

# **International New Venture Performance of Latin American Firms: The Role of Marketing Capabilities**

## **Abstract**

Few studies have examined the role of marketing capabilities as a source of competitive advantage in the international entrepreneurship field. There is not much empirical evidence in the international new ventures literature to consider the strategy interplay of marketing capabilities in approaching new markets overseas. Building upon the resource based view (RBV), we develop a model of marketing capabilities - competitive strategy - export venture performance. The sample used in this study are international new ventures from an emerging Latin American country (Mexico) which provides a unique research setting and sheds additional light on these relationships. Our findings suggest that the relationship between marketing capabilities and competitive strategy is mediated by marketing communication. Moreover, our study reveals the moderating role of technological turbulence, which strengthens the link between marketing capabilities and marketing communication. Likewise, technological turbulence strengthens the link between marketing communication and competitive strategy. The study findings have important implications for research on international entrepreneurship and new venture decision-making in Latin American markets.

## **Keywords**

Marketing capabilities; competitive strategy; marketing communication; technological turbulence; international new ventures; export venture performance.

## ***Introduction and Literature Gaps***

As one of the most dynamic regions, Latin America's transforming economies offer large-scale opportunities and challenges for international firms. With an average grow rate of 6.3% per year between 2009 and 2012, Latin America exceeded the average global growth of 5.7% for the same period ([IMF, 2014](#)). While the global economy in 2016 has been challenging with low projections of 2.4% for an overall real GDP growth average, some Latin American countries and regions still present higher growth projections boosted by robust growth on exports. Notably, Mexico and Central America will see output continue to expand at 2.7%, while the Caribbean will grow by about 2.6% ([WorldBank, 2016](#)). Regardless that Latin America is an important

world player among emerging economies, the region has been too long neglected among the international entrepreneurship (IE) literature ([Santiso, 2013](#)).

As global trading has become increasingly important, especially in high velocity industries, the central role of high tech small and medium firms taking advantage of international trading opportunities is crucial for the understanding of the antecedents of performance ([Zhou, Wu, & Barnes, 2012](#)). International new ventures (INVs) are small and medium high-tech firms that from inception seek to gain substantial competitive advantage from the use of resources and deployment of capabilities for the international sale of outputs ([Oviatt & McDougall, 1994](#)). Rennie ([1993](#)) was the first to identify and label this new breed of firms that respond to environmental changes through rapid internationalization. The study of INVs in Latin America is still incipient given the difficulty of accessing information of small and medium firms, reason why many studies about the region limit their analysis to multinational corporations ([Brenes, Montoya, & Ciravegna, 2014](#)). The present study aims to further the research agenda on INV Latin American firms which remains grossly under-represented in IE literature.

INVs are young firms vulnerable to impediments related to resource limitations. While further investigations suggest that marketing capabilities play a major part in explaining INVs' performance ([Efrat & Shoham, 2012](#); [Evers, Andersson, & Hannibal, 2012](#)), much work still remains to understand the interaction of marketing capabilities with other factors to meet the competitive demands. Marketing capabilities are created in order to gain competitive advantage ([Narver & Slater, 1990](#)). The marketing capability of a firm is characterized by its ability to develop and deliver superior value to its customers by combining its available resources ([Day, 2011](#)). Despite the support in the marketing literature for deploying marketing capabilities to increase value, little is known about how INVs, which are resource constrained, could manage to

increase marketing capabilities, which are resource intense. Hence, these gaps in the IE literature imply a lack of support for INVs' managers to decide on how to increment the level of marketing capabilities to increase performance.

These IE literature controversies are twofold. On the one hand, most marketing capabilities studies claim that superior performance is the result from acquiring and exploiting unique resources. This argument is based on the resource based view (RBV) of the firm, which for decades has had an influence on the IE dialogue by helping researchers articulate the drivers of competitive advantage ([Kaleka, 2012](#); [Peng & York, 2001](#)). However, the RBV has also been criticized in the IE literature for its emphasis on creating and sustaining capabilities regardless of ongoing changes in external market conditions ([Knight & Cavusgil, 2004](#)).

On the other hand, the highly competitive demands of INVs require them to be aware of the nature of their marketing environment to develop an adequate configuration of marketing capabilities. In the IE literature the recognition of the influence of external factors on the firms' operations and their impact on internal factors, led to calls for a broader RBV that would encompass both aspects.

In addition, with the recent advances in new media and computer technologies, now more than ever, communication is crucial to comprehend the external marketing environment, as it plays a key role in attracting and keeping customers ([Duncan & Moriarty, 1998](#); [Duncan & Mulhern, 2004](#); [Reid, 2005](#)). Still, little is known about the interplay of marketing communication with the marketing capabilities that firms need.

The analysis of external factors considers that competing abroad is not without challenges for Latin American INVs. They have to deal with many external challenges to improve their strategies and respective executions to compete in regional and global markets ([Ickis, 2000](#)). The

rate of technological change in the market is one of the challenges that INVs need to overcome, and in a higher degree for those INVs located in resource constrained emerging markets.

Technological turbulence can be viewed as a threat to firms' operations as it creates unstable environments that eventually contribute to reduce firms' performance ([Gu, Hung, & Tse, 2008](#); [Segarra & Callejon, 2002](#)). While there are claims regarding the vulnerability of INVs under unstable conditions showing that they expose the firms' weaknesses ([Autio, Sapienza, & Almeida, 2000](#)), other studies presumed that technological turbulence could present a positive impact on the performance of INVs ([Efrat & Shoham, 2012](#); [Song, Droge, Hanvanich, & Calantone, 2005](#)). Accordingly, there are gaps in the literature about how can technological turbulence positively affect INVs performance.

We suspect that these inconsistencies can be resolved, at least partially, by understanding the consolidation process that empowers the firm to add value and fulfill the demand. This consolidation process refers to the interactions of the firms' marketing capabilities acting as antecedents of performance. This analysis should include RBV components, which are internal to the firm, and the impact of external factors. Investigations about marketing capabilities have increasingly played a critical role in INV firms' survival and success in international markets ([Ripollés & Blesa, 2012](#)). However, it is interesting to observe that limited focus is given to the effect of external factors, such as technological turbulence, on INVs ([Aspelund, Madsen, & Moen, 2007](#)).

In the present study these arguments are tested by addressing the following still unanswered research question: *What is the effect of marketing capabilities on the relationships with marketing communication, competitive strategy, technological turbulence, and performance of INVs?*

This study makes three contributions to knowledge in this important field. First, this is an investigation of the interaction of marketing capabilities and marketing communication for realizing a competitive strategy to enhance export venture performance in INVs. We report on the interplay between marketing capabilities and marketing communication to demonstrate how this determines the extent of competitive marketing strategies as a pathway to understanding superior performance in the export ventures of the INVs. In doing so, we demonstrate how marketing communication affects the relation between marketing capabilities and competitive strategy, thus offering a solid extension to IE theory. This contribution ties neatly with the concern we rose previously about the implications of resource limitations in INVs.

Second, this study reports the moderation effect of an external factor. Competitive turbulence moderates on two relationships, one between marketing capabilities and marketing communication, and the second between marketing communication and competitive strategy on INVs. Our model will contribute to the required empirical grounding from which to make recommendations to managers of INVs regarding relevant resource allocation decisions. The choice to augment the levels of marketing capabilities necessitates considerable resource investments, and the managers need to be certain that their investments will profit appropriate rewards. Until now the literature offers uncertain recommendations to practitioners, merely because the performance effect of marketing capabilities on INVs have not yet received meticulous empirical attention. Specifically, there are doubts as to whether increasing levels of marketing capabilities are favorable for all INVs, under all circumstances. IE scholars have not reported if there are any conditions under which the benefits of marketing capabilities outweigh the costs, or the conditions under which the costs associated with increasing the level of

marketing capabilities outweigh the benefits obtained. Therefore, this research regarding the performance consequences of marketing capabilities on INVs is opportune.

