

**International Entrepreneurial Orientation and Performance:
The Moderating role of Inter-firm Alliances**

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Abstract: Why important? *This study examines the moderating influence of inter-firm alliances with non-competitors and competitors on the international performance of entrepreneurial SMEs. Based on a sample of 166 British and US based companies our results indicate that a firm's international entrepreneurial orientation has a significant influence on international performance. Our study also shows that inter-firm alliances with non-competitors increase a company's performance, while inter-firm alliances with competitors impacts a firm's performance negatively.*

Keywords: SME; International Entrepreneurial Orientation; Strategic alliances with non-competitors; Strategic alliances with Competitors

Expanding business operations to international markets can contribute to the performance of small and medium sized entrepreneurial firms (SMEs), yet there is great variability in its impact (Lu and Beamish 2001). Recently researchers have tried to explain this variation by focusing on two factors which play a central role in influencing the international performance of SMEs; entrepreneurial orientation (Wiklund and Shepherd, 2005; Zahra and Garvis, 2000) and strategic alliances (Lee, 2007; Cegarra-Navarro, 2005). Entrepreneurial orientation (EO) is a firm's propensity to be innovative, a tendency to utilize novel behaviors; act proactively, an ability to anticipate and act on future changes in the external environment; and take risks, the willingness to undertake investments with uncertain outcomes (Covin and Slevin, 1989; Lumpkin and Dess, 1996). SMEs that possess a high level of entrepreneurial orientation have the ability to recognize opportunities in international markets and to create the processes, asset base, and strategies needed to take advantage of these opportunities resulting in more successful international operations (Covin, Green and Slevin, 2006; Jantunen et al., 2005; Marino et al., 2002).

Participation in strategic alliances also helps explain international success (Lu and Beamish 2001; Cegarra-Navarro, 2005; Chen and Huang, 2004). Strategic alliances are cooperative agreements between two or more companies to share some of their resources (Lu and Beamish, 2001). SMEs face many obstacles in successfully establishing themselves abroad (Zhou et al., 2007); resources provided by alliance partners may act as the source of new knowledge that companies can use in order to develop their international organizational capabilities (Slotte-Kock and Coviello, 2009; Cegarra-Navarro, 2005; Dess et al., 2003). Overall, previous research has suggested that strategic alliances provide SMEs with the skills to

overcome the liabilities of smallness and foreignness and successfully compete in foreign markets (Coviello, 2006).

Although research in these two areas has provided valuable insights about SME international performance, we could identify no studies that look at how entrepreneurial orientation and strategic alliance participation jointly influence international performance. This is important because a number of studies have found a strong relation between entrepreneurial orientation and strategic alliances (Marino et al., 2003; Dickson, Weaver, and Mark, 1997) but have not looked at how these two factors relate to international performance. Furthermore, past research tends to concentrate on firm alliances with non-competing partners (Luo and Hassan, 2009; Lin et al., 2009; Zhou et al., 2007) and has ignored the compound relationships that a company might establish with firms that are direct competitors or potential competitors (Ross and Robertson, 2007). Because of the importance of strategic alliances with competing firms (Bengtsson and Kock, 2000), this type of alliance may have a significant influence on firm international performance.

Therefore in this study we build on the entrepreneurship and strategic alliance literatures to examine the relation between entrepreneurial orientation, strategic alliances, and international performance of SMEs. More specifically we theorize that for SMEs the relation between entrepreneurial orientation and international performance is moderated by their participation in strategic alliances with both competing and non-competing firms. We suggest that participation in alliances with non-competitors results in improved international performance because it provides the firm with the necessary skills, resources, and knowledge to effectively execute an international expansion strategy (Zhou et al., 2007, Coviello, 2006). But participation in alliances with competitors adversely impacts international performance because the potential

benefits from the increase in skills and resources generated by the alliance may be offset by the costs associated with monitoring the behavior of competing partners who may possess contrary interests and act opportunistically (Luo, Rindfleisch, and Tse, 2007; Rindfleisch and Moorman, 2003).

We test these ideas on a sample of manufacturing and service sector SMEs based in the United States and United Kingdom. Our results provide support for the moderating influence of alliance participation on the entrepreneurial orientation – international performance relation and on the differentiating impact of alliances with competitors and non-competitors. Hence our study adds to the international entrepreneurship literature by providing a better understanding of how entrepreneurial orientation and alliance participation influences the international performance of SMEs.

Theory and Hypotheses

SME international performance has been a concern of researchers for many decades (Souza, 2004; Zou and Stan, 1998; Cavusgil and Zou, 1994). Over the years scholars have looked at the impact of a variety of factors that may influence the international performance of a company. Early research examined such factors as managerial and firm characteristics (Aaby and Slater, 1989; Nakos, Brouthers, and Brouthers, 1998); the adaptation of international marketing strategy components (Albaum and Tse, 2001); the influence of organizational structure (Beamish et al., 1999); and the influence that external moderating factors like competitive intensity and technological turbulence have on export-market oriented behavior and international performance (Cadogan, Diamantopoulos, and Siguaw, 2002). Despite these

multidirectional research efforts no definite conclusions have been reached on what makes an SME successful abroad (Zou and Stan, 1998).

