distinguishes between high, medium-high, medium-low and low technology industries and comes from an ordering of different manufacturing industries according to their intensities in R&D, measured by two indicators (R&D expenditures divided by gross production and by added value) for the years 1991 and 1997 in a group of 11 developed countries (OECD, 2001).

In Table 2-1, the Korean SMEs of our sample classified as technology intensive ones belong to the following industries: Pharmaceuticals; Computing machinery; Medical, precision and optical instruments; and Radio, TV and communications equipment and apparatus. These industries are classified as technology intensive sectors both in ISIC Rev. 3 and in NACE Rev. 2.

Table 2-1: Classification of Manufacturing Firms

Manufacturing Details	ISIC Rev.4/ NACE Rev.2	Technology Intensive	Non- Affiliated	Affiliated	Total
Manufacture of food products, beverages and tobacco products	10 to 12	Low	1	1	2
Manufacture of textiles, apparel, leather and related products	13 to 15	Low	2	2	4
Manufacture of wood and paper products, and printing	16 to 18	Low	1	1	2
Manufacture of chemicals and chemical products	20	Medium Hi	7	7	14
Manufacture of pharmaceuticals, medicinal chemical and botanical products	21	Hi	13	2	15
Manufacture of rubber and plastics products, and other non-metallic mineral products	22 to 23	Medium Low	6	2	8
Manufacture of basic metals and fabricated metal products, except machinery and equipment	24 to 25	Medium Hi	9	5	14
Manufacture of computer, electronic and optical products	26	Hi	43	19	62
Manufacture of electrical equipment	27	Medium Hi	0	2	2
Manufacture of machinery and equipment n.e.c.	28	Medium Low	7	1	8
Manufacture of transport equipment	29 to 30	Medium Hi	2	8	10
Other manufacturing, and repair and installation of machinery and equipment	31 to 33	Medium Low, Low	2	0	2
Total			93	50	143

This categorical variable is equal to one if a sample firm is from a high-technology industry sector and zero otherwise. 54% of our sample firms belong to high-tech industries (73% are among non-affiliated firms and 27% among affiliated ones).

2.4.3.5 Control Variables

To isolate the DOI-P relationship, other variables that are likely to affect profitability are controlled, namely, firm age, firm size, capital intensity, and advertising expenditure.

Prior empirical studies have shown that the relationship between the age of a firm and its performance is inconclusive and contingent on the interpretation of the role of age. If firm age is interpreted as the level of experience, learning, and reputation that a firm accumulates, it is usually positively related to performance (Johanson & Vahlne, 2009; Karadeniz & Göçer, 2007; Sørensen & Stuart, 2000; Stinchcombe & March, 1965). On the other hand, if firm age is indicated as aging or inertia, which would be negatively related to organizational flexibility or agility, then it would negatively affect performance (BarNir, Gallagher, & Auger, 2003; Vermeulen & Barkema, 2001). In this study, we expect that firm age will have a negative effect on performance as older firms tend to be less flexible in their operations, which makes adjusting to a new business environment more difficult (Carr, Haggard, Hmieleski, & Zahra, 2010). Additionally, we argue that business group affiliation also reduces flexibility, therefore age should be controlled for to further test this hypothesis.

Firm size is measured as the number of employees in logarithmic form (Almodóvar & Rugman, 2014). As internationalization is a costly operation, resource availability benefits international performance especially in the case of SMEs. Dhanaraj and Beamish (2003) use firm size as an indicator of managerial and financial resource availability that can reduce the costs related to internationalization. The reason to include firm size in a study on SMEs is because more than half of the firms in our sample belong to technology intensive industries. Knowledge resources such as technology are the main sources of competitive advantages, which is an important

predictor of performance, and this resource is often embedded in individuals (Argote, 2012; Arrow, McGrath, & Berdahl, 2000; C. Lee, Lee, & Pennings, 2001).

Advertising expenditure captures a firm's intangible assets such as brand name (McAlister, Srinivasan, & Kim, 2007; Srivastava, Shervani, & Fahey, 1998). Advertising is generally accepted as means to strengthen sales growth (Boulding & Staelin, 1995). Advertising expenditure is measured by log transformation of the advertising expenditures, correcting highly skewness of the variable. Increasing advertising expenditure indicates a growing commitment in marketing activities which have a positive effect on firm performance by differentiating products from those of competitors (S. Chu & Keh, 2006; Kotabe et al., 2002) and allow SMEs to gain sustained competitiveness over competitors in host markets (Erickson & Jacobson, 1992; H. Lee, Kelley, Lee, & Lee, 2012; McDougall, Oviatt, & Shrader, 2003; Morck & Yeung, 1991).

Capital Intensity is calculated by dividing total assets of a company by its sales measuring the amount of capital needed per dollar of sales. It is reciprocal of total asset turnover ratio. Manufacturing firms are capital intensive firms, which requires substantial amount of tangible assets such as plants and equipment to produce goods. The degree of capital intensity reflects the magnitude of financial commitment which is directly related to the cost of expansion (Pla-Barber, Sanchez-Peinado, & Madhok, 2010). Moreover, previous studies also show that, capital intensity often causes strategic rigidity because of high fixed assets (Datta & Rajagopalan, 1998; Hambrick & Lei, 1985). In this study, we expect that capital intensity will likely be negatively related to the degree of internationalization.

2.4.4 Results

Table 2-2 provides the sample's descriptive statistics and pairwise correlations. Some correlations between variables exhibit significant values. To further test for the effects of multicollinearity, Table 2-3 calculates the variance inflation factors (VIF).

Table 2-2: Pairwise Correlation

	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7	8
Age	29.49	13.7	6	100	1							
Size	4.93	0.62	2.2	6.15	0.0438	1						
Capital Intensity (Sales)	1.63	1.13	0.39	12.24	-0.0498	-0.2929***	1					
Advertising (log)	7.62	0.96	4.36	10.02	0.0502	0.2600***	0.0633*	1				
HighTech	0.54	0.5	0	1	-0.2303***	0.0637	0.1745***	0.1667***	1			
Affiliation	0.3	0.46	0	1	-0.0589	-0.1508***	-0.1380***	-0.2325***	-0.2227***	1		
FSTS	0.37	0.29	0	1	-0.2023***	-0.0742*	-0.011	-0.1159***	0.1736***	-0.1003**	1	
ROA	0.98	11.11	-120.66	21.74	-0.0763*	0.1406***	-0.3248***	0.0159	-0.0779*	0.0693*	-0.0744*	1

Note: p***<0.01; p**<0.05; p*<0.1

Table 2-3: VIF Test

Variable	VIF	1/VIF
Age	1.11	0.901861
Size	1.23	0.810353
Capital Intensity (Sales)	1.19	0.841933
Advertising (log)	1.17	0.854627
HighTech	1.19	0.838422
Affiliation	1.16	0.862849
FSTS	1.11	0.904023
Mean VIF	1.17	

The rule of thumb is that if the VIF for any independent variable is greater than 10 (some use a cutoff of 5), multicollinearity exists (Moore, McCabe, & Craig, 2012). The highest VIF in Table 2-3 is well below 10, suggesting that multicollinearity is not a concern.

Table 2-4: Descriptive Statistics of Industry and Business group affiliation

Age	Mean	Std.Dev.	Min	Max
Non-Affiliated	30.01	14.1	13	100
Affiliated	28.25	12.65	6	58
Size	Mean	Std.Dev.	Min	Max
Non-Affiliated	4.99	0.6	3.37	6.15
Affiliated	4.79	0.65	2.2	5.99
Advertising	Mean	Std.Dev.	Min	Max
Non-Affiliated	7.76	0.87	5	10.02
Affiliated	7.27	1.07	4.36	9.58
Capital Intensity	Mean	Std.Dev.	Min	Max
Non-Affiliated	1.73	1.25	0.39	12.24
Affiliated	1.39	0.74	0.49	4.83
Technology Intensive	Mean	Std.Dev.	Min	Max
Non-Affiliated	0.61	0.49	0	1
Affiliated	0.37	0.48	0	1
ROA	Mean	Std.Dev.	Min	Max
Non-Affiliated	0.48	10.14	-61.75	21.74
Affiliated	2.17	13.08	-120.66	21.37

The firms of our sample are well-established firms, with an average age of almost 29 years, and have on average 139 employees. Table 2-4 shows that non-affiliated firms are older and larger than affiliated firms. Moreover, non-affiliated firms are more capital intensive than affiliated firms. In addition, non-affiliated firms have on average higher advertising expenditure and technology intensiveness which may imply that non-affiliated firms have more intangible assets than affiliated ones.

FSTS Summary	Obs	Percentage	Mean	Std. Dev.	Min	Max
Non-Affiliated	424	0.7	0.39	0.3	0	1
Affiliated	178	0.3	0.326	0.27	0	0.95
Non-HighTech	279	0.46	0.317	0.26	0	0.95
HighTech	323	0.54	0.419	0.31	0	1
(00) Non-Affiliated and Non-HighTech SMEs	166	0.27	0.351	0.29	0	0.95
(01) Non-Affiliated and HighTech SMEs	258	0.43	0.416	0.3	0	1
(10) Affiliated and Non-HighTech SMEs	113	0.19	0.267	0.2	0	0.68
(11) Affiliated and HighTech SMEs	65	0.11	0.429	0.34	0.01	0.95

From table 2-5, non-affiliated SMEs are more internationalized than affiliated SMEs and SMEs from high-tech industries are more internationalized than SMES from other industries. After analyzing FSTS by moderating factors, business group affiliation and industry as in Table 4-2, we found that SMEs from high-tech industries are more internationalized than SMEs from other industries regardless they are non-affiliated or affiliated. However, affiliated SMEs from high-tech sectors are slightly more internationalized than non-affiliated ones, whereas non-affiliated SMEs from the other sectors are clearly more internationalized than affiliated ones. This suggests that industry characteristics of SMEs may be as much influential on the degree of internationalization as firms' internal governance characteristics are.

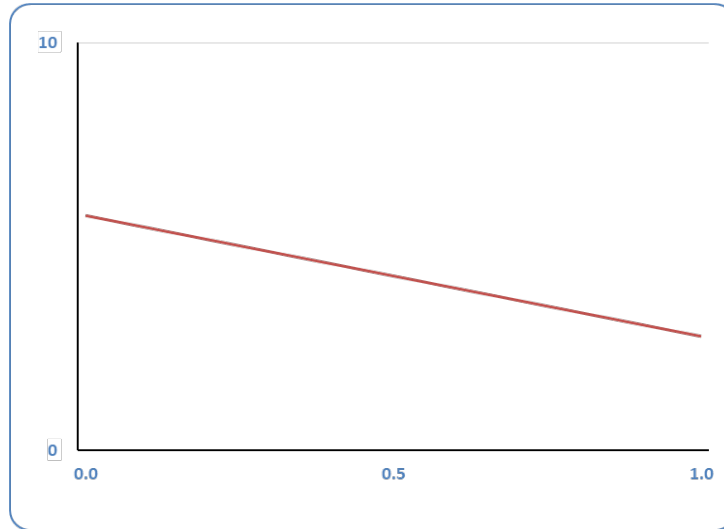


Figure 2-1: DOI P Relationship

In Table 2-6, Model 1 demonstrates there is a negative linear relationship between the degree of internationalization and performance and Model 3 reveals a sigmoid or S-shaped DOI-P relationship. Besides, Models 1 and 3 show the same direction, an overall downward relationship between the degree of internationalization and performance. Figure 2-1 graphically represents the relationship between DOI and firm performance, measured by mean values of ROA, for both models. These results are in line with the predicted S-shaped relationship, therefore we accept H1.

In Model 3, business group affiliation and technology intensity are estimated as control variables showing that business group affiliation is positively related to performance, whereas high technology intensity is negatively related. Next, we test whether group affiliation moderates the DOI-P relationship.

Table 2-5: Results 1

DV	ROA					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
IV	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Intercept	5.763332***	6.461206***	8.779406***	5.207644***	4.470367***	11.56768***
Age	0.1080475***	0.1062358***	-0.117704***	-0.1094959*	0.1104527***	-0.1174831***
Size	0.3943053	0.3230763	0.2439303	0.4932152***	0.6910273***	0.0517171
Capital Intensity (Sales)	-2.844091***	-2.890967***	-3.253576***	-2.805347***	-3.136823***	-3.158474***
Advertising (Log)	0.4242037***	0.4628362***	0.5424955***	0.44283***	0.5790297***	0.3130768*
High-Tech (1)	-0.5314367*	0.9574016***	-0.59356*	-0.6033124*	-0.8137891**	-0.8732289**
Affiliation (1)	0.2647836	-0.0822709	0.6751418**			
FSTS	-2.964591***	-4.795726*	-36.35887***			
FSTS^2		2.194978	82.52204***			
FSTS^3			-53.58939***			
FSTS x Affiliation (1)						
0				-3.181758***	-9.251708***	-33.31856***
1				-2.566656***	-11.79558***	-26.5603***
FSTS^2 x Affiliation (1)						
0					7.386587***	76.84804***
1					13.04388***	51.14466***
FSTS^3 x Affiliation (1)						
0						-50.88778***
1						-28.12373*
N of Obs (N of firms)	602(143)	602(143)	602(143)	602(143)	602(143)	602(143)
Wald Chi2	264.11***	270.45***	859.13***	272.42***	647.20***	323.77***

Note: p***<0.01; p**<0.05; p*<0.1; Affiliation (1): 1 for Affiliated SMEs; High-Tech (1): 1 for Technology Intensive SMEs

In order to capture the effects associated with a moderating factor, we include interaction terms of business group affiliation with DOI, measured by FSTS. As shown from Models 4, 5 and 6 in Table 2-6, we found significant effects of business group affiliation on the DOI-P relationship. Model 6 shows S-shaped curves for both types of firms, affiliated and

unaffiliated, when the DOI-P relationship is moderated by group affiliation, thus providing further evidence to partially support H1.

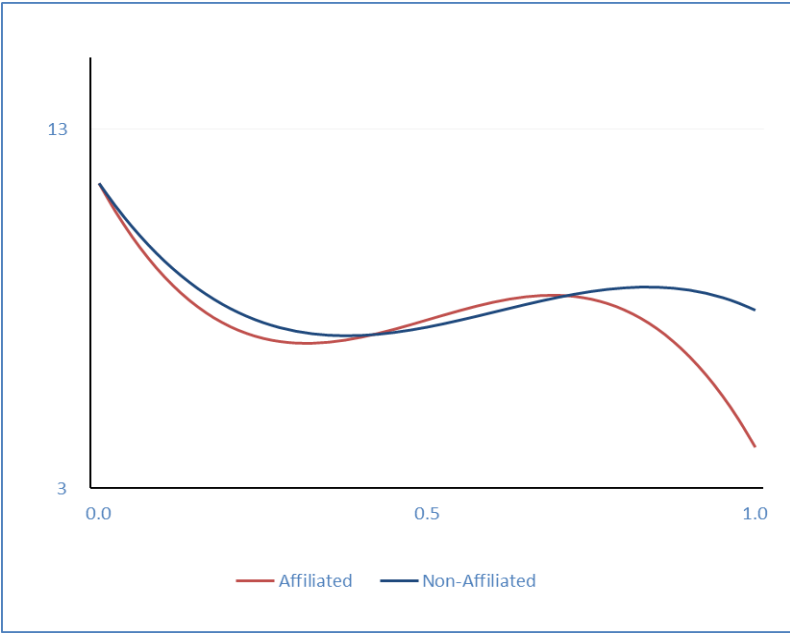


Figure 2-2: DOI P Relationship Affiliated vs. Non-Affiliated

Model 6 in Table 2-6 and Figure 2-2 also indicate that affiliated SMEs show better performance than non-affiliated at low and high levels of internationalization. However, interaction between DOI and business group affiliation show more elaborated outcomes as DOI increases. After a more pronounced negative decline at low levels of internationalization, non-affiliated SMEs realize greater financial gains at intermediate levels of internationalization, outperforming affiliated SMEs. However, at high levels of internationalization, the DOI-P curve of non-affiliated SMEs drops faster showing a more negative decline rate than the one for affiliated SMEs. In summary, affiliated SMEs show better performance at low levels of internationalization with a less negative decline rate of their performance, therefore we accept H2. The findings also show that the second degree coefficient of the interaction term for non-affiliated SMEs shows more positive slope at the intermediate levels of internationalization, while more negative slope is shown at high levels of internationalization. Therefore we partially accept H3. Thus, we

conclude that business group affiliation shows different moderating effects on the DOI-P relationship according to the degree of internationalization.

Table 2-6: Results 2

DV	ROA		
	Model 7	Model 8	Model 9
IV	Coefficient	Coefficient	Coefficient
Intercept	4.800799***	5.768584***	11.39028***
Age	-0.1102055***	-0.1316349***	-0.1406314***
Size	0.2977887	0.0420272	0.0321331
Capital_Intensity (Sales)	-2.963404***	-3.13706***	-3.0447***
Advertising (Log)	0.6073412***	0.8203366***	0.3042122*
High-Tech (1) x Affiliation (1) x FSTS			
00	-2.351725***	6.355551**	-3.759712
01	-2.407974*	-13.17538***	-0.2147799
10	-3.48582***	-9.578033***	-46.97693***
11	-3.242114***	-2.861636	-21.08071**
High-Tech (1) x Affiliation (1) x FSTS^2			
00		-11.24566***	6.650944
01		21.46321***	-74.01431*
10		7.111249**	115.8942***
11		-0.2820499	49.48083*
High-Tech (1) x Affiliation (1) x FSTS^3			
00			-8.001922
01			113.4108**
10			-77.04192***
11			-35.45017
N of Obs (N of firms)	602(143)	602(143)	602(143)
Wald Chi2	333.90***	1.822.65***	349.50***

Note: p***<0.01; p**<0.05; p*<0.1; Affiliation (1): 1 for Affiliated SMEs; High-Tech (1): 1 for Technology Intensive SMEs

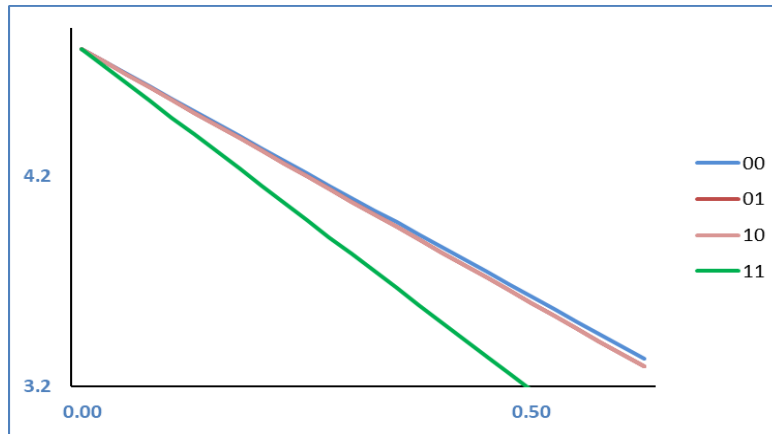


Figure 2-3: Performance

In order to see whether there are performance differences between SMEs according to industry technology intensity and group affiliation, we use three-way interaction terms with FSTS that results in four combinations: non high-tech and non-affiliated (00), non high-tech and affiliated (01), high-tech and non-affiliated (10), and high-tech and affiliated (11). From Models 7, 8 and 9 in Table 6, we only found significant moderating effects of industry technology intensity and business group affiliation on the DOI-P relationship in Model 7. The results show that SMES from non-high-tech industries outperform SMEs from high-tech industries. The results also show that affiliated SMEs from high-tech industry sectors experience less decline in performance than non-affiliated SMEs from the same industry sectors. Therefore, we accept H4.