Third, we conducted our empirical study in the context of high-technology “born regional” ([Lopez, Kundu, & Ciravegna, 2009](#)) INVs from Mexico. This is a Latin America unique setting for testing marketing capabilities as performance antecedents of INVs. In Mexico, which is considered an upper middle income country ([WorldBank, 2014](#)), the emphasis on constrained resources is higher than in developed economies ([Kaufmann & Roesch, 2012](#)), and less tight than in other emerging markets. Therefore, the results obtained speak to an important set of firms ignored in the marketing capabilities debate.

### ***Conceptual Model and Hypotheses***

Research indicates that the overwhelming majority of INV firms initiate their overseas activities via exporting means ([Knight & Cavusgil, 2004](#)), particularly when the focus of the firm is on high-technology products ([Burgel & Murray, 2000](#)). Thus, following previous studies such as Morgan and colleagues ([2004](#)), we adopt the export venture of the INV firm as the primary unit of analysis. Figure 1 presents the conceptual model of this study.

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## *Marketing Capabilities and Competitive Strategy*

Marketing capabilities, as a source of sustainable competitive advantage, have been discussed previously in the international business field ([Ripollés & Blesa, 2012](#)) and in young international ventures ([Zhou et al., 2012](#)). Marketing capabilities can be defined as integrative processes designed to apply the necessary resources the firm possesses to the market related needs of the firm, enabling the firm to add value and meet competitive demands ([Day, 1994](#)).

INVs' literature shows that INVs follow a combination competitive strategy of low cost and marketing differentiation ([Hughes, Martin, Morgan, & Robson, 2010](#)). Successful businesses are usually positioned to capitalize on an attractive value proposition emanating directly from their combination of low cost and differentiation ([Wright, 1987](#)). First, cost leadership provides customers with lower prices than competitors ([Aulakh, Kotabe, & Teengen, 2000](#)). Second, marketing differentiation develops new and distinct products ([Hill, 1988](#)). Competitive strategies are planned patterns of marketing capability deployments that support choices about how the venture will compete for target customers and achieve its desired goals ([Day, 2011](#)). The link of marketing capabilities with competitive strategy is documented in the literature. Studies like Furrer and colleagues ([2008](#)) explore the marketing capability configurations, generic strategies and firm performance. In addition, Murray and colleagues ([2011](#)) investigate the link of marketing capabilities and competitive advantages using a sample of export ventures. Marketing capabilities should ensure that the competitive strategy's decisions are aligned with the requirements of the international marketplace ([Dickson, 1992](#)). Marketing capabilities should allow international market decision makers to select the competitive strategy options that are more likely to be well received in the international market ([Morgan, Katsikeas, & Vorhies, 2012](#)). Firms with new product development capability, service capability and distribution capability

can effectively develop and manage new product, service and distribution offerings to generate a competitive advantage based on differentiation and cost leadership to meet international consumers' needs. On these bases it is possible to suggest:

*Hypothesis 1: The possession of marketing capabilities is positively related to the competitive strategy pursued by the INV firm.*

### ***Competitive Strategy and Export Venture Performance***

Increasingly INVs compete for the same resources as multinationals locally and internationally right from their very inception ([Lu & Beamish, 2001](#)). Therefore, combining and recombining resources to deploy capabilities is a dynamic, interactive process ([Eisenhardt, 1989](#)) to attain an adequate competitive strategy ([Spanos & Lioukas, 2001](#)). The ability of a firm to progress rapidly and appropriately is based on a competitive strategy that allows firms to decide which strategy can be executed to achieve superior export venture performance. The world of globalization and technological change where INVs compete requires dynamic strategic decisions to adapt continuously ([Leonidou, Palihawadana, & Theodosiou, 2011](#)). A positive relationship between competitive strategy and business performance has been widely proposed in the literature ([Kaleka, 2011](#)). Competitive strategy is linked to performance by determining the quality of strategy implementation ([Furrer et al., 2008](#)). In consequence, this study proposes:

*Hypothesis 2: The competitive strategy pursued by the INV firm is positively related to export venture performance in the international market where the INV firm competes.*



### ***Marketing Capabilities and Export Venture Performance***

The international marketing literature emphasizes that marketing capabilities play an important role in enabling effective marketing strategy implementation in export venture operations. Marketing capabilities are important sources of superior performance in export ventures ([Morgan et al., 2012](#)) and marketing capabilities affect firms performance in foreign markets ([Zou, Fang, & Zhao, 2003](#)). Marketing capabilities are the integrative process of applying the collective firm's knowledge, skills and resources to market-related needs. Marketing capabilities enables a firm to add value to its products and meet the competitive demands ([Day, 1994](#); [Vorhies & Morgan, 2005](#)), and play a pivotal role in the in the deployment of market-related resources to respond to the changing environment ([Morgan, Slotegraff, & Vorhies, 2009](#)).

The literature notes that the possession of marketing capabilities leads to superior firm performance in various business disciplines and industrial sectors. For example, a study conducted by Vorhies and Morgan ([2005](#)) on 12 end-consumer and service industries found that the development of marketing capabilities enhance customer satisfaction, market effectiveness, and profitability. In addition, Murray and colleagues ([2011](#)) found that export ventures with marketing capabilities help improve financial, strategic and product performances. Thus, the development of marketing capabilities may enhance INVs performance. Therefore, this study proposes:

*Hypothesis 3: The possession of marketing capabilities is positively related to export venture performance in the international market where the INV firm competes.*

### ***Marketing Capabilities and Marketing Communication***

Marketing capabilities include the firm's abilities in information generation and dissemination to develop proper responses for current and future needs with changing competitive dynamics ([Moorman & Slotegraff, 1999](#)). For INVs that interact in foreign markets, marketing communication enables firms to manage export customers' value perceptions. Firms with marketing communication are able to persuade customers to have a positive perception of their products, consequently building a differentiated brand image and awareness ([Murray et al., 2011](#)). Marketing communication emphasizes a two-way communication through better listening up to increasing the interactivity with the broader marketing environment ([Duncan & Moriarty, 1998](#)). In this regard, marketing communication is based on the information interchange among customers, competitors, channel members, and the broader market environment ([Day, 2011](#)).

Therefore, the marketing capabilities of INVs should have a direct link with the development of effective advertising and promotion, which is based on marketing communication skills and processes, as well as the firm should use marketing communications with dexterity. In this regard, the present investigation suggests:

*Hypothesis 4: The possession of marketing capabilities is positively related to marketing communication of the INV firm.*

### ***Marketing Communication and Competitive Strategy***

When the firm enhances the ability to gather competitor information, such as competitors' cost structures and competitive behaviors information, the firm can initiate effective cost-containment programs, which leads to low-cost advantage. This is the main brick to develop a cost leadership

strategy in the firm. A differentiation strategy requires information from competitors and the marketing environment about the degree of distinction of international products ([Zou et al., 2003](#)).

Previous research reported a significant relationship of marketing communication and competitive strategy of export ventures based on the skills to rapidly implement a response to a major competitors' actions. For example, in the case after a major competitor of an export venture were to launch an intensive campaign targeted at the venture's customers ([Murray et al., 2011](#)). The marketing communications skills and processes are indispensable to react to competitive actions by developing effective export advertising and promotion ([Morgan et al., 2004](#)). In order to have this information available to generate appropriate competitive strategies the INV firm needs the primary integrative element of marketing communication. Hence, this study proposes:

*Hypothesis 5: The possession of marketing communication is positively related to the competitive strategy in the INV firm.*

### ***Marketing Communication and Export Venture Performance***

The development of marketing communication capability is likely to be felt through better performing campaigns, which in turn result in improved firm performance ([Duncan & Mulhern, 2004](#); [Reid, 2005](#)). Given the competitive challenges facing most firms, it is vital that managers identify and react to competition and growth opportunities rapidly by building and sustaining marketing communications capabilities strategically and linking these directly to firms objectives ([O'Cass & Weerawardena, 2009](#)). Despite much conceptual work around defining marketing

communication, little research has been undertaken to illustrate its value as a capability. To address this issues, the present study is grounded in the RBV and considers marketing communication as a capability that facilitates the translation of a firms' marketing capabilities into competitive advantages ([Luxton, Reid, & Mavondo, 2015](#)).