More recently researchers have suggested that EO and a company's cooperative relations with other firms may be crucial factors that impact international performance (Ireland et al., 2009; Zhou et al., 2007). By employing an entrepreneurial strategy, companies are introducing new products, diversifying their activities and learning how to thrive in an uncertain domestic or international environment (Dess et al., 2003). However, due to SME resource constraints an entrepreneurial strategy by itself may not be sufficient to substantially increase international performance (Jantunen et al., 2005). A shortage of skills, knowledge, and capabilities may curtail the ability of even the most entrepreneurial company to succeed abroad (Coviello, 2006). Therefore, other factors have to be present to allow companies with EO to maximize their international performance. We suggest that one of these "other factors" that may moderate the EO – international performance relationship is the extent of strategic alliance participation a firm undertakes. These external cooperative agreements can provide SMEs with resources they lack and allow it to compensate for the liabilities associated with small size (Zhou et al., 2007; Coviello and Cox, 2006). Research suggests that SMEs that are not successful in developing external strategic alliances will not possess sufficient organizational capabilities to effectively compete in new markets, adversely impacting international performance (Slotte-Kock and Coviello, 2009; Lee, 2007; Cegarra-Navarro, 2005).

Researchers have examined the relation between EO and alliance participation. However, most of these studies focus their attention on how alliances may impact the entrepreneurial process, thus examining alliances as an independent variable (Hoang and Antoncic, 2003) or they focus on how the entrepreneurial process impacts alliance development;

placing alliances as a dependent variable (Marino et al., 2002). While, these lines of inquiry have been fruitful and have expanded our knowledge of alliances and entrepreneurship, these studies do not explore how participation in alliances interacts with EO to provide an entrepreneurial company with the necessary skills and resources to enhance its international operations.

Below we attempt to rectify this situation, building on the recommendations of Wilklund and Shepherd (2003) to uncover moderators of firm-level entrepreneurial behavior. We theorize and test the notion that alliance participation moderates the relation between EO and international performance. We explore two types of alliances; those with competitors and those with non-competitors. Our theory suggests that competitor-based alliances restrict international performance while alliances with non-competitors are international performance enhancing.

Entrepreneurial Orientation and Performance

The entrepreneurial orientation model was first proposed by Covin and Slevin (1991) based on earlier pioneering work by Miller (1983). These authors opined that for entrepreneurial activities such as new product introduction or new entry into foreign markets to occur, an organization-wide phenomenon of entrepreneurial orientation has to precede it. Thus entrepreneurial orientation operates as an antecedent for all subsequent entrepreneurial activities of a firm. For entrepreneurial orientation to occur in a company, three factors have to be present, willingness to take risks, innovative behavior, and proactiveness (Covin, Green and Slevin, 2006; Jantunen et al., 2005; Covin and Slevin, 1991).

A company that behaves innovatively will be very likely to undertake experimental ventures, explore new ideas, and search for new ways to solve old problems. Proactive

companies try to predict future trends and the needs that their customers will have in the future (Jantunen et al., 2005). They try to find new technologies that will provide them with a competitive advantage in the marketplace. Lastly, risk-taking firms are willing to invest in ventures that have highly uncertain outcomes (Ruokonen and Saarenketo, 2009; Wiklund and Shepherd, 2005; Zahra and Garvis, 2000).

Several studies in recent years have examined the association between an entrepreneurial orientation and its influence on performance (Jantunen et al., 2005, Wiklund and Shepherd, 2005; Zahra and Garvis, 2000; Covin and Slevin, 1991, Coviello and Jones, 2004). Although research findings have not been unanimous (Frishammar and Anderson, 2009; Lee et al., 2001; Slater and Narver, 2000), most researchers discovered that firms possessing a high entrepreneurial orientation will perform better in international markets. Yet diversity in the findings of studies examining the performance of entrepreneurial companies is not unexpected since one has to consider that by definition entrepreneurial companies undertake risky ventures that may produce negative results.

As Zahra and George (2002, p. 261) suggest an entrepreneurial orientation is necessary for international success because it aids a firm in “the process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in pursuit of competitive advantage”. Therefore a company that is highly entrepreneurially oriented will have the ability to discover and exploit opportunities that appear in foreign markets. The pursuit of these opportunities, in contrast to companies that do not possess high entrepreneurial orientation, will on average lead the firm to higher international performance. Our first hypothesis therefore states that:

Hypothesis 1: SME entrepreneurial orientation is positively related to international performance.

