

# **TRADE ASSOCIATIONS, NETWORKS AND EXPORT PERFORMANCE**

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## **ABSTRACT**

By drawing on the literature of networks and cooperation, this research addresses the effects of the firm's level of engagement with trade associations located at the company's export market on export performance. In addition, it gauges the moderating effects that such level of engagement exerts on the firm's perceived environmental uncertainty on customer needs.

The authors analyze firm-level data from a South American emerging economy and report that a stronger engagement with trade associations located at the company's export market has a positive effect on export performance. Environmental uncertainty on customer needs is confirmed as an export performance barrier, but unexpectedly, this obstacle only diminishes in a negligible factor as the level of engagement with trade associations located at the firm's export market increases.

This research contributes to the literature by investigating the direct and moderating effects of institutional overseas networks on the firm's export performance, and by scrutinizing on the distinctions among the cooperation determinants of local networks and networks situated at the firm's export market. Implications for policy makers and practitioners are discussed.

Keywords: Trade Associations, Networks, Environmental Uncertainty on Customer Needs, Export Performance.

## **COMPETITIVE PAPER**

## INTRODUCTION

Export performance remains a relevant research area in a global environment with increasing technological change, lower trade barriers and a growing interest in country and firm-level export developing strategies (Ngo et al, 2016; Cieslik et al , 2015; Katsikeas et al, 2000; Matanda & Freeman, 2009).

The understanding and modeling of export performance is typically grounded on two fundamental theoretical approaches: While the resource based theory posits that firm's internal tangible and intangible resources result in competitive advantage and export performance (Zou & Stan, 1998; Barney, 1991), the contingency approach suggests that the interdependence of firm external and internal factors determines firm's export performance (Yeoh & Jeong, 1995; Cavusgil & Zou, 1994; Sousa et al, 2008). This study approaches export performance from the contingency perspective.

Within the latter view, institutional networks need more attention (Chetty & Agndal, 2007) and external networks and horizontal relationships, such as engaging with trade associations, are factors that require further study (Boehe, 2013). This is so because external networks may facilitate access to resources that are essential for internationalization. These resources might include, for instance, information benefits or access to pooled resources oriented at international operations (Yiu et al, 2007; Lavie, 2006), as well as collective action in the creation of crucial public goods (Porter, 1998).

In addition, the peculiar conditions on the export market environment are also relevant factors impacting the firm's export performance within the contingency approach. These circumstances include the management's perceived environmental uncertainty on customer's needs (Lee et al, 2009; Phua, 2007; Ondersteijn et al, 2006). Nevertheless , very few studies that surpass national borders have addressed the relationship between perceived environmental uncertainty on customer needs and inter-organizational collaborations. The evidence on the effect of such relationships is scarce when emerging markets are the context of study (Matanda & Freeman, 2009).

Kiss, Danis & Cavusgil (2012) in particular, emphasize the necessity to comprehend the connection between firms and international networks in the context of emerging economies. They ask for a deeper understanding on how firms manage the complexity of resource acquisition while engaging with international networks (Kiss & Danis, 2008; Kiss, Danis & Cavusgil, 2012). Our study explores this particular gap in the literature by answering the following research questions: 1) What are the effects of the level of engagement with trade associations located at the firm's export market on export performance? 2) What are the moderating effects that such engagement exerts on the impact of perceived environmental uncertainty on customer needs?

Notwithstanding, before theorizing on the previous interrogations, the authors are compelled to justify the categorization of "local" and "foreign" networks by providing an answer to the question: What are the differences between the cooperation determinants of local networks and international networks when interacting with exporting firms?

It is important to note that current literature has mainly focused on the question "Should firms concentrate more on local or foreign networks?" (Patel et al, 2014) and has overlooked the knowledge void on the fundamental disparities in the characteristics and determinants of cooperation in local networks and networks overseas. The lack of theory on these dissimilarities seems rather appalling if we consider that a categorization of networks as "local" and "foreign" can only be justified by these very same distinct attributes.

In other words, without explaining the theoretical differences between "local" networks and "foreign" networks: Why should we assume possible contrasts in the behavior of such networks? Wouldn't they be networks behaving like networks regardless of their location? Why should "local networks" and "foreign networks" be separate subjects of study if they are not intrinsically divergent? This additional gap in the literature motivated the authors to first address the distinctions between "local" and "foreign" networks and later build on the direct and moderating effects of foreign trade association engagement on export performance.