Effective marketing communication is considered key for superior firm performance. In particular, the literature has highlighted the important role of information regarding customers, competitors, channel members, and the broader market environment in the successful development and execution of marketing strategy ([Jaworski & Kohli, 1993](#); [Jaworski, Kohli, & Sahay, 2000](#)). Information sharing among parties in the relationship and feedback facilitates information processing about the market ([Duncan & Moriarty, 1998](#)). Developments in information processing and communication technologies, accompanied by a growing trend of niche markets, have created a fertile background for INVs' appearance ([Knight & Cavusgil, 1996](#)). Marketing communication should favor a two-way communication in order to understand the information related to doing business in the market, the customers, the quality of the channel relationships in the market, and to develop knowledge of competitors in the market to achieve superior performance ([Fill, 2002](#)). In this regard, this study suggests:

*Hypothesis 6: Marketing communication enhances export venture performance where the INV firm competes.*

### *Moderating effects of Technological Turbulence*

In examining the transformation of marketing capabilities into competitive strategy, one should avoid adopting a deterministic view in evaluating the marketing capabilities-competitive strategy relationship. Without exercising caution, such a view would lead to over-generalization of the marketing capabilities benefits. Researchers have conceptualized the external environment as one of the key constructs for understanding firm behaviour and performance ([Ketchen, Hult, & Slater, 2007](#)) in that “the appropriateness of different strategies depends on the competitive settings of businesses” ([Prescott, 1986 p. 765](#)).

INVs operate in changing high-tech environments. Technological turbulence, creates frequent alterations that force firms to constantly keep up with and adapt to technological trends. Technological turbulence can be viewed as a threat to firms’ operations in that it is disruptive and creates unstable environments ([Cadogan, Cui, & Yeung, 2003](#)). Accordingly, technological turbulence contributes to a sense of uncertainty. Empirical evidence regarding the effect of uncertainty is mixed. Gu, Hung and Tse ([2008](#)) find that performance declines when technology changes rapidly using a sample of well-established Chinese firms, as well as Segarra and Callejon ([2002](#)) confirm these findings with a sample of Spanish new firms. However, Knight and Cavusgil ([2004](#)) as well as Efrat and Shoham ([2012](#)) show that technological turbulence could lead to better performance.

INVs operate in dynamic environments exploiting technological trends and changes as springboards for redefining their products and markets ([Knight & Cavusgil, 2004](#)). We propose that the impact of marketing capabilities on competitive strategy varies across different levels of technological turbulence.

A rapidly changing technological environment creates new product development opportunities that firms can use to appeal to and expand their customer bases. It also creates challenges that may propel firms to change or upgrade their products to maintain superior competitive positions ([Sheng, Zhou, & Li, 2011](#)). Firms must overcome challenges and seize opportunities by developing advanced new products, otherwise they will be squeezed out of the market ([Li & Calantone, 1998](#)). Therefore, rapidly changing technologies obligate firms to use new technologies and skills to introduce new products quickly with high quality distribution services ([Zou et al., 2003](#)), and after-sales services ([Katsikeas, Pappas, & Katsikeas, 2004](#)). This can be achieved by skilfully using marketing communications to develop adequate advertising and promotion campaigns ([Luxton et al., 2015](#)).

Hence, with these reasons we propose that with high technological turbulence, the INV will require to engage in new product development, service and distribution marketing capabilities employing marketing communications to maintain or enhance performance. With less technological turbulence, the INV firm will not need to incur in such resource-consuming activities. Based on the earlier discussion, we propose:

*Hypothesis 7: The relationship between marketing capabilities and marketing communication is moderated by technological turbulence in the INVs' environments. Specifically, the relationship diminished under conditions of low technological turbulence. As technological turbulence increase, the relationship becomes stronger.*

Marketing communication is viewed as a firm-specific capability in that its undelaying processes may be deeply embedded in organizational routines and practices ([Lin & Wu, 2014](#)). Consistent with the RBV, a capability does not imply doing something in an outstanding way. It means performing some function at some acceptable level that provides advantages ([Helfat et al., 2007](#)).

We recognize that marketing communication is heterogeneously distributed among competitors, hence its ability to provide some performance advantage. Thus, our formulation implies firms will have marketing communication capability, but some will have more than others.

The configuration of marketing communication capabilities is different and potentially unique for each firm. The development of marketing communication capabilities may be expensive for competitors. Consistent with Eisenhardt and Martin (2000) marketing communications may not be a source of sustainable competitive advantage but it is likely to provide a series of temporary advantages.

For INVs that are exposed to technological turbulence, the investment on marketing communication could help to compete with the highly speed unpredictability of technology. With high technological turbulence the INV will require to skillfully use marketing communication for effective advertising and promotion campaigns. With less technological turbulence, the INV firm will not need to incur in such resource-consuming activities. Consequently, we propose to theorize technological turbulence to moderate the relationship between marketing communication and competitive strategy.

*Hypothesis 8: The relationship between marketing communication and competitive strategy is moderated by technological turbulence in the INVs' environments. Specifically, the relationship diminished under conditions of low technological turbulence. As technological turbulence increases, the relationship becomes stronger.*

## ***Research Methodology***

Following the increased attention in Latin America to the role of INVs ([Lopez et al., 2009](#)) this study sampling frame consisted on 260 INV firms from Mexico from a total population of 1433 INVs found in the country by the lead author. High-technology manufacturing exports from Mexico have grown substantially over the past decade following an extensive program of trade liberalization ([Aulakh et al., 2000](#)). However, according to our understanding, INVs in Mexico had not been identified as such before the present study. INVs were immersed in government exporting databases firms mixed with other non-high-tech industries. So we focused on the generation of firm –and international venture– level data from high technology industries in Mexico.

Therefore, we selected and evaluated databases that contained information across high-technology industries ([Fernhaber, McDougall, & Oviatt, 2007](#)). The databases were assessed in terms of the inclusiveness of fields enabling the identification of high-technology INVs in Mexico, such as the age of the firm at exporting, the industry sector, and the firm size in terms of number of employees and sales turnover. To strengthen the generalizability of the findings and to increase observed variance a multi-industry sample was used for this study ([Autio et al., 2000](#); [Moen, 2002](#)).

Oviatt and McDougall ([1994, p. 49](#)) define an INV firm as “*a business organization that from inception seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.*” Although this definition implies that an INV is inter- national at inception, most scholars do not interpret this literally. Instead, they typically view the definition as more descriptive and examine firms that internationalize within their



first few years of existence. For example, some studies examined the internationalization of new venture firms that were up to six years old ([Shrader, 2001](#); [Zahra, Ireland, & Hitt, 2000](#)), similar to views of domestic new ventures ([Fernhaber et al., 2007](#)). Other studies identified samples of INVs that internationalized within three years of their founding ([Knight & Cavusgil, 2004](#)), and still others used firms that began exporting within two years of their founding ([Moen, 2002](#)). The current study adopts the latter definition. This is true to Oviatt and McDougall's ([1994](#)) definition of an INV, is the least ambiguous definition of an INV ([Chetty & Campbell-Hunt, 2004](#)), and is supported by Knight and Cavusgil's ([2005](#)) research, which suggests that firms internationalizing approximately two and a half years after founding perform better in foreign markets than those that internationalize later.