Strategic Alliances and Performance

Strategic alliances have been identified by previous research as playing a very important role in increasing the organizational skills and resources of a company (Lu and Beamish 2001). Alliances tend to provide “a forum for observation, experimentation, and demonstration, joint problem-solving arrangements [which] provide managers with valuable external learning opportunities to draw on during capability acquisition” (McEvily and Marcus, 2005, p. 1034). In recent studies, for example, linkages have been shown to exist between top management alliances of Chinese companies and new knowledge creation within these companies (Luo and Hassan, 2009) and the merger and acquisition decisions of companies are greatly influenced by their alliances and the organizational learning that has been created through these alliance activities (Lin et al., 2009). Overall, it appears that alliances provide companies with an opportunity to accumulate required skills that will allow them to execute an appropriate strategy.

Internationalization research examining the behavior of SMEs has looked at the role that alliances play in assisting a firm with its international expansion efforts (Chetty and Agndal, 2007). This research suggests that alliances are a resource that provides SMEs with the ability to gradually expand their operations abroad (Ulubasoglu, Akdis, and Kok, 2009). Alliances allow SMEs to utilize resources provided by partner companies and expand abroad despite their lack of sufficient resources (Chetty and Cambell-Hunt, 2003). A firm’s ability to utilize alliance resources has been characterized as social capital and it plays an important role in the initial international expansion of a firm, in the selection of appropriate international markets and in deciding on the mode or channel of foreign operation (Chetty and Agndal, 2007; Zhou et al.,

2007). Because of this SMEs tend to rely more on alliances, in comparison to larger companies, in order to gain economies of scale and scope (Gomes-Caceres, 1997).

However, most of the studies that have examined alliances have concentrated on relationships with non-competitors, ignoring the complex partnerships that firms create with competing companies (Ross and Robertson, 2007). The few research inquiries which have examined alliances with competitors have provided us with more intricate evidence (Luo, Rindfleisch, and Tse, 2007; Rindfleisch and Moorman, 2003). Therefore, because companies can undertake alliances with both competitors and non-competitors alike, strategic alliance links need to be examined in these two broad areas.

Alliances with non-Competitors

Entrepreneurship research argues that the entrepreneurial process is only possible because companies and individual entrepreneurs operate within a specific social context and take advantage of the opportunities provided by the environment (Aldrich, 1999). Expansion to foreign markets presents the firm with new social contexts (Autio et al., 2000). Strategic alliances with non-competitors provide entrepreneurial SMEs the skills and resources necessary to successfully operate in these new international markets. Strategic alliances with non-competitors offer entrepreneurial firms a multitude of benefits, from risk and cost sharing to the combination of complementary assets, to gaining knowledge that resides within other organizations (Marino et al., 2002). Moreover, it appears that the flow of information and knowledge between alliance partners influences the decision-making and managerial structure of entrepreneurial SMEs and results in improved performance (George et al., 2001).

Of course strategic alliances do not always result in positive outcomes. As Woolcock and Narayan (2000) state, the development of social relationships does not only have positive aspects for a company, but it may also have negative consequences. For example, a company may gain from the development of alliances because it can take advantage of external resources and knowledge of the market, but it may also spend precious time and resources in developing and monitoring these external links that may cause it to divert its attention from its core business. Luo and Hassan (2009) observed that Chinese companies which promoted excessive networking and alliances of their top managers with outsiders, experienced diminishing returns. Despite some evidence that alliance links with non-competitors do not always benefit a company, most studies agree that alliance building has beneficial results for an entrepreneurial firm (Slotte-Kock and Coviello, 2009).

An entrepreneurial company can take advantage of the skills and resources provided by non-competitor alliances to enhance its international performance. Dollinger and Golden (1992) found SMEs that used cooperative agreements were able to increase performance and protect themselves against environmental uncertainty. Strategic alliances tend to improve the possibility that entrepreneurial new ventures will succeed abroad because they provide an SME with such skills as technical capacities and structure needed to thrive (Lee, 2007). In summary, an entrepreneurial orientation provides an SME with the drive to take risks and expand abroad. Inter-firm alliances with non-competitors provide it with the skills and resources that it lacks to be apply these entrepreneurial strategies and be successful internationally (Zhou et al., 2007; Suarez-Villa, 1998). Thus, we suggest that:

Hypothesis 2: Participation in a greater number of alliances with non-competitors enhances the application of SME entrepreneurial orientation resulting in improved international performance.

Alliances with Competitors

In addition to alliances with non-competitors, SMEs may decide to establish links with competing firms in foreign markets. These firms may originate in the home country of the focal company, in another nation, or could be local (target country) competitors. An SME will decide to form an alliance with a competitor because it perceives certain benefits from that relationship. In addition, the business world has become so complex that a company can be a customer, supplier, competitor, and partner with another firm all at the same time (Ross and Robertson, 2007). As a result a company may have an alliance with a potential competitor either willingly or because it does not have another choice.

