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Business Group Affiliation and Export Propensity in New Ventures

Jonas Eduardsen[1], Svetla Marinova[1], Bozidar Vlacic[2], Miguel González-Loureiro[3]

[1] Aalborg University Business School, Aalborg University, Denmark

[2] Católica Porto Business School, Catholic University of Portugal, Portugal

[3] Department of Business Management and Marketing, University of Vigo, Spain

Abstract

The purpose of this study is to examine how business group affiliation influences the export propensity of new ventures. To help address the inconsistency of past research on the value of business group affiliation for firms seeking to expand their business abroad, we provide a contingency perspective by exploring how organizational characteristics and business group characteristics condition the value of business group affiliation. We analyze the impact of business group affiliation on the export propensity of new ventures, including the factors that condition this impact, by using a sample of 2,874 European new ventures. The primary contribution of this study is to determine the impact of business group affiliation on the export propensity of new ventures, including the moderating effects firm size on the business group affiliation-export propensity relationship. Our findings show that the export propensity of new ventures affiliated with business groups is significantly higher than for stand-alone new ventures. However, our findings demonstrate that the impact of business group affiliation on export propensity depends on the network characteristics of the business group in terms of the geographical dispersion of network ties. Consequently, our findings suggest that business group affiliation provides advantages for new venture exporting only if it provides access to international inter-firm networks thus acting as a compensatory mechanism for liability of outsidership and liability of newness in foreign markets. In such cases, business group affiliation is a major resource capital that equipoises the somewhat limited financial resource provision for new venture internationalization.

Keywords: export propensity, business group affiliation, network resources, internationalization, new ventures.

Business Group Affiliation and Export Propensity in New Ventures

New ventures (NVs) face many hurdles in their efforts to internationalize due to the joint effects of liabilities of smallness, newness and foreignness (Prashantham & Floyd, 2012). In particular, the resource scarcity of NVs poses a critical challenge in terms of internationalization, as NVs tend to possess far fewer financial and intangible resources while access to financial and human resources being limited (Knight & Kim, 2009; Sasi & Arenius, 2012). As a result, international expansion is more complex and challenging for NVs. However, despite great difficulties, several NVs seek internationalization from inception. These firms are often referred to as either international new ventures (INVs) (Oviatt & McDougall, 2004) or born globals (Knight & Cavusgil, 2004). Because of the number of burdens suffered by NVs and the increasing recognition of the growing role of NVs in the global marketplace, international business scholars have started focusing their attention on exploring why some NVs pursue internationalization (Puig, Gonzalez-Loureiro, & Ghauri, 2018).

Networks, which can be both personal and inter-firm networks, are frequently highlighted as a means for NVs to overcome relevant liabilities, as networks can facilitate both opportunity recognition, learning and resource acquisition (Sedziniauskiene, Sekliuckiene, & Zucchella, 2019; Söderqvist & Chetty, 2013). For example, networks may provide NVs access to their first foreign markets (Coviello & Munro, 1995), financial capital (Coviello & Cox, 2007), and knowledge of foreign markets, market trends and competition (Fernhaber & Li, 2013). In addition to that, networks have also been found effective in building legitimacy in foreign markets (Bangara, Freeman, & Schroder, 2012). Thus, it has been argued that INVs can overcome the slowing effects of resource scarcity, liability of newness and foreignness on firm internationalization by utilizing

networks (Sasi & Arenius, 2008). Networks are therefore considered instrumental in international growth for NVs.

A large body of literature acknowledges network relationships as an important factor in explaining the first attempts of NVs to go international, i.e. exporting. However, the impact of affiliation to business groups (BGs) – a particular type of inter-firm network where a set of legally independent firms are bound together by a constellation of formal and informal ties - on the export propensity of NVs remains veiled. Several studies have explored how BGs add value to affiliate firms, including how it affects the ability of affiliate firms to expand into foreign markets (Holmes, Hoskisson, Kim, Wan, & Holcomb, 2018; Manikandan & Ramachandran, 2015). These studies, nevertheless, have almost exclusively focused on the impact of BG affiliation on outward foreign direct investment in the context of established MNEs from developing economies, thereby overlooking its potential role in enabling other types of international activities, such as exporting, in NVs (Aguilera, Crespí-Cladera, Infantes, & Pascual-Fuster, 2019; Tajeddin & Carney, 2019; Yaprak & Karademir, 2010).

BGs, which go by many names including *keiretsu* and *chaebol,* are frequently used in both emerging and developed economies. Currently, there are more than 26,000 BGs in Western Europe (Belenzon, Berkovitz, & Rios, 2013) and typically consists of firms operating in different industries (Khanna & Yafeh, 2007). Such an inter-firm network can provide access to important resources and competencies, by facilitating sharing, combining, and complementing of firm-specific resources within the BG (Granovetter, 1995; Yaprak & Karademir, 2010). Thus, BGs can be used to build capabilities and acquire tangible and intangible scarce resources necessary for operating in international markets (Purkayastha, Manolova, & Edelman, 2018). Also, it has been speculated that NVs that belong to a BG is likely to receive reputational benefits in terms of

increased credibility (Fernhaber & McDougall, 2005). However, while some studies confirm that BG affiliation can enable internationalization by providing affiliates with internal markets and intragroup learning (Gaur, Kumar, & Singh, 2014; Purkayastha et al., 2018), other studies show that BG affiliation hurts firm internationalization (Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011; Gaur & Delios, 2015) or no impact (Cerrato & Piva, 2012; Nam, Liu, Lioliou, & Jeong, 2018). Because of these contradictory findings, it is difficult to say whether a positive or a negative effect prevails (Cerrato & Piva, 2012).