We followed the classification of the American Electronics Association to identify Mexican high-technology firms. Because INVs are SMEs that rely on cutting-edge technology to develop relatively new product innovations ([Knight & Cavusgil, 2004](#)), we adopted the European Commission classification of SMEs regarding firm size, which is in line with the Mexican Ministry of Economy: firms with 10–50 employees are considered small, and firms in the range of 51–249 employees are medium sized. Firms with fewer than 10 employees are micro firms and were omitted from the study; such firms tend to have part-time operations and unstable objectives that can skew study outcomes.

After drawing together multiple databases and making one of just INVs, we grouped together a target population of 1422 Mexican INVs for this study. Then each firm was checked as part of a screening process to determine the usable sampling frame. After screening for trading status, contact details, firm characteristics, and willingness to participate, we dropped 111 firms, largely because of company policies of noncooperation. This screening process led to a usable sample

frame of 1311 INVs. Concurrent to this screening process, we also pre-notified the study and obtained the identity of the key informant. The 1311 firms' representatives had expressed their willingness to participate. Then, we began a process of computer-assisted random calling of the firms in the usable sample frame to conduct telephone interviews to obtain responses for the survey. After resource exhaustion and the elapse of time, a total of 260 INVs had participated in the study. Each respondent reported on a self-identified export venture, which we defined as a single product or product line exported to a specific export market (country). The final response rate was 19.8% of the usable sample population; moreover, 260 observations are considered adequate for analysis purposes.

Telephone interviews were used to gain access to managers owing to culture, managerial predisposition, and resource constraints. Usually, in Latin contexts a personal interview is the preferred data generation method; however, given that the INVs were geographically dispersed, the resource challenges this approach posed were insurmountable. We selected telephone interviewing as a close substitute to personal interviewing. There are several advantages to this approach. Firms were contacted randomly by trained interviewers using a computer-assisted telephone interviewing system. The system automatically controlled the sample selection by randomly dialing the numbers from the database of agreed participants. The computer was programmed to time re-contact attempts (e.g., recall no-contacts after two hours, recall busy numbers after ten minutes, allow the interviewer to enter a time slot when busy respondents indicated the day and time they could be interviewed).

Most of the respondents identified themselves as executive managers or managers (78%); the remainder were executive directors (11%), chief executive officers (5%), or in other senior positions (6%). The mean relevant working experience of the respondents was 6.8 years. A

post hoc competency check on the informants' knowledge of export venture marketing programs, strategies, resources, and marketing capabilities, as well as those of their major competitors, elicited a mean of 6.00 on a seven-point scale (1 = "low knowledge," and 7 = "high knowledge"). The export ventures ranged across the following high-technology sectors: 25% computer systems design and related services, 13% computer and peripheral equipment, 18% electronic components, 22% communications equipment, and 22% measuring and control instruments. The median number of years of exporting was 13. Regarding size, 174 firms had 51 employees or more, and the remaining 86 had 10–50 employees.

To assess potential non-response bias, we compared early and late respondents with respect to various characteristics, including number of full-time employees, years of exporting, annual sales volume, age of the venture, number of export markets, key informant self-reported competency evaluation indicators, and the construct measures. We detected no significant difference using secondary information on employee numbers and annual sales volume. We also compared the respondent firms and a group of 70 randomly selected nonparticipant firms. No differences were found between respondents and non-respondents at conventional levels ( $p < .05$ ). The conclusion was that non-response bias was not a significant problem in the data.

We used a systematic questionnaire development process combined fieldwork and literature-based insights to specify the domain of each of the constructs and develop multiple items to serve as indicators. An extensive literature search was performed to develop in English a preliminary survey instrument; then, five academic researchers in international marketing and strategy who served as expert judges evaluated the survey to assess face validity. Subsequently, we developed a Spanish version of the questionnaire including business

context terms used in Mexico. Two language experts were used to perform a back-translation procedure. Finally, to evaluate the relevance of the constructs to the Mexican INV business environment and the clarity of instructions and response format, the survey was presented and revised in a series of face-to-face settings with nine Mexican INV managers.

All construct measures were retrieved from literature existing sources. Marketing capabilities, competitive strategy and export venture performance are second order reflective constructs with three dimensions each. The dimensions of marketing capabilities are: new product, distribution and service. Items from Zou, Fang and Zhao, (2003) were used to capture new product and distribution capabilities. Katsikeas, Paparoidamis and Katsikea (2004) items were used to source service capabilities. The operationalization of marketing communication were also based on items from Zou, Fang and Zhao, (2003). Likert-type seven point scale was employed to operationalize marketing capabilities ranging from (1) 'Much Worse' to (7) 'Much Better' with a mid-point label of 'About the same'. The dimensions of competitive strategy are cost leadership, marketing differentiation and delivery differentiation. Cost leadership provides customers with lower prices than competitors. Cost leadership items were obtained from Aulakh, Kotabe, and Teegen (2000) and Styles and Ambler (1994). Marketing differentiation help the firm to develop new and distinct export venture products as well as investments in marketing communications. These items were sourced from Aulakh, Kotabe, and Teegen (2000), Menguc, Auh, and Shih (2007), Spanos and Lioukas (2001), and Styles and Ambler (1994). Delivery differentiation enhances efficiency in the delivery of value offerings to customers. The items of delivery differentiation were retrieved from Morgan, Kaleka, and Katsikeas (2004), Cavusgil and Zou (1994).

To operationalize competitive strategy the participating INV managers were asked to denote the degree of emphasis that they intended to place upon the marketing functions that denote the items of each subsection of the specific construct. A Likert-type seven point scale was employed ranging from (1) 'Not at all' to (7) 'To a great Extent' with a mid-point label of 'To some Extent'.

It is clear that multidimensional measures of performance should be employed in the field of marketing ([Morgan et al., 2004](#)). Accordingly, INV performance is conceptualized in this study at the export venture level in terms of three dimensions for the present study: 1) effectiveness, the extent to which organizational goals and objectives are met; 2) efficiency, the relationship between performance financial outcomes and the inputs required to achieve them; and, 3) adaptiveness, the operational ability to respond to environmental changes ([Jaworski & Kohli, 1993](#)).

In most studies, measurement of performance is unidimensional in nature, with the emphasis on the use of measures concerning the effectiveness dimension. Literature shows that measures that assess the efficiency dimension of performance are less frequently used ([Zou, Fang, et al., 2003](#)) and scant attention has been paid to the assessment of the adaptiveness dimension of performance. Focusing only on unidimensional measurement approaches may lead to an incomplete understanding of the performance of the firm. Therefore, this study adopts a multidimensional performance conceptualization and operationalization to reflect contemporary theoretical developments in the marketing field.

Respondents were asked to provide their own ratings of performance effectiveness, efficiency, and adaptiveness ([Walker & Ruekert, 1987](#)) compared with competitors in the export market ([Peng & York, 2001](#)). These subjective measures were deemed to be appropriate because prior work has found a high correlation between subjective and objective performance measures

([Brouthers, Nakos, Hadjimarcou, & Brouthers, 2009](#)). In the present study, effectiveness and efficiency items were obtained from Vorhies and Morgan ([2003](#)); and Walker and Ruekert ([1987](#)). Walker and Ruekert ([1987](#)) were used to measure adaptiveness items.

We measured marketing communications as a first order construct with items from Morgan, Vorhies and Schlegelmilch ([2006](#)), Morgan, Zou, Vorhies and Katsikeas ([2003](#)), and Morgan and Hunt ([1994](#)). Technological turbulence items were measured with a scale developed by Jaworski and Kohli ([1993](#)). We included one control variable in the structural model. We captured firm size using a question asking for the number of full-time employees currently working in the firm.