A firm will engage in an alliance with a competitor to reap such benefits as enhanced learning, reduced costs, and shared resources (Ritala, Hallikas, and Sissonen, 2008; Luo, Rindfleisch, and Tse, 2007). Since competitors have knowledge of the same industry, these alliances hold the promise of providing more specific relevant knowledge compared to alliances with non-competitors. Further this overlap with competitors means that knowledge can be more easily transferred and absorbed since the firms may share a common business/technical language, understanding of the business context and access to industry specific resources. For example, a small beer company may decide to enter a foreign market by forming an alliance with another beer company that already possesses an extensive distribution network in that market. By forming this strategic alliance, it does not have to incur the considerable cost of establishing its own proprietary distribution network. Yet alliances with competitors may not always be beneficial for SMEs because of issues arising from partner opportunism and lack of monitoring skills originating in the liability of small size unique to SMEs (Ritala, Hallikas, and Sissonen, 2008). Previous research has tended to overlook the negative implications of cooperation with

competitors largely ignoring the potential downside of forming alliances with rival firms (Luo, Rindfleisch, and Tse, 2007; Rindfleisch and Moorman, 2003). While it is possible that an entrepreneurial company can increase its knowledge and resources by forming an alliance with a competitor, these benefits may be outweighed by partner opportunism and the costs of monitoring the actions of rivals (Rindfleisch and Moorman, 2003).

SMEs may not have the resources and the ability to closely monitor these relationships with competitors and can find the extra costs of such actions prohibitive (Ross and Robertson, 2007). Because of this reliance on competitors may produce a loss of company technological skills, marketing abilities, and may curtail its abilities to stay close to its customers (Luo et al., 2007). These circumstances may result in an erosion of a firm's competitive advantage and have an overall negative influence on the performance of the company. As Ritala, Hallikas, and Sissonen (2008) found participating in strategic alliances with competitors may divert firm attention from its target market and instead of resulting in improved performance actually lead to poor or negative international performance.

In sum, we propose that although strategic alliances with competitors bring certain benefits to an SME these benefits will be outweighed by the difficulties and costs associated with protecting firm-specific resources and monitoring the potential opportunistic behavior of the partner organization. SMEs with an entrepreneurial orientation may not benefit by forming alliances with competitors, but may in fact find that international performance will decline. Thus hypothesis 3 states:

Hypothesis 3: Participation in a greater number of alliances with competitors will negatively impact a SMEs entrepreneurial orientation resulting in reduced international performance.

METHODS

To test these hypotheses we used a mail survey of internationally active SMEs originating in the United States and United Kingdom. We used samples from two different countries in order to eliminate potential national selection bias (Hayton et al., 2002). Companies in our sample operated in a number of industrial sectors from traditional food and drink industries, to services, to high technology companies.

We selected our sample from the Dun and Bradstreet database in both countries. To be included in this study firms had to meet four specific criteria. First they had to qualify as a small or medium size enterprise. International definitions of what constitutes a SME tend to vary widely. In order to increase the international generalizability of our study, we adopted the European Union definition (European Commission, 2009), that defines a SME as a company with a maximum of 250 employees. Second the firm needed to have international sales. Third, each firm had to be independently owned (not a subsidiary of a larger firm). Fourth, the firm had to be US or UK owned. Based on these criteria we identified approximately 5,000 companies in each country, out of all the companies that are tracked by Dun and Bradstreet. Due to cost considerations we limited our sample to 700 firms (350 in each country) selected randomly from those firms that met our criteria.

The target respondent for each firm was the person with the greatest knowledge about the international activities of the firm, namely the owner, CEO, or top-level manager (in international operations, marketing or sales). Potential key informants of all 700 firms were contacted by telephone to check that the firm actually met the four criteria and were willing to participate in the study. This yielded 601 positive responses (86%). The questionnaire was then mailed to the key informants of all those 601 firms. Follow-up telephone calls were made after a couple of weeks following the initial dispatch of the questionnaires to remind respondents to

participate in the study. We received fully completed questionnaires from 162 firms (69 in the US and 93 in the UK), providing a response rate of 27%. Respondents were asked to identify and complete the survey with respect to the firm's international activities in the 'best-seller' foreign country; the market in which the firm achieved the highest level of sales among its foreign locations.

Dependent Variable

In order to measure our dependent variable, international performance, we used five, seven-point Likert-type questions. Similar measures have been used in previous studies (Aulakh and Kotabe, 1997; Brouthers et al., 2009; Rauch et al., 2009). Respondents were asked to rate the export performance of their firm in the 'best' foreign country compared to their direct competitors over the last three years in the areas of (a) sales growth, (b) market share, (c) return on investment, (d) profitability, and (e) overall satisfaction with performance relative to our objectives. The seven-point scale ranged from 1 – much lower to 7 – much higher. These five items loaded on a single factor, creating our *international performance* measure (Cronbach's $\alpha = .90$).