The purpose of this study is to examine the impact of BG affiliation on the export propensity of NVs, considering how the geographical diversity of the BG network and the size of the NV affects the impact of BG affiliation on NV exporting. By doing so, we contribute to the existing literature in several ways. First, we extend the current literature on implications of BG affiliation on firm internationalization by examining the impact of BG affiliation on NV exporting. While it has been speculated that BG affiliation can fuel NV internationalization, this has yet to be studied empirically. Second, we contribute to the literature by expanding existing research on BGs and internationalization to the context of developed economies, which has previously been neglected (Aguilera et al., 2019). Thus, while previous studies outlined how BGs can help emerging economy firms overcome institutional barriers, it is still unclear if firms from developed economies can also benefit from affiliation. Third, we extend the ongoing debate on the role of BGs in the internationalization of firms by exploring under what circumstances BG affiliation is likely to contribute to internationalization. This is important as more attention to potential moderating variables, such as BG characteristics, is needed to resolve the inconclusive empirical findings (Mahmood, Zhu, & Zajac, 2011; Shukla & Akbar, 2018).

The paper proceeds as follows. First, we present the theoretical foundation and the research hypotheses. Second, we introduce and discuss the research methodology employed in the study, including the data collection, measurement and data analysis. Third, we report the results of the empirical analysis before we conclude with a discussion of the main findings, as well as the managerial implications and directions for future research.

Theoretical background

Internationalization and network linkages

NV internationalization is frequently examined from a network perspective. Network theory has become one of the dominant paradigms in the theory of internationalization (Ruzzier, Hisrich, & Antoncic, 2006). A large body of literature highlights the importance of network linkages in the internationalization process, in particular for small and NVs (Coviello, 2006; Fernhaber & Li, 2013; Musteen, Francis, & Datta, 2010; Sharma & Blomstermo, 2003). In our study, we draw upon the revised Uppsala internationalization process model that incorporates business network theory to examine the impact of BG affiliation on NV internationalization (Johanson & Valne, 1977; Johanson & Vahlne, 2009).

Several studies have demonstrated that the revisited Uppsala model can be used to analyze and explain firms' internationalization behavior (Galkina & Chetty, 2015; Oehme & Bort, 2015; Santangelo & Meyer, 2011; Schweizer, Vahlne, & Johanson, 2010; Sui & Baum, 2014). The two core arguments are that (1) markets are networks of relationships where firms are linked to each other in various, complex, and invisible patterns and (2) network relationships offer the potential for learning and for building trust and commitment, which are considered important ingredients and necessary conditions for firm internationalization (Johanson & Vahlne, 2009). Thus, the

revisited Uppsala model shares the assumptions of the original model that learning and knowledge are fundamental to firm internationalization but also views internationalization as a network phenomenon. Accordingly, firms are not stand-alone units, but ones embedded within interpersonal and inter-firm networks of connected relationships (Johanson & Mattson, 1988) (Johanson and Mattson, 1988). Hence, the main argument in the revised Uppsala model is that networks and network position matter for firm internationalization as the opportunities and constraints faced by a firm in the internationalization are (at least partly) determined by the firm's access to and position in relevant international networks that act as important conduits of information and knowledge (Kontinen & Ojala, 2011; Mathews & Zander, 2007).

Several studies have found that NVs rely on their network relationships to learn about internationalization, to select their internationalization mode, to acquire information about new markets or to access resources needed to internationalize (Bembom & Schwens, 2018). For example, network linkages can provide NVs with information and knowledge relevant to their internationalization and enable them to reduce information asymmetry to overcome knowledge gaps (Ellis, 2011; Zhou, Wu, & Luo, 2007). This is important, as knowledge gaps have been identified as a key barrier to internationalization, particularly for smaller firms (Leonidou, 2004). Thus, networks can facilitate the flow of information relevant to internationalization which, in turn, can help firms "discover, create, actualize, and develop international market opportunities" (Chandra & Wilkinson, 2017, p. 692). Against this background, we suggest that networks are important for identifying opportunities and obtaining resources needed for foreign market expansion (Johanson & Vahlne, 2006).

Network linkages provide firms with access to readily available or jointly constructed knowledge that is confined to network insiders (Vahlne & Johanson, 2017). An important

implication of this is that knowledge about entrepreneurial opportunities is private to the network and shared between the parties involved (leaving aside the possibility of unwanted dissipation). Thus, relationships give partners access to an extended knowledge base" (Vahlne & Johanson, 2017, p. 1090). To gain access network benefits, the firm must first become an "insider", which can be achieved through direct and indirect interactions (Chandra & Wilkinson, 2017) and gain the trust of other network parties. Thus, as Johanson and Vahlne (Johanson & Vahlne, 2009, p. 1411) argue, "insidership in relevant network(s) is necessary for successful internationalization, and so by the same token there is a liability of outsidership." Thus, the internationalization process can be seen as a process of building "insidership" positions in relevant networks, where the company commits resources to establish, develop and maintain relationships (Yamin & Kurt, 2018).

Networks can also potentially constrain firms' ability to internationalize. Many studies have highlighted how networks can harm internationalization growth. When networks consist mainly of ties between actors in the domestic market, this may take away firms attention and effort from internationalization and have a constraining effect on internationalization (Prashantham & Birkinshaw, 2015). Thus, too much focus on home-country network ties can be counter-productive for international growth. Networks also determine the opportunity space of firms and, in some cases, networks may even keep firms from pursuing international opportunities and limit their strategic options (Mort & Weerawardena, 2006). Tie-based opportunities are also likely to be constrained in terms of both geographic and psychic distance, suggesting that some opportunities can be missed because they lie beyond the network (Ellis, 2011). Thus, networks can be considered a double-edged sword that can have both positive and negative effects for the firm's internationalization.

Network characteristics and firm internationalization

The role and impact of networks on firm internationalization are determined by the characteristics of the network. Some networks are more likely to provide firms with the knowledge, resources and skills necessary for firms to identify, develop, and exploit international opportunities (Bembom & Schwens, 2018; Chandra & Wilkinson, 2017). Two network characteristics are likely to influence the ability of networks to facilitate firm internationalization: (1) network diversity and (2) relational embeddedness (Musteen, Datta, & Butts, 2014). Network diversity is associated with the heterogeneity of network partners. In the context of firm internationalization, the geographical diversity of network partners is particularly important, as geographically diverse networks are more likely to provide foreign market knowledge and help firms identify international opportunities (Ellis, 2011; Musteen et al., 2010). Thus, networks, where firms are geographically concentrated, are less likely to provide network members with information and support needed for internationalization, while the information, experience, and support are more likely to be available in networks that are internationally diverse (Johanson & Mattson, 1988). The network structure, therefore, influences the amount and diversity of resources, which are accessible by the firm and can be exploited to increase involvement in foreign markets (Bembom & Schwens, 2018).