The participating INV managers were asked to provide their own rating of their firm's marketing capabilities, marketing communications and export venture performance relative to the major competitors using a Likert-type seven-point scale was employed, ranging from (1) 'Much Worse' to (7) 'Much Better' with a mid-point label of 'About the same'.

### ***Addressing Common Method Bias***

The likelihood of common method bias (CMB) increases using key informant data ([Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003](#)). Although, sometimes, reliance on key informants may be the only realistic, feasible way to obtain the desired information. In many research contexts there is a practical benefit of the same source measures which makes key informants vital ([Podsakoff & Organ, 1986](#)). To mitigate such concerns, we administered our measurement instrument within certain guidelines proposed in the literature ([Podsakoff et al., 2003](#)). The procedure suggests that respondents should not be able to deduce the true intentions of the questionnaire, priming effects should be minimized, and questions that lead to socially desirable

answers should be minimized. Therefore, we implemented the survey as an inquiry into general firm behavior, rather than focusing on any of our constructs of interest. We avoided socially desirable responses by assuring the respondents that there were no correct or incorrect responses. We also interspersed items representing dependent and independent variables throughout the questionnaire to reduce any priming effect of the items. Moreover, to reduce the incentive of respondents to artificially inflate or disguise their responses, we assured them confidentiality. We also obtained data from knowledgeable insiders such as senior-level managers, who have been asked to rate objective organizational characteristics rather than subjective personal feelings. In this regard, we mitigated individual biases in the responses as suggested by McGrath (2001).

To diminish the effect of CMB, we adopted Podsakoff and colleague's (2003) procedures (i.e., construct items were placed within general topic categories, different response formats were used in the questionnaire, and all items were carefully crafted). We directly assessed the possibility of CMB by using two statistical alternatives. The first statistical alternative considers that if CMB accounts for the observed relationships between the variables, a measurement model containing the main study constructs should yield a single factor (Podsakoff et al., 2003). The fit indexes ( $\chi^2 = 1315.420$  (517),  $p < .01$ ; NFI = .72; NNFI = .79; CFI = .81; and RMSEA = .08) suggest a poor fit of this model to the data. However, because of the perceived leniency of the single factor test (Malhotra, Sung S. Kim, & Ashutosh, 2006), we employed the more advanced marker variable test (Lindell & Whitney, 2001). Specifically, we included in the data the variable export venture duration, which is theoretically unrelated to the main study constructs. The average correlation of export venture duration with the main study variables (those included in the measurement models) was .05. Using this marker variable, we computed the CMB-adjusted correlations

between all the main study variables using the following equation:

$$r_A = (r_u - r_M)/(1 - r_M),$$

where  $r_A$  is the CMB-adjusted correlation,  $r_u$  is the original correlation, and  $r_M$  is a marker variable. We found that the small differences between the original and the CMB-adjusted correlations ( $\Delta r \leq .04$ ) made no difference to the statistical significance of correlations between the main study variables. Moreover, to test the second statistical alternative we estimated an overall measurement model (parsimonious estimation; see below) using the original and CMB-adjusted correlations and conducted a chi-square difference test between the models. The substitution did not significantly deteriorate fit ( $\Delta\chi^2 < .10$ ). Taken together, these procedures and analyses suggest that CMB is not the likely explanation of relationships between the study constructs ([Podsakoff et al., 2003](#)).

### ***Analysis and Results***

We estimated three measurement models (see Table 1). The first contains 11 items measuring the marketing capabilities construct and 3 items measuring the marketing communication construct. The second model contains 9 items assessing the competitive strategy construct. The third model includes 11 items measuring the export venture performance construct and 3 items measuring the technological turbulence construct. Whereas marketing capabilities, competitive strategy and export venture performance are second-order constructs, marketing communication and technological turbulence are first order constructs.

We performed these analyses using the elliptical reweighted least squares estimation procedure in AMOS, which is proved to produce unbiased parameter estimates for multivariate normal and non-normal data. In spite of a significant chi-square ( $X^2=172.14$ ;  $df =73$ ;  $p<0.000$ ) in the first



measurement model, as might be expected given the sensitivity of the test statistic to sample size ([Bagozzi & Yi, 1988](#)) all other diagnostics are supportive. Indeed, MacCallum and colleagues ([1996](#)) have proven that the chi-square is unrealistic in most SEM empirical research. In a similar approach, Bagozzi and Foxall ([1996](#)) assert that researchers should not exclusively rely on the chi-square test as a measure of fit. The other fit indexes (normed fit index [NFI] = .90, comparative fit index [CFI] = .94, and root mean square error of approximation [RMSEA] = .072) suggest that the model fits the data satisfactorily. Items loaded heavily on their posited constructs and had t-values greater than 5.93. Likewise, the second measurement model exhibits a good overall fit to the data (NFI=.92; CFI=.95; RMSEA=.065) even though it shows a significant chi-square ( $X^2=50.37$ ;  $df =24$ ;  $p<0.000$ ). This might be contemplated given the sensitivity of the test statistic to sample size ([Bagozzi & Yi, 1988](#)). The third measurement model that corresponds to export venture performance displays good fit values (NFI=.93; CFI=.96; RMSEA=.063) although it illustrates a significant chi-square ( $X^2=148.31$ ;  $df =41$ ;  $p<0.000$ ). This might be anticipated given the sensitivity of the test statistic to sample size ([Bagozzi & Yi, 1988](#)). This evidence also supports the conceptualization of export venture performance in this study as a second-order construct. Unidimensionality is also obtained in all measurement models based on the good fit values of the fit statistic.

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Insert Table 1 about here  
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The measurement models themselves offer support for convergent validity if the overall goodness-of-fit indexes demonstrate a good fit of the hypothesized relationships to the data and all factor and item loadings are high and significant ([Anderson & Gerbing, 1988](#)). In general, the

results exhibit a good fit of the measurement models to the data and high standardized loadings significant at  $p < .01$ . Furthermore, average variance extracted (AVE) estimates for the measures range from .63 to .90 (see Table 1). Composite reliability coefficients for all scales range from .82 to .96, suggesting satisfactory internal consistency.

We employed Fornell and Larcker's (1981) test of discriminant validity. This procedure involves assessing whether the AVE for every construct's measure is larger than the squared *phi* correlation of that construct with all other constructs in the model. All AVE estimates compare favorably with the corresponding *squared phi* correlations. Table 2 presents the Pearson's correlations and descriptive statistics of the measures. In summary, the measures possess adequate psychometric properties.

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Insert Table 2 about here  
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### ***Structural Model and Results***

To test the hypotheses, the parsimonious structural model estimation procedure was used for this study. The parsimonious approach entails averaging the indicators for each construct to form manifest composites. By conducting such a procedure, the first-order construct is represented by one single indicator and the second order constructs are treated in the model as being first-order with composites of their dimensions (Morgan, Kaleka, et al., 2004). Marketing capabilities, competitive strategy and export venture performance are second order constructs and are presented in the model as composites of their dimensions. Marketing communication is a first order construct of the observed variables: marketing communication skills and processes,

skillfully using marketing communications, and developing effective export advertising and promotion. Because the number of parameters estimated relative to sample size is a key determinant of convergence, standard errors, and model fit, this method was critical in achieving a ratio of sample size to estimated parameter greater than five, which is necessary to attain reliable parameter estimates ([Bentler, 1995](#)). As such, composite measures were used as manifest indicators for each latent construct by averaging the items of each scale (for the first-order constructs) or subscale (for the second-order construct).

In addition, in modelling higher order constructs, it is crucial to check visually if the additional level satisfies the t-rule of identification, e.g. the number of data variances and co-variances equals or exceeds the number of parameters to be estimated ([Byrne, 2001](#)). We checked through each construct and any structure requiring an additional constraint.