Independent Variables

We included three independent variables in this study. The first, *entrepreneurial orientation* was composed of nine, seven-point Likert-type questions that explored the dimensions of innovativeness, proactiveness and risk-taking originally developed by Naman and Slevin (1993) and Covin and Slevin (1988). As suggested by Rauch et al. (2009) a

unidimensional construct was created for EO by adding the values of each of the nine items (Cronbach's alpha = .85).

The second independent variable, *cooperation with non-competitors*, was measured using three, seven-point Likert-type questions taken from Dollinger and Golden (1992). Respondents were asked the extent to which, in the target foreign country, their firm cooperates/participates with non-competitors in (a) joint manufacturing agreements, (b) joint research, and (c) joint advertising and marketing. The seven-point scale ranged from 1 - no activity to 7 - heavy activity. These three questions loaded on one factor (Cronbach's alpha = .76).

Our third independent variable, *cooperation with competitors*, was measured using seven, seven-point Likert-type questions taken from Dollinger and Golden (1992). Respondents were asked the extent to which they were cooperating/participating with competitors in (a) joint purchase agreements, (b) joint sales agreements, (c) joint manufacturing agreements, (d) sharing information, (e) joint research, (f) joint advertising and marketing, (g) and sharing transportation costs. The seven-point scale ranged from 1 - no activity to 7 - heavy activity. These seven questions loaded on one factor (Cronbach's alpha = .79).

Our two moderating variables were calculated by taking the centered value of *entrepreneurial orientation* and multiplying it by the centered values of *cooperation with non-competitors* and *cooperation with competitors* (Aiken and West, 1991).

Control Variables

In this study we included numerous control variables that previous research has shown to influence SME international performance (Brouthers et al., 2009). A dichotomous variable, *nationality*, was created to control for home country differences. Companies from the United

Kingdom were coded one (1) while those from the United States were coded zero (0). Two dichotomous variables also were used to control for the industrial sector of the respondent firms. *Manufacturer* takes the value of one (1) for manufacturing companies while service oriented companies were coded zero (0). *Low-tech* takes the value of one (1) for companies operating in traditional sectors like manufacturing and chemicals, while companies in high technology industries were coded zero (0).

The *international experience* that a company possessed was measured by the number of years that it had operated abroad (Cavusgil and Zou, 1994). Another control variable looked at the *number of countries* in which the company was currently selling products to measure a firm's experience in operating in multiple foreign environments (Brouthers et al., 2009). *Firm size* was measured by the total number of employees (Lu and Beamish, 2001). Finally, because international markets differ on a number of criteria, we controlled for the target market institutional environment. *Target market institutional environment* was measured using three, seven-point Likert-type questions (Cronbach's $\alpha=.72$). These questions asked respondents (1) how safe/risky the environment was in the host country, (2) what type of investment and marketing opportunities this market possesses, and (3) how controllable the target environment of that country was (Covin and Slevin, 1989; Khandwalla, 1977).

Non-response and common methods issues

Following the collection of the data, we tested for non-response bias and common methods variance. Non-response bias arises when the respondents of a study have different characteristics from the population. We tested for non-response bias in two different ways. Initially, we tested for differences in the responses that we received following the first mailing

and the responses that we got at later collection stages. The second way that we checked for non-response bias was by comparing two demographic characteristics of our respondents, number of employees and total sales, with our total population. Neither test revealed any significant difference between respondents and non-respondents.

Common methods variance may occur when both dependent and independent variables are collected from respondents at the same time. Although Rauch and colleagues (Rauch et al., 2009) noted in their meta-analysis that common methods variance does not appear to be a problem in studies of EO and performance we tested for its potential. According to Podsakoff and Organ (1986) if all the variables in a study load in one factor, or if one factor explains most of the variance, common methods variance may be a problem. We found that the variables in our study loaded on four factors and the largest factor explained only 22.1 percent of the variance, thus it appears that our data do not suffer from common methods variance.

RESULTS

Prior to testing our hypotheses we examined the correlations between our variables. Table 1 shows the mean, standard deviation, and correlation between all our main variables. Although we observed some significant correlations among the dependent, independent, and control variables, multicollinearity does not appear to be a problem; the variable inflation factors (VIF) were all below the value of 3 which Neter, Wasserman and Kutner (1983) suggest is indicative of multicollinearity problems.

Insert Table 1 about here

To test our three international performance hypotheses we used hierarchical multiple regression (Table 2). We examined five models. Model 1 included only the control variables. Model 2 included all the control variables plus the *entrepreneurial orientation* variable. Model 3 examined the moderating affect of *cooperation with non-competitors* while model 4 explored the moderating impact of *cooperation with competitors*. Our final model (model 5) included both moderating variables.

Insert Table 2 about here

The first model in Table 2 shows the influence of our control variables on international performance. The regression was significant ($p < .01$). Two of the control variables were significantly related to international performance. *Number of countries* was positively ($p < .01$) related to performance while *Low-Tech* was negatively ($p < .01$) related to performance.