Consistent with previous research, control variables in our model have been identified as having an impact on firm performance except for firm size which is not significant. Advertising expenditure has positive effects on performance while capital intensity and firm age are negatively related to performance, all as expected.

2.5 Discussion

In this paper, we examine the impact of business group affiliation on SME internationalization and its performance implications in the context of Korea, an advanced

economy that implemented fundamental market-oriented institutional change in the aftermath of the 1997 Asian financial crisis (H. Kim, Kim, & Hoskisson, 2010).

Our theoretical framework integrates the business group literature with internationalization research, leading into our argument that firm's internal governance, in terms of affiliation to a business group, moderates the relationship between SME internationalization and performance. We propose an S-shaped relationship between international diversification and firm performance in which group-affiliated SMEs perform better than independent ones at low levels of internationalization while at intermediate and high levels of internationalization independent SMEs are the ones to show better performance. To further prove our main argument, we also examine the moderating effects of business group affiliation on the DOI-P relationship according to industry technology intensity.

We proceed to discuss our results, which largely support our predictions although with a few unexpected findings. International diversification has generally been found to improve performance after the initial stage of international expansion in which firms learn to compete in foreign markets. However, contrary to our expectations, our results show an overall negative relationship between internationalization and firm performance. Some prior studies have also found such negative relationship. For example, Lu & Beamish (2006:42) on their study on SME internationalization found that exporting activity had a negative impact on profitability and concluded that exporting is an effective growth strategy, but its contribution to firm profitability could be weakened or even reversed due to currency appreciation. Our study considers the period 2011-2015 in which the Korean Won-USD exchange currency was quite stable (TradingEconomics, 2017) so currency fluctuations did not played a major role. Some other studies on the role of business groups in emerging markets have also obtained a negative DOI-P relationship (Gaur & Delios, 2015; H. Kim et al., 2010). Especially interesting is the study from Kim et al (2010) on Korean manufacturing multinationals where they found that emerging-economy firms

face an international diversification discount. That is, international diversification is less likely to bring the benefits of international expansion due to two main reasons: i) the tendency of emerging market firms to focus more on non-market resources, which are less transferable to international markets, and ii) fundamental market-oriented reforms brings market liberalization and, sooner rather than later, the entry of international competitors in the home market, thus internationalization becomes an strategic imperative. The argument of Kim et al. (2010) provides a plausible explanation for our results, given that most firms of our sample, with an average age of 29 years, started their operations when market-oriented reforms and institutions were being introduced and the incentives to developed market-based resources were weak.

We found an S-shaped relationship between international diversification and firm performance, thus challenging the notion that only large and highly internationalized multinational firms face the risk of over-internationalization. In line with recent studies (J. Shin et al., 2017), our findings show that SMEs also encounter a threshold of internationalization.

Regarding the moderating effects of business group affiliation on the DOI-P relationship, we found that they vary at different levels of internationalization. At initial stages of internationalization, in which SMEs incur in considerable costs of learning and adaptation to foreign markets that outweigh the benefits, we found that affiliated SMEs experience a less detrimental negative effect on performance as compared to independent ones. This finding converges with previous research (Gaur & Delios, 2015; Wan & Hoskisson, 2003; Yiu, Lu, Bruton, & Hoskisson, 2007) and indicates that affiliated SMEs benefit from access to business group resources and information from sister affiliates to mitigate their resource constraints and the costs associated with the liabilities of foreignness, especially in the case of manufacturing SMEs where investments in product development and physical assets amplify the liabilities of smallness.

At intermediate levels of internationalization, we found that independent SMEs experience a higher increase in performance and also outperform affiliated SMEs. While both types of firms, affiliated and non-affiliated SMEs, improve performance with continued internationalization, our finding supports the argument that affiliated mMNEs improve their performance to a lesser extent given that their more complex internal governance (Claessens, Fan, & Lang, 2006) translates into higher agency and internationalization-related coordination costs (Carney et al., 2011; Ferris et al., 2001; Morck et al., 2005; H.-H. Shin & Park, 1999). On the other hand, independent SMEs are more flexible in terms of strategic and operational decision making (Carney et al., 2011; M.-J. Chen & Hambrick, 1995; W. Chu, 2004) and experience lesser agency and coordination costs, because they are not constrained by reciprocal obligations common among group affiliates. Moreover, as independent firms consolidate their presence in foreign markets, the initial information advantage of group affiliates, relative to independent firms, will likely diminish.

At high levels of internationalization, we found that both affiliated and non-affiliated SMEs face a threshold of internationalization and that surpassing it is detrimental to firm performance. Firms need to implement new routines in order to control foreign operations dispersed across countries (Siddharthan & Lall, 1982). Beyond a certain level of internationalization, the increasing demands of coordination and governance of disperse activities exceed the benefits of further expansion (F. J. Contractor et al., 2003; Li, 2005). Accordingly, organizational flexibility is most needed to mitigate these increasing costs (Xia, 2011) which would give an advantage to independent SMEs. However, contrary to our expectations, non-affiliated SMEs experience the threshold of internationalization at lower levels and show a much steeper decrease in performance as compared to affiliated SMEs (see Figure 2). This suggests that independent SMEs may be less capable or have less resource than affiliated SMEs to control foreign activities when overly internationalized. That is, at high levels of internationalization independent SMEs appear to suffer more severely the liability of smallness.

To further test our main argument, we have examined the moderating effects of business group affiliation on the DOI-P relationship according to the technology intensity of the industries to which SMEs belong to. In our sample, the SMEs from high-tech industries are more internationalized than those from other industries, regardless they are group-affiliated or not, and less profitable. These features are consistent with the characteristics of high-tech industries, which are described as fast changing, competitive, and risky, pushing firms to expand internationally. Regarding the DOI-P relationship, we have found that business group affiliation enhances the performance of affiliated high-tech SMEs at all levels of internationalization. This result emphasizes the greater role of group affiliation advantages, especially if they imply access to specialized valuable resources that can be shared at group level, in supporting the costly and challenging international expansion of high-tech manufacturing SMEs.

Considering our findings altogether, we conclude that affiliation to a business group has an overall positive effect on the DOI-P relationship, wherein sharing group resources and information appears to be a key factor in both mitigating the net negative performance effects associated with the initial stages of internationalization and enhancing the performance of affiliated SMEs at high levels of internationalization.

2.6 Conclusion

Over the last 60 years, Korea has successfully transformed its economy and achieved economic growth. Korean SMEs play an important role in economic growth in terms of international activities such as aggressive exporting activities and overseas manufacturing supported by the Korean government's export-oriented policies (Ahn, Fukao, & Kwon, 2004). Global competition coupled with a relatively small domestic market, Korean SMEs are forced to reach a certain degree of international expansion in order to achieve the necessary economy of scale to survive (Le, Kim, & Kim, 2016). Korean SME expansion is also encouraged by strong competition from developing countries with lower labor costs (Etemad, 2004) as firms from developing countries can compete with technologically

advanced Korean SMEs using their price competitiveness. Accordingly, Korean SMEs face challenges making international operations not a choice but a necessity to be successful in their competitive environment (Doz & Prahalad, 1991; Porter, 1990).

With respect to the internationalization of Korean SMEs, we examine the relationship between the degree of internationalization and performance of manufacturing SMEs and analyze the moderating effect of business group affiliation and industry characteristics on the DOI-P relationship. We find an S-shaped relationship between international diversification and firm performance in which business group affiliation has different moderating effects on performance according to the degree of internationalization. Thus, group-affiliated SMEs perform better than independent ones at low and high levels of internationalization. Further, we have also found that affiliation to a business group enhances the performance of affiliated high-tech SMEs. Overall, we conclude that business group affiliation has a net positive effect on the DOI-P performance because it helps mitigate the liabilities of foreignness and smallness, typical of SMEs.

This paper contributes to the extant literature on SME internationalization and on business groups in several ways. Firstly, by integrating into a theoretical framework both literature streams we provide a theoretical and empirical explanation of the moderating effect of group affiliation on the DOI-P relationship at different levels of internationalization. Secondly, we demonstrate the overall positive effect of group affiliation in the context of an advanced economy, as business groups continue to provide benefits to group-affiliated SMEs in more developed, market-oriented institutional settings.

Our study has a number of limitations which may provide opportunities for future research. First, this study explores the effect of business group on performance with a Korean sample and as a result, cannot be generalized to other institutional and temporal settings. Recent studies have shown that the impact of group affiliation on performance of affiliates is not uniform across all countries (Bamiatzi, Cavusgil, Jabbour, & Sinkovics, 2014;

Carney, Van Essen, Estrin, & Shapiro, 2015; Vissa et al., 2010) and over time period (Chakrabarti, Singh, & Mahmood, 2007). Extending this study to internationalizing SMEs in advanced countries with strong business groups (e.g. Japan, Singapore, or Taiwan) would be a way of improving the generalizability of our findings.

Second, in our longitudinal study, we use panel data containing observations over 5 years. However, our focus is to see how performance varies over the degree of multinationality, not by time variance. The approach for searching the polarized results on business group may not be enough to understand the actual impact on affiliates and it does raise research inquiry for analyzing the effect of business group over time as institutional settings changes. This temporal information would make the DOI-P study more dynamic and valuable providing clear paths of international operations taken in successive periods of time.

Third, Korean SMEs covered in this paper are all public companies. Privately-held, non-listed enterprises are not included in the analysis, as a result, the findings may not hold true for unlisted firms. Among independent, non-affiliated SMEs, listed and unlisted firms may show different patterns of internationalization because unlisted firms may have less acute agency problems or have less conflict between minority and majority owners in strategic decisions such as foreign expansion. Moreover, unlisted firms have limited financial sources, whereas listed firms are likely to have more access to capital and better corporate governance (Loderer & Waelchli, 2010) which may enhance the likelihood of their survival in foreign markets.

Lastly, due to the lack of firm-level data on R&D intensity in the KIS-Value data base, we use the OECD industry classification by technology intensity to separate high-tech SMEs from the rest. Using individual firm's R&D intensity would have isolated the effects of business group affiliation on DOI with more accuracy and provided more conclusive results in study of business group affiliation.

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3

The Relationship between Multinationality and Performance: Knowledge-Intensive vs. Capital-Intensive Service Micro-Multinational Enterprises

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Chapter 3: The Relationship between Multinationality and Performance: Knowledge-Intensive vs. Capital-Intensive Service Micro-Multinational Enterprises

3.1 Abstract

This research explores the relationship between multinationality and firm performance (M-P) in the context of micro-multinational enterprises (mMNEs) within the service sector. We examine the moderating effects of industry characteristics using a data set of 1,082 Spanish service mMNEs over an eight-year period. The empirical results provide statistical evidence that knowledge-intensive service mMNEs exhibit an inverted U-shaped M-P relationship, while capital-intensive service mMNEs present a U-shaped relationship. Our findings demonstrate that knowledge-intensive service mMNEs increase their performance in the initial stage of multinationality, encounter a threshold of internationalization at relatively low levels of multinationality and have a propensity to over-internationalize. By comparison, capital-intensive service mMNEs experience negative performance effects at low levels of multinationality and positive ones as they further internationalize. Given that their operations are scale-sensitive, they tend to expand internationally by concentrating their operations in few foreign markets as a means to overcome the liabilities of internationalization and smallness. We contribute to the literatures on multinationality research in the service sector and on SME internationalization by showing that the effects of multinationality on the performance of mMNEs depend on industry characteristics and that such contextual factors provide a better understanding of the M-P relationship.

3.2 Introduction

Nowadays, the protagonists of outward foreign direct investment (FDI) are firms of all sizes, not just large multinational enterprises (MNEs). Recent research has identified the

emergence of micro-multinational enterprises (mMNEs), a new type of small-and-medium-sized firms (SMEs) that, in addition to exporting, implement higher commitment market entry modes to exploit opportunities abroad (Dimitratos, Amorós, Etchebarne, & Felzensztein, 2014; Dimitratos, Johnson, Slow, & Young, 2003; Ibeh, Johnson, Dimitratos, & Slow, 2004; Prashantham, 2011). Dimitratos et al. (2003, p5) define an mMNE as a “small- and medium-sized firm that controls and manages value-added activities in more than one country through a constellation [or combination] of contractual and investment modes”. Unlike born-globals, global start-ups, and international new ventures, mMNEs are not defined by their age and speed of internationalization, but by their behavior to adopt more committed modes of servicing foreign markets, including FDI (Ibeh et al., 2004).

The service sector is the most dynamic and fastest growing segment in the world economy (Endo & Ozaki, 2011; Sanchez-Peinado, Pla-Barber, & Hébert, 2007). There is compelling evidence that service companies have been the most active driver of globalization in recent years (UNCTAD, 2014). The rapid emergence and growth of service internationalization has been facilitated by the liberalization of service markets, the declining costs of transportation and communication, and the remarkable development of information technologies (Ball, Lindsay, & Rose, 2008; Samiee, 1999). However, services are heterogeneous and the differences between sub-sectors have implications in their patterns of internationalization (Pla-Barber & Ghauri, 2012). Among differentiating factors, capital intensity and knowledge intensity have attracted the attention of International Business scholars. Although service firms are generally less capital-intensive than manufacturing firms, the degree of capital intensity varies significantly across them. Since a service firm’s degree of capital intensity represents the relative magnitude of financial commitment, increasing capital intensity implies additional costs for engaging in internationalization activities (Erramilli & Rao, 1993). Likewise, the degree of knowledge intensity varies significantly across service firms. Knowledge-intensive services embed a higher degree of intangible or tacit knowledge and require a higher level of client interaction and local adaptation, which implies higher costs in transferring and exploiting

the firm's specific advantages in foreign markets. Therefore, the differences in the internationalization patterns of knowledge-intensive (KI) and capital-intensive (CI) service firms and the implications these differences have on their performance become relevant research topics (Contractor, Kundu, & Hsu, 2003; Pla-Barber & Ghauri, 2012).

Core international business theory asserts that there is a positive relationship between a firm's degree of multinationality and its performance (Contractor, 2012), given that internationalization offers firms the opportunity to grow and enhance their competitiveness (Caves, 1996; Hymer, 1976). Nowadays, internationalizing SMEs are able to use investment modes to enter foreign markets despite their small size. Surprisingly, little research has been done on the use of investment modes by SMEs in the international business literature because the traditional notion is that SMEs focus exclusively on exporting modes due to their resource constraints (Crick & Jones, 2000; Prashantham, 2011). Furthermore, most of the extant research on the internationalization of SMEs focuses on exporting manufacturing firms while prior studies on the relationship between multinationality and performance (M-P) have also focused on manufacturing firms, leaving the service sector relatively unexplored (Capar & Kotabe, 2003; Endo & Ozaki, 2011; Pla-Barber, Sanchez-Peinado, & Madhok, 2010). Accordingly, little is known about the M-P relationship of SMEs in general (Yang & Driffield, 2012) and of service SMEs in particular.

This study aims to fill this knowledge gap by exploring the relationship between multinationality and firm performance in the context of mMNEs operating in the service sector. More specifically, our research question is to determine whether the degree of capital or knowledge intensity of a service mMNE may lead to different dynamics of costs and benefits of internationalization which in turn determine the shape and direction of the observed M-P relationship. To answer this question, we bring together two important academic streams: the literature on the M-P relationship and the literature on service sector internationalization. In order to do so, we built a data set composed of 1,082 Spanish micro-multinational enterprises operating over an eight-year period and examined the moderating impacts of two types of mMNE service firms: knowledge-

intensive (KI) and capital-intensive (CI). The empirical results provide statistical evidence of an inverted S-shaped relationship between multinationality and performance within the mMNE service sector. Furthermore, KI service mMNEs reveal an inverted U-shaped relationship, while CI service mMNEs display a U-shaped relationship. This paper extends the empirical literature on the M-P relationship focusing on service mMNEs. Our findings suggest that industry characteristics determine the direction and shape of the M-P curve for different types of service mMNEs. We also argue that the international expansion of service mMNEs is likely facilitated by their distinguishing organizational characteristics and, at the same time, constrained by their limited resources.

This paper is structured as follows. The next section reviews the literature on the relationship between multinationality and performance in the service sector and on the organizational characteristics of mMNEs, in addition to the development of hypotheses. Following this, the paper presents the methodological aspects of this research. The subsequent section presents the results of the statistical analysis conducted in this study. The paper concludes by discussing the findings, outlining implications for research and management, in addition to the limitations of the study and future research directions.

3.3 Literature review and hypothesis development

3.3.1 Internationalization and firm performance in the service sector

After 30 years of research on the relationship between multinationality and firm performance, empirical findings continue to provide inconclusive results (Kirca, Roth, Hult, & Cavusgil, 2012; Li, Goerzen, & Verbeke, 2005; Ruigrok & Wagner, 2004). In recent years, based on the trade-off between costs and benefits, which determine the direction of the slope at different levels of multinationality, researchers have found various non-linear relationships between multinationality and performance. Namely, a squared relationship, U-shaped or inverted U-shaped (Capar & Kotabe, 2003; Geringer, Beamish, & DaCosta, 1989; Gomes & Ramaswamy, 1999; Hitt, Hoskisson, & Kim, 1997; Lu & Beamish, 2001), a

cubic relationship, S-shaped or inverted S-shaped (Bae, Park, & Wang, 2008; Bowen, 2007; Contractor et al., 2003) and, more recently a quadratic relationship, M-shaped or inverted M-shaped (Almodóvar & Rugman, 2014; Benito-Osorio, Colino, Guerras-Martín, & Zúñiga-Vicente, 2015; Lee, 2010, 2013).

The rationale for an inverted U-shaped M-P relationship is that in the initial stages of multinationality the benefits of international expansion exceed the costs incurred, however, as the firm increasingly enters dissimilar markets and grows in complexity, the costs of international activities escalate and beyond a point exceed the benefits of entering new foreign markets. This point is called the threshold of internationalization and occurs when international operations start to drain managerial and organizational capacity resulting in decreased performance (Geringer et al., 1989; Gomes & Ramaswamy, 1999; Hitt et al., 1997). On the other hand, the U-shaped relationship implies that performance first decreases at low levels of multinationality due to the liabilities of internationalization. However, with continued internationalization, performance increases as the level of multinationality increases because firm-specific advantages can be exploited at a greater scale and new knowledge and capabilities are developed (Ruigrok & Wagner, 2003) while liabilities and costs are reduced through accumulated experience in the host country (Lu & Beamish, 2004). More complex models such a cubic relationship, S-shaped curves, assume the same rationale of the U-shaped relationship for the first two stages (first a decrease in performance then followed by an increase) and then firms reach a tipping point, a third stage, where further increases in multinationality yield negative results. Beyond that tipping point, the resulting complexity of doing business escalates coordination costs (Gomes & Ramaswamy, 1999) and, unless the firm develops superior coordination and control capabilities over their international operations, the costs of excessive internationalization will outweigh the benefits (Contractor, 2012; Contractor et al., 2003).