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Insert Table 3 about here  
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The fit indexes (NFI=.90; CFI=.94; RMSEA=.069) suggest the structural model demonstrates a good fit to the data (see Table 3). Given the relatively large sample, the significant chi-square is not surprising ( $X^2=132.01$ ;  $df =59$ ;  $p<0.01$ ); as might be expected given the sensitivity of the statistic test to sample size ([Bagozzi & Yi, 1988](#)).

The empirical assessment of key relationships predicted in the theoretical model (Figure 1) indicates support for five of the six relationships examined (Table 3). In support of H<sub>1</sub>, the results indicate that marketing capabilities are positively associated with competitive strategy ( $\beta = .37$ ,  $p< .01$ ). This finding is consistent with the literature sustaining that key marketing capabilities secure higher-up coordination of functional activities by supporting choices about how the

venture will compete for target customers in order to achieve its desired goals ([Teece, Pisano, & Shuen, 1997](#)). Therefore, key marketing capabilities engender more delivery and marketing differentiation as well as cost leadership competitive strategies in INVs.

Results also support the claim that competitive strategy is a strong predictor of export venture performance. On this basis, there is no doubt that  $H_2$  is theoretically substantive ( $\beta = .34$ ,  $p < .05$ ). This finding is in keeping with Henard and Symanzki ([2001](#)), Carbonell and Rodriguez ([2006](#)), as well as Morgan and colleagues ([2004](#)), who identified competitive strategy as one of the most important drivers of export venture performance, because of the relative superiority of a venture's value offering as a determinant on target customers' buying behavior.

Furthermore, the results show that marketing capabilities link positively to export venture performance ( $\beta = .64$ ,  $p < .01$ ) supporting  $H_3$ . This implies that INVs focusing on new product development, service and distribution deploy marketing capabilities to build superior export venture performance. In addition, the results suggest that marketing capabilities are positively associated with marketing communications ( $\beta = .63$ ,  $p < .01$ ) upholding  $H_4$ . Moreover, while marketing communication is positively linked to competitive strategy, as per  $H_5$  ( $\beta = .50$ ,  $p < .01$ ), it is not linked to export venture performance. The relation between marketing communication and export venture performance shows a non-significant path failing to give support to  $H_6$  ( $\beta = -0.21$ ,  $p > .05$ ). Therefore marketing capabilities need marketing communication to reinforce the competitive strategy of INVs to achieve superior export venture performance.

To test that technological turbulence moderates the relationship between marketing capabilities and marketing communication we required an additional analysis. We split our sample into two groups at the median level of technological turbulence and re-estimated our structural model

([Hewett & Bearden, 2001](#)). We estimated two models: one in which we constrained the path between marketing capabilities and marketing communication to be equal across the two groups and one in which we allowed the path coefficients to vary freely. A highly significant chi-square difference ( $\Delta\chi^2_{(1)} = 7.84, p < 0.02$ ) signifies much better fit for the unconstrained model, thus indicating that the relationship between marketing capabilities and marketing communication is different in the two groups. As shown in Table 3, the two-group moderator test support the prediction of our theoretical model H<sub>7</sub>. In the low-competitive intensity group, the marketing capabilities and marketing communication relationship is positive and significant (path coefficient = .41, t-value = 2.96,  $p < .01$ ) and in the high competitive intensity group, the same relationship is positive and significant (path coefficient = .74, t-value = 5.91,  $p < .01$ ). Therefore, there is moderation of technological turbulence in the path from marketing capabilities and marketing communication supporting H<sub>7</sub>.

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Insert Figure 2 about here  
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Figure 2 illustrates the moderation effect of competitive turbulence between marketing capabilities and marketing communication. The difference in marketing capabilities and marketing communication depends on the low and high levels of competitive turbulence.

To test that technological turbulence moderates the relationship between marketing communication and competitive strategy we also estimated another set of models. One in which we constrained the path between marketing communication and competitive strategy to be equal across the two groups and one in which we allowed the path coefficients to vary freely. A highly

significant chi-square difference ( $\Delta\chi^2_{(2)} = 38.3, p < 0.01$ ) exhibits a much better fit for the unconstrained model, thus indicating that the relationship between marketing communication and competitive strategy is different in the two groups. As shown in Table 3, the two-group moderator test support the prediction of our theoretical model H<sub>8</sub>. In the low-competitive intensity group, the marketing capabilities and marketing communication relationship is positive and significant (path coefficient = .36, t-value = 2.43, p < .01) and in the high competitive intensity group, the same relationship is also positive and significant (path coefficient = .68, t-value = 3.76, p < .05). Therefore, there is moderation of technological turbulence in the path marketing communication and competitive strategy upholding H<sub>8</sub>.

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Insert Figure 3 about here  
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Figure 3 illustrates the moderation effect of competitive turbulence between marketing communication and competitive strategy. The difference marketing communication and competitive strategy depends on the low and high levels of competitive turbulence.

Furthermore, the results imply the mediating role of marketing communication between marketing capabilities and competitive strategy, because H<sub>6</sub> is not supported. In addition, the results suggest a mediating role of competitive strategy between marketing capabilities and

performance. We estimated three additional models to verify this. The first model analyzed the direct link from marketing capabilities to performance. The path loading strategy increased from  $\beta = .64$  to  $\beta = .73$  (both  $p < .01$ ). The second model removed the paths: from marketing capabilities to performance, from marketing capabilities to competitive strategy and from marketing communication to performance. The link from marketing capabilities to marketing communication increased from  $\beta = .63$  to  $\beta = .68$  (both  $p < .01$ ). The third model removed the paths: from marketing capabilities to marketing communication, from marketing communication to competitive strategy, from marketing communication to performance, from marketing capabilities to performance. The link from marketing capabilities to competitive strategy increased from  $\beta = .37$  to  $\beta = .79$  (both  $p < .01$ ). The tests confirm partial mediation.

### ***Discussion and Conclusions***

This study is an attempt to address the lacuna in marketing theory on the relationships among marketing capabilities, marketing communication, competitive strategy, technological turbulence, and export venture performance of high technology INV firms. Several studies in marketing have proposed marketing – capabilities - performance frameworks of export venture performance ([Morgan et al., 2004](#)) and other studies discussed the importance of marketing communications (e.g. [Fill, 2002](#); [Grein & Gould, 1996](#)). However, until now, no study has examined the effect of marketing capabilities with marketing communication, competitive strategy, export venture performance and technological turbulence of INVs. The study findings

support seven of the eight hypotheses and signify the efficacy of the measurement approaches used to capture the focal constructs. The results strongly support the central role of INVs marketing capabilities in the process of attaining superior export venture performance. This study makes three valuable contributions to knowledge as a result.

First this study integrates the interaction of marketing capabilities, marketing communication and competitive strategy to improve performance in INVs. These interplays occur in the RBV paradigm to map a network of relationships that is unique in the extant literature. We report empirical evidence on how marketing capabilities are affected by the partial mediating role of marketing communication. Thus, the findings in this study offer a novel extension to the understanding of how marketing communication comes about and how high technology INV firms can gain from them. Additionally, competitive strategy partially mediates two relationships. One between marketing capabilities and performance, and the second between marketing communication and performance of the INV. The finding of the partial mediating role of marketing capabilities and performance is in line with the export ventures literature, which reports the partial mediating role of lower-cost and differentiation competitive strategies ([Murray et al., 2011](#)). However, to the best of our knowledge, the competitive strategy partial mediation between marketing communication and performance of the INV has not been described in the IE literature.

Therefore, an analysis of marketing capabilities seems incomplete without some form of synthesis of the RBV with marketing communication, competitive strategy and performance. In addition, these study findings highlight the interplay between marketing communication and competitive strategy to demonstrate the manner to achieve superior export venture performance. These results indicate that the rapid environment that INV's find themselves produces a need to



develop new philosophies and strategies from which to attain competitive advantage. In the case of INV's a focus on marketing differentiation and delivery differentiation can achieve superior export venture performance.