Model 2 added the *entrepreneurial orientation* measure and was significant ($p < .01$). The improvement in explanatory power over the control variable only model (Model 1) was also significant ($p < .01$). Our *entrepreneurial orientation* variable was significantly associated with international performance ($p < .01$) in support of hypothesis 1; firms with greater EO tended to have higher international performance.

In models 3, 4, and 5 we examined the moderating influence of alliance participation. Model 3 was significant ($p < .01$) as was the increase in explanatory power over model 2 ($p < .01$). Our results show that the interaction between EO and *cooperation with non-competitors* was significantly ($p < .01$) associated with international performance. Model 4 was also significant ($p < .01$), but there was not a significant increase in explanatory power over model 2 ($p > .05$). This model shows that the interaction between EO and *cooperation with competitors* was not

significantly ($p > .05$) associated with international performance. Finally Model 5 was significant ($p < .01$) as was the increase in explanatory power over model 2 ($p < .01$). These results confirm the findings from Models 3 and 4. We note that *cooperation with non-competitors* significantly improves the application of EO in foreign markets while *cooperating with competitors* does not appear to have any impact on the relation between EO and international performance.

To help interpret the results obtained in Models 3, 4, and 5 we created figures to depict the two interactions. In Figure 1 we plotted the interaction between EO and cooperation with non-competitors. As the figure shows we found that more active participation in alliances with non-competitors improves the application of EO and leads to greater international performance. Hence we find support for hypothesis 2. In Figure 2 we plotted the interaction between EO and cooperation with competitors. As this figure indicates there appears to be no interaction effect; we find no support for hypothesis 3 which suggested a negative relation with international performance. It appears that participation in alliances with competitors does not moderate the relation between EO and international performance, suggesting that any benefits of participation in alliances with competitors may be offset by the costs of monitoring partner activity providing no net benefits to internationalizing entrepreneurial firms.

Insert Figures 1 and 2 about here

Robustness test

As a robustness test we recalculated the *cooperation with competitors* variable so that it included the same 3 measures as were contained in the construct *cooperation with non-competitors*, instead of using the seven item construct designed by Dollinger and Golden (1992).

As can be seen in Table 3, when we reran Models 4 and 5 using the *cooperation with competitors* construct based on only three items we noted that the relation between cooperation with competitors and international performance was negative and significant ($p < .05$) although the interaction with EO was still not significantly associated with international performance. Hence while this revised construct provides some support for our contention that cooperating with competitors may negatively influence international performance, it does not provide support for hypothesis 3.

Insert Table 3 about here

DISCUSSION, LIMITATIONS AND CONCLUSION

In this study we look at the association between EO and international performance for small and medium sized firms. Building on previous scholarship that suggests researchers examine moderators (e.g. Rauch et al, 2009), we theoretically and empirically explored the notion that participation in alliances with non-competitors and competitors would have a moderating influence on the EO-international performance relation. Our theory suggested that alliances with non-competitors provide EO firms with additional resources and knowledge needed to be successful in foreign markets where these firms may suffer from liabilities of smallness and foreignness. We also suggested that alliances with competitors would come at a higher price and therefore might actually lead to a decline in international performance.

Our results provide partial support for these ideas. As past studies have noted (Rauch et al., 2009) we found support for the notion that SMEs with stronger entrepreneurial orientations are more successful in foreign markets. Companies that do not possess a strong entrepreneurial

orientation will have lower international performance. Our results also indicate that international performance will be further enhanced by a company's decision to cooperate with non-competitors. SMEs often lack resources needed to be successful in international markets even SMEs with EO; alliances can provide such firms with the organizational knowledge and resources necessary to succeed (Fernhaber et al., 2009). Cooperating with non-competitors appears to aid SMEs as they expand internationally, helping these firms exploit and enhance their EO and improve international performance.

However, our analysis suggests that participation in cooperative ventures with competitors do not provide a similar positive impact on performance. We found no international performance implications of participation in alliances with competitors. This might be the case because the benefits of cooperation, seen in non-competitor alliances, may be offset by higher monitoring and control costs when dealing with competitors. Future research efforts might want to focus on this area to gain a better understanding of the contexts in which alliances with competitors may be more beneficial than the costs involved in such ventures and when such alliances may detract from firm performance.

Overall, our results indicate that entrepreneurial orientation is an important but not sufficient predictor of international performance for SMEs and that some types of alliances help firms utilize their EO more effectively adding to international performance, while other types of alliances do not seem to help at all. Hence our study contributes to the literature in several ways. First, we contribute to the entrepreneurship literature (e.g., Rauch et al., 2009) by examining an important moderator of firm behavior and performance; alliance participation. Second, we noted that there are two types of alliance partners which provide very different outcomes when looking at entrepreneurial orientation and international performance. Finally we contribute to the

international entrepreneurship literature (Slotte-Kock and Coviello, 2010; Cegarra-Navarro, 2005) by providing a better understanding of how entrepreneurial orientation and alliance participation work together to help firms expand successfully to international markets.