Given the large quantity of divergent results, a series of factors and/or moderators have been reported to explain the different findings (Kirca et al., 2012). Several researchers

acknowledge that contextual factors are critical in multinationality research (Andersen, 2008; Brock & Alon, 2009; Fleming & de Oliveira Cabral, 2016; Kirca, Fernandez, & Kundu, 2016; Kirca et al., 2012; Ruigrok, Amann, & Wagner, 2007; Singla & George, 2013). Anderson (2008) states that certain industrial conditions lead to different cost/benefit dynamics that display various M-P relationships across industries. In a similar vein, Kirca et al. (2012) state that a comprehensive contextual framework can contribute to resolving the contradictory and inconclusive results reported in the literature, by demonstrating that the effects firm-specific assets have on the M-P relationship depend on the industry context in the case of emerging market MNEs. Singla and George (2013) provide evidence of the moderating role of certain firm's organizational characteristics, age and business group affiliation, that positively moderate the M-P relationship. Accordingly, recent lines of research focus on understanding the factors underlying the M-P relationship in *specific contexts* rather than on finding a *generic* shape of the curve that can be generalizable across sectors (Hennart, 2007; Venzin, Kumar, & Kleine, 2008). In this study we focus on the specific context of the service sector.

As mentioned before, prior studies on the M-P relationship have mostly focused on manufacturing firms leaving the service sector relatively unexplored. Two seminal studies were published in 2003. The first one by Capar and Kotabe (2003) concluded that international expansion has an initial negative effect on the performance of service firms up to a certain point, beyond which higher levels of international diversification increase performance, thus supporting a U-shaped relationship. The second one by Contractor et al. (2003) found the existence of an S-shaped M-P curve for service multinationals that are knowledge-intensive, and a U-shaped curve for those that are capital-intensive. Several empirical studies were carried out in subsequent years as shown in Table 3-1.

Table 3-1: M-P Studies in the Service Sector

Author (s) and Year	Firm sector	Country	Result
Capar and Kotabe (2003)	Service	Germany	U-Shaped
Contractor et al. (2003)	CI & KI services	US & non-US	U-Shaped (CI) & S-Shaped (KI)
Li et al. (2005)	Service	US	S-Shaped
Brock et al. (2006)	Law firms	US & non-US	Inverted U-Shaped
Elango (2006)	Service	Emerging countries	Linear positive
Hitt, Bierman et al. (2006)	Law firms	US	Linear positive
Contractor et al. (2007)	Service	India	U-Shaped
Andersen (2008)	Manufacturing & service (CI & KI)	US	Linear positive (KI) Linear negative (CI)
Brock et al. (2006)	Law firms	US & non-US	No relationship
Lee (2008)	Hotel chains	US	U-Shaped
Endo and Ozaki (2011)	Service	Japan	U-Shaped
Tang and Jang (2010)	Hotel chains	US	U-Shaped
Lee et al. (2011)	Restaurant chains	US	Linear Negative & No Relationship
Abdelzaher (2012)	Professional services	Conceptual Model	S-Shaped
Rhou and Koh (2014)	Restaurant chains	US	U-Shaped
Jain and Prakash (2016)	Software firms	India	Inverted U-Shaped

The studies focusing in service firms in general find either an S-shaped curve (Li et al., 2005) or a U-shaped curve (Capar & Kotabe, 2003; Contractor, Kumar, & Kundu, 2007; Endo & Ozaki, 2011), with the exception of Elango (2006) that found a positive linear relationship. Although these results can appear as contradictory, Contractor (2012) suggests that the first two patterns may be reconciled if the U-shaped curve is considered as the first two sections of the S-shaped curve.

Those studies that examine the M-P relationship in the case of KI service firms present more divergent and less conclusive results. On the one hand, several studies have found

an inverted U-shaped (Brock, Yaffe, & Dembovsky, 2006; Jain & Prakash, 2016) or positive linear (Andersen, 2008; Hitt, Bierman, Uhlenbruck, & Shimizu, 2006) relationship, manifesting in both cases positive yields in the initial stages of multinationality. Anderson (2008) depicts linear relationships across industry sectors demonstrating a positive linear M-P relationship in manufacturing and in KI service firms whereas CI service firms present a negative linear relationship. Moreover, Jain and Prakash (2016) show an inverted U-shaped M-P relationship moderated by the internationalization motives for Indian software firms. On the other hand, two other studies propose an S-shaped relationship and that KI service firms realize financial gains earlier than CI service firms do (Abdelzaher, 2012; Contractor et al., 2003).

By contrast, the studies centered in CI service firms present more convergent results revealing either a U-shaped (Lee, 2008; Rhou & Koh, 2014; Tang & Jang, 2010) or a negative linear (Andersen, 2008; Lee, Koh, & Heo, 2011) M-P relationship, indicating that the first stages of multinationality present negative yields.

3.3.2 Micro-multinationals: A new type of internationalizing SMEs

Internationalizing SMEs are assumed to face three liabilities when expanding abroad (Lu & Beamish, 2006). The first two, the liability of foreignness (Hymer, 1976) and the liability of newness (Stinchcombe & March, 1965), are commonly faced by all firms operating in foreign countries. The liability of foreignness stems from a lack of local knowledge and local business connections (Johanson & Vahlne, 2009) thus representing significant costs to internationalizing SMEs, as most of them are less experienced in international operations. The liability of newness means that newer firms will face difficulties and added risks due to their lack of legitimacy in the new market. The legitimizing process can be expensive and time consuming, particularly for young and less established firms who need to build new relationships with customers and business partners (Sørensen & Stuart, 2000). The liability of smallness is the third disadvantage facing SMEs. In essence, internationalizing SMEs have less resources to draw upon compared to large firms (De

Maeseneire & Claeys, 2012). These three liabilities directly impact SMEs' internationalization costs (Lu & Beamish, 2006; Wiklund, Baker, & Shepherd, 2010) and constrain their choice of the modes of servicing foreign markets, given that foreign investment involves a considerable amount of costs in terms of learning and adjusting to new markets (Goerzen & Beamish, 2003). As a consequence, little research has been done on the use of investment modes by SMEs in the international business literature because the traditional notion is that SMEs focus exclusively on exporting modes due to their resource constraints (Crick & Jones, 2000; Prashantham, 2011).

Dimitratos et al. (2003) first used the term 'micro-multinational enterprise' (mMNE) to describe a new type of internationalizing SMEs characterized by their ability – in comparison to pure exporters – to manage what Benito, Petersen and Welch (2011) name as “mode combinations” encompassing both contractual and equity foreign operation modes. Unlike born-global, global start-ups, and international new ventures (INV), mMNEs are not defined by their age and speed of internationalization, but by their behavior to adopt more committed modes of servicing foreign markets, including FDI (Ibeh et al., 2004). Thus, while those born-global firms or INVs that employ “mode combinations”, including FDI, will qualify as mMNE, not all mMNEs will qualify as born-global or INV firms because they may not be young firms nor have internationalized rapidly.

Although mMNEs have received very little attention, to our knowledge only five empirical articles have been published in academic journals, we already have some sense about their organizational characteristics. mMNEs originate from a mixture of high and low technology firms both in the manufacturing and the service sectors (Dimitratos et al., 2003; Ibeh et al., 2004). They exhibit a significantly higher degree of internationalization (measured as the percentage of foreign sales to total sales) than pure exporters and are more entrepreneurial (in terms of international risk-taking) (Dimitratos et al., 2014; Prashantham, 2011). They actively use their inter-organizational networks to obtain relevant, in-depth foreign market knowledge (Dimitratos et al., 2014; Stoian, Rialp, & Dimitratos, 2016) and rely largely on them to innovate and adapt their offer to the

idiosyncrasies of foreign markets (Stoian et al., 2016). Furthermore, Prashantham (2011) found in his study on Indian software SMEs that cross-border ethnic social capital facilitates the adoption of higher-commitment entry modes by mMNEs. In summary, these organizational characteristics are argued to allow mMNEs to adopt more committed foreign market entry modes and achieve superior performance (Prashantham, 2011) in spite of their resource constraints.

3.3.3 The M-P relationship in service mMNEs

The literature on service management identifies inseparability, heterogeneity, intangibility and perishability, as the main characteristics that distinguish services from goods (Javalgi, Javalgi, & Martin, 2007; Venzin et al., 2008). Firstly, inseparability refers to the fact that production and consumption of services often occur simultaneously. Secondly, intangibility means that the content of a service is immaterial and cannot be evaluated like a good. Service intangibility is also related to the knowledge content embedded in the service, thus the higher the knowledge content is tacit the higher the level of client interaction and local adaptation will be required. Thirdly, heterogeneity means that services are usually tailored in order to meet each customer's needs and as a result more difficult to standardize, which make it less likely for service firms to benefit from economies of scale (Contractor et al., 2003; Kirca et al., 2012). Lastly, perishability means services cannot be easily stored for use at a later time. It is important to highlight that services are heterogeneous and vary in the degree in which they feature these characteristics.

Service firms face even tougher challenges than manufacturing firms to internationalize due to their distinctive characteristics. A high degree of inseparability increases the need to produce service outputs physically close to the client, as is the case with hotels or restaurants. A high degree of intangibility usually requires a high level of buyer-seller interaction and local adaptation, increasing the need for a physical presence in host markets as it is the case for legal or auditing services (Capar & Kotabe, 2003; Ghoshal &

Bartlett, 1990; Knight, 1999). Furthermore, service firms are more likely to choose high commitment entry modes in foreign countries when transferring intangible or tacit know-how (Luo, 2001; Madhok, 1998). Inseparability, intangibility, and heterogeneity lead to higher costs when the offering requires a physical presence and customization to particular customers' needs (Chen, Tsou, & Ching, 2011).

Even though the use of information technologies is leading to new service delivery models – especially in knowledge-intensive services – where certain components of the service output do not need to be produced at the point of consumption (Badr, Peng, & Biennier, 2012; Ball et al., 2008; Nordås, 2015), in the presence of intangibility and heterogeneity service firms will still have the need to stay physically close to their clients and maintain full control of operations, regardless of the level of inseparability. This is usually achieved through FDI modes.

Implementing international expansion through FDI modes is typically accompanied by significant financial and managerial commitments from the outset (Ball et al., 2008), considerable costs in terms of learning and adjusting to overcome the lack of local information and unfamiliarity with the local culture (Zaheer & Mosakowski, 1997), increased coordination costs and insufficient economies of scale at the beginning, making it an especially hard task for service firms (Contractor et al., 2003).

Considering internationalization as a process, we argue that the M-P relationship is non-linear because firm performance is dependent on the combined effects of benefits and costs of internationalization (Tallman & Li, 1996) and the firm's ability to manage them along the internationalization process (Thomas & Eden, 2004). Consequently, service mMNEs will likely suffer from declining performance in the initial stages of multinationality, resulting in a negative slope in the M-P curve. However, performance will likely improve with continued internationalization because firm-specific advantages will be exploited at a greater scale and new knowledge and capabilities will be developed through learning and access to additional resources (Ruigrok & Wagner, 2003; Tallman & Li, 1996). Therefore,

Hypothesis 1. *The relationship between the degree of multinationality and performance within service sector mMNEs is non-linear, with a negative slope during the initial stage of multinationality, when mMNEs start employing FDI servicing modes, and with a positive slope in the subsequent stage.*

3.3.4 Knowledge-intensive vs. capital-intensive service mMNEs

Although service firms generally need less capital than manufacturing firms, capital intensity varies significantly across service sectors (Erramilli & Rao, 1993). The degree of capital intensity reflects the magnitude of financial commitment which is directly related to the cost of expansion (Pla-Barber et al., 2010). For CI service firms such as hotel or retail chains, the establishment of a new subsidiary in a foreign market implies a significant financial commitment due to substantial investments in specialized fixed assets. The nature of these investments amplifies the costs associated with the liability of foreignness. Being foreign means that making mistakes in business decisions is more likely and, if these mistakes refer to investment decisions, they may have competitiveness-impairing consequences (Lu & Beamish, 2004) whose effects, in the case of CI service firms, may last for prolonged periods of time. Furthermore, most of these firms are likely to expand by exploring new markets by themselves, that is, they have to directly face the liabilities of internationalization without established clients (Sherer & Lee, 2002).

By contrast, KI service firms such as advertising, accounting, and law firms do not need to implement considerable tangible investments in foreign markets, although they do require significant investments in their professional staff (Sanchez-Peinado et al., 2007). The source of value of a KI service firm lies in its intangible assets that to a large extent are embedded in their human resources (Muller & Doloreux, 2009; Von Nordenflycht, 2010). Mistakes in business decisions can be more easily fixed given the flexibility to re-allocate intangible assets (Kogut & Kulatilaka, 1994), thus diminishing the costs associated with the liability of foreignness. Besides, the international expansion of KI service firms is often

driven by a follow-the-client strategy (Contractor et al., 2003; Greenwood & Empson, 2003).

Such features lower the costs of international expansion experienced by KI service firms in different and important ways: intangibility lowers the burden of financial investment, while customer-following reduces the initial uncertainty about the firm's ability to generate the minimum amount of revenues needed to cover operational costs, and at the same time diminishes associated experiential learning costs needed to adapt to a new foreign market (Brock & Alon, 2009; Contractor et al., 2003; Erramilli & D'Souza, 1995; Sanchez-Peinado et al., 2007). As a result, KI service firms face less severe costs of internationalization compared to CI service firms which allow them to reap the benefits of internationalization faster.

Moreover, the use of the Internet and the application of Cloud-based platforms is changing the traditional association between high intangibility and high inseparability in a growing range of KI business services such as the outsourcing of IT systems or accounting. Recent literature is paying attention to the fact that nowadays a medium degree of inseparability can be found in this type of KI services, which only require a limited degree of local production because a significant portion of the work can be completed outside the client's premises (Badr et al., 2012; Ball et al., 2008; Nordås, 2015). This trend will likely contribute to a greater differentiation between KI and CI service firms, which cannot do the same because the production and consumption of their services are locally-bound (Ball et al., 2008) due to their large investments in tangible assets in the host country. Therefore,

Hypothesis 2. *During the initial stage of multinationality, the decline in performance experienced by KI service mMNEs is likely to be smaller than the decline experienced by CI service mMNEs.*

Knowledge-intensive services often require a significant degree of customization. Customization is a learning process between KI service firms and their customers that

requires a high degree of customer interaction during service delivery (Tsou, Ching, & Chen, 2007). Service delivery as a capability is developed through this close contact and often requires a high level of local-specific investment (Bouquet, Hebert, & Delios, 2004; Silvestro, Fitzgerald, Johnston, & Voss, 1992) to satisfy customers' needs, as they are partially based on their particular culture and context (Erramilli & D'Souza, 1995; Erramilli & Rao, 1993; Von Nordenflycht, 2010). At the same time, close customer interaction facilitates the accumulation of experience about the host country, thus the liabilities of foreignness and newness (and associated costs) will decrease over time (Lu & Beamish, 2004). The new knowledge and capabilities developed through learning and access to additional resources (Ruigrok & Wagner, 2003) will support further internationalization.

As KI service firms enter new foreign markets, additional investments to acquire local-specific knowledge (Doz, Santos, & Williamson, 2001) and develop local business relations (Johanson & Vahlne, 2009) will be needed. In that regard, KI services are more difficult to standardize since customer preferences may differ across foreign countries (Rugman & Verbeke, 2002), making it less likely that KI service firms can benefit from economies of scale. Even though KI service firms may use service delivery models which do not require a high level of local production, allowing them to achieve some cost reductions in the separable parts of the service output through standardization or cost arbitrage, the business itself (client acquisition, account management, supervision) will still heavily depend on personal relations, networks and trust (Abdelzaher, 2012). Interpersonal relations are hard to forecast, manage and control for inexperienced market entrants when the client does not share a similar cultural background (Kogut & Singh, 1988). Thus, as the level of multinationality increases, managing and controlling international activities becomes more complex and costs escalate. Beyond a point, the complexity associated with further international expansion will likely exceed the capacities and capabilities of KI service mMNEs and firm performance will decrease (Gomes & Ramaswamy, 1999;; Ruigrok & Wagner, 2003; Sullivan, 1994).

On the other hand, CI service firms are less sensitive to cultural distance than KI service firms and are better able to achieve economies of scale through expanding to foreign markets (Kogut, 1985; Porter, 1990). However, the ability of CI service mMNEs to achieve significant economies of scale through international expansion is most likely constrained by their size and limited resources, placing a clear limit to their geographical expansion (liability of smallness). Therefore,

Hypothesis 3. *After the initial stage of multinationality, both KI and CI service mMNEs are likely to exhibit increased performance at medium levels of multinationality (positive slope) before reaching a threshold where performance is likely to decrease (negative slope).*

3.4 Methodology

3.4.1 Sample and Data

Over the last two decades, a large group of companies have successfully internationalized in Spain. Mendoza and Vives (2010) studied a sample of 1,658 Spanish parent companies that had at least one foreign affiliate in 2008 and found that 69.7% were SMEs and 50.6% were service companies. Due to the 2007 economic and financial crisis, internationalization has become an attractive option to grow revenues for an increasing number of large as well as small and medium-sized firms in Spain. According to the latest official data, 60.8% of first-level foreign affiliates of Spanish companies in 2013 were in the service sector (INE, 2015). Therefore, Spanish internationalizing service firms provide an interesting research setting for our study.

Our data was obtained from SABI (Analysis System of Iberian Balance sheets), which is a database that covers Portugal and Spain and contains company financials (balance sheet, income statement, and financial ratios), date of incorporation, main office location, primary and secondary industry codes, total number of employees, and ownership data related to a company's shareholders and the equity stake a company owns in each of its affiliates. Data on foreign affiliates was only available since 2004. SABI includes more than

95% of the Spanish companies that are legally obligated to deposit their annual reports and financial statements at the Mercantile Registry Offices (roughly two million companies). It is compiled by Informa, the Spanish subsidiary of Bureau van Dijk (BvD), a major publisher of business information that specializes in private company data. SABI uses the same standardized information format as Amadeus (Pan-European database) and Orbis (worldwide database) which are also provided by BvD.