The results show that marketing communication may facilitate the adoption of a combination competitive strategy based on marketing differentiation and cost advantage in a particular international market, indicating lacunas in the fulfillment of customer needs for differentiated low-cost products. This superior quality in the channel relationships may be employed to produce differentiated products and achieve production cost reduction based on a cost leadership competitive strategy. Alternatively, by reducing the cost of the delivered offering firms are likely to both attain higher profit margins and thus increase their profitability, or lower the product price and achieve larger sales volume and greater profits.

Furthermore, the results indicate that the rapid environment that INVs find themselves produces a need to develop new philosophies and strategies from which to attain competitive advantage. Marketing communication helps INVs to focus on a competitive strategy based on marketing differentiation, delivery differentiation and cost leadership to achieve superior export venture performance. The study findings have important implications for research on marketing strategy, new venture decision-making, and international marketing.

Second, we add to the IE literature by investigating whether the degree to which marketing capabilities and corresponding marketing communication vary under differing technological turbulence. Moreover, we also contribute to the literature the findings to which marketing communication and competitive strategy differ under technological turbulence. The first moderation effect concludes that the higher the technological turbulence is, marketing capabilities become a key component of INVs to enhance marketing capabilities. In contrast,

marketing capabilities and marketing communication may not be as relevant under conditions of low technological turbulence. Under higher technological turbulence conditions, INVs with less marketing capabilities and less marketing communication are likely to see their performance damaged as customers would prefer firms with higher marketing capabilities and marketing communication. Therefore, it is possible that high level of marketing capabilities are not always beneficial given that its development and maintenance is highly resource intensive ([Slater & Narver, 1994](#)). Also, the rewards from having high level of marketing capabilities and marketing communication may not always accrue. Moreover, the degree of technological turbulence also can help to determine the required marketing communication to leverage competitive strategy for superior performance in INVs. The higher technological turbulence environment, the greater need for INVs to use the marketing communication for a stronger competitive strategy. In this type of environment INVs require higher skills to use their marketing communications accompanied of processes for a stronger competitive advantage. Further, this environment drive INVs to develop effective export advertising and promotion to obtain higher performance. These empirical evidence is useful to INVs' managers. The suggestion is to emphasize the investment in developing marketing capabilities to enhance marketing communication and competitive strategy in environments with higher technological turbulence.

Third, the results speak to an important set of firms hitherto ignored in the marketing capabilities debate: the high technology INV from Latin America. With this study we contribute to the call for research focused on this region of the world, which have thus far, been underrepresented in the literature. With this study we aim to increase our understanding of Latin American INVs and to analyze them with a model of marketing capabilities – competitive strategy – export venture performance considering technological turbulence as an external factor.

### ***Further Research and Limitations***

The first limitation of this study is the cross-sectional research design which prohibits causal inference, and temporal effects exist among marketing capabilities, marketing communication, competitive strategy, and export venture performance that are not accommodated within this empirical framework. Further research should be aimed at generating longitudinal data to capture dynamic influences. However, it should be noted that this limitation is common in studies conducted within the area of accelerated internationalization ([Freeman & Cavusgil, 2007](#)). Second, and partly related to the latter, reverse causation cannot be ruled out in the theoretical framework of this study. Third, the unit of analysis in the study was the export venture of the INV firm, identified by the respondent. We made no accommodation to assess the related or discrete effects of marketing capabilities, marketing communication and competitive strategy with regard to other concurrent and historical ventures. In addition, in this study the export venture is defined as a single product or product line exported to a specific export market. Though necessary to delimit the study, a loss of richness occurs as a result. Fourth, these data were generated among the INVs of a single country: Mexico. Therefore, the results are limited to this particular country's framework, and caution should be exercised in attempting to draw generalizations to other contexts. Fifth, a multi-industry sample was used to increase generalizability, but in doing so, the sample becomes heterogeneous, and the ability to represent a single industry closely was lost. Nevertheless, these multiple industries are all high-technology oriented. Collectively, then, the findings are limited by these features of the sample.

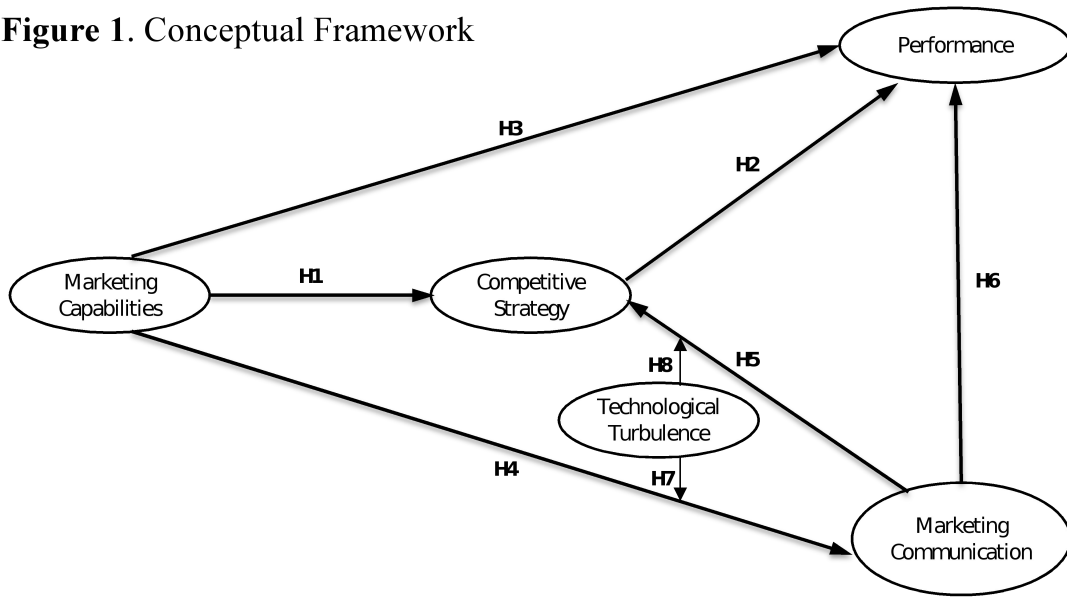
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**Figure 1.** Conceptual Framework