In contrast, relational embeddedness refers to the strength of network ties, which is based on the relationship intensity and frequency of social interaction. Thus, the geographical dispersion of network ties can enhance or constrain a firm's ability to obtain knowledge about foreign markets and opportunities therein. Relational embeddedness is also likely to contribute to differences in the impact of networks on firm internationalization. Relational embeddedness can be expected to influence the breadth of foreign market knowledge available to firms within the network (Musteen et al., 2014). Besides, relational embeddedness – and the trust that emanates from such close

network ties – motivates network members to exchange information more freely and frequently (Inkpen & Tsang, 2005). It could, therefore, influence the firm's ability to recognize, develop and exploit international opportunities. Firms can gain access to the resources of other firms within a network by building relationships and trust. Thus, networks that are characterized by a high degree of trust, such as networks with high relational embeddedness, are more likely to enable firms to acquire the resources and skills necessary for exploiting international opportunities from inside the network (Chandra & Wilkinson, 2017). Consequently, we argue that networks can be instrumental in facilitating internationalization when the networks are characterized by geographical dispersion of network ties and by trust and commitment emanating from relational embeddedness.

Hypothesis development

Business group affiliation and new venture export propensity

Whereas BGs are widespread in emerging economies such as Brazil, Chile, China, India, South Korea, Mexico, Turkey and Eastern Europe, where they help affiliated firms to cope with immature institutions and market imperfections (Khanna & Rivkin, 2001; Khanna & Yafeh, 2007), BGs also exist in more developed economies, such as Western and Southern Europe, Japan and Korea (Granovetter, 1995; Lamin, 2013). For example, Belenzon, Berkovitz, and Rios (2013) identify more than 26,000 BGs in Western European countries. Their names vary from *chaebols* in Korea, *grupos* in Spain, *Keiretsus* in Japan to *guanxiqiye* in China and Taiwan. Although there is not a single uniform definition of a BG, most scholars agree that BGs are a set of legally independent firms bound together through a constellation of enduring formal and informal ties. (Khanna & Rivkin, 2001; Purkayastha, Kumar, & Lu, 2017). They are not short-term strategic alliances as affiliated firms have a high degree of commitment and involvement. Hence, BGs are a unique

organizational form that falls between markets and hierarchies, where a set of legally independent firms pursuing mutually beneficial objectives and operating under somewhat unified entrepreneurial guidance going beyond alliances among otherwise independent firms, but falling short of constituting a fully integrated organizational structure (Cuervo-Cazurra, 2006; Guillén, 2000; Holmes et al., 2018). Hence, in BGs there is no unilateral right or ability to control other firms in the group (Smångs, 2006).

A BG can be considered as "a portfolio of heterogeneous resources" (Yiu, Bruton, & Lu, 2005, p. 186) embedded within the inter-firm network (Lavie, 2006; Yiu et al., 2005), and including knowledge, experience and information, among others (Gulati, Nohria, & Zaheer, 2000; Lamin, 2013). Firms in the BG can then tap into this portfolio of heterogeneous network resources and use them to their advantage. Thus, BGs is an inter-firm network of internationalization knowledge and network ties that firms affiliated with them can take advantage of to explore and exploit international opportunities (Elango & Pattnaik, 2007).

Scholars have recently started debating the advantages and disadvantages of BGs for firm internationalization (Holmes et al., 2018). Existing studies suggest that BG affiliation confers benefits and disadvantages for internationalization simultaneously. BGs create internal markets such as labor, trade and capital markets, which can both create and destroy value (Holmes et al., 2018). As BGs are larger than individual firms, they can absorb more risk in the internationalization process (George & Kabir, 2012) (George & Kabir, 2012). BGs can offset challenges associated with liabilities of foreignness and newness by leveraging network resources to acquire relevant knowledge about foreign markets and internationalization (Manikandan & Ramachandran, 2015; Purkayastha et al., 2017). BGs may also act as a reputation-enhancing mechanism, which may help firms affiliated with them build legitimacy in foreign markets and

therefore serve as a catalyst for affiliates as they engage in internationalization, including exporting (Khanna & Rivkin, 2001; Mukherjee, Makarius, & Stevens, 2018). The high relational embeddedness increases the motivation and willingness of member firms to share and combine resources within the network that can support exporting. Thus, we propose that:

Hypothesis 1: BG affiliation is positively associated with NVs' export propensity.

The moderating impact of business group international orientation

Previous studies provide conflicting results regarding the impact of BG affiliation on firm internationalization. While some studies suggest that BG affiliation can fuel internationalization by providing advantages such as internal markets and intragroup learning, other studies found that BG affiliation constrained firm ability to internationalize. According to Yiu, Brutton, and Lu (2005) "the value-creating potential of a business group is largely dependent on how business groups are able to acquire resources and generate capabilities necessary to prosper" (Yiu et al., 2005, p. 185). Thus, the values created will vary depending on the type of resources and capabilities that BGs can obtain. Concerning the context of this study, this means that the potential of BGs to fuel internationalization depends on their ability to acquire and provide resources and capabilities needed for internationalization. We argue that the impact of BG affiliation on firm internationalization depends on the BG network characteristics. So far, only a few studies have explored how the BG network characteristics may enable or inhibit internationalization of entire BGs (e.g. Chen & Jaw, 2014; Tan & Meyer, 2010). These studies suggest that the mechanisms through which information and resources are shared may vary based on the network types (Mahmood et al., 2011). Thus, separation of the BG network types may enhance the understanding

of the flow of resources and information within BGs and its subsequent effect on firm internationalization (Shukla & Akbar, 2018).