The main advantages of using SABI are that it allows the researcher to: a) have information on private companies from all industries, excluding banks and insurance companies; b) identify each company with accuracy (based on its unique tax identification number); c) access each company's financial and employment information for the last ten consecutive years; and d) obtain certain information about its foreign affiliates (affiliate's company name, city and country, and current equity participation of the Spanish parent company as a percentage of direct and total voting rights). That is, SABI allow us to clearly identify and build a data set of Spanish multinational companies, including their affiliates abroad. The main limitations of using SABI are: a) the financial and employment information provided only refers to the parent company in Spain, therefore, we cannot know the relative size of a firm's international operations (e.g. foreign sales/total sales, foreign employees/total employees, or foreign assets/total assets); and b) the date in which a Spanish firm made its first equity investment in a foreign affiliate is not provided.

For operational purposes, we define as an Spanish service mMNE a firm that meets the following criteria: a) be a firm incorporated in Spain and controlled by Spanish investors, thus excluding the Spanish subsidiaries of foreign multinationals; b) have at least one foreign affiliate; c) its primary activity needs to be in the service sector (excluding banks and insurance companies); d) be an SME as defined by the European Commission (2015), that is, employing at least 10 and fewer than 250 persons and have either an annual turnover not exceeding EUR 50 million or an annual balance sheet total not exceeding EUR 43 million . Criteria a) and b) follow the definitions of 'multinational enterprise' by Dunning and Lundan (2008, p3) and 'transnational corporation' by UNCTAD (2014, p3).

We define ‘foreign affiliate’ in the same way that UNCTAD does, that is, as an incorporated firm in a host country in which a Spanish parent company owns at least 10% of the shareholders’ voting rights. According to the degree of influence and control, we distinguish between ‘associate’ firms (the parent company owns at least 10% but not more than half of voting rights) and ‘subsidiaries’ (the parent company owns more than half of voting rights) (UNCTAD, 2014). Given that the literature emphasizes that mMNEs use a combination of contractual and investment modes for servicing foreign markets (Dimitratos et al., 2014; Dimitratos et al., 2003; Ibeh et al., 2004), we have included in our study *all types* of foreign affiliates, associate firms and subsidiaries.

From the SABI dataset, we selected those service companies that met the mMNE criteria in the year of reference. Data was collected for an eight-year period (2005 to 2012). In the unbalanced data set, our final sample consisted of 1,082 mMNEs (with a total of 3,326 observations).

3.4.2 Model

The estimated empirical equations between MUL and firm performance is,

$$ROA_i = \beta_0 + \beta_1 * MUL_i + \beta_2 * MUL_i^2 + \beta_3 * MUL_i^3 + \sum(\beta_c * Control Variables_{ci}) + \varepsilon_i$$

Where ROA_i is the return on asset; MUL_i is the degree of multinationality; $Control Variables_{ci}$ are four heterogeneous characteristics and i denotes the time period.

In addition, the cubic fit between MUL and ROA moderated by types of service industry ($KICI_i$) is estimated as:

$$ROA_i = \beta_0 + \sum(\beta_c * Control Variables_{ci}) + \beta_1 * (MUL_i * KICI_i) + \beta_2 * (MUL_i^2 * KICI_i) + \beta_3 * (MUL_i^3 * KICI_i) + \varepsilon_i$$

Where $KICI_i$ is a dummy variable of CI service mMNEs (0) and KI service mMNEs (1)

In order to minimize potential heteroscedasticity in the panel data (Greene, 2003), a feasible generalized least square (FGLS) regression method was used.

3.4.3 Measures

3.4.3.1. Performance

ROA (return on assets) is used to measure performance. ROA has been widely used in prior studies on the relationship between multinationality and performance including those focusing in service firms (Contractor et al., 2007; Contractor et al., 2003; Hitt, Tihanyi, Miller, & Connelly, 2006; Lu & Beamish, 2001; Ruigrok et al., 2007). ROA is a relevant measure since the investments in foreign subsidiaries are reflected in the assets of a firm and the possible dividends, royalties and management fees paid by foreign subsidiaries as well as increases in patrimonial value in its income statement. ROA is also an appropriate indicator to measure how the benefits of internationalization have been achieved through economies of scale and scope (Kim, Hwang, & Burgers, 1989). In addition, we also use ROE (return on equity) to evaluate the robustness of the results. The numerator in both ratios, ROA and ROE, is based on net income before tax.

3.4.3.2. Multinationality (MUL)

We operationalize multinationality by compounding two measures consisting of the number of foreign affiliates and the number of countries in which these affiliates operate (Chao & Kumar, 2010; Endo & Ozaki, 2011; Lu & Beamish, 2004). The first measure is a ratio composed of the total number of foreign affiliates a firm has to the largest number of foreign affiliates for any firm within the sample. This ratio indicates the amount of resources invested in foreign countries (Cerrato, Crosato, & Depperu, 2015). The second measure is a ratio composed of the number of countries in which a firm has foreign affiliates to the largest such number within the sample. This ratio indicates the scope of internationalization (Cerrato et al., 2015). The multinationality ratio, MUL, is the mean of these two measures and it ranges between 0 and 1 (Endo & Ozaki, 2011). It should be noted that MUL measures the relative degree of multinationality within our sample.

Increases in multinationality can result from expanding into new countries (broader scope) and increasing presence in existing host countries (more depth). By taking into

account the number of countries, MUL captures the breadth or scope dimension of multinationality. In the case of service mMNEs, the scope dimension captures the essential dynamics of the costs and the benefits of multinationality. On the one hand, CI services are scale-sensitive and tend to have a high degree of inseparability that makes them 'location-intensive' (Ball et al., 2008), meaning that economies of scale will be realized largely within the countries in which these firms operate. Given a firm's size, its country scope is a good proxy of whether the firm is benefiting from economies of scale in the foreign markets in which it operates. On the other hand, KI services are sensitive to cultural distance, so the country scope of a KI service firm is a good proxy of the increasing costs associated with increased multinationality.

By taking into account the number of foreign affiliates, MUL partially captures the depth dimension of multinationality and indirectly the firm's international experience. In that regard, if a firm has two or more affiliates in a given host country this is most likely an indication that it has increased its presence since its initial entry, based on its accumulated experience and learning. It is also interesting to note that, in comparison to the diversity of foreign affiliates (e.g. sales, manufacturing, R&D) that can be found in manufacturing multinationals, the foreign affiliates of service mMNEs are less diverse. The distinguishing features of services (especially those of inseparability, intangibility and perishability) imply a more homogeneous configuration of foreign affiliates because service production (at least partially) and service delivery need to stay physically close to customers/clients.

3.4.3.3. KICI: Knowledge-Intensive vs. Capital-Intensive service firms

For classifying KI and CI service firms from our sample, we use the statistical classification of economic activities in the European Community, 2008 (also known as NACE Rev. 2) from Eurostat as starting point and cross-checked their knowledge intensiveness classification with the one proposed by Cruz et al. (2014) for Spanish service multinationals and with those of other studies (Contractor et al., 2003; Muller & Doloreux,

2009; Von Nordenflycht, 2010). For the final sample, we have 758 CI service mMNEs and 324 KI service mMNEs as shown in Table 3-2.

3.4.3.4. Control variables

The choice of entry mode by service firms is highly influenced by service characteristics (Brouthers, Brouthers, & Werner, 2003; Erramilli & Rao, 1993; Villar, Pla-Barber, & León-Darder, 2012). KI service firms are more likely to prefer high-control entry modes compared to CI service firms due to the high costs associated in transferring and exploiting their firm-specific advantages in foreign markets and to the need of high control of the service delivery process (Bouquet et al., 2004; Brouthers et al., 2003; Erramilli & Rao, 1993). Entry mode is measured as the average percentage of ownership of foreign affiliates in a given year (Cesaroni, Gambardella, & Garcia-Fontes, 2004).

Firm age and size are influential aspects of internationalization success. While firm size is a proxy for economies of scale and scope (Thomas & Eden, 2004) and represents the availability of resources, firm age is related to the accumulation of intangible resources over time (Dhanaraj & Beamish, 2003; Karadeniz & Göçer, 2007). Firm size is measured as the natural log of the number of employees. Dhanaraj and Beamish (2003) use firm size as an indicator of managerial and financial resource availability that can reduce the costs related to internationalization. Firm age is measured as the number of years since its incorporation. Strategic assets such as brand, reputation, and legitimacy are acquired over time and are critical for international expansion as they reduce some of the costs associated with liabilities of foreignness (Singla & George, 2013). Generally, older firms should be more capable in managing activities across countries with their accumulated managerial competencies and knowledge (Dhanaraj & Beamish, 2003).

Table 3-2: Classification of Service Sectors: CI vs. KI service mMNEs

NACE Rev 2 Code (First 2 Digits)	CI vs. KI	Service Sector Details	Number of mMNEs
35 to 39		Electricity, Gas, and Water Supply	34
41 to 43		Construction	160
45 to 47	CI	Wholesale and Retail	413
49 to 53		Transport, Storage	92
55 to 56		Accommodation and Food Service Activities (Hotel and Restaurant)	43
61		Telecommunications	16
Total			758
58		Publishing	26
62 to 63		IT and other Information Services	76
64 to 66	KI	Financial and Insurance Activities(a)	20
69 to 71		Legal, Accounting, Management, Architecture, Engineering, Technical Testing and Analysis (b)	149
72		Scientific Research and Development	9
73 to 74		Other Professional, Marketing, Scientific and Technical Activities	44
Total			324
Grand Total			1082

(a) Excluding financial intermediation (64.1), activities of holding companies (64.2) and insurance and reinsurance (65).

(b) Excluding activities of head offices (70.1).

Table 3-3: Descriptive Statistics and Pairwise correlations for Service mMNEs

Service mMNEs	Mean	Std.Dev.	Min	Max	1	2	3	4	5	6	7
Age	24.85	12.04	2	92	1						
Firmsize	3.77	0.81	2.3	5.51	0.1711***	1					
Indebtedness	59.38	27.09	1.91	291.56	-0.1807***	0.0228	1				
Entry Mode	71.58	27.14	10	100	-0.0363***	0.0290*	0.0555***	1			
KICI	0.28	0.45	0	1	-0.1673***	0.0344**	-0.0277	0.0196	1		
MUL	0.13	0.11	0.07	0.94	0.0035	0.1376***	0.0593***	0.1241***	0.1311***	1	
ROA	4.08	16.48	-162.87	350.32	0.0132	-0.0199	-0.2592***	0.0145	0.0769***	-0.0279	1

Note: p*** < 0.01; p** < 0.05; p* < 0.1.

Table 3-4: VIF Test

Variable	VIF	1/VIF
Age	1.11	0.903737
Firmsize	1.06	0.946695
Indebtedness	1.05	0.954658
Entry Mode	1.01	0.993431
KICI	1.06	0.947647
MUL	1.04	0.959895
Mean VIF	1.05	

Financial indebtedness (debt-equity ratio) is included as a control variable to capture a portion of firm's value (Hitt et al., 1997; Lu & Beamish, 2004; Thomas & Eden, 2004). Table 3-3 provides the descriptive statistics and pairwise correlations of the entire sample. Most of the service mMNEs in our sample have foreign affiliates in a limited number of countries (90% of the cases between one and three). On average, they have 1.2 affiliates per country and 60 employees. They are well-established firms, with an average age of almost 25 years, and show a clear preference for high control FDI modes. In Table 3-3, some correlations between variables exhibit significant values. To further test for the effects of multicollinearity, Table 3-4 calculates the variance inflation factors (VIF).

Multicollinearity is problematic because it can increase the variance of regression coefficients, making them unstable and difficult to interpret (Hair, 2010). The rule of thumb is that multicollinearity exists if the VIF for any independent variable is greater than 10 (some use a cutoff of 5). A tolerance coefficient can also be calculated in conjunction with VIF as $1/\text{VIF}$ from the abbreviated model. If the coefficient approaches zero, multicollinearity is considered to be a problem (Moore, McCabe, & Craig, 2012). The highest VIF in Table 4 is well below the benchmark of 10, suggesting that multicollinearity is not a problem.

Table 3-5 shows descriptive statistics for composites of MUL and control variables for CI and KI service firms. When we compare KI and CI service mMNEs, KI firms are on average slightly larger, younger, more internationalized in terms of number of countries and number of foreign affiliates, and more profitable (see correlation between KICI and ROA in Table 3-3).

Table 3-4: Descriptive Statistics of MUL and Control Variables for KI and CI

Variable	Mean	Std. Dev.	Min	Max
(0): Capital Intensive mMNEs (2391 observation)				
MUL	0.13	0.1	0.07	0.81
Countries	1.63	1.22	1	11
Affiliates	2.01	1.72	1	17
Age	26.11	12.12	2	92
Employees	59.05	51.02	10	248
Entry Mode	71.25	27.55	10	100
Indebtedness	59.85	26.44	1.91	291.56
(1) Knowledge Intensive mMNEs (935 observations)				
MUL	0.16	0.13	0.07	0.94
Countries	2.07	1.61	1	12
Affiliates	2.44	2.11	1	15
Age	21.63	11.23	2	71
Employees	62.75	51.93	10	239
Entry Mode	72.43	26.07	10	100
Indebtedness	58.18	28.66	3.91	286.78

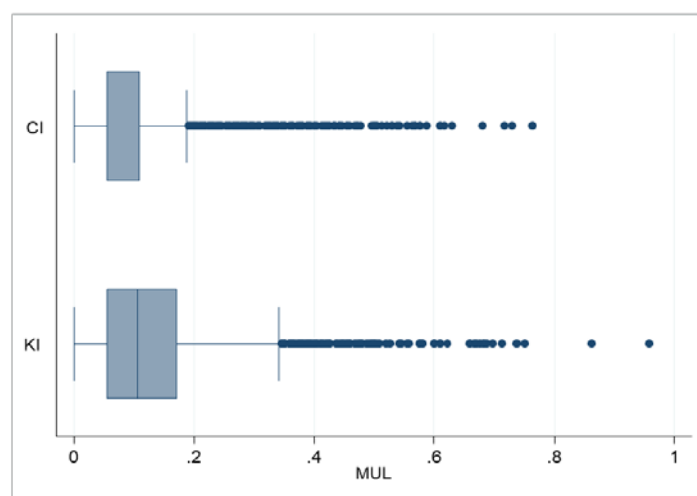


Figure 3-1: Boxplot for MUL

Figure 3-1 shows the box plot of MUL for CI and KI service firms. In both cases, MUL presents a skewed distribution with a long right tail that may indicate the existence of outliers. Overall, CI service firms are less internationalized than KI ones (90% of CI service firms are located below a MUL value of 0.24, whereas 90% of KI service firms are located below 0.34), however they present a higher number of extreme values located at least 1.5 interquartile ranges above the third quartile. In order to check the existence of outliers in our regression analysis, we calculated Cook's distances, Leverage, DFFITS and Studentized residuals. There are no observations straying away from all four criteria. Although few observations did not fully meet one or two of these tests, the influence of these observations were not so big and unusual, thus we concluded that there is no significant or serious outlier in our data.

Table 3-6 presents a general model testing the hypotheses and incorporates the linear, squared, and cubic terms in Models 1, 2 and 3 respectively. The regression coefficients of Models 1 and 2 are the most statistically significant and Model 3 has a higher Wald chi-square (joint significance test of the coefficients). The analysis reveals a non-linear, inverted S-shaped relationship between multinationality and performance of service mMNEs for the entire sample (Model 3). Therefore, we do not accept H1 for the entire sample, as contrary to expectations the data implies that the costs associated with the initial stage of multinationality does not outweigh the benefits of servicing foreign markets through FDI modes.

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Table 3-5: Statistical Results 1

DV	ROA						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
IV	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Intercept	12.590***	11.935***	11.500***	13.702***	13.800***	12.032***	12,698***
Age	-0.020***	-0.024***	-0.190***	-0.040***	-0.031***	-0.029***	-0.031***
Firm Size	-0.215***	-0.215***	-0.143***	-0.028	-0.211***	-0.083*	-0.142***
Indebtedness	-0.147***	-0.141***	-0.143***	-0.156***	-0.153***	-0.144***	-0.140***
Entry Mode	0.013***	0.015***	0.013***	0.013***	0.015***	0.018***	
KICI	2.117***	2.307***	2.109***				-1.278***
MUL	-1.385***	2.087*	12.103***				
MUL^2		-5.504**	-43.036***				
MUL^3			33.697***				
KICI x MUL							
0				-3,228***	-7.880***	-1.651	
1				4.126***	20.149***	32.551***	
KICI x MUL							
0					14.935***	0.288	
1					-46.570***	-122.526***	
KICI x MUL							
0						95.411***	
1							
KICI x Entry Mode							
0							0.008***
1							0.029***
N of Obs (N of firms)	3326(1082)	3326(1082)	3326(1082)	3326(1082)	3326(1082)	3326(1082)	3326(1082)
Wald Chi2	10,453.46***	51,574.07***	15,114.23***	24,898.45***	33,885.15***	18,195.47***	5030.74***

Note: p*** < 0.01; p** < 0.05; p* < 0.1.

Figure 3-2 visually displays this finding with the horizontal axis representing the degree of multinationality (MUL) and the vertical axis representing mean values of ROA.

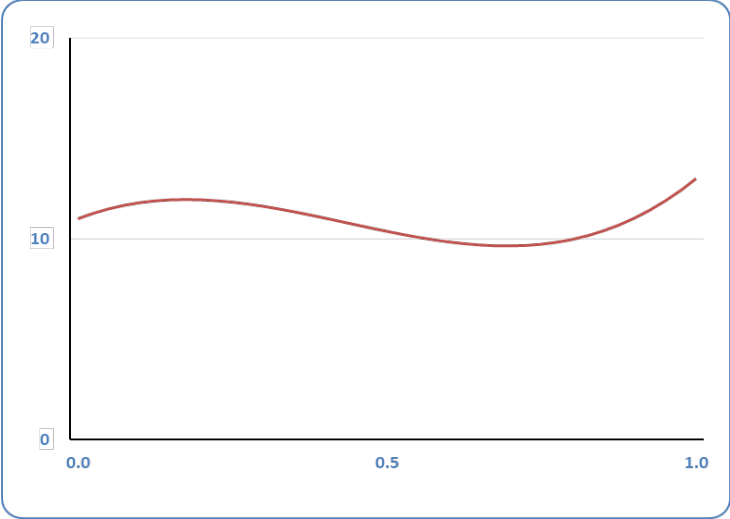


Figure 3-2: M-P Relationship

Model 3 shows a positive and significant coefficient for *KICI*, suggesting that there is a performance difference between KI and CI service mMNEs. Age and firm size are negatively related to performance, although it is interesting to note that firm size is positively related to multinationality (see Table 3-3). Finally, indebtedness is also negatively related to performance as expected and previous literature indicates.

To gain a deeper understanding of the effect of different service characteristics on the M-P relationship, interaction terms between *KICI* (0 for CI and 1 for KI mMNEs) and MUL were added in the single, squared, and cubic terms of MUL in Models 4, 5 and 6 respectively (see Table 3-6). The regression coefficients of Models 4 and 5 are the most statistically significant and Model 5 has a higher Wald chi-square. As shown in Model 5 (Table 3-6) and in Figure 3-3, the empirical results suggest that KI service mMNEs exhibit an inverted U-shaped relationship between multinationality and performance, while CI service mMNEs present a U-shaped relationship.