Limitations

This study possesses a few limitations that offer opportunities for future research. To test our theory we selected companies from two developed industrialized nations, the United States and United Kingdom. It is possible that the behavior of other companies, such as those based in smaller or developing nations may be different from those included in our study. To increase the generalizability of our results we recommend that future research replicate our study in countries possessing different political and economic environments, different entrepreneurial cultures, and more or less of an international focus by government entities.

The second limitation of our study is that although we examined two distinct classes of alliances, those with competitors and non-competitors, a more refined cut at these alliance types may provide additional insights. Future studies could focus on one category of alliances (non-competitors for example) and look for variations in their usefulness in improving EO for internationalizing firms as well as focusing of a firm's ability to improve EO through the absorption and use of the information and resources generated by the alliance.

Finally, our results are limited because we used a cross-sectional sample. Since company behavior changes overtime, it is possible that our results only represent the behavior of these companies at the time of the survey. Studies are needed to see whether our results can be replicated in different times and how these relations may change as both alliance partners gain

experience dealing with each other.

Managerial Implications

Our findings show that an entrepreneurial orientation and alliance participation are very important for internationalizing SMEs which provides important implications for managers and policy makers. Managers of internationalizing companies need to foster a strong entrepreneurial orientation and engage in alliances with non-competing companies. A strong entrepreneurial orientation will push a company to take risks and act proactively in foreign markets, while alliances with non-competing companies will provide them with the resources and knowledge required to be successful in these foreign operations.

Governmental policy makers need to work on finding potential non-competing alliance partners for domestic companies that want to expand abroad. Matching non-competitors with SMEs expanding abroad will be more effective when there is an alignment between SME resource deficiencies and alliance partner knowledge and capabilities. If government trade officials are successful in providing companies with useful foreign partners that can supplement existing operations, they could substantially increase the international success potential of domestic SMEs.

Conclusion

In this study we investigated the international expansion of entrepreneurial firms and the role that an entrepreneurial orientation and alliances with competing and non-competing companies play in influencing international performance. SMEs expanding abroad need to possess certain skills and resources that allow them to overcome the liabilities of smallness and

foreignness. One mechanism that firms can use to acquire the necessary skills and resources to compensate for their shortcomings is to participate in alliances with other companies. We found that alliances with non-competing companies combined with a high entrepreneurial orientation improve a company's international performance. However, alliances with competing companies do not appear to have a significant influence on performance. Thus our study contributes to the literature by providing an understanding of one critical factor that SMEs can use to foster more success internationally, assuming they already have a strong entrepreneurial orientation. In addition, by exploring the separate impact of alliances with competitors and those with non-competitors, we create a better appreciation of the type of alliances that SMEs should be trying to establish in order to be more successful in their foreign operations.

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Table 1
Correlation Table

Variable	1	2	3	4	5	6	7	8	9	10	11
Mean	1.4	20.5	18	.33	.50	142	3.6	4.2	2.7	1.4	4.3
S.D.	.49	19.3	22	.47	.50	319	1.0	1.0	1.2	.55	1.6
1. Nationality	1										
2. International Experience	-.27*	1									
3. Number of Countries	-.02	.17	1								
4. Manufacturer	.11	-.23*	.06	1							
5. Low-Tech	-.42*	.28*	-.03	-.21*	1						
6. Firm Size	-.05	-.11	.13	-.05	.07	1					
7. Target Market Ins Env	.16	-.12	-.22*	-.08	-.01	-.06	1				
8. Entrepreneurial Orientation (EO)	.06	-.17	.06	.04	-.17	-.01	.03	1			
9. Cooperation with non-competitors	.41*	-.13	-.01	.08	-.21*	-.06	.23*	.04	1		
10. Cooperation with competitors	.26*	-.17	.06	.08	-.09	.06	.05	.04	.24*	1	
11. International Performance	-.13	.09	.30*	.04	-.10	-.02	-.07	.45*	.17	-.11	1

*p.<.01

Table 2
Hierarchical Regression Analysis of International Performance

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Control Variables:					
Nationality	-1.7 (.19)	-1.9 (.17)	-3.0** (.17)	-1.8 (.18)	-2.8** (.17)
International Experience	0.4 (.005)	1.2 (.005)	1.7 (.005)	0.9 (.005)	1.5 (.005)
Number of Countries	3.5** (.004)	3.5** (.003)	3.5** (.003)	2.8** (.004)	3.2** (.004)
Manufacturer	0.2 (.19)	0.5 (.17)	0.4 (.16)	0.5 (.17)	0.3 (.16)
Low-Tech	-2.6** (.19)	-2.0* (.17)	-1.6 (.16)	-1.5 (.17)	-1.5 (.16)
Firm Size	-0.1 (.001)	0.1 (.001)	-0.2 (.001)	0.4 (.001)	0.4 (.001)
Target Market Institutional Environment	0.9 (.09)	0.7 (.08)	-0.0 (.07)	0.3 (.08)	-0.1 (.07)
Independent Variables:					
Entrepreneurial Orientation (EO)		5.7** (.08)	5.5** (.07)	6.1** (.08)	5.6** (.07)
Cooperation with non-competitors			3.3** (.08)		3.6** (.08)
Cooperation with competitors				-1.4 (.13)	-1.8 (.07)
EO X Cooperation with non-competitors			2.1** (.07)		2.0* (.07)
EO X Cooperation with competitors				1.2 (.09)	0.7 (.08)
Model adjusted R square	0.10	0.29	0.35	0.29	0.36
Model F	3.1**	7.5**	8.1**	6.4**	7.1**
F change from Model 2			7.4**	1.4	4.5**