In this study, we suggest that the impact of BG affiliation on firm internationalization may differ depending on whether the BG is international or purely domestic. Domestic BGs are by definition bounded by the domestic market and therefore unlikely to help affiliated firms with relationship building beyond the domestic market (Prashantham & Birkinshaw, 2015). In domestic BGs, trading relationships between domestic affiliates may also reduce the incentive for affiliates to export (Hundley & Jacobson, 1998). In contrast, international BGs create a geographically diverse network, which has a greater reach and can be expected to increase the extent to which affiliates come into contact with international knowledge and help affiliates to create, identify and enact a wider set of international business opportunities (Musteen et al., 2010). This is supported by Granovetter (1995), who suggests that geographically diverse ties are likely to assist firms in connecting them to a wider set of international business opportunities. Thus, international BGs can be expected to provide affiliates with access to information about international opportunities, which are not available to domestic or geographically concentrated networks, such as domestic BGs (Musteen et al., 2010). Besides, affiliation to international BGs can also help firms overcome the liability of foreignness, due to legitimacy spillovers (Elango, 2009; Gulati, 1999). Hence, we propose that:

Hypothesis 2: The impact of BG affiliation on export propensity is stronger for NVs affiliated with international BGs compared to NVs affiliated with domestic BGs.

Impact of firm size on business group affiliation-exporting relationship

Sometimes, network ties such as inter-organizational ties are less important for internationalization (Shirokova & McDougall-Covin, 2012). While network ties in some situations can have a positive impact on firm internationalization, in other situations these effects will be insignificant or even negative (Sedziniauskiene et al., 2019). The impact of network ties, including inter-organizational ties, will have a more significant impact on internationalization when high barriers to internationalization have to be overcome (Torkkeli, Puumalainen, Saarenketo, & Kuivalainen, 2012). Network ties and the relational resources derived from these are assumed to be important for internationalization because they give access to resources that NVs need for the internationalization process. Thus, network ties can act as a means for resource-constrained NVs to overcome important barriers by providing access to external resources. In contrast, when internationalization does not involve high barriers, network ties become less important. Network therefor only foster internationalization in situations, where NVs resource scarcity creates a dependence on external resources, such as when the internationalization involves higher resource commitments.

A long withstanding argument in international business research is that smaller firms suffer from size disadvantages (Calof, 1993) and firm size is amongst the most researched antecedents of firm internationalization (Martineau & Pastoriza, 2016). Firm size is typically a proxy for the availability of resources available to the firm, where smaller firms are typically confronted with higher resource barriers due to liabilities of smallness and newness (Hessels & Parker, 2013; Kahiya, Dean, & Heyl, 2014). Thus, resource dependence increases as a direct function of firm size (Boyd, 1990). Smaller firms typically lack managerial talent with international expertise. This makes internationalization increasingly challenging for smaller firms compared to larger firms

(Kiss & Danis, 2008). Being small therefore detains some firms' from internationalizing (Mittelstaedt, Harben, & Ward, 2003).

Because smaller firms have fewer resources available for internationalization, NVs have to cope with severe resource constraints when seeking to increase their involvement in foreign markets (Dimitratos, Johnson, Slow, & Young, 2003). One way NVs can cope with the liabilities of smallness and newness is by generating relational resources through social ties and/or business relationships (Schweizer, 2013). Thus, network ties are likely to be more valuable to smaller firms, due to the higher resource barriers faced by smaller firms (Paul, Parthasarathy, & Gupta, 2017). BG affiliation can, therefore, be expected to be particularly critical for smaller firms that have a high dependency on external resources by providing firms with a means to gain the resources required to be involved in international activities. For example, BG affiliation can enable smaller firms to circumvent resource scarcity by providing access to financing, knowledge about foreign markets, and managerial talent with international expertise. BG affiliation is therefore likely to be more valuable to smaller firms, as they typically lack the resources needed for internationalization and therefore are more dependent on other means of gaining access to these resources. Hence, we propose the following hypotheses.

Hypothesis 3: The impact of BG affiliation on export propensity is negatively moderated by firm size.

Methodology

Sample and Data

To examine the impact of BG affiliation on the level of internationalization in SMEs, we used the Flash Eurobarometer survey on "Internationalisation of Small and Medium-sized Enterprises",

which contains information about 14,313 SMEs from 34 countries participating in the European Union (EU) program for the Competitiveness of Enterprises and Small and Medium-Sized Enterprises (COSME). This dataset contains information about SMEs' involvement in international business activities, including the level of internationalization as well as BG affiliation.

Data were collected by TNS Political & Social, using a structured telephone interview in June 2015. Following previous studies, SMEs were defined as firms employing less than 250 employees. Stratified random sampling was used by applying country-specific quotas on both company size (using four different ranges: 1-9 employees, 10-49 employees, and 50-249 employees) and sectors (manufacturing, services, retail, and industry). To ensure the trustworthiness of the collected data, the selected respondents had to be a general manager, a financial director, or a significant owner.

Because we are specifically interested in the impact of BG affiliation on export propensity in NVs, we excluded all established ventures from the dataset. NVs are typically defined as firms below a certain age; however, the exact cutoff age differs across studies. For this study, we follow Beckman (2006) and define NVs as firms that are less than 10 years of age. This left with a dataset of 2,874 NVs. Thus, the sample size is more than sufficient for logistic regression analysis, as the overall sample is greater than the recommended sample size of 400 while the sample size for both exporters and non-exporters is more than 150 per estimated parameter and therefore significantly higher than the required 10 observations per estimated parameter (the full model includes 8 estimated parameters) (Hair, Babin, Anderson, & Black, 2018; Hosmer, Lemeshow, Sturdivant, & Hosmer Jr., 2013).

The dataset contained some missing data, which we examined before further analysis. Closer examinations of this missing data revealed that less than 5 per cent of the respondent sample

was made up of partial respondents (i.e. 131 out of 2,874). Most of the missing data were identified in firm size (≈ 2 %) and export propensity (≈ 2 %). The majority of partial respondents only contained missing data in one variable (≈ 50 %) and only 20 cases contained missing data in three variables or more. To explore whether the data were missing at random or not, we compared the summary statistics for partial and complete respondents to explore whether any notable differences existed between the two groups. This comparison showed a large agreement between the two groups in terms of means and variance, suggesting that the partial and complete respondents did not differ notably across the two groups in terms of the main dependent and independent variables.