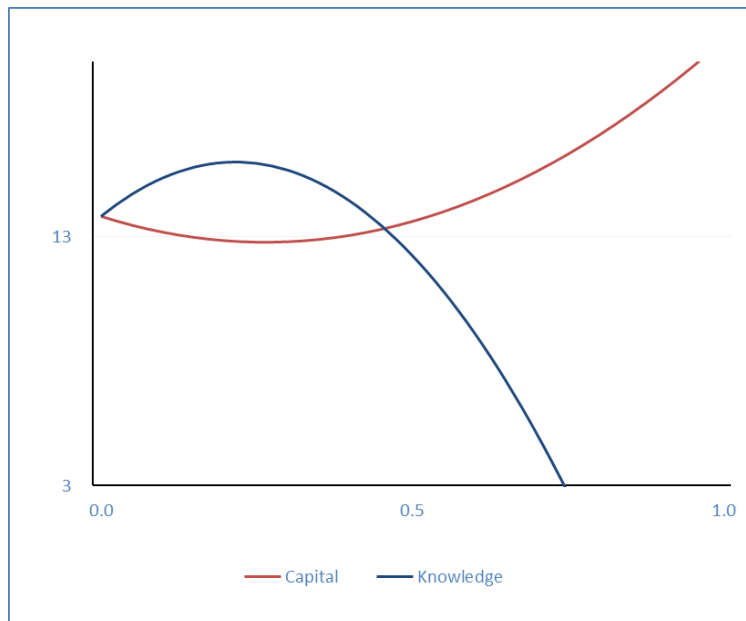


Figure 3-3: M-P Relationship of KI and CI

In the case of KI service mMNEs, contrary to our expectations, a positive slope was revealed at low levels of multinationality and therefore H1 was not supported. After the initial stage of multinationality, KI service mMNEs present a relatively long descending curve. A careful analysis lends partial support to H3 (see Discussion section).

In the case of CI service mMNEs, these results fully support H1 as Model 5 indicates statistical support for a U-shaped relationship between multinationality and performance. Further analysis lends partial support to H3 (see Discussion section).

The comparison of the M-P relationship between KI and CI service mMNEs in the initial stage of multinationality, a positive versus a negative slope, provides support to the core argument of H2 (see Discussion section).

In order to see the separate effect of entry mode on performance, in Model 7 we add an interaction term (see Table 3-6). The results show that the entry mode is positively related to performance for both types of firms (0.029 for KI and 0.008 for CI). If other conditions

remain constant, choosing a high control entry mode is more positively related to performance in the case of KI service mMNEs than in CI ones, as expected.

To evaluate the robustness of our results we used ROE as the dependent variable. For CI service mMNEs we obtained the same result, a U-shaped M-P curve. For KI service mMNEs the results using ROA (inverted U-shaped) and ROE (inverted S-shaped curve), can be reconciled given that in both cases the first two sections have the same directions (a positive slope at low levels of multinationality and a negative one at medium levels). Moreover, the number of KI service mMNEs in our sample that exhibit high levels of multinationality (MUL higher than 0.67) is very small (only two as shown in Figure 3-1), so it does not seem meaningful to compare the two M-P graphs (inverted U-shaped and inverted U-shaped) beyond medium levels of multinationality due to insufficient data.

3.5 Discussion

The main objective of this study is to empirically investigate the M-P relationship of service mMNEs focusing on the moderating effects of different service sector attributes, namely capital intensity and knowledge intensity. H1 and H3 taken together propose an S-shaped M-P relationship in the case of service mMNEs and H2 proposes that KI service mMNEs experience a smaller decline in performance than CI ones in the initial stage of multinationality.

Our results show a sigmoid or three-stage relationship between multinationality and performance for the entire sample. Contrary to our expectations, the service mMNEs of our study demonstrate an inverted S-shaped relationship. The fact that they experience a moderate increase in performance at low levels of multinationality (see Figure 2), suggests that, in spite of being SMEs, the costs associated with the initial stage of multinationality does not outweigh the benefits of expanding internationally through FDI modes. Therefore, H1 is rejected for the entire sample.

The distinguishing features of mMNEs provide a possible explanation for our results. Their involvement in and active use of interorganizational networks allow mMNEs to obtain relevant, in-depth foreign market knowledge (Dimitratos et al., 2014; Prashantham, 2011; Stoian et al., 2016) Further, mMNEs rely largely on their business networks to innovate and adapt their offer to the idiosyncrasies of foreign markets (Stoian et al., 2016). Thereby, their organizational characteristics most likely help them to mitigate the liabilities of internationalization and enhance the benefits of it. Besides, when the number of foreign affiliates is very low, and consequently the number of countries, mMNEs would take advantage of their preexisting organizational infrastructure, without the need of significant adjustments, in order to control and coordinate its incipient network of foreign affiliates (Almodóvar & Rugman, 2014).

However, a deeper investigation into service sector attributes suggests positive returns are not always the case in this initial stage. Specifically, KI service mMNEs revealed an inverted U-shaped M-P relationship, while CI service mMNEs showed a U-shaped one. Therefore, H1 is rejected in the case of KI service mMNEs and supported for CI ones.

Regarding KI service mMNEs, our results converge with those studies that have found an inverted U-shaped (Brock et al., 2006; Jain & Prakash, 2016) or a positive linear relationship (Andersen, 2008; Michael A Hitt et al., 2006). This suggests that, in the initial stage of multinationality, KI service mMNEs seem to be able to take advantage of the opportunities offered by international expansion through FDI modes, while at the same time they manage to mitigate the costs of internationalization significantly (see further discussion of Hypothesis 2 below).

Likewise, the results for CI service mMNEs are in line with the majority of previous studies on CI service firms that found a U-shaped (Andersen, 2008; Lee et al., 2011; Rhou & Koh, 2014; Tang & Jang, 2010) or negative linear relationship (Andersen, 2008; Lee et al., 2011). Negative yields in the initial stage of multinationality suggest that CI service mMNEs face severe internationalization costs at the outset as hypothesized. Their limited firm size

seems to represent a significant hurdle for the international expansion of their scale-sensitive activities (see further discussion of H2).

Regarding H2, our results support the core argument of the hypothesis although not in its stated form, given that only CI service mMNEs exhibit a negative slope of the M-P curve at low levels of multinationality. The KI service mMNEs of our study experience an increase in performance in the initial stage of multinationality, while their CI counterparts experience a decline as shown in Figure 3-3. This substantial performance gap between these two types of service mMNEs most likely reflects the important differences between KI and CI service firms and their implications on performance as hypothesized.

Based on prior literature, we argue that factors such as low financial burden, a customer-following strategy, high operational flexibility to redeploy professional staff, or the increasing separability of KI business services, all contribute to diminish the initial internationalization costs of KI service firms. By comparison, CI service firms suffer from much higher costs of international expansion due to the need to commit large investments in tangible fixed assets and because most of them are likely to follow a market-seeking strategy, that is, they have to directly face the liabilities of internationalization without established clients.

H3 refers to more advanced stages of multinationality. It states that mMNEs are likely to exhibit increased performance at medium levels of multinationality before reaching a threshold where performance is likely to decrease. Given that the service mMNEs of our study demonstrate an inverted S-shaped relationship, H3 is rejected for the entire sample. However, the hypothesis is partially supported, although for different reasons, for both types of service mMNEs.

On the one hand, CI service mMNEs exhibit increased performance at medium levels of multinationality (as expected) as well as at high levels without reaching a threshold where performance decreases (contrary to our expectations). High initial costs associated to the liabilities of internationalization and insufficient access to economies of scale appear to be

the most important hurdles these firms face when first entering foreign markets using FDI modes. Interestingly, most of the CI service mMNEs of our study appear to follow a strategy of market concentration as a means to overcome these hurdles. Thus, first selecting and later on expanding in (very) few foreign markets would allow CI service mMNEs to reach the minimum scale of operations at local level needed to be competitive. In this way, they would deploy their limited resources more efficiently and foster the accumulation of knowledge and learning about these markets, reducing the costs associated to the liabilities of internationalization and smallness. Consequently, multinationality increases will mostly come from increasing a firm's presence in existing foreign markets and to a lesser extent from expanding into new countries. In our study this is manifested by the fact that the CI service mMNEs are more geographically concentrated than their KI counterparts (on average they are present in 1.63 vs. 2.07 countries, see Table 3-5) and, at the same time, present a much longer tail of observations with high MUL values (see Figure 3-1). Furthermore, given that CI services tend to be less affected by cultural differences, a strategy of market concentration will likely not increase substantially the organizational complexity of coordinating and controlling the international operations of a CI service mMNE. All these aspects would explain why these firms exhibit an increase in their performance at medium and even at high levels of multinationality without facing a threshold of internationalization.

On the other hand, KI service mMNEs exhibit a significant decrease of their performance after the initial stage of multinationality and encounter a threshold of internationalization (as expected) at relatively low levels of multinationality (contrary to our expectations). Our findings challenge the notion that the risk to over-internationalize may only occur to large, highly internationalized firms (Contractor, 2007, 2012; Contractor et al., 2003), but not to internationalizing SMEs (Lu & Beamish, 2001). However, we found that KI service mMNEs encounter a threshold of internationalization at relatively low levels of multinationality (in our study this point is reached when a firm has presence in two countries and a total of four foreign affiliates or in three countries and a total of three

foreign affiliates). We argue that the high degree of intangibility present in most KI services demands considerable efforts from the parent company to transfer knowledge and service delivery capability, that are largely embedded in its human resources, to its foreign affiliates. Further, the delivery of KI services often requires intensive customer interaction and high customization, including the acquisition of local-specific knowledge, which implies that KI services are more difficult to standardize across borders. Therefore, as KI service mMNEs further internationalize they are faced, on the one hand, with increasing governance and coordination costs arising from the growing complexity of operating in dissimilar markets and, on the other, with growing demands on their limited key resources (people) to transfer the needed knowledge and capabilities to their foreign affiliates and to sustain their development. Due to their limited size, these simultaneous demands would explain why KI service mMNEs encounter a threshold of internationalization relatively soon in their international expansion. Nonetheless, it should be noted that the increasing separability of KI business services may contribute to reduce such difficulties and facilitate more easily scalable service production and delivery models, which would permit KI service mMNEs to largely overcome the constraints imposed by their limited size.

A related finding of our study is that a significant proportion of KI service mMNEs, close to one fifth, have expanded beyond the threshold of internationalization (estimated at a MUL value of 0.23, see Figure 3-3), signaling a propensity to over-internationalize. This finding suggests that KI service mMNEs may be prone to underestimate the long-term costs of establishing foreign operations. As discussed previously, KI service mMNEs appear to be able to keep the initial costs of establishing a presence abroad at quite low levels (thus facilitating their international expansion), especially if they pursue a client-following strategy. While client followers have an advantage in the early phase of entry in a foreign market, compared to market-seekers, they might face difficulties at a later stage seeking

new local clients after completion of the initial projects that brought them to a country (McLaughlin & Fitzsimmons, 1996).

Finally, the evidence related to the control variables used in our study indicates an interesting additional finding. Entry mode is positively related to the performance of both types of mMNEs. As expected, a high-control entry mode is more positively related to performance in the case of KI service mMNEs than in the case of CI ones. The high degree of intangibility present in most KI services creates a strong preference for high-control entry modes as means to protect the main source of value (their knowledge and reputation) and the considerable investments needed to transfer service delivery capability to foreign markets. This finding is in line with the extant literature on choice of market entry mode by service firms (Brouthers et al., 2003; Capar & Kotabe, 2003; Erramilli & Rao, 1993; Kotabe, Murray, & Javalgi, 1998; Pla-Barber et al., 2010; Zahra, Ireland, & Hitt, 2000).

3.6 Conclusion

To our knowledge, this paper is one of the first to analyze the relationship between multinationality and performance in the context of service mMNEs. Previous studies on the M-P relationship in service sector firms have focused on large MNEs and little attention has been paid to internationalizing SMEs.

There is a growing consensus among researchers that contextual factors are critical in multinationality research. Moreover, Kirca et al. (2012) point out that focusing on the role of moderating variables would provide a better understanding of the underlying basis for the M-P relationship, providing useful theoretical insights as well as higher managerial relevance.

Our findings confirm that the effects of multinationality on performance depend on industry characteristics within the service sector and that the shape of the M-P relationship becomes more significant when these factors are taken into account. More

specifically, KI service mMNEs increase their performance in the initial stage of multinationality although they encounter a threshold of internationalization at relatively low levels of multinationality. Further, they are prone to over-internationalize. By comparison, CI-service mMNEs experience negative performance effects at the beginning of their international expansion and positive ones as they further internationalize. Given that their operations are scale-sensitive, they tend to expand internationally by concentrating their operations in few foreign markets as a means to overcome the liabilities of internationalization and smallness. We also found that the threshold of internationalization is a relative notion dependent on a firm's industry characteristics and on its managerial and organizational capacity, which is largely related to its size.

This paper extends the empirical literature on the M-P relationship by focusing on service mMNEs. By doing so, we contribute to the literatures on multinationality research in the service sector and on SME internationalization.

Our study also offers valuable insights for managers. The high initial costs of internationalization faced by CI service mMNEs should not discourage them. Rather, an international market concentration approach allows these firms to more easily gain scale to exploit their firm-specific advantages and learn about their host markets. In this way, as our results suggest, the net performance impact will eventually be positive. With regard to KI service mMNEs, managers should be keenly aware that their company size, industry characteristics and managerial and organizational capacity determine a threshold of internationalization, and that expanding beyond that point can be highly detrimental to their firm performance. Further, when pursuing a customer-following strategy, managers should not underestimate the actual costs of establishing a foreign affiliate in a country once the initial customer projects have been completed, otherwise they risk over-internationalizing.

3.7 Limitations and Future Research

This study has several limitations that should be considered when interpreting the results, which at the same time may provide opportunities for further research. First, the study sample is constrained to the Spanish context, which may challenge the generalizability of our findings, thus we call for further studies on service mMNEs from other countries.

Second, due to limitations on the data available, our multinationality measure, the MUL ratio, gives the same weight to the different countries and to the different foreign affiliates regardless of their size. Further research on mMNEs could use indicators that provide a more accurate measure of a firm's degree of multinationality such as foreign sales to total sales, foreign employees to total employees or foreign assets to total assets. Likewise, our operationalization of multinationality does not take into account whether a firm's foreign affiliates are located in the same or in different regions. Future studies could look at the impact of intra- and inter-regional diversification on the performance of mMNEs.

Third, the impact of multinationality on performance has a temporal dimension. Liabilities and costs of internationalization are reduced through accumulated experience and learning in the host country (Lu & Beamish, 2004), thus, in the long run the benefits of internationalization tend to prevail over costs, especially in the presence of significant firm-specific advantages (Thomas & Eden, 2004). Our measure of performance, ROA, as well as other alternative accounting measures (such as ROE or ROS), captures multinationality benefits in a given year, that is, in the short run. Whenever data is available, it is advisable to incorporate in the analysis future oriented indicators, such as Tobin's q or Excess Market Value, that better capture the potential benefits of multinationality in the long run.

Fourth, as mentioned previously, SABI does not provide the date in which a firm first made an equity investment in a given foreign affiliate. Whenever possible, future studies on mMNEs should incorporate a firm's FDI experience as a control variable.

Fifth, we have focused on two important service industry characteristics as moderators of the relationship between multinationality and performance, namely capital intensity and knowledge intensity. Future research should try to analyze the moderating influence of other important service characteristics on the M-P relationship of service mMNEs. La, Patterson, and Styles (2005) argue that intangibility and inseparability are particularly relevant with regard to service internationalization. The use of the Internet and the application of Cloud-based platforms in an increasing range of KI business services is making them more and more separable, thus changing the traditional association between high intangibility and high inseparability. This trend will likely contribute to a greater differentiation of KI from CI service firms as well as to reduce the costs and enhance the speed of the internationalization of KI service firms in general, and KI service SMEs in particular.

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4

Geographical Diversification Strategy of Micro-Multinationals: The Effects of Industry and Group Affiliation

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Chapter 4: Geographical Diversification Strategy of Micro-Multinationals: The Effects of Industry and Group Affiliation

4.1 Abstract

International diversification is an important strategy in increasing firm competitiveness. It is a particularly important growth strategy for micro-multinational enterprises (mMNEs) given their resource constraints in comparison to large multinational enterprises (MNEs). Thereby, where and how mMNEs internationalize can have a profound effect on firm performance. In this study, we examine geographical diversification strategy and firm performance for a sample of 523 Spanish mMNEs over an eight-year period. We examine the performance of mMNEs whose geographical diversification strategies are predicted according to industry characteristics and group affiliation. We find that firm attributes derived from industry characteristics are more influential than group affiliation in choosing a geographical diversification strategy. However, the differential performance of firms adopting the same geographical strategy is explained by group affiliation. Our findings support the benefits of business group affiliation in internationalization. This study extends prior literature on SME internationalization, more specifically on mMNEs, and on business groups by examining the effect of group affiliation on the internationalization strategy and performance of group affiliates. Lastly, contributes to the multinationality-performance (M-P) literature from a methodological point of view by using a two-step approach to control for endogeneity.

4.2 Introduction

While there are many studies on the internationalization of small and medium-sized enterprises (SMEs), little attention has been paid to micro-multinational enterprises (mMNEs) (Dimitratos, Amorós, Etchebarne, & Felzensztein, 2014; Dimitratos, Johnson, Slow, & Young, 2003). According to Dimitratos et al. (2003, p. 165), a micro-multinational

(mMNE) is an SME “that controls and manages value-added activities in more than one country through a constellation [or combination] of contractual and investment modes”. mMNEs employ advanced foreign market entry modes, such as licensing, joint ventures and foreign subsidiaries (Ibeh, Johnson, Dimitratos, & Slow, 2004), thereby challenging the traditional notion that SMEs focus exclusively on exporting given their resource constraints (Prashantham, 2011). Conceptually, mMNEs are different from “born-global firms” or “international new ventures” because they are defined by the adoption of higher-commitment entry modes, including foreign direct investment (FDI), but they don’t have to be young firms nor have internationalized rapidly (Shin, Mendoza, Hawkins, & Choi, 2017).

The emergence of mMNEs has raised a new research agenda within the field of SME internationalization. While outward FDI provides possibilities for increasing firm performance and creating value (Cantwell & Narula, 2001; Ruigrok & Wagner, 2003), expanding into dissimilar markets requires a significant resource commitment, and increases operational costs and risks in order to adapt themselves to new business environments (A. M. Rugman, Oh, & Lim, 2012). However, SMEs not only suffer from the liabilities of foreignness and outsidership but also from the liability of smallness making internationalization particularly challenging (Kirby & Kaiser, 2003). As a result, activities of SMEs tend to be constrained within their home regional market (In Hyeock Lee & Marvel, 2009). Therefore, the geographical diversification strategy that an mMNE adopts may likely have a profound effect on firm performance.