The research questions previously presented are relevant because the outcomes of cooperation venues can be counter-intuitive in some instances. As an example we may cite research conducted in Chile by Dimitratos et al (2014), which shows that inter-firm collaboration increases the firm's probability of becoming a micromultinational. A positive effect of cooperation on internationalization is then suggested by this study. Nevertheless, a prior study by Geldes & Felzensztein (2013) reports a negative effect of cooperation on marketing innovation in Chile. And such a decrease in innovation should result in a diminishing firm internationalization (Golovko & Valentini, 2011). The reported findings of both studies seem to be in conflict, and the apparent contrast brings into the limelight the fact that cooperation may render positive or negative outcomes on any specific cooperation venue.

Nowack (2012) clearly depicts that a cooperative venue includes two strategic choices for actors, either cooperating or defecting. Moreover, cooperating partners might commit to cooperation at different levels. The latter explains why a cooperative venue could lead to results that place one cooperating actor in a worse position than not cooperating at all. Thus engaging in a cooperative venue with an overseas trade association does not necessarily report a benefit for firms.

This study contributes to the literature by expanding the understanding on how networks that spread across national boundaries influence the export performance of firms. It shows the fundamental differences between local and international networks in the context of the cooperation literature and also sheds light on how export firms from emerging economies could use the development of transnational institutional networks, such as trade associations located in their export markets, with the objective of diminishing the barriers posed by negative environmental elements.

In the following section we introduce the theoretical discussion on the effects of local and overseas networks as well as trade associations on export performance. Then a hypotheses on the relationship between the level of engagement with a trade association located at the

firm's export market and export performance is presented. Later, we introduce the concept of perceived environmental uncertainty on customer needs and develop our hypothesis on the moderating effects of the level of engagement with overseas trade associations on environmental uncertainty. Data, Methodology and Results follow. Finally, we discuss the conclusions and the limitations, as well as the practical and theoretical implications of our findings.

## **NETWORKS AND EXPORT PERFORMANCE**

Firms gain competitive advantage by securing distinct resources and fostering unique capabilities (Barney, 1991). This effort in developing firm-level factors increases firm export performance and provides support to the resource view approach to export performance (Zou & Stan, 1998; Sousa et al, 2008). But alternatively, in addition to internal firm elements, researchers have recently placed their attention on the relationship between firms and their environment.

In this regard, the contingency approach argues that the firm external medium exerts an important role on its export outcome (Cavusgil & Zou, 1994; Yeoh & Jeong, 1995). According to this view, the specific environment of the firm grounds its resource acquisition process and delivers an imprint to its export strategy. (Robertson & Chetty, 2000). External networks, both formal and informal, are a fundamental part of such firm entourage and provide different kinds of support to the firm internationalization pursuit (Chetty & Agndal, 2007).

Firms manage a set of networks that include: social networks, reputational networks, marketing information networks, cooperation networks and cooperative technology networks (Hong & Stanley, 2015; Lechner et al, 2006). The concept of social networks refers to relationships among individuals. These relationships with friends and non-business acquaintances are a relevant start-up resource that assist firms in securing finance, suppliers, information, and customers (Pinho & Prange, 2016; Felzenstein et al, 2014; Lechner et al, 2006).

Reputational networks, on the other hand, have a signaling purpose (Deeds et al, 2004). Firms posing under such an umbrella should overcome the liability of newness with ease (Roberts & Dowling, 2002), and may conquer the liability of outsidership as well, through a better access to interconnected stakeholders (Johanson & Vahlne, 2009). Cooperation networks are made of direct inter-firm relationships. Such direct relationships have a positive effect on export intensity (Boehe, 2013). Marketing information networks develop over time with the objective of maximizing the flow of information among individuals or firms and include customers, suppliers, competitors, and distribution channels. They strongly influence entrepreneurial strategy-making (Malecki & Poehling, 1999; Ostgaard & Birley, 1994). Finally, cooperative technology networks are direct relationships with other firms in the creation of technology. This cooperative action increases innovation and firm performance (Lisowska et al, 2015; Stuart, 2000).