Due to the limited amount of missing data, and a limited indication that data are not missing at random, we restrained from using maximum likelihood or multiple imputation approaches and instead used pairwise deletion to handle missing data (Newman, 2014).

Measures and variables

The main dependent variable in this study is the export propensity, which refers to whether or not a firm exports to foreign markets (Serra, Pointon, & Abdou, 2012). Following previous studies, we coded export propensity as a binary variable equal to one, if the firm derives part of their sales revenues from exports (Krammer, Strange, & Lashitew, 2018; Nam et al., 2018). In line with Orser, Spence, Riding and Carrington (2010), we also included an alternative and more conservative measure of export propensity, where export propensity is measured as a binary variable indicating whether or not a firm derives more than 25 per cent of their sales revenues from exports.

Our main independent variable is *BG affiliation*. Following Iona, Leonida and Navarra (2013) we measure BG affiliation through a dummy variable that takes a value of '1' if the firm is part of a BG and '0' if otherwise. Thus, we distinguish between firms affiliated with a BG and

those that are not. However, because we are interested in how the geographical diversity of the BG network affects export propensity, we also measured BG affiliation as a categorical variable consisting of three groups: non-affiliation, affiliation to domestic BG, and affiliation to international BG. Our moderator variable, firm size, was measured as the logarithm of the total number of employees (Majocchi, Bacchiocchi, & Mayrhofer, 2005).

To rule out alternative explanations, we also included some control variables that have previously been found to influence both export intensity and export propensity. These include firm characteristics, such as firm age and industry affiliation. Firm age is likely to influence the export propensity of SMEs, as export activity often develops because of an SME's success in its domestic market (Johanson & Vahlne, 1977) (Johanson & Vahlne, 1977). Also, older firms are more likely to possess more resources and have a greater number of network ties which can be exploited for internationalization (Fernhaber, McDougall-Covin, & Shepherd, 2009; Zahra, Ireland, & Hitt, 2000) Consequently, to control for this, firm age was measured as the number of years since inception. To control for industry affiliation, we included four industry dummies. Industry affiliation is likely to influence internationalization strategies, as the industry affiliation partly determines the context in which firms operate affecting the process of internationalization and strategic choices of SMEs (Dasí, Iborra, & Safón, 2015; Lattemann et al, 2017; Majocchi & Strange, 2012). Thus, industry affiliation is an important context variable in understanding firm internationalization, including the decision to internationalize and the level of involvement in foreign markets (Andersson, 2004; Andersson, Evers, & Kuivalainen, 2014). Finally, we control for domestic market size, as the size of the domestic market size is likely to influence whether and when firms begin exporting (Bausch & Krist, 2007). In particular, in countries where the domestic market size is small, internationalization is likely to be a necessary growth strategy to ensure long-

term survival (Sapienza, Autio, George, & Zahra, 2006). Thus, the export propensity of NVs is likely to depend on the domestic market size (Glaum & Oesterle, 2007). We measured the economic size of the firm's home country as the logarithmic value of the average Gross Domestic Product (GDP) in Euro over a three-year period (Blake & Moschieri, 2017). This data was obtained from Eurostat.

---------- INSERT TABLE 1 AROUND HERE ----------

Findings

In the following section, we present the results of the data analysis. Table 2 presents a summary of the descriptive statistics, including the minimum, maximum, and standard deviation of all variables included in the different regressions models and their bivariate correlations.

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To examine whether collinearity was an issue, we examined both the correlations between the covariates and the variance inflation factors (VIFs). As illustrated in Table 2, the bivariate correlations were all well below the .8 cut-off point. Additionally, VIFs across all the fitted models were less than 1.38 for all except the interaction term, which is well below the suggested threshold of 10 (Mason & Perreault, 1991). Thus, there was no indication that multicollinearity was an issue.

Because export propensity, which is our dependent variable, is a binary variable we used logistic regression to test our hypotheses. We present the results of the logistic regression analyses in Table 3. To facilitate model comparisons, we included the variables in a stepwise manner (Best

& Wolf, 2014). To assess the goodness-of-fit of each model, we used three different approaches: likelihood ratio test, Akaike Information Criterion (AIC), and the Hoslem-Lemeshow classification test (Hair et al., 2018). We refrained from using pseudo R2 measures, such as Nagelkerke's R^2 or Cox and Snell's R^2, as these measure of fit suffer from the problem of taking larger fit values the more explanatory variables included in the models (Best & Wolf, 2014). Instead, we used the AIC, which is also a likelihood-based measure of goodness-of-fit (Akaike, 1974). The primary advantage of AIC is that it punishes each additional parameter and therefore also considers parsimony (Vrieze, 2012).

We first estimated a baseline model (Model 1) that only included the control variables. Results show that firm size, industry affiliation, and domestic market size all are significant predictors of export propensity. As expected both firm size (Odds ratio (OR)=1.28, $p < .001$, 95 % CI = 1.19, 1.38) and firm age (OR=1.39, $p < .01$, 95% CI = 1.13, 1.70) was found to increase the likelihood of NVs engaging in exporting. In addition, as expected, domestic market size was found to have a negative impact on export propensity (OR=0.83, $p < 0.1$, 95% CI = 0.74, 0.93). Finally, our results also show that industry is a significant predictor of export propensity, with NVs within the manufacturing industry being the most likely to be engaged in exports.

Next, we included the BG affiliation dummy variable in Model 2, which indicated whether a NV was affiliated to any BG, to estimate the direct effect of BG affiliation on NVs' export propensity. Adding the BG dummy variable improved the model estimation fit compared to our baseline model as indicated by the AIC. In addition, the Hosmer-Lemeshow test shows a smaller chi-square value that is non-significant ($\chi^2(14) = 14.04$, $p = .08$). Thus, the overall predictive accuracy is improved by including BG affiliation compared to our baseline model. The results from Model 2 show that BG affiliation significantly increased the propensity of NVs being

engaged in exports. More specifically, we found that NVs affiliated with BGs are 1.55 times more likely to be exporting compared to non-affiliated NVs (OR=1.55, $p < .001$, 96% CI = 1.25, 1.93). Hence, we can confirm hypothesis 1.