Moreover, given their resource constraints, how are mMNEs able to engage in higher-commitment foreign market entry modes? Researchers have started searching for organizational attributes that differentiate mMNEs from pure exporting firms such as their international entrepreneurial orientation (Dimitratos et al., 2014) or their use of inter-organizational networks (Stoian, Rialp, & Dimitratos, 2016). Although it is well established that owners’ characteristics directly affect performance (Garengo, Biazzo, & Bititci, 2005),

few studies have examined the relationship between internationalization strategies and types of ownership (Fernández & Nieto, 2006). In particular, affiliation to a business group may provide mMNEs access to critical resources needed to support their internationalization.

In this paper, we explore whether the geographical diversification strategies (regional or multi-regional) pursued by mMNEs differ by industry and ownership type and their performance implications. Based on a sample of 523 Spanish mMNEs over an eight-year period, we use a two-stage approach developed by Shaver (1998) and adopted by Brouthers et al. (2013). In the first stage, we conduct a probit regression to see if the geographical diversification strategy is predicted based on industry and ownership characteristics. In stage two, we use a feasible generalized least square (FGLS) regression model to assess the performance differences between mMNEs that pursue the predicted geographical diversification strategy (Fit group) and those whose geographical diversification strategy depend on other factors (Non-Fit group).

Our results show that service mMNEs are more likely to pursue a regional diversification strategy than manufacturing ones. Likewise, affiliated mMNEs are more likely to pursue single-region expansion than independent ones. While firm attributes derived from industry characteristics are more influential factors than group affiliation in adopting a geographical diversification strategy, the differential performance of firms adopting the same geographical strategy is explained by group affiliation. Thus, among mMNEs pursuing multi-regional diversification, affiliated mMNEs outperform independent ones in service and manufacturing sectors. Likewise, among mMNEs pursuing regional diversification, affiliated mMNEs outperform independent mMNEs in service sectors. In sum, our findings support the benefits of being affiliated and its positive performance effects.

This study extends prior literature on SME internationalization, and more specifically on micro-multinationals, by examining the effect of industry characteristics and ownership in

determining geographical diversification strategies. The trade-off between regional or multi-regional geographical scope of MNEs has been the subject of substantial debate; however, extant research typically has focused on large MNEs (Degraevl, 2017; Pisani, Caldart, & Hopma, 2017). We also contribute to the literature on business groups by examining the effect of group affiliation on the internationalization strategy chosen by affiliated firms and by comparing the performance of affiliated and independent firms, an area where empirical evidence is scant (Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011; Lin, 2014). Lastly, this study also contributes to the multinationality-performance (M-P) literature from a methodological point of view, the two-step approach model allow the comparison of the M-P relationships derived from two different strategic decisions (regional vs. multi-regional diversification) eliminating the problem of endogeneity.

4.3 Literature Review and Hypotheses Development

4.3.1 Regional vs. Multi-regional geographical diversification

International diversification provides opportunities to gain competitive advantages and increase performance (Hitt, Hoskisson, & Kim, 1997). Recent research has shown that the geographical dimension of multinationality matters. In their seminal article, Rugman and Verbeke (2004) analyzed the geographical distribution of the sales of the world's largest companies. They classified MNEs into four types: home-region oriented, bi-regional, host-region oriented and global. They found that the sales of most MNEs take place largely in their home region and that only in very few cases the world's largest firms operate globally. These authors (A. M. Rugman, 2005; A. M. Rugman & Verbeke, 2004; A. M. Rugman & Verbeke, 2007) provided several reasons why multinational firms tend to be regional rather than global in their geographical scope. Firstly, on top of geographical closeness, institutional and cultural proximity makes it easier to do business in countries within the same region (informal determinants). Secondly, intensification of regional trade

agreements provides formal, intra-regional mechanisms to facilitate more business between proximate countries.

Their findings can also be interpreted as a reflection of the limits that MNEs have to transfer and deploy their firm-specific advantages internationally (A. M. Rugman & Verbeke, 2004, p. 6). The fact that countries within a region are culturally close and firms face similar market demands and similar or even the same competitors, facilitates that the experience and knowledge of one country can be applied to another country within that region. However, when multinational companies diversify across regions they do not benefit from such sharing and face the costs of 'inter-regional' distance and the 'liability of inter-regional foreignness' (A. M. Rugman & Verbeke, 2007).

Qian et al. (2013, p. 635) note that there is an intense debate among international strategy researchers on the merits of intra- and inter-regional diversification. However, the empirical literature presents inconclusive results because some authors conclude that intra-regional diversification is more effective than inter-regional diversification (Arregle, Beamish, & Hébert, 2009; Asmussen, 2009; A. M. Rugman & Verbeke, 2004), while others arrive at opposite conclusions (Delios & Beamish, 2005; Osegowitsch & Sammartino, 2008; Qian, Li, Li, & Qian, 2008).

On the one hand, Ruigrok et al. (2013) summarize the theoretical arguments to explain the superior performance of firms with a regional focus as follows: by mainly expanding within their home region, firms can significantly reduce managerial and administrative costs related to cultural and geographic distance (A. M. Rugman, 2005) and benefit from legal, economic, and customer-related proximity across countries in the same region (Qian et al., 2008). Accordingly, costs related to coordination, employee travel, and physical product or asset transportation are reduced when the geographical distance is minimized among subsidiaries (A. M. Rugman & Oh, 2010).

On the other hand, inter-regional diversification increases a firm's growth potential because it helps to maximize market opportunities, leverages economies of scale derived

from dispersed operations (Kim, Park, & Prescott, 2003) and allows to arbitrage production factors and consumer market differences across regions (Wan & Hoskisson, 2003). However, expanding beyond the home-region and entering into new regions and dissimilar markets will require a greater level of resource commitments and most probably will increase operational costs and risks due to the liabilities of regional foreignness (J. Michael Geringer, Stephen Tallman, & David M. Olsen, 2000; A. M. Rugman, 2005; A. M. Rugman et al., 2012) which at some point may erode firm performance.

Researchers argue that SMEs are often confronted with challenges that large MNEs do not experience (Karagozoglu & Lindell, 1998; Qian, 2002; Qian et al., 2008). Large MNEs are capable of allocating substantial amount of resources across distant foreign markets (Guillen, 2000) leveraging and distributing the fixed costs of managing foreign operations (Khanna & Palepu, 2000). However, with expanded geographical scope, effectively coordinating and controlling competitive actions across regions becomes a challenging task even for large MNEs, leading to higher costs (Qian, Khoury, Peng, & Qian, 2010) and detrimental effects on performance (Li, 2005). Therefore, given their resource constraints, we expect that SMEs will likely prefer to pursue a regional diversification strategy (either home-region or host-region oriented) rather than a multi-regional one.

4.3.2 Manufacturing vs. Service sectors

Service firms exhibit distinct patterns of internationalization from those of manufacturing firms. The literature on service management identifies four main characteristics that distinguish services from goods: intangibility, heterogeneity, inseparability of production and perishability (Campbell & Verbeke, 1994; Capar & Kotabe, 2003; Venzin, Kumar, & Kleine, 2008). These features make the resources of service firms usually more location-bound than those of manufacturing firms (A. Rugman & Sukpanich, 2006; A. M. Rugman & Verbeke, 2008). Transferring firm-specific resources may require more commitment in service firms than in manufacturing firms due to the intangible nature of services (Villar,

Pla-Barber, & León-Darder, 2012). Service heterogeneity makes less likely that service firms will benefit from internationalization because services are often customized to meet each individual customer's needs (Capar & Kotabe, 2003; Kirca, Roth, Hult, & Cavusgil, 2012; A. M. Rugman & Verbeke, 2002). Services are perishable since they cannot be easily stored and must be consumed at the time of production (Moeller, 2010). Finally, due to inseparability most service firms cannot (or only to a minimal extent) decouple production and sales activities and consequently have to deliver their activities physically close to their customers.

These four features explain the distinct patterns of internationalization of services firms and the difficulty they face to achieve the economies of scale and scope associated with internationalization (Anand & Delios, 1997). Therefore, service firms are constrained in their ability to exploit their firm-specific resources in foreign markets. The more distant foreign markets are, the higher the costs and complexities associated to the effort to adapt to cultural, economic and institutional differences and to the transfer of firm-specific resources (A. M. Rugman & Verbeke, 2001). Thus, service firms will likely prefer to enter foreign markets similar to their home market. In comparison, manufacturing firms are less sensitive to cultural and institutional distance and more able to achieve economies of scale and scope by expanding into foreign markets within and across regions. Therefore,

Hypothesis 1: *Service mMNEs are more likely to pursue a regional diversification strategy than manufacturing mMNEs.*

4.3.3 Business Group Affiliation

Although it is well established that owners' characteristics directly affect performance (Garengo et al., 2005), few studies have examined the relationship between internationalization strategies and types of ownership (Fernández & Nieto, 2006), and in particular to corporate ownership or affiliation to a business group (Carney et al., 2011).

A business group can be defined in different ways depending on the theoretical perspective and national context. In this essay, we define a business group as “a collection of formally independent firms which however share common ownership and operate under common financial and administrative control exerted by a controlling parent company” (Chang & Hong, 2002; Lorenzoni & Baden-Fuller, 1995). Group affiliated firms are tied together through various formal and informal ways (Mahmood, Zhu, & Zajac, 2011) and important strategic decisions such as international diversification are likely to be approved at the group level rather than at the firm level (Chang, 2003; Chang & Choi, 1988), especially FDI decisions which are often complex, risky and involve significant resource commitments with long-term implications.

Business groups are argued to be the most efficient organizational form in the presence of significant market imperfections and institutional voids most commonly found in developing or emerging economies (Carney et al., 2011; Khanna & Palepu, 1997, 2000; Khanna & Rivkin, 2001). In that regard, business groups typically possess multiple resources and function as internal markets which disseminate necessary resources (capital and managerial talent) to their affiliates. This resource-sharing allows affiliated firms to access and deploy valuable resources at a lower cost compared to the external market (Chang & Choi, 1988; Chang & Hong, 2000). Further, individual affiliated firms can leverage the group’s international experience on foreign markets in which other affiliates already operate. These aspects allow affiliated firms to overcome barriers to internationalization more easily than independent firms would do (Birkinshaw, Morrison, & Hulland, 1995; B. Elango & Pattnaik, 2011; Khanna & Palepu, 2000; Ruigrok & Wagner, 2003).

Nevertheless, the literature suggests that affiliated firms have a less pronounced international orientation than independent ones (Carney et al., 2011). On the one hand, social norms and strong internal links in many business groups lead affiliated firms to first focus on transactions among themselves rather than reaching out to non-group firms

which may reduce incentives to expand beyond the boundaries of the business group in search for business (Carney et al., 2011; J Michael Geringer, Stephen Tallman, & David M Olsen, 2000; Guillen, 2000; Hundley & Jacobson, 1998; Lamin, 2006; Orru, Hamilton, & Suzuki, 1989). On the other, many business groups depend on advantages developed and based in their home country contexts and these home country-specific resources may be imperfectly relocated and adjusted to foreign markets, which reduces the motivation to expand to dissimilar foreign markets (Johanson & Vahlne, 2009; Tan & Meyer, 2010). Hence, business groups will likely tend to stay close to home markets and expand into their home regions (A. M. Rugman & Verbeke, 2004, 2005).

Conversely, independent firms are not constrained by social norms and administrative controls associated to business groups and can more readily exploit international opportunities. In order to manage foreign operations efficiently, organizational flexibility is needed to mitigate increasing costs (Xia, 2011). One of the advantages of being small and independent is that firms are likely to be more flexible and reactive to environmental changes in comparison to affiliated firms belonging to a larger organizational entity (Carson & Gilmore, 2000). While affiliated firms will likely prefer to stay in home region passing up opportunities in distant markets, independent firms that are unconstrained by group membership are more likely to expand internationally across regions. Therefore,

Hypothesis 2: Affiliated mMNEs are more likely to pursue a regional diversification strategy than independent mMNEs

We expect that mMNEs will choose their internationalization strategies in a way that minimizes costs and challenges and maximizes the chance of success. In H1 and H2 we argue that the strategic choice between regional and multi-regional diversification is deeply related to firm and industry characteristics. Thus, manufacturing mMNEs will tend to pursue multi-regional strategy for achieving economies of scale, while service mMNEs will tend to focus their efforts to carefully selected markets within their home region due to the characteristics of service offerings. Regarding business group affiliation,

independent mMNEs are more likely to pursue multi-regional diversification than affiliated ones. Therefore,

Hypothesis 3A: *Independent manufacturing mMNEs are more likely to pursue a multi-regional diversification strategy than affiliated manufacturing mMNEs*

Hypothesis 3B: *Independent manufacturing mMNEs are more likely to pursue a multi-regional diversification strategy than independent service mMNEs*

Hypothesis 3C: *Affiliated service mMNEs are more likely to pursue a regional diversification strategy than independent service mMNEs*

Hypothesis 3D: *Affiliated service mMNEs are more likely to pursue a regional diversification strategy than affiliated manufacturing mMNEs*

4.3.4 Performance

Over the past fifteen years, the international business literature has revealed numerous M-P relationships. Based on the trade-off between costs and benefits, which determine the direction of the slope at different levels of multinationality, researchers have found various non-linear M-P relationships: squared relationships (Capar & Kotabe, 2003; Lu & Beamish, 2001; Ruigrok & Wagner, 2003), cubic/sigmoidal relationships (Bae, Park, & Wang, 2008; Lu & Beamish, 2004; Thomas & Eden, 2004) and a four-phased M-curve (Almodóvar & Rugman, 2014; In Hyeock Lee, 2010, 2013).

In this study, we expect that performance will likely decline during the first or initial stage of multinationality as costs exceed the benefits due to learning and adjusting costs to overcome liabilities of internationalization, increasing coordination costs, and insufficient economies of scale (Capar & Kotabe, 2003; F. J. Contractor, Kundu, & Hsu, 2003; Gomes & Ramaswamy, 1999; Lu & Beamish, 2001; Thomas & Eden, 2004). Consequently, mMNEs will likely experience declining performance in the initial stages of multinationality, resulting in a negative M-P slope. Nonetheless, as mMNEs continue their

internationalization process and develop new knowledge and capabilities, increases in the level of multinationality will likely translate into increases in performance because firm-specific advantages can be exploited at a larger scale (Ruigrok & Wagner, 2003) and liabilities and costs will be reduced through accumulated experience. Therefore:

Hypothesis 4: *The relationship between the degree of multinationality and performance in the case of mMNEs is non-linear, with a negative slope during the initial stage of multinationality and with a positive slope in the subsequent stage.*

In previous hypotheses (H1, H2, H3A and H3C), we argue that mMNEs' attributes derived from industry characteristics and type of ownership lead to a predicted geographical diversification choice. From an economic perspective, geographical diversification choices are efficiency-driven decisions by focusing on the benefits and cost effects of firm attributes (Keith D Brouthers, 2013). Since each geographical diversification strategy implies different costs and generates different benefits, mMNEs will likely select the strategy that maximizes performance (Keith D. Brouthers, Brouthers, & Werner, 2003). Therefore,

Hypothesis 5: *mMNEs pursuing predicted geographical diversification strategies according to industry and ownership characteristics will likely outperform mMNEs pursuing not predicted strategies*

4.4 Methods

4.4.1 Empirical Setting

Spain is an interesting setting for the study of SME internationalization in general and mMNEs in particular. Over the past three decades a large number of SMEs have successfully internationalized. Mendoza and Vives (2010) studied a sample of 1,658 Spanish parent companies that had at least one foreign affiliate in 2008 and found that 69.7% were SMEs. The economic and financial crisis of Spain in 2008 and following years

has raised even more the awareness of Spanish SMEs about the importance of international diversification which has become an important strategic option for their long-term survival (Sanz & Machuca, 2015). An important feature for our study is that FDI flows by Spanish firms are mostly concentrated in two regions, the European Union and in Latin America, which are considered their “natural markets” due to sharing a common history or language or having a high level of physical and institutional proximity (Casanova, 2004).

4.4.2 Sample and Data

The sample of Spanish mMNEs considered in our study has been extracted from SABI (*Sistema de Análisis de Balances Ibéricos* [Analysis System of Iberian Balance sheets]). It contains comprehensive information on companies in Spain and Portugal, including date of incorporation, location of the main office, company industry classification, company financials, total number of employees, and ownership data related to shareholders and affiliated companies, among other information. Data on foreign affiliates is only available from 2004. SABI includes more than 95% of the Spanish companies that are legally obligated to deposit their annual reports and financial statements at the Mercantile Registry Offices (roughly two million companies). It is compiled by Informa, the Spanish subsidiary of Bureau van Dijk (BvD), a major publisher of business information that specializes in private company data. SABI uses the same standardized information format as Amadeus (Pan-European database) and Orbis (worldwide database) which are also provided by BvD.

For operational purposes, we define Spanish mMNEs as those firms that meet the following criteria: a) to be an incorporated firm in Spain controlled by Spanish shareholders, thus excluding the Spanish subsidiaries of foreign multinationals; b) to be an SME according to the European Commission (2015), that is, having at least 10 and no more than 249 employees and to have either an annual turnover not exceeding EUR 50

million or an annual balance sheet total not exceeding EUR 43 million; and c) to have at least one foreign affiliate.

We follow UNCTAD and define a 'foreign affiliate' as an incorporated firm in a host country in which a parent company owns at least 10% of the shareholders' voting rights. According to the degree of influence and control, one can distinguish between 'associate' firms (the parent company owns at least 10% but not more than half of voting rights) and 'subsidiaries' (the parent company owns more than half of voting rights) (UNCTAD, 2014). Given that mMNEs use a combination of contractual and investment modes for servicing foreign markets (Dimitratos et al., 2014; Dimitratos et al., 2003; Ibeh et al., 2004), we have included in our study *all* types of foreign affiliates, associate firms and subsidiaries.

From the SABI dataset, we selected those companies that met the mMNE criteria over an eight-year time period (2005 to 2012). For the purpose of our study, we excluded those companies that were banks, holding companies, mutual funds, insurance companies or corporate headquarters (NACE Rev.2 codes: 6410, 6420, 6430, 65 and 7010 respectively). We checked the existence of outliers in our regression analysis by calculating Studentized residuals, Leverage, Cook's distance and DFITS. Two observations that met the four criteria were considered as outliers and excluded. In the unbalanced data set, our final sample consists of 523 mMNEs with a total of 1,751 firm-year observations.

4.4.3 Dependent Variables

Two dependent variables are included in this study according to the two-step model employed. In the first model the dependent variable is geographical diversification strategy and in the second model is performance.

Geographical Diversification Strategy: We employ the regional *versus* multi-regional dichotomy for meaningful empirical analysis (Qian et al., 2010; A. Rugman & Sukpanich, 2006). Based on the location of foreign subsidiaries, regional captures geographic

diversification restricted to one region, either home-region (Europe) or host-region (e.g. Latin America), while multi-regional captures diversification across two or more regions.