Chetty & Agndal (2007) propose a classification of networks based on four noticeable dimensions. Networks can be grouped depending on whether they are composed of individuals or organizations, and whether their organization is formal or informal. This alternative notion allows for a focus on the network organization instead of its purpose, and therefore concedes a clearer categorization of trade associations, which are the main focus of this research. Subsequently, trade associations can be viewed as formally planned inter-organizational networks with a concrete purpose and scope. Trade associations are external network organizations that exist as part of the firm's environment. Firms have the choice to join them or not. Trade Associations have also been defined as "orchestrating hubs" inserted in a bigger network of firms. Their mission in the larger network of firms is to enhance the reachability of participating firms and making them more accessible to others (Boehe, 2013).

External networks facilitate resources that might be unreachable through market exchange (Hatani & McGaughey, 2013). Network resources are defined as "resources owned by partner firms which can be accessed by the focal firm through its network ties with these partner firms" (Boehe, 2013, pp. 168). Network resources may include business contacts,

market information, weight in the political arena, or specialized equipment (Oh et al, 2006; Ciravegna et al, 2014).

The network literature illustrates the many ways by which external networks contribute to firm performance and export performance: Entrepreneurs may use their contacts to browse through international market opportunities and choose on the most promising ones (Ellis, 2011). They may use social networks to strengthen international competitiveness and increase information gathering (Holmlund & Kock, 1998). In some instances, an alliance with a partner with good reputation might result in a reputation transfer benefiting the firm with less reputation (Saxton, 1997). Alliance partners could influence positively the Initial Public Offering valuations of new ventures that are related to them (Stuart et al, 1999). The sales and innovation of firms may increase as a result of partnership with firms that have complimentary technical capabilities (Bell 2005; Stuart, 2000).

Networks are of special importance in emerging economies (Meyer & Peng, 2015; Zhu et al, 2006). This is because networks create social capital that turns to be essential in the internationalization of firms (Felzensztein et al, 2015). They also play a key role in the development of trust (Felzensztein et al, 2010). Trust assists firms in coping with conditions of uncertainty, and allows them to share information about export markets (Shirokova & Mcdougall, 2012; Felzensztein, Brodt & Gimmon, 2014). Such knowledge influences the international expansion of firms positively (Oviatt & Mcdougall, 2005). In addition, social networks in emerging markets increase firm performance because they facilitate the identification of new business opportunities (Zhu et al, 2006). All of these ideas suggest that firms in emerging markets should be inclined to engage with networks located at their export markets.

## **LOCAL AND OVERSEAS NETWORKS**

Firms might acquire knowledge of different sorts (technological, institutional, business and market knowledge or internationalization knowledge) by cooperating directly with a

foreign partner (Patel et al, 2014) or cooperating through overseas institutional networks such as trade associations . Cooperation (network collaboration) is a key mechanism explaining the effects of foreign networks on firms (Subramanian, 2006). It is also a fundamental element in the impact of local networks on businesses (Chetty & Agndal, 2007). Nevertheless, the theoretical differences in the determinants of cooperation of local and overseas networks remain under-explained in the international business literature. And though several researches extend on the benefits of collaborating with overseas partners (e.g. Musteen et al, 2010; Patel et al, 2014), no explicit differentiations on the cooperation motives between local and overseas networks, other than the cultural and institutional contrasts portrayed by Kiss, Danis & Cavusgil (2012), have been outlined previously. The question on the unique determinants of cooperation of local and overseas networks is key because it justifies the research question of whether there is an impact of overseas networks on export performance. If the cooperation determinants were equal at local and foreign levels, the aforementioned research question would be unnecessary.

Perry (2009) examines trade associations in Australia and New Zealand and finds differences that could be attributed to cultural, institutional and market size distinctions among countries. We argue that the disparities in comparable local and overseas networks reside in the core role of cooperation within the network and the cooperation motives of local networks vs. overseas networks.