Since we are interested in how the geographical diversity of the BG network affects the export propensity of NVs, we then distinguished between whether NVs were non-affiliated, affiliated with domestic BGs, or affiliated with international BGs (Model 3). This resulted in a lower AIC, suggesting an improved model fit. However, the Hosmer-Lemeshow test shows statistical significance for Model 3, indicating that significant differences remain between the actual and expected value. The results of Model 3 confirm hypothesis 2, which suggests that the impact of BG affiliation on export propensity is stronger for NVs affiliated with international BGs compared to NVs affiliated with domestic BGs. The results of Model 3 show that NVs affiliated with international BGs are more than 2 times as likely to be exporting compared to non-affiliated NVs (OR=2.18, $p < .001$, 95% CI = 1.67, 2.84), whereas no evidence was found that NVs affiliated with domestic BGs were more likely to export compared to non-affiliated NVs (OR=.89, $p > .05$, 95% CI = 0.63, 1.25). Thus, the potential of BGs to facilitate exporting is found to be contingent upon the nature of the BG in terms of the geographical diversity of the inter-firm network ties.

Finally, to examine the impact of firm size on the BG affiliation-exporting relationship we included the interaction term between BG affiliation and firm size (Model 4). As illustrated in Table 3, Model 4 has the lowest AIC suggesting that this model is superior in terms of goodness-of-fit and predictive power. In addition, the Hosmer-Lemeshow test shows that Model 4 has the smallest chi-square value that is non-significant, also indicating a well-fitting model. Thus, Model 4 produced the best explanation of export propensity in terms of both overall model fit and overall predictive accuracy, when compared to the other models. The results of Model 4 show that the

interaction term is significant; suggesting that firm size moderates the impact of BG affiliation on export propensity. However, because the interaction between firm size and BG affiliation cannot be interpreted directly by looking at the coefficient for their interaction, we calculated the average marginal effect (AME) of BG affiliation on export propensity at various firm size to facilitate the interpretation of how firm size moderates the relationship (Hoetker, 2007). As illustrated in Figure 1, we found a positive diminishing marginal effect of BG affiliation on export propensity as firm size increases. More specifically, the AME of international BG affiliation is highest at a firm size equal to 10 full-time employees, where the probability of NV exporting increases by 21 percentage points when the NV is affiliated with international BGs. It is also important to notice that the AME even becomes negative when the firm size exceeds 150 employees, suggesting that the probability of NV exporting decreases because of international BG affiliation for NVs exceeding 150 employees. For example, for firms with 200 employees, the probability of NVs exporting is 2 percentage points lower compared to non-affiliated firms, while for NVs with 250 employees the probability is 4 percentage points lower. Thus, the beneficial effect of BG affiliation appears to decline as firms grow larger, thereby confirming hypothesis 3.

----------INSERT FIGURE 1 ABOUT HERE----------

Discussion

The literature on BGs and firm internationalization has been growing recently (Holmes et al., 2018). Our review of the literature of the impact of BG affiliation on firm internationalization showed that existing studies have provided mixed results, with some studies showing that affiliates are more likely to internationalize compared to non-affiliated firms (Singh, 2009; Singh & Gaur,

2013), while others studies find the opposite to be true (Chittoor, Sarkar, Ray, & Aulakh, 2009; Gaur & Delios, 2015; Tan & Meyer, 2010). Thus, further research was needed to understand better under what circumstances BG affiliation is more likely to contribute to higher levels of internationalization.

Our findings confirm that BG–affiliated NVs have a higher export propensity than non-affiliated NVs. This demonstrates the extent to which BG networks facilitate exporting in NVs, which are ventures characterized by resource constraints that impede the initiation, development, and sustainment of export operations. This supports previous studies suggesting that firms can utilize their affiliation to other firms in the BG to identify and exploit new market opportunities and/or to supply additional resources needed for internationalization vis-à-vis unaffiliated firms (Lamin, 2013; Singh, 2009; Singh & Gaur, 2013). Our findings, therefore, suggest that we must add BG affiliation to the list of potential antecedents explaining the internationalization of NVs and the existence of INVs.

An important finding in our study is that the impact of BG affiliation on NVs exporting is determined by the characteristics of the BG network. This highlights that BG affiliation only acts as a facilitator for internationalization under certain circumstances, suggesting that not all types of BGs are equally valuable to NVs seeking to engage in exporting. More specifically, we find that network diversity, in terms of the geographical diversity of firms affiliated with a BG, has a significant impact on the effect of BG affiliation on firm internationalization. We provide empirical support for previous claims that the more international a BG is, the more information is accessible about foreign markets, thereby increasing the internationalization chances of affiliated firms (Lamin, 2013), which is consistent with the argumentation mentioned above. Furthermore, we find that affiliation to domestic BGs does not have any positive impact on the export propensity of NVs.

This suggests that the benefits of BGs for exporting disappears when the BG is purely domestic. Thus, our findings agree with previous studies suggesting that the heterogeneity of network partners in terms of geographical location are important in explaining the usefulness of potential network resources (Ellis, 2011; Musteen et al., 2010).

There are different reasons for why the geographical diversity of firms affiliated with a BG has an impact on the consequences of being affiliated with a BG for firms seeking to expand their business abroad. First, the network structure influences the amount and diversity of resources from which NVs can benefit (Bembom & Schwens, 2018). In our study, we argue that international BGs are more likely to provide NVs with access to the relevant foreign market knowledge and thereby help firms identify international opportunities (Ellis, 2011; Musteen et al., 2010). This, in turn, enables BG-affiliated firms to more easily surpass important internationalization barriers related to the limitation of resources (Añón Higón & Driffield, 2011). In addition, prior studies have suggested that home-country ties may take away attention and effort from international opportunities and thereby suppress international growth (Prashantham & Birkinshaw, 2015). Thus, in a BG context, this suggests that being affiliated with a domestic BG may have a significant impact on managerial attention and make them less attentive to identifying and exploiting international opportunities.