**Table 1.** Measurement Models and Measures

Factors and Items	Standardized Loading	t-Value
<b>Measurement Model 1: Marketing Capabilities<sup>d</sup> and Marketing Communication</b>		
<b>Marketing Capabilities</b>		
<b>New Product</b> (C.R = .93, AVE= .83) <sup>b</sup>	0.69	6.30
Developing new export venture	0.74	___ <sup>e</sup>
Successfully launching new export venture products	0.86	13.14
Speedily developing and launching new export venture products	0.86	13.09
<b>Service</b> (C.R = 0.89, AVE =.65) <sup>b</sup>	0.78	5.49
Using our pricing skills to respond quickly to any customer changes	0.52	___ <sup>e</sup>
Delivering high quality after-sales service	0.75	7.38
Attracting and retaining after-sales service personnel	0.78	7.44
<b>Distribution</b> (C.R =.82, AVE =.73) <sup>b</sup>	0.66	5.93
Providing high levels of support to distributors	0.72	9.61
Closeness in working with distributors/retailers in this market	0.64	8.80
Adding value to distributors' businesses	0.70	9.42
Satisfying the needs of distributors	0.70	9.40
Attracting and retaining the best distributors in the export venture	0.68	___ <sup>e</sup>
<b>Marketing Communication</b> (C.R =.88, AVE = .86) <sup>b</sup>	0.63	___ <sup>e</sup>
Marketing communication skills and processes	0.88	___ <sup>e</sup>
Skillfully using marketing communications	0.90	17.00
Developing effective export advertising and promotion	0.73	13.46
Goodness-of-Fit Statistics: $\chi^2$ /d.f. = 172.146 (73), p < .000; NFI = .90; CFI = .94; RMSEA = .072		
<b>Measurement Model 2: Competitive Strategy<sup>d</sup></b>		
<b>Delivery Differentiation</b> (C.R = .92, AVE= .79) <sup>a</sup>	0.86	___ <sup>e</sup>
Guarantee delivery times	0.81	___ <sup>e</sup>
Achieve quick delivery and response to distributor orders?	0.62	9.06
Offer extensive end-user customer service?	0.77	10.71
<b>Marketing Differentiation</b> (C.R = .84, AVE= .65) <sup>a</sup>		
Invest in marketing communications to build awareness?	0.74	___ <sup>e</sup>
Develop new export venture product offerings?	0.52	6.75
Offer a highly differentiated export venture product(s)?	0.69	7.93
<b>Cost Leadership</b> (C.R =.83, AVE =.63) <sup>a</sup>		
...be the lowest cost provider in this export market?	0.62	___ <sup>e</sup>
...provide export venture customers with lower prices than competitors?	0.79	6.26
...tightly control export venture selling and promotion expense?	0.40	4.76
Goodness-of-Fit Statistics: $\chi^2$ (d.f.) = 50.370 (24), p < .001; NFI = .92; CFI = .95; RMSEA = .065		



Measurement Model 3: <b>Export Venture Performance</b> <sup>d</sup> and <b>Technological Turbulence</b>		
<b>Efficiency</b> (C.R = .94, AVE= .80) <sup>b</sup>	0.80	— <sup>e</sup>
Return on Investment (ROI)	0.79	— <sup>e</sup>
Return on Sales (ROS)	0.76	12.50
Export Venture margin	0.80	13.30
Reaching export venture financial goals	0.73	12.01
<b>Effectiveness</b> (C.R = .96, AVE= .90) <sup>b</sup>		
Positive changes in market share	0.79	— <sup>e</sup>
Market share growth	0.87	14.57
Growth in sales revenue	0.84	14.11
<b>Adaptiveness</b> (C.R = .88, AVE = .66) <sup>b</sup>		
Overall export venture performance	0.64	— <sup>e</sup>
Number of successful new export venture products	0.73	9.04
Time to market for new export venture products	0.76	9.26
Responding to competitors product changes	0.48	6.56
<b>Technological Turbulence</b> (C.R = .96, AVE = .88) <sup>a</sup>	0.38	5.03
The technology in our industry is changing rapidly	0.85	— <sup>e</sup>
Technological changes provide big opportunities in our industry	0.96	19.15
A large number of new product ideas have been made possible through technological breakthroughs in our industry	0.81	16.22
Goodness-of-Fit Statistics:		
$\chi^2$ (d.f.) = 148.318 (41), $p < .000$ ; NFI = .93; CFI = .96; RMSEA = .063		
Notes: CR = composite reliability, AVE = average variance extracted. Items marked with a superscript "a" are anchored by 1 = "not at all" and 7 = "to a great extent"; items marked with a superscript "b" are anchored by 1 = "much worse" and 7 = "much better"; items marked with a superscript "c" are second-order constructs; and items marked with a superscript "e" are fixed to set the scale.		

**Table 2.** Descriptives and Correlations

Measure	M	SD	1	2	3	4	5	6	7	8	9
1. New Product	4.85	1.61	<b>0.91</b>								
2. Service	5.16	1.31	.441	<b>0.80</b>							
3. Distribution	4.77	1.33	.357	.477	<b>0.86</b>						
4. Marketing Communication	4.72	1.48	.462	.432	.291	<b>0.93</b>					
5. Delivery Differentiation	5.68	1.28	.127	.256	.227	.353	<b>0.89</b>				
6. Marketing Differentiation	4.91	1.42	.421	.490	.307	.638	.469	<b>0.80</b>			
7. Cost Leadership	4.96	1.21	.028	.237	.126	.186	.403	.346	<b>0.79</b>		
8. Efficiency	4.68	1.50	.274	.364	.372	.280	.226	.355	.287	<b>0.90</b>	
9. Effectiveness	5.43	1.23	.222	.403	.275	.291	.168	.336	.181	.515	<b>0.95</b>
10. Adaptiveness	4.77	1.44	.438	.458	.328	.347	.237	.474	.373	.589	.483

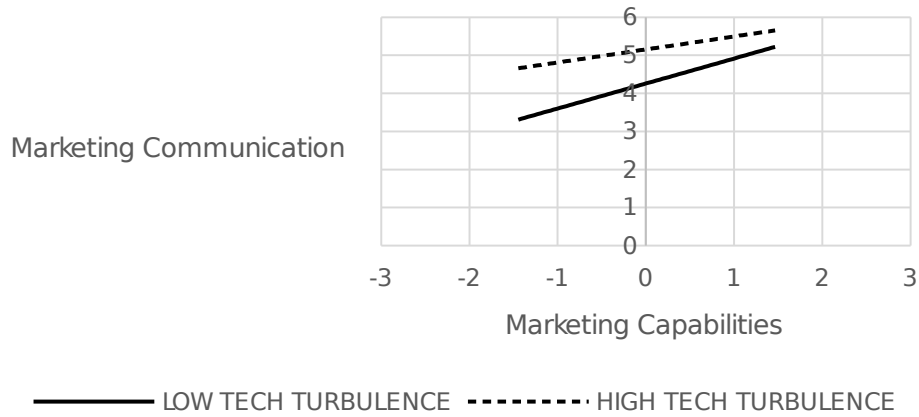
Notes: Correlations  $\geq .12$  or  $\leq -.12$  are significant at  $p = .05$  (two-tailed)

**Table 3.** Structural Model

Structural Relationships	Standardized Loading	t-Value
<b>Hypothesized Links</b>		
<b>H1</b> Marketing Capabilities → Competitive Strategy	0.37	3.62**
<b>H2</b> Competitive Strategy → Export venture performance	0.34	2.38*
<b>H3</b> Marketing Capabilities → Export venture performance	0.64	4.54**
<b>H4</b> Marketing Capabilities → Marketing Communication	0.63	6.64**
<b>H5</b> Marketing Communication → Competitive Strategy	0.50	4.88**
<b>H6</b> Marketing Communication → Export venture performance	-0.21	-1.84
<b>H7 Split Group Moderation Test*</b>		
<b>Low-Technological Turbulence</b>		
Marketing Capabilities → Mkt Communication	0.41	2.96**
<b>High-Technological Turbulence</b>		
Marketing Capabilities → Mkt Communication	0.74	5.91**
<b>H8 Split Group Moderation Test*</b>		
<b>Low-Technological Turbulence</b>		
Mkt Communication → Comp. Strategy	0.36	2.43**
<b>High-Technological Turbulence</b>		
Mkt Communication → Comp. Strategy	0.68	3.76*
<b>* Groups split at median level of Technological Turbulence.</b>		
<b>Control Variables</b>		
Ln (Size) → Export venture performance	0.04	0.788
Goodness-of-Fit Statistics:		
$\chi^2(d.f.) = 132.010(59)$ , $p < .000$ ; NFI = .90; CFI = .94; RMSEA = .069		
* $p \leq .05$ (one-tailed as we hypothesize directionality).		
** $p \leq .01$ (one-tailed as we hypothesize directionality).		
Notes: Critical value ( $\alpha = .5$ ) = 1.645.		

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**Figure 2.** Moderation of Technological Turbulence between Marketing Capabilities and Marketing Communication



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**Figure 3.** Moderation of Technological Turbulence between Competitive Strategy and Marketing Communication