Table 4-1: Descriptive statistics for Regional Expansion

N of Regions	Freq.	Percent	Cum.
1	1,313	74.99	74.99
2	323	18.45	93.43
3	75	4.28	97.72
4	26	1.48	99.2
5	14	0.8	100
Total	1,751	100	

mMNEs	N of Regions	Freq.	Percent	Cum.
Independent service	1	508	76.28	76.28
	2	116	17.42	93.69
	3	32	4.8	98.5
	4	10	1.5	100
	Total	666	100	
Independent manufacturing	1	354	65.68	65.68
	2	124	23.01	88.68
	3	31	5.75	94.43
	4	16	2.97	97.4
	5	14	2.6	100
Total	539	100		
Affiliated service	1	263	86.23	86.23
	2	33	10.82	97.05
	3	9	2.95	100
	Total	305	100	
Affiliated manufacturing	1	188	78.01	78.01
	2	50	20.75	98.76
	3	3	1.24	100
	Total	241	100	

The geographical regions considered are the following: Europe; Latin America and the Caribbean; USA and Canada; Sub-Saharan Africa; Asia (South, East and Southeast); Northern Africa and Middle East; Oceania; and the Community of Independent States and Southeast Europe (former communist countries). The value of the variable is one for regional diversification and zero otherwise. In our sample, 75 % of mMNEs have their foreign affiliates located in a single region, 19% have direct presence in 2 regions and 6 % of them in 3 or more regions as shown in Table 4-1. Moreover, of those firms pursuing a regional diversification strategy, 51% are home-region oriented (foreign affiliates located in Europe) and the remaining 49% are host-region oriented (17% in Latin-America and 32% in another region).

Performance: Following many previous studies on the relationship between multinationality and performance (Capar & Kotabe, 2003; Farok J Contractor, Kumar, & Kundu, 2007; B Elango, 2010; Gomes & Ramaswamy, 1999; Vissa, Greve, & Chen, 2010; Zhang, Ma, Wang, & Wang, 2014), firm performance is operationalized as return on assets (ROA). ROA is calculated as net income before tax divided by total assets.

4.4.4 Independent Variables

Group Affiliation: We use the BvDEP independence indicator provided by SABI, where firms with values of “C” and “D” are those in which an investor directly or indirectly controls 50% or more of voting rights. Then, we also searched in SABI the name of the investor to make sure it was another firm – either the group’s holding company or another firm of the same business group. For operational purposes, we categorize a firm as *affiliated* when its BvDEP independence indicator is “C” or “D” and the controlling shareholder is another Spanish firm (corporate ownership) and as *independent* otherwise. The value of the variable is one for affiliated mMNEs and zero otherwise. The sample consists of 345 independent and 178 affiliated mMNEs.

Industry: For classifying service and manufacturing firms, we use the statistical classification of economic activities in the European Community, 2008 from Eurostat (also known as NACE Rev. 2). For the final sample, we have 247 manufacturing and 334 service mMNEs. The value of the variable is one for manufacturing mMNEs and zero otherwise.

Multinationality: Multinationality (MUL) represents the degree of internationalization by compounding two measures consisting of the number of foreign affiliates a firm has and the number of countries in which these affiliates operate (Endo & Ozaki, 2011; Lu & Beamish, 2004). The first measure is the ratio of the number of foreign affiliates a firm has to the largest number of foreign affiliates for any firm within the sample. The second measure is the ratio of the number of countries to the largest number of countries where a firm has foreign affiliates. The MUL ratio is the mean of these two values and it ranges between 0 and 1. It should be noted that MUL measures the relative degree of multinationality within our sample.

Number of foreign countries and number of foreign affiliates have been commonly used to measure multinationality (Allen & Pantzalis, 1996; Gomes & Ramaswamy, 1999; Mishra & Gobeli, 1998). The MUL ratio captures the breadth or scope dimension of multinationality. Previous studies show that the geographic scope of internationalization is a good proxy to see if the firm is benefiting from economies of scale in the foreign markets in which it operates (Thomas & Eden, 2004), and the benefits of internationalization are more pronounced for breadth than depth (Kirca et al., 2012).

Control Variables: The control variables include firm age, firm size, and debt-to-equity ratio. Firm age is the number of years since the founding and is an indicator of organizational inertia (BarNir, Gallagher, & Auger, 2003; Vermeulen & Barkema, 2001). While no formal hypothesis is offered, we expect that firm age will have a negative effect on performance as older firms tend to be rigid in their operations, which makes adjusting to new business environment difficult (Carr, Haggard, Hmieleski, & Zahra, 2010). Firm size is represented by the natural logarithm of the number of employees and relates to the

notion that managerial and financial resources are available to assist the firm in foreign markets (Agarwal & Ramaswami, 1992; Dhanaraj & Beamish, 2003). In addition, a debt-to-equity ratio (indebtedness) is included as a control variable to capture a portion of a firm's value which may affect firm performance (Hitt et al., 1997; Lu & Beamish, 2004).

4.4.5 Model

An extensive body of literature has highlighted the problems of endogenous selection in studying performance as the result of strategic choices in international diversification (Campa & Kedia, 2002; Kosová, Lafontaine, & Perrigot, 2013). For example, in studying the effect of different foreign entry modes on firm performance, the choices managers make are based on the expectations of how each type of entry mode may affect firm performance. In this case it is statistically biased to use entry mode as an exogenous variable to predict firm performance. Therefore, in order to test our hypotheses, we use the two-stage technique described in Shaver (1998) and adopted by Brouthers et al. (2013).

In the first stage of our analysis, we conduct a probit regression to see if the geographical diversification strategy is predicted based on our hypotheses. We divide the sample of mMNEs into four groups: Independent Service (00), Independent Manufacturing (01), Affiliated Service (10) and Affiliated Manufacturing (11). In this model, a positive coefficient indicates that the independent variable increases the probability of choosing a regional diversification strategy over a multi-regional one, whereas a negative coefficient decreases the probability of selecting regional a strategy which means a multi-regional strategy is more likely.

In stage two, we use a feasible generalized least square (FGLS) regression model to assess the performance differences between mMNEs that pursue the predicted geographical diversification strategy (Fit group) and those whose geographical diversification strategy depend on other factors (Non-Fit group). The use of a FGLS regression model minimizes

potential heteroscedasticity in the panel data (Greene, 2003). Given that the choice of a firm's geographical diversification strategy is not randomly made (Shaver, 1998), we add a self-selection correction variable derived from the previous probit model for dealing with self-selection bias.

4.4.6 Results

Table 4-2 shows the descriptive statistics and pairwise correlations among variables. Our sample is made of well-established firms, with an average age of almost 26 years, which show a low mean value of multinationality. In terms of size, the sample firms have an average of 52 employees and if one considers the range according to the standard deviation (where 67% of the cases are concentrated) it goes from 23 to 118 employees. A high correlation is detected between MUL and Geographical Diversification variable (labeled 'Regional'). However, the variance inflation factors in Table 4-3 (maximum equals 1.62) suggests that multicollinearity is not a concern in this analysis, as the value is below the rule of thumb of 10.

Table 4-2: Descriptive Statistics and Pairwise Correlation

Variable	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7	8	
Age	26.47	14.0062	3	91	1								
FirmSize	3.9491	0.8222	2.3026	5.4972	0.1962***	1							
Indebtedness	54.2678	22.5358	1.295	129.517	-	0.0264	1						
Industry	0.4455	0.4972	0	1	0.1565***	0.2371***	-0.0785***	1					
Affiliation	0.3118	0.4634	0	1	0.2548***	-0.1055***	-0.0078	-0.0055	1				
Regional	0.7499	0.4332	0	1	-0.0144	-0.2499***	-0.1150***	-0.1138***	0.1184***	1			
ROA	4.1183	9.9388	-72.342	68.307	0.0194	-0.0679***	-0.2142***	-0.0407*	0.0113	0.0604**	1		
MUL	0.1385	0.113	0.0749	0.9118	0.0799***	0.0357	0.2399***	0.0848***	0.0937***	-0.1352***	-0.6005***	-0.0288	1

Variable	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7
Age	26.47	14.0062	3	91	1						
FirmSize	3.9491	0.8222	2.3026	5.4972	0.1962***	1					
Indebtedness	54.2678	22.5358	1.295	129.517	-	0.0264	1				
Regional	0.7499	0.4332	0	1	0.1565***	0.0194	-0.2499***	-0.1150***	1		
FIT	0.5762	0.4943	0	1	0.1247***	-0.0819***	-0.0172	0.0384***	-	1	
ROA	4.1183	9.9388	-72.342	68.307	0.0799***	-0.0679***	-0.2142***	0.0604**	0.0187	1	
MUL	0.1385	0.113	0.0749	0.9118	0.0357	0.2399***	0.0848***	-0.6005***	0.0264	-0.0288	1

Note: p*** < 0.01; p** < 0.05; p* < 0.1.

Variable	VIF	1/VIF
Age	1.12	0.8891
FirmSize	1.17	0.855
Indebtedness	1.04	0.9577
Industry	1.12	0.8895
Affiliation	1.03	0.9739
Regional	1.62	0.617
MUL	1.6	0.6262
Mean VIF	1.24	

Variable	VIF	1/VIF
Age	1.09	0.917737
FirmSize	1.13	0.883417
Indebtedness	1.04	0.960308
FIT	1.03	0.973567
Regional	1.62	0.618179
MUL	1.6	0.625861
Mean VIF	1.25	

Table 4-4 and Table 4-5 present descriptive statistics of geographical diversification strategy and MUL. As expected regional diversification is the prevalent strategy in all mMNEs groups, nonetheless manufacturing mMNEs present a higher adoption of multi-regional diversification (30% of observations) compared to service mMNEs (21%). Regarding ownership, affiliated mMNEs pursue a regional strategy more frequently (83% of the cases) than independent mMNEs do (72%) as Independent mMNEs are more internationalized than affiliated mMNEs in Table 4-5.

Table 4-4: Intra-regional vs. Inter-regional

Classification	Obs	Intra-regional	Freq.	Percent	Cum.
Total	1,751	0	438	25.01	25.01
		1	1,313	74.99	100
Service	971	0	200	20.6	20.6
		1	771	79.4	100
Manufacturing	780	0	238	30.51	30.51
		1	542	69.49	100
Independent	1,205	0	343	28.46	28.46
		1	862	71.54	100
Affiliated	546	0	95	17.4	17.4
		1	451	82.6	100

Table 4-5: MUL descriptive statistics

mMNEs	Obs	Mean	Std. Dev.	Min	Max
Inter-regional	438	0.256	0.1463	0.1497	0.9118
Intra-regional	1,313	0.0993	0.0614	0.0749	0.7326
Service	971	0.129	0.0972	0.0749	0.8824
Manufacturing	780	0.1503	0.1292	0.0749	0.9118
Independent	1,205	0.1488	0.1263	0.0749	0.9118
Affiliated	546	0.1158	0.071	0.0749	0.6845
Affiliated manufacturing	241	0.1128	0.0575	0.0749	0.4332
Independent	539	0.1671	0.1476	0.0749	0.9118
Affiliated service	305	0.1182	0.0802	0.0749	0.6845
Independent	666	0.134	0.1038	0.0749	0.8824
Variable	Mean	Std. Dev.	Min	Max	
MUL	0.1385	0.113	0.0749	0.9118	
Affiliates	2.0702	1.8899	1	17	
Countries	1.7076	1.3319	1	11	

Model 1 in Table 4-6 reports the results of the probit estimates for the choice of regional (as opposed to multi-regional) diversification strategy. Service mMNEs are more likely to

pursue regional diversification than manufacturing ones as shown by the negative coefficient (-0.35) for manufacturing. Likewise affiliated mMNEs are more likely to pursue regional diversification than Independent ones as shown by the positive coefficient (0.19) for group affiliation. Therefore, H1 and H2 are supported.

Table 4-6: Results 1		
DV	Expansion Strategy	
	Probit	
IV	Model 1 Coefficient	Model 2 Coefficient
Intercept	3.153386***	3.127733***
Age	0.0099277***	0.0099725***
FirmSize	-0.2598533***	-0.2629366***
Indebtedness	-0.0047186***	-0.0046891**
Affiliation (1)	0.1895672**	
Manufacturing (1)	-0.352349***	
MUL	-8.986091***	-8.976169***
Affiliation (1) x Manufacturing (1)		
1		-0.2991119***
10		0.3078592**
11		-0.2090708*
N of Obs (N of firms)	1,751(523)	1,751(523)
Wald Chi2	366.64***	365.78***

Note: p***<0.01; p**<0.05; p*<0.1

Table 4-7: Marginal Effect

	Delta-method

	dy/dx	Std. Err.	z	P>z
Age	0.0020802	0.000619	3.36	0.001
FirmSize	-0.0548472	0.0105247	-5.21	0
Indebtedness	-0.0009781	0.0003852	-2.54	0.011
Affiliation (1)	0.0397268	0.0174522	2.28	0.023
Industry (1)	-0.0763257	0.0178014	-4.29	0
MUL	-1.872382	0.0880403	-21.27	0

Table 4-7 presents marginal effects of categorical variables on the dependent variable. Owing to the difficulty in interpreting the coefficients of independent variables in a probit model, the marginal effect is useful and informative by showing the derivative of the prediction function which is the probability of choosing regional diversification in our probit model. The partial effect of Industry is -0.0763257, while the effect of Affiliation is 0.0397268, which implies that manufacturing firms are more likely to choose multi-regional diversification and affiliated firms are more likely to choose regional diversification. In that regard, industry differences are much influential than ownership differences when mMNEs decide on their geographical diversification strategy.

The interaction term “Affiliation with Industry” in Model 2, Table 4-6, represents mMNEs with predicted geographical diversification strategy. The negative signs of independent and manufacturing mMNEs (01 and 11, respectively) imply that the probability of selecting a multi-regional diversification strategy over a regional one increases. In other words, manufacturing mMNEs (01 and 11) are more likely to choose a multi-regional diversification strategy over a regional one. Therefore, we accept H3A and H3B. Conversely, the positive signs of independent and affiliated service mMNEs (00 and 10, respectively) show that service mMNEs are more likely to choose a regional diversification strategy over a multi-regional one. Therefore, we accept H3C and H3D.

In models 1 and 2, Table 4-6, Age is positively significant which implies that younger firms are more likely to adopt a regional diversification strategy. In addition, Firm Size and Indebtedness are negatively related to regional diversification. Hence, mMNEs pursuing a multi-regional strategy are likely to be older, larger and have a higher debt-to-equity ratio than mMNEs pursuing a regional one.

Table 4-8: FIT vs. non-FIT

mMNEs	Expansion strategy	FIT	Non-FIT
Affiliated Manufacturing (11)	Inter-Regional	110	111
Affiliated Service (10)	Intra-Regional	101	100
Non-Affiliated Manufacturing (01)	Inter-Regional	10	11
Non-Affiliated Service (00)	Intra-Regional	1	1

Before testing performance, we divide mMNEs into two groups, those whose geographical diversification strategies are predicted according industry characteristics and ownership (Fit) and those using other geographical diversification strategies (Non-Fit). Independent and affiliated manufacturing mMNEs with multi-regional diversification (010 and 110 respectively) are categorized in the Fit group in Table 4-8. Conversely, independent and affiliated manufacturing mMNEs pursuing regional diversification (011 and 111 respectively) are categorized in the Non-Fit group. Likewise, independent and affiliated service mMNEs pursuing regional diversification (001 and 101 respectively) are categorized in the Fit group, while independent and affiliated service mMNEs following a multi-regional diversification strategy (011 and 111 respectively) are categorized in the Non-Fit group.

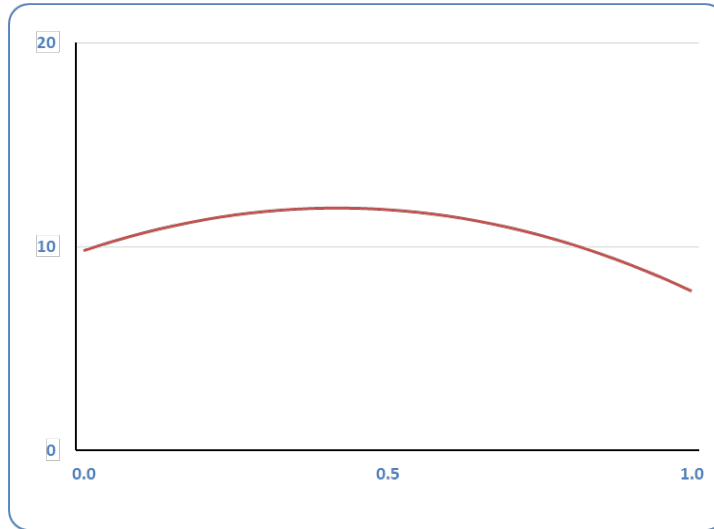


Figure 4-1: M-P Relationship of mMNEs

Table 4-8: Results 2

IV	ROA		
	Model 3 Coefficient	Model 4 Coefficient	Model 5 Coefficient
Intercept	11.46619***	10.86021***	9.813448***
Age	-0.0671314***	-0.0575929***	-0.0519296***
FirmSize	-0.3122418***	-0.3082022***	-0.3751026***
Indebtedness	-0.0940014***	-0.0883004***	-0.0875913***
Regional (1)	0.6584764***	0.6559022***	1.09002***
FIT	-0.3029473***	-0.2211803**	-0.1786188*
MUL	1.206644	1.452244*	10.02091***
MUL^2			-12.6032***
lambda		-0.7025234**	-0.8121264***
N of Obs (N of firms)	1,751(523)	1,751(523)	1,751(523)
Wald Chi2	1,176.38***	1,139.18***	1.209.16***

Note: p***<0.01; p**<0.05; p*<0.1;

Table 4-9 presents the models used to test H4 controlling self-selection bias. We test performance differences between mMNEs whose geographical diversification strategies are predicted (Fit) and mMNEs using other geographical diversification strategies (Non-Fit). Model 3 shows a non-significant relationship between multinationality and performance. Model 3 is misspecified because it does not account for self-selection of the strategic choice on firm's geographical scope (Heckman, 2013; Shaver, 1998). Since firms select geographical diversification strategies based on available resources and internationalization motives rather than on a random basis, results drawn from Model 3 may be incorrect. In Models 4 and 5, the self-selection correction variable (λ) is significant in both cases, which implies that unobservable factors affect the relationship between the choice of the geographical diversification strategy and performance and that we have controlled for them.

Models 4 and 5 reveal that the Fit group is less likely to outperform the Non-Fit group, which implies that mMNEs whose geographical diversification strategies are predicted according to ownership and industry characteristics do not outperform mMNEs which choose other geographical diversification strategies, thus H5 is rejected. This result is analyzed in further detail below. Contrary to our expectations, Model 5 demonstrates a non-linear, inverted U-shaped M-P relationship and therefore H4 is not supported. Figure 4-1 illustrates this relationship with the horizontal axis representing the degree of multinationality (MUL) and the vertical axis the mean values of ROA. Model 5 also shows that regional diversification is positively related to performance. In addition, Age, Firm Size, and Indebtedness are negatively related to performance. This finding implies that younger and smaller mMNEs with less leverage are likely to be more profitable.