Another important finding is that the impact of international BG affiliation on NV export propensity is negatively moderated by firm size, as we predicted. This was because larger NVs are more likely to be less dependent on external resources and therefore less reliant on networks to provide complementary resources. Meanwhile, the impact of BG affiliation on NV export is higher among smaller NVs. Following our argument, smaller NVs obtain a higher benefit from BG than

larger counterparts in terms of decreasing the negative impact of the limitation in resources to go international.

These findings suggest that NVs, which are characterized by resource scarcity, can overcome resource-related export barriers by affiliating with BGs, in particular those that are smaller. This is because BGs allow affiliated NVs to tap into the knowledge and connections of the inter-firm network, which enables them to acquire foreign market knowledge and financial resources and thereby they enjoy higher chances to attract customers from foreign markets than unaffiliated NVs. Our study suggests when NVs should potentially consider affiliating with and exploit relational resources embedded in BG networks. For example, NVs seeking to engage in exporting should be attentive to the network structure and geographical diversity of the BG affiliates, as this will determine both the amount and diversity of available resources from which NVs can benefit.

Our study is subject to a few limitations that can be addressed in future research. First, while the empirical analysis is conducted on a large cross-national sample of European NVs, it is also limited by the used dataset. In particular, due to data limitations, we were only able to distinguish between domestic and international BGs and empirically analyze how affiliation to these two types of BG influences the export propensity of NVs. Based on this we conclude that BG affiliation only increases the export propensity of NVs when affiliated with international BGs vis-à-vis domestic BGs. However, it is possible that domestic ties may have a positive impact on international growth and competitiveness of NVs in certain circumstances (Prashantham & Birkinshaw, 2015). For example, domestic ties may be able to enable firm internationalization when firms in the domestic network have accumulated considerable international experience. In such cases, domestic ties can act as substitutes for the lack of international experience and become

a source of learning for firms seeking to expand their business abroad (Milanov & Fernhaber, 2014). However, due to the nature of the available data, we were not able to explore this in greater detail. Thus, our study only provides partial answers to the question of why some BGs are more likely to facilitate the internationalization of member firms. We, therefore, encourage future research to continue exploring how BG network characteristics, including the international experience of the firms affiliated with the BG, influence affiliated firms' ability to identify and exploit opportunities in foreign markets. Such studies can increase our understanding of whether domestic BGs are more likely to contribute to higher levels of internationalization under certain circumstances. They should also include the question of internationalization earliness, which were not included in the dataset used in this study. It is quite likely that early entries in international markets can be partially explained by the BG affiliation and the market orientation of its network.

Besides, our study only explores the direct effect of BG affiliation – whether being affiliated with a domestic or international BG – on the propensity to export without paying attention to the ability of firms to identify and exploit potential network resources. Not all firms may be equally good at identifying and exploiting the network resources created in BGs. The ability of firms to exploit the opportunities afforded by network ties to internationalize is likely to depend on the competencies of firms (Torkkeli et al., 2012). For example, network learning may be critical for affiliated firms' ability to realize the potential benefits of BG affiliation in facilitating international expansion (Prashantham & Dhanaraj, 2010). Thus, while BG affiliation can play a crucial role in the formation of network resources, which can facilitate internationalization of affiliated firms, this will materialize only when firms possess the necessary resources to identify and exploit network resources. Thus, future research should explore the role of network competencies in identifying and exploiting network resources for internationalization. We believe

that the ability of BG affiliation to facilitate internationalization largely depends on the individual firm's network competence. For example, any networking activity should be complemented by entrepreneurial opportunity-seeking and opportunity-development behavior to facilitate SME internationalization (Mort & Weerawardena, 2006).

Conclusion

The literature on BGs and firm internationalization has been growing recently, with existing studies providing mixed resulted regarding the impact of BG affiliation on firm internationalization (Aguilera et al., 2019; Holmes et al., 2018). Our study contributes to the extant literature by examining the impact of BG affiliation on export propensity in NVs, including under what circumstances BG affiliation is likely to increase export propensity in such ventures. Our study shows that NVs that are affiliated with BGs are more likely to be involved in exporting compared to non-affiliated NVs. However, when distinguishing between different types of BGs, we found that BG affiliation only increases the likelihood of exporting when NVs are affiliated with international BGs, whereas no significant differences are found between NVs affiliated with domestic BGs and non-affiliated NVs. Furthermore, we have shown that the positive impact of being affiliated with international BGs decrease with firm size, i.e. the impact of BG-affiliation on export propensity is negatively moderated by firm size.