The literature on cooperation reveals the differences in the cooperation rationale when networks are local or foreign. Nowack (2006) models cooperation and identifies five key mechanisms of cooperation that are present in human interactions. These mechanisms are also active in inter-organizational relationships and inter-firm collaboration: a) Kin selection refers to the tendency of individuals to cooperate with others with similar genes. b) Direct reciprocity derives from the assumption that if one cooperates others might cooperate as well. c) Indirect reciprocity implies that the first individual pays cost “c” for another to get benefit “b” and the second individual cannot return the cooperative action in the present or future. In this context individuals cooperate with others mostly motivated by the idea that “someone else will benefit me in the future”. Reputation is an important aspect in this

scheme. d) Spatial reciprocity refers to the impulse of cooperating with individuals that are closer. Finally, e) Group selection is the propensity to cooperate with individuals that are part of the same group.

From these mechanisms, and the classification presented by Chetty & Agndal (2007), we single out the theoretical differences in the cooperation determinants of local and foreign inter-personal and inter-organizational networks.

-----TABLE 1 HERE-----

Table 1 portrays the mechanisms that explain why a particular network-firm relationship would develop at the local or international level and the differences between network cooperation determinants at the local and overseas level in probabilistic terms.

For instance, local firms could engage with local networks with formal structure whose actors are organizations (such as trade associations) moved by kin selection. Under this scheme, the presence of a family bond between the member of the firm and a member of the trade association staff could easily facilitate cooperation. Cooperation may also arise based on the direct reciprocity mechanism. For example, the trade association could provide some contacts to the firm and expect the firm to fill a survey for the association later on. Indirect reciprocity, spatial selection and group selection are not difficult to imagine in such a local context.

But when a local firm interacts with a foreign network with formal structure and whose actors are organizations, kin selection, though ultimately possible, is highly improbable, and the probability of spatial selection is zero by definition. This fact shrinks the cooperation space possibilities for local firms and networks located at export markets.

This condition does not mean that cooperation will not arise and prevail. It only entitles that cooperation mechanisms (in probabilistic terms) are fewer. On this subject Nowack (2006) portrays how the cost-benefit ratio of a cooperative action is the defining factor behind the

rise and stability of cooperation. The cost benefit ratio refers to the relationship between the cost and benefit that each cooperating partner receives as a result of the cooperative venue. These costs and benefits take into account the strategic actions of the other cooperating partner ( Nowack, 2012). Thus, even when less cooperation mechanisms are present for cooperation to emerge between a local firm and a foreign network, sustained cooperation is possible as long as the appropriate cost-benefit ratio is present.

## **TRADE ASSOCIATIONS**

Trade associations are institutional voluntary networks composed of firms. These businesses decide to jointly address issues that represent a high cost for a single firm, but can be solved at a lower firm cost when several firms collaborate (Bennett 1996). Trade Associations have a fundamental role in the development of public goods and the exchange of ideas and information (Felzenstein et al, 2015; Porter, 1998). They can operate nationally and across national borders offering a set of services that may or not be exclusive to members. Their service portfolio includes seminars, conferences, gathering and analysis of data, contact information procurement, representation in seminars and trade fairs, product certification, legal counseling, public relations management and political voice (Lisowska et al, 2015; Moore & Hamalai, 1993).

### **Net Effects of Cooperation with Overseas Trade Associations**

Eberhard & Craig (2013) outline that cooperating with networks is a “double edge sword” that could increase costs and demand ample time while restricting firm’s strategic options to the network boundaries . The identification and profiting on opportunities might be hindered by network relationships ( Snehota & Hakansson, 1995). Also, opportunistic behavior and threat of conflict are factors present in these alliances. Conflict emerges from the pursuit of heterogeneous objectives (Beamish & Lupton, 2016). Ultimately, the creation and maintenance of bonds could imply investments that exceed benefit.

In the cooperation of a local firm with an overseas trade association located at its export market, the flow of information runs both ways. While local firms acquire some information on the export market, overseas firms also gather information on local firms through their trade associations. It might be then naïve to consider cooperative outcomes as desirable at all occasions as firms situated at export markets could use the information on local firms either to collaborate, to ignore the cooperation opportunity (defect) or to strengthen competition and increase trade barriers through lobbying on more restrictive import policies. Trade associations, which are integrated in specific industries, could adopt a competition stance and support competitive actions thus generating a negative outcome from cooperation.