Table 4-9: Results 3

DV	ROA	
	Model 6	Model 7
IV	Coefficient	Coefficient
Intercept	10.78926***	10.04579***
Age	-0.0563361***	-0.0536211***
FirmSize	-0.3034003***	-0.3301339***
Indebtedness	-0.0890273***	-0.0893678***
MUL	2.210943***	8.601845***
MUL^2		-9.444679***
Affiliation x Industry x Regional		
0 0 1 (FIT)	0.4646967**	0.7538573***
0 1 0 (FIT)	-1.036915***	-1.040675***
0 1 1	0.7077005***	0.9927718***
1 0 0	0.8491699**	0.8696235**
1 0 1 (FIT)	0.7169012***	1.013621***
1 1 0 (FIT)	-0.5465788*	-0.5964993**
1 1 1	-0.055223	0.2984821
Self-selection correction (lambda)	-0.350448	-0.4109228
N of Obs (N of firms)	1,751(523)	1,751(523)
Wald Chi2	1,308.90***	1,358.03***

Note: p***<0.01; p**<0.05; p*<0.1;

The coefficients of the interaction term “Affiliation x Industry x Regional” in Model 6, Table 4-10, represent the differential impact of the choice of geographical diversification strategy (regional or multi-regional) on firm performance for each of the mMNE groups identified according to industry (manufacturing, service) and ownership (independent firm, affiliated to a business group). The results are analyzed in two different ways.

Firstly, from Model 5 we found that mMNEs whose geographical diversification strategies are predicted according to ownership and industry characteristics (Fit group) do not

outperform mMNEs which choose other geographical diversification strategies (Non-Fit group). This finding refers to the entire sample. Model 6 allow us to examine the performance differences between Fit and Non-Fit groups for *each* of the four mMNE types: i) independent service mMNEs pursuing regional diversification (Fit: 001) outperform those pursuing multi-regional diversification (Non-Fit: 000) (coefficients 0.75 and 0.00 respectively); ii) affiliated service mMNEs pursuing regional diversification (Fit: 101) outperform those pursuing multi-regional diversification (Non-Fit: 100) (coefficients 1.01 and 0.87 respectively); iii) independent manufacturing mMNEs pursuing regional diversification (Non-Fit: 011) outperform those pursuing multi-regional diversification (Fit: 010) (coefficients 0.99 and -1.04 respectively); and iv) in the case of affiliated manufacturing mMNEs the coefficient for multi-regional diversification (Fit:110) is negative and significant but the coefficient for regional diversification (Non-Fit: 111) although positive is not significant, therefore we cannot conclude which group outperforms the other. In summary, in the case of both independent and affiliated service mMNEs the Fit group (regional diversification) outperforms the Non-Fit group (multi-regional diversification), while in the case of independent manufacturing mMNEs the Non-Fit group (regional diversification) outperforms the Fit group (multi-regional diversification). In other words, our results provide strong empirical evidence that the choice of a regional diversification strategy leads to a better performance in three out of the four cases analyzed.

Secondly, Model 6 also allow us to examine the performance differences between mMNEs from the same industry and different ownership characteristics that follow the same geographical diversification strategy: i) affiliated service mMNEs pursuing regional diversification (001) outperform independent ones pursuing the same strategy (101) (coefficients 1.01 and 0.75 respectively); ii) affiliated service mMNEs pursuing multi-regional diversification (100) outperform independent ones pursuing the same strategy (000) (coefficients 0.86 and 0.00 respectively); iii) affiliated manufacturing mMNEs pursuing multi-regional diversification (110) outperform independent ones pursuing the

same strategy (010) (coefficients -0.54 and -1.03 respectively); and iv) in the case of affiliated manufacturing mMNEs pursuing regional diversification (111) is non-significant, therefore we cannot compare with the group of independent ones that pursue the same strategy (011). In summary, our results provide strong empirical evidence that group affiliation matters and that in three out of the four cases analyzed affiliated mMNEs outperform independent mMNEs pursuing the same geographical diversification strategy. Lastly, In Model 6 the self-selection correction (λ) variable is not significant. A plausible explanation is that dividing the Fit variable into eight different types of mMNEs (see Table 8) would explain some variance of ROA.

4.5 Discussion

A general view is that SMEs are less global than they might be (Beleska-Spasova & Glaister, 2010) because their lack of resources and capability encourages SMEs to develop a regional orientation (Cerrato & Piva, 2015). While regional diversification is the prevalent strategy followed by the mMNEs of our sample, nonetheless a significant 25 percent pursue a multi-regional strategy.

As predicted, service mMNEs and affiliated mMNEs are more likely to adopt a regional diversification strategy. Given the nature of services, service mMNEs are usually more location-bound than manufacturing mMNEs, hence our results converge with previous research (A. Rugman & Sukpanich, 2006; A. M. Rugman & Verbeke, 2008). Regarding business group affiliation, we found that affiliated mMNEs are less internationally oriented than independent mMNEs which also converges with previous studies (Carney et al., 2011; J. Michael Geringer et al., 2000; Lamin, 2006; A. M. Rugman, 2005; Tan & Meyer, 2010). When considering the effect of industry characteristics and group affiliation on the choice of geographical diversification strategies by mMNEs we observe that industry characteristics are significantly more influential. Previous studies have shown that industry characteristics provide different pressures in the firm's competitive environment

(Doz & Prahalad, 1991; Ghoshal & Bartlett, 1990) and strongly shape firm strategies (Porter, 1986). The internationalization patterns among firms within the same industry may show many similarities since pursuing strategies that do not fit the industry characteristics is likely to create disadvantages (Benito, 2005).

The evidence related to control variables and MUL descriptive statistics also points to an additional interesting observation. mMNEs pursuing a regional strategy are younger and smaller firms with a much lower MUL value compared to mMNEs pursuing a multi-regional strategy. These aspects suggest that most mMNEs first expand internationally within a single region (either home- or host-region) and later on, if they succeed in growing and developing a larger and stronger resource base, they are able to expand across regions.

Regarding performance, contrary to our expectations, we have found an inverted U-shaped M-P relationship. In our study performance improves at initial levels of internationalization, however after reaching a tipping point (or threshold) firm performance begins to decline as MUL further increases. In our case, this threshold occurs when MUL reaches a value of 0.40 (equivalent to having six foreign affiliates in five countries). As mMNEs further internationalize they are faced, on the one hand, with increasing organizational costs and complexity as geographical, cultural and institutional distances increase (Brida, Ramon-Rodriguez, Such-Devesa, & Driha, 2016; Gomes & Ramaswamy, 1999) and, on the other, with growing demands on their limited resources and capabilities. These simultaneous demands would explain why mMNEs face a threshold of internationalization.

Our results also support that regional mMNEs outperform multi-regional mMNEs. Given their resource constraints, regional diversification provides cost saving advantages by entering culturally, physically, and economically closer markets and as a result firms have better performance than those pursuing multi-regional diversification. This finding is in line with previous studies which found that regional diversification allows firms to reduce the liabilities of internationalization by minimizing administrative and managerial costs

due to similarities in a region and geographical proximities (Delios & Beamish, 2001; Johanson & Vahlne, 1977; Qian et al., 2008). This finding provides an additional explanation for the positive M-P relationship at initial levels of internationalization given that, as mentioned earlier, most mMNEs first expand internationally within a single region (either home- or host-region) which requires less costs associated with internationalization activities than inter-regional expansion (Delios & Beamish, 2001; Grant, 1987; Johanson & Vahlne, 1977).

Our results reveal that the performance of mMNEs varies according to the geographical strategy they choose and the type of ownership. While firm attributes derived from industry characteristics are more influential factors in choosing geographical diversification strategies than group affiliation, the differential performance of firms adopting the same geographical strategy is explained by group affiliation. Thus, among mMNEs pursuing multi-regional diversification, affiliated mMNEs outperform independent ones in both service and manufacturing sectors. In addition, among mMNEs pursuing regional diversification, affiliated mMNEs outperform independent mMNEs in service sectors. Accordingly, our findings support the benefits of being affiliated in line with previous research (Kirca et al., 2011). Affiliated mMNEs can use either the parent company's or other affiliates' resources to internationalize (Chen & Jaw, 2014; Guillen, 2000) and having access to such resources have a positive effect on internationalization (Yiu, Lu, Bruton, & Hoskisson, 2007). The benefits of resource sharing among affiliates outweigh the costs generated from complexity of managing foreign activities.

4.6 Conclusions

The trade-off between regional and multi-regional diversification has been the subject of substantial debate; however, extant research typically focuses on the internationalization activities of large MNEs. We found that by adopting a regional strategy most mMNEs are able to overcome the liability of smallness and successfully expand internationally. An

interesting angle of our study refers to the meaning of a *regional* diversification strategy. Much of the literature equates regional strategy with expanding into the firm's home-region, however this is only true in half of the cases of our study. For two thirds of the Spanish mMNEs of our study following a regional strategy means expanding into one of their "natural markets", either Europe or Latin America. We also found that industry characteristics are more influential than group affiliation when mMNEs choose their geographical diversification strategy. Finally, regarding the M-P relationship, group affiliation has a net positive effect, that is, when comparing firms that pursue the same geographical diversification strategy, affiliated mMNEs outperform independent ones.

We extend prior literature on SME internationalization, and more specifically on micro-multinationals, by examining the effect of industry characteristics and ownership in determining geographical diversification strategies. We also contribute to the literature on business groups by examining the effect of group affiliation on the internationalization strategy chosen by mMNEs and by comparing the performance of affiliated and independent firms, an area where empirical evidence is scant (Carney et al., 2011; Lin, 2014). Lastly, this study also contributes to the multinationality-performance (M-P) literature from a methodological point of view, the two-stage analysis allows the comparison of the M-P relationships derived from two different strategic decisions (regional vs. multi-regional diversification) eliminating the problem of endogeneity.

As in any empirical study there are limitations that should be considered when interpreting the results, which at the same time may provide opportunities for future research. First, our sample is only made of Spanish mMNEs which limits the generalizability of our findings. Second, the traditional separation between services and products may be too simplistic because most goods embody some intermediate services, and most services embody some intermediate goods (Pla-Barber, Sanchez-Peinado, & Madhok, 2010). Moreover, we have not considered the levels of capital- and knowledge-intensity among manufacturing and service mMNEs which may lead to different geographical diversification patterns. Third, due to a lack of data availability, we could not

obtain information about the depth or intensity of internationalization such as foreign assets (or sales) over total assets (or sales). Our multinationality measure, the MUL ratio, gives the same weight to foreign countries and to foreign affiliates regardless of their size. Further research on mMNEs could use entropy measures capturing both sales and subsidiary diversification measures within and across regions. Fourth, previous research has shown that the identity of the owners (e.g. foreign or national individuals, families, financial investors) has important implications on firm strategy and performance (Cerrato & Piva, 2012; Thomsen & Pedersen, 2000). In this paper, we only consider independent firms and firms owned by a business group, without distinguishing between different types of owners in the case of independent firms. Lastly, we could not control by the different motivations of internationalization. Previous research has revealed significant relationships between various motives and FDI location choice (Dunning, 1998; Galan, Gonzalez-Benito, & Zuñiga-Vincente, 2007; Jain, Lahiri, & Hausknecht, 2013; Siedschlag, Smith, Turcu, & Zhang, 2013).

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5

Conclusions and Future Research

Chapter 5: Conclusions and Future Research

The three essays of that make up this dissertation attempt to respond its overarching research question: *what contextual and organizational factors allow internationalizing SMEs overcome their size constraints, adopt higher commitment entry modes, and maximize performance?*

Different contextual and organizational factors are examined as moderators of the focal DOI-P (or M-P) relationship. International diversification offers a range of exploration and exploitation benefits to SMEs. However, given their resource and capability constrains, it is still risky for SMEs to run into foreign markets without analyzing factors affecting the benefits and costs of doing business in a host country, especially when they are pursuing higher commitment entry modes involving FDI.

We focus on the factors underlying the DOI-P (or M-P) relationship in specific contexts rather than on finding a shape of the relationship to resolve the inconclusive results. Previous studies on the DOI-P (or M-P) relationship have focused on large MNEs and little attention has been paid to internationalizing SMEs using higher commitment entry modes. We provide a theoretical and empirical explanation of the moderating effect of contextual and organizational factors on the M-P relationship at different levels of internationalization. To do so, we integrate the literature on multinationality research with the corresponding literatures related to the contextual (industry sectors) and organizational (ownership types, geographical diversification strategies) moderating variables into a theoretical framework. Our findings confirm that the relationship is context specific and it is contingent on organizational and industry characteristics. The effects of multinationality on performance depend on industry and firm-level

characteristics and the shape of the DOI-P (or M-P) relationship becomes more significant when these factors are taken into account.

In analyzing the relationship between internationalization and firm performance within the manufacturing and service sectors, we provide statistical evidence that the degree of technology intensity of manufacturing mMNEs (Essay 1) and the degree of knowledge and capital intensity of service mMNEs (Essay 2) lead to different dynamics of costs and benefits of internationalization which in turn determine the shape and direction of the observed DOI-P (or M-P) relationship. Our findings confirm that the moderating effects of industry and firm-level characteristics on the DOI-P (or M-P) relationship vary at different levels of internationalization (or multinationality).

In that regard, business group affiliation shows different effects on performance according to the degree of internationalization (or multinationality) and appears to be a key factor in overcoming the liabilities of internationalization and smallness and, consequently, enhancing the performance of SMEs. Previous studies of business group affiliation have focused on the effect of business group affiliation on market imperfections and institutional voids in emerging economies and cannot be generalized to other institutional settings. In this dissertation, we demonstrate the overall positive effect of group affiliation in the context of an advanced economy, Korea. Our findings confirm that it is still more risky for independent SMEs to rush into foreign markets especially when the initial costs are high or they are overly internationalized. Further, our results challenge the notion that the risk to over-internationalize may only occur to large, highly internationalized firms. We found that SMEs also encounter a threshold of internationalization because such a threshold is a relative notion that depends not only on the degree of internationalization achieved but also on industry characteristics and the firm's managerial and organizational capacities, which are largely related to its size.

In exploring the geographical diversification strategy of SMEs (Essay 3), we extend prior literature on SME internationalization, and more specifically on micro-multinationals, by examining the effect of industry characteristics and ownership in determining

geographical diversification strategies. Our study provides an interesting angle regarding the meaning of a *regional* diversification strategy. Much of the literature equates regional strategy with expanding into the firm's home-region. However, for two thirds of the Spanish mMNEs of our study, following a regional strategy means expanding into one of their "natural markets", either Europe or Latin America. We found that by adopting a regional strategy (either home- or host-region oriented) most mMNEs are able to overcome the liability of smallness and successfully expand internationally. We also found that firm characteristics based on industry are more influential factors in the choice of the geographical diversification strategy than characteristics based on type of ownership. Regarding the M-P relationship, group affiliation has a net positive effect, that is, when comparing firms that pursue the same geographical diversification strategy, affiliated mMNEs outperform independent ones.

In summary, the dissertation contributes to the SME internationalization literature by addressing several contextual and organizational factors (industry, business group affiliation, geographical diversification strategies) which allow internationalizing SMEs and mMNEs to overcome their size constraints, adopt higher commitment entry modes, and maximize performance.

5.1 Limitations and future research

The empirical studies that make up this dissertation have inevitably some limitations which at the same time provide opportunities for further research. First, none of the three essays of the dissertation include motivations to expand internationally. Future studies may consider to focus on two distinct but complementary perspectives of internationalization: asset-exploitation and asset-seeking in two step approach (Verbeke & Brugman, 2009). However, the model of the DOI-P (or M-P) relationship needs refinement to explain dynamics of costs and benefits of expansion in both perspectives. SMEs expand internationally not only when they possess certain forms of firm-specific

advantages exploitable in host countries, but also when they intend to seek resources and skills they lack. Depending on the types of motivations, expansion strategies are to be chosen accordingly and firm performance should be measured differently for each motivation (Verbeke, Li, & Goerzen, 2009).

Second, ownership is a significant variable that needs to be taken into consideration as a driver of internationalization (Fernández & Nieto, 2006). Previous research has shown that the identity of the owners (e.g. foreign or national individuals, families, corporations, institutional investors) has important implications on firm strategy and performance (Cerrato & Piva, 2012; Fernández & Nieto, 2006; Thomsen & Pedersen, 2000). In Essays 1 and 3 we only consider independent firms and firms owned by a business group (corporate ownership). Future research could distinguish between different types of SME owners.

Third, recent studies have shown that the impact of business groups on the performance of their group affiliates, including internationalization, is not uniform across all countries (Bamiatzi, Cavusgil, Jabbour, & Sinkovics, 2014; Carney, Van Essen, Estrin, & Shapiro, 2015; Vissa, Greve, & Chen, 2010) nor over time period (Chakrabarti, Singh, & Mahmood, 2007). While the literature on the role of business groups on the performance of group affiliates in emerging markets is considerable, the issue of how group affiliation impacts the internationalization strategies of affiliated firms has been largely ignored in the context of developed countries.

Lastly, in our longitudinal study, we use panel data. However, our focus is to see how performance varies over the degree of internationalization (or multinationality), not by time variance. The impact of internationalization on performance has a temporal dimension. Liabilities and costs of internationalization are reduced through accumulated experience and learning in the host country (Lu & Beamish, 2004). Moreover, either flexibility or vulnerability of SMEs to external changes makes SMEs more sensitive and would shape the internal characteristics according to the temporal dynamics of business environment (Buckley, 1997). Therefore, the approach for searching polarized results on

contextual variables may not be enough to understand their actual impact raising research inquiry for analyzing the effect of contextual factors over time as business environments change. This temporal information would make the study of the DOI-P (or M-P) relationship more dynamic and valuable, providing clear paths of international operations taken in successive periods of time.

5.2 Managerial Implications

Our study also offers valuable insights for SME managers. They need to be aware of the risks and take a long term view when pursuing international expansion (Lu & Beamish, 2004). The decline in performance experienced in the early stages of internationalization, owing to high learning and adaptation costs, should not discourage firms. Managers should be aware of their firms' resources and capabilities to support internationalization and carefully choose geographical diversification strategies accordingly. Our results suggest that a regional geographical strategy allow most of these firms to more easily gain scale to exploit their firm-specific advantages and learn about their host markets. In this way, the performance impact of internationalization will eventually be positive.

With regard to firms with moderate to high levels of internationalization, SME managers should be keenly aware that industry characteristics, company size and managerial and organizational capacity may determine a threshold of internationalization, and that expanding beyond that point can be highly detrimental to their firm performance. Once international experience is accumulated, continued internationalization would bring positive returns in most of the cases. This positive evolution can create the illusion that international expansion could succeed continuously without developing further capabilities before entering new markets. In order not to over-internationalize, managers should not underestimate the actual costs of international expansion, especially in those cases in which the firm adopts a follow-the-customer internationalization strategy.

References to Chapter 5

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