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Tables and Figures

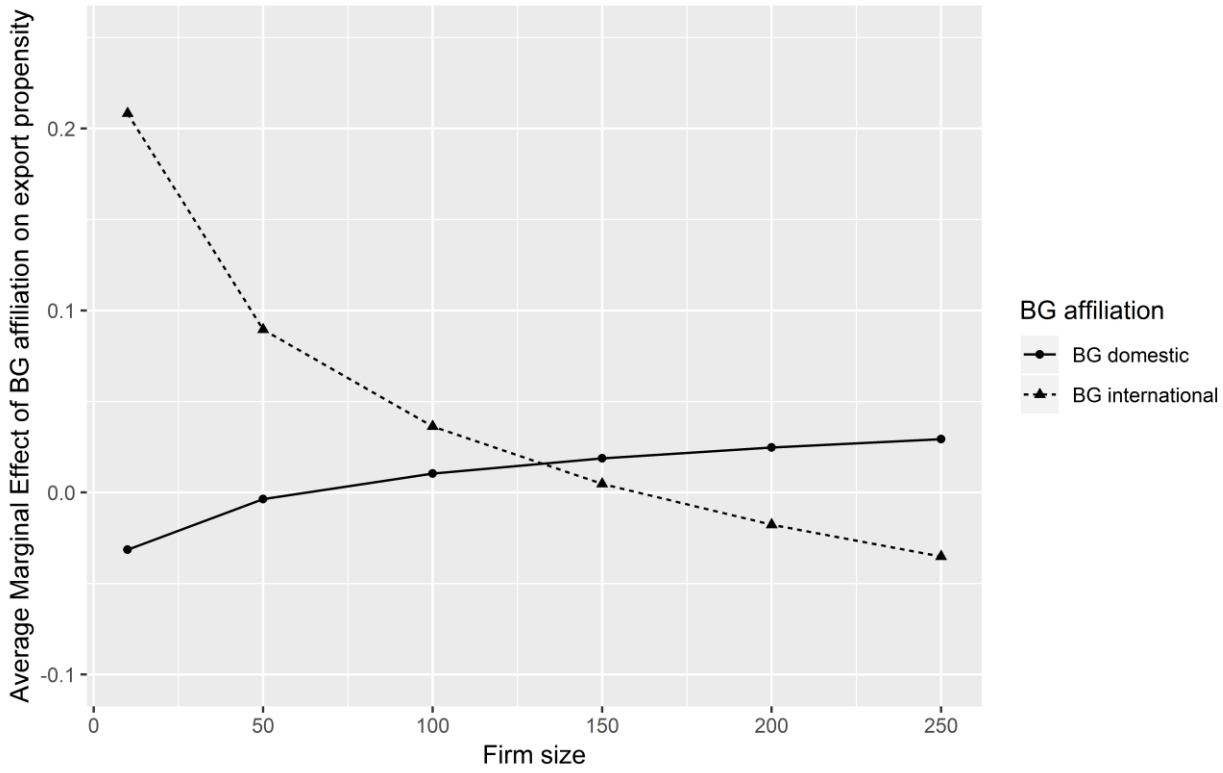

Figure 1 Average Marginal Effect of business group affiliation at various firm sizes.

Table 1 Variables included in the analysis.

Variable	Description
Dependent variables:	
Export propensity	Dummy variable taking the value of 1 if the SME derives part of their sales revenue from exports
Export propensity (2)	Dummy variable taking the value of 1 if the SME derives more than 25 per cent of sales revenue from exports
Independent variables:	
Business group affiliation	Dummy variable=1 if firm is affiliated with business group and 0 if no affiliation
Business group affiliation (2)	Categorical variable consisting of three groups: (1) non-affiliation, (2) affiliation to domestic business group, and (3) affiliation to international business group
Moderating variables:	
Firm size	Logarithm of the number of full-time employees
Control variables:	
Firm age	Logarithm of the number of years since firm was established
Manufacturing	Dummy variable=1 if firm is in the manufacturing industry
Retail	Dummy variable=1 if firm is in the retail industry
Service	Dummy variable=1 if firm is in the service industry
Industry	Dummy variable=1 if firm is in the industrial industry

Table 2 Correlations.

	Mean	SD	Min.	Max.	1	2	3	4	5	6	7	8	9	10
1. Export propensity	0.33	0.47	0	1	1									
2. Firm size	2.27	1.15	0	5.52	0.11***	1								
3. Firm age	1.72	0.44	0	2.2	0.07***	0.08***	1							
4. Manufacturing	0.15	0.36	0	1	0.19***	0.11***	-0.02	1						
5. Service	0.33	0.47	0	1	-0.14***	0.07***	-0.01	-0.30***	1					
6. Retail	0.3	0.46	0	1	0.11***	-0.16***	0.01	-0.28***	-0.46***	1				
7. Domestic market size	5.15	0.72	3.53	6.45	-0.07***	-0.03	-0.10***	-0.01	0.12***	-0.05*	1			
8. BG affiliation	0.18	0.38	0	1	0.10***	0.20***	0.00	0.01	0.04*	0.03	0.02	1		
9. DBG (domestic business group) affiliation	0.07	0.26	0	1	-0.02	0.11***	-0.04*	-0.02	0.05*	-0.01	0.05**	0.59***	1	
10. IBG (international business group) affiliation	0.11	0.31	0	1	0.15***	0.16***	0.04*	0.03	0.02	0.04*	-0.02	0.74***	-0.10***	1

Table 3 Results from logistic regression (Baseline = independent SMEs).

	Model 1	Model 2	Model 3	Model 4
Firm size	1.28 ***	1.24 ***	1.24 ***	1.28 ***
	(1.19, 1.38)	(1.15, 1.34)	(1.14, 1.34)	(1.18, 1.40)
Firm age	1.39 **	1.41 ***	1.38 **	1.35 **
	(1.13, 1.70)	(1.15, 1.73)	(1.12, 1.69)	(1.10, 1.66)
Retail	0.64 ***	0.62 ***	0.62 ***	0.61 ***
	(0.50, 0.81)	(0.48, 0.79)	(0.48, 0.79)	(0.48, 0.78)
Services	0.26 ***	0.25 ***	0.25 ***	0.25 ***
	(0.20, 0.33)	(0.19, 0.32)	(0.20, 0.33)	(0.19, 0.32)
Industry	0.21 ***	0.21 ***	0.22 ***	0.22 ***
	(0.16, 0.28)	(0.16, 0.28)	(0.17, 0.29)	(0.16, 0.29)
Domestic market size	0.83 **	0.83 **	0.84 **	0.84 **
	(0.74, 0.93)	(0.73, 0.93)	(0.74, 0.94)	(0.74, 0.94)
BG affiliation		1.55 ***		
		(1.25, 1.93)		
BG domestic			0.89	0.64
			(0.63, 1.25)	(0.26, 1.60)
BG international			2.18 ***	5.65 ***
			(1.67, 2.84)	(2.83, 11.30)
Firm size * BG domestic				1.11
				(0.83, 1.49)
Firm size * BG international				0.71 **
				(0.57, 0.89)
N	2754	2743	2743	2743
-2 Log Likelihood (-2LL)	3,218.20***	3,202.62***	3,183.06***	3,173.58**
AIC	3246.16	3218.62	3201.06	3195.58
Hosmer-Lemeshow χ^2	21.265**	14.044	18.047*	11.254

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.