On top of the previous arguments, we add the following reasons as causes of potential negative outcomes from cooperation: 1) Defecting after a project has been initiated. 2) Confronting high opportunity costs on wrongful resource allocation. 3) Cooperating at different levels of engagement.

It becomes clear that if the local firm starts a project with a trade association located at its export market and the trade association loses interest and leaves the project, the firm might lose any resources previously invested in the project. The firm will also experience a loss expressed as an opportunity cost because it could have allocated its resources in more profitable venues.

Also, cooperation at different levels of commitment may cause losses to one of the cooperating partners. Imagine that a wine producer can independently gather information on suppliers and such action will produce an outcome of 3 in its export market after an investment of 1. Net profit for the firm without cooperating would be equal to 2. The firm estimates that if it cooperates with a trade association located at its export market in organizing a small trade show where suppliers can portray products customized to their needs, then it can reach an outcome of 6. It assumes that the optimal selection of a supplier technology would increase productivity substantially. It therefore decides to commit an investment of 3 in a cooperation project hoping to achieve a net profit of 3. But if the level

of commitment of the trade association in gathering the best suppliers of technologies for the wine producer is poor or mediocre, final outcome could be below the expected, for instance a 4. In this case, net profit for the firm would be 1, which is lower than the profit of not cooperating. Cooperation would then exert a negative impact on profit. The decision of cooperating would have reduced the net profit by 1 unit.

Nevertheless, on the issue of the net effects of cooperation between firms and trade associations in emerging economies, past research shows an overwhelmingly positive relationship between trade association engagement and firm performance. Knorrinda (1999) studies the shoe production cluster in India and reports that firms that have a stronger engagement with a trade association also experience a better firm performance. Rabelotti (1999) reports similar results for clustered Mexican firms. Schmitz (1999) reaches the same conclusion while analyzing 65 shoe producing firms in Brasil. We argue that developing a stronger engagement with a trade association located at the firm's export market produces a similar effect and positively impacts export performance. In this sense, we propose that foreign trade association networks influence firms across national boundaries fostering exports.

Exporting firms cannot be tied to internal capabilities and competencies or local environments and networks in their pursuit of profit (Bradley et al, 2006). Firms that get involved in inter-organisational cooperation show a better export organisational performance through better market information gathering, higher profits and customer satisfaction (Felzenstein et al, 2015; Matanda & Freeman, 2009).

When a local firm approaches a trade association abroad and increases its level of engagement with it, the firm extends its contacts and social networks, thus boosting the possibility of obtaining further financial resources, suppliers, information and customers. In the Chilean emerging economy, proximity in social networks influences collaboration between firms at a larger extent than spatial proximity (Geldes et al, 2016). This fact could explain an underlying tendency in this emerging economy towards the development of international social ties.

Firm reputation should also increase with the improvement of the relationship with a trade association located at the firm's export market, therefore facilitating the reduction of the liability of outsidership (Johanson & Vahlne, 2009) and impacting export performance positively. This is even more relevant in the case of firms situated at emerging markets because they approach external markets with a reputation disadvantage (Saxton, 1997). Direct collaboration in marketing networks may rise either by a direct alliance with the trade association located at the foreign market or by the mediation of such trade association. Trade associations could recommend partners for conducting joint sales, joint trading and distribution, co-branding, or information sharing.

Technological networks and cooperation networks could also proliferate as the firm increases its level of engagement with a trade association at its export market. These collaborations should facilitate the acquisition of knowledge and innovation growth (Lisowska et al, 2015; Stuart, 2000), therefore impacting export performance positively.

Based on the past arguments we propose:

H1: A stronger engagement with trade associations located at the firm's export market correlates positively with export performance.

## **ENVIRONMENTAL UNCERTAINTY**

Geographic distance makes the understanding of export markets a troublesome venture (Johanson & Wiedersheim-Paul, 1975). Environmental uncertainty is defined as the limitation of firm executives in predicting future changes in the environment (Dimitratos et al, 2004). This paper considers environmental uncertainty on customer needs (also known as market turbulence) as it relates to managers constraints in predicting future trends of consumers (Jaworski & Kohli, 1993; Hoque, 2004; Cadogan et al, 2005). Market turbulence is negatively associated with the increase of export performance. (Matanda & Freeman, 2009).