*p<.05; **p<.01 Standard errors in parenthesis

Table 3
Robustness Test
Hierarchical Regression Analysis of International Performance

Variables	Model 1	Model 2	Model 3	Revised Model 4	Revised Model 5
Control Variables:					
Nationality	-1.7 (.19)	-1.9 (.17)	-3.0** (.17)	-1.8 (.17)	-2.8** (.17)
International Experience	0.4 (.005)	1.2 (.005)	1.7 (.005)	0.9 (.005)	1.5 (.005)
Number of Countries	3.5** (.004)	3.5** (.003)	3.5** (.003)	2.8** (.004)	3.2** (.003)
Manufacturer	0.2 (.19)	0.5 (.17)	0.4 (.16)	0.5 (.17)	0.3 (.16)
Low-Tech	-2.6** (.19)	-2.0* (.17)	-1.6 (.16)	-1.5 (.17)	-1.5 (.16)
Firm Size	-0.1 (.001)	0.1 (.001)	-0.2 (.001)	0.4 (.001)	0.4 (.001)
Target Market Institutional Environment	0.9 (.09)	0.7 (.08)	-0.0 (.07)	0.3 (.08)	-0.1 (.07)
Independent Variables:					
Entrepreneurial Orientation (EO)		5.7** (.08)	5.5** (.07)	6.1** (.08)	5.6** (.07)
Cooperation with non-competitors			3.3** (.08)		3.5** (.08)
Cooperation with competitors (3 questions)				-2.1* (.08)	-2.4* (.07)
EO X Cooperation with non-competitors			2.1** (.07)		2.0* (.07)
EO X Cooperation with competitors				1.8 (.10)	1.2 (.09)
Model adjusted R square	0.10	0.29	0.35	0.31	0.38
Model F	3.1**	7.5**	8.1**	6.9**	7.7**
F change from Model 2			7.3**	2.9	3.1*

*p<.05; **p<.01 Standard errors in parenthesis

Figure 1

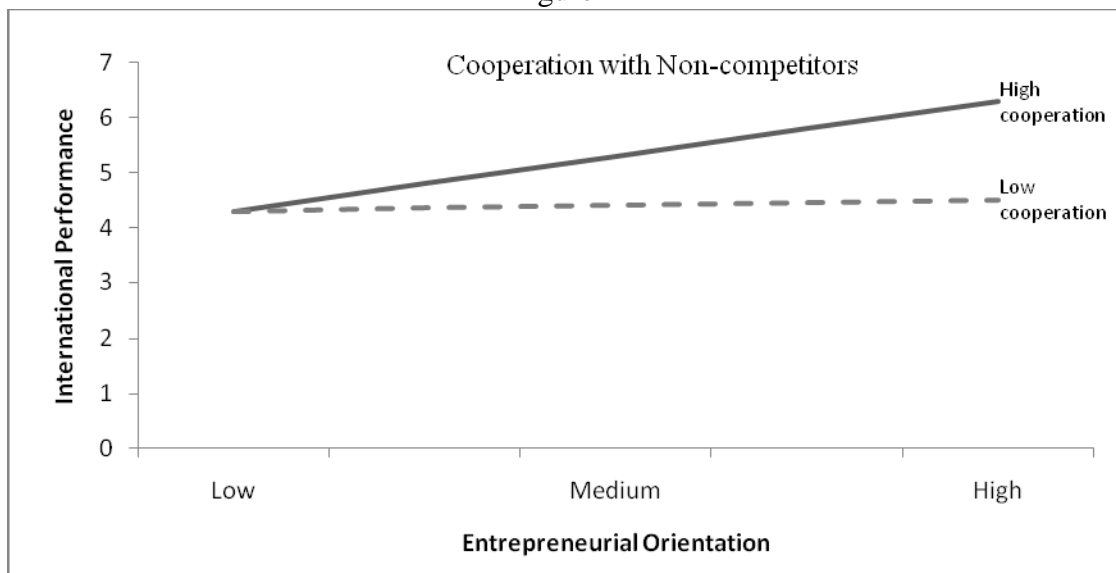


Figure 2