Lack of institutional support in emerging economies could result in an increase of environmental uncertainty (Ghauri et al, 2003). Consequently, the intense use of networks located at export markets, including trade associations, could diminish the negative effects of environmental uncertainty on export performance because trade associations simplify the acquisition of network resources (Lavie, 2006). Managers could access advice networks through the trade association. These advice sharing mechanisms should assist in handling environmental uncertainty (Manolova et al, 2010) .

Gathering market information through a trade association located at the export market would assist firm’s managers in predicting future customer’s trends with better accuracy and later deciding on how to approach customers with a marketing strategy that best fits their needs (Helm & Gritsch, 2014). This is even more relevant as the particular advantages of obtaining new resources and capabilities are noticeable in high uncertainty contexts (Zhan & Pezeshkan, 2016).

Based on these arguments, this study postulates that deepening a relationship with a trade association located at the firm’s export market will result in a reduction (in absolute value) of the negative effects of environmental uncertainty “customer needs” on export performance. Therefore we affirm:

H2: Firms that have a stronger engagement with trade associations located at their export market experience a lower negative effect from environmental uncertainty “customer needs” on export performance.

The complete model proposed by this research is depicted in the following figure:

-----FIGURE 1 HERE-----

## **METHODOLOGY**

### **CONTEXT**

Chile is a desirable country for this research because of several reasons: Firstly, interfirm collaboration has been well documented in previous studies (e.g. Felzensztein et al, 2014; Felzensztein et al. 2015; Geldes et al, 2016), thus providing hints on the effects of cooperation on export performance. Secondly, it is a small emerging economy, where the study of overseas networks needs further attention. Finally, it is a country with a high percentage of its exports volume concentrated on natural resource industries and currently suffering from a lower global demand and a slower growth rate of trade partners. Under these conditions, export performance is becoming an even more relevant subject.

In addition, Chile is recognized as the most internationally open economy in Latin America, with the inception of liberal policies fostering free international trade that date back to the 1980's. That makes the study of Chile bear high relevance for Latin American countries willing to adapt a more export oriented framework (Nichols-Nixon et al, 2011). On top of that it is especially pertinent to further develop research on cooperation in the context of emerging economies (Beamish & Lupton, 2016). The contextual variations found in emerging markets constitute the core of a new approach to theory on the business phenomena (Meyer & Peng, 2015). And the study of cooperation in Chile provides an opportunity to gauge the contextual specificities previously referred in an economy characterized by international free trade.

### **DATA COLLECTION**

In order to explore the effects of overseas trade association engagement on export performance and the moderating effects of foreign trade association engagement on environmental uncertainty, the authors conducted a survey during 2015 (questions are shown in the appendix).

Before implementing the survey, the authors applied a survey pre-test with ten firm managers and confirmed that the survey was fully understood. Later, pre-test results were discarded and the questionnaire was applied to managers of exporting firms by email and face-to-face encounters. Surveys were distributed to exporting firms listed in ProChile (The government export promotion office). A total of 1,248 firms were contacted and 156 businesses completed the questionnaire. After correcting for lack of complete information a total of 116 surveys were considered for this study. Survey respondents answered the questions consulting with other firm departments in order to control for information bias (Podsakoff et al, 2003, p.881) . In the sample: 52 percent of the firms are small (with less than 50 employees), 22 percent are medium enterprises (with 200 or less employees), and 26 percent are large firms (with more than 200 employees).

## **MEASUREMENT & METHODOLOGY**

This study uses a General Linear Model to test its hypotheses on a cross section database. Considering that both dependent variables are proportions, the authors selected as methodology a GLM model with a logit transformation and robust standard errors as suggested by Papke & Wooldridge (1993). The model's dependent and independent variables are shown in table 2.

-----TABLE 2 HERE-----

### *Dependent Variables:*

This research measures export performance through two distinct ratios: On one hand International Intensity is the volume of exports in the firm divided by total sales (Fernhaber et al, 2008; Boehe, 2013). On the other hand, the survey asked managers to provide the percent of total profit generated by exports. Both ratios reflect the extent to which the firm is involved in foreign markets.

### *Independent Variables:*

Overseas Trade Association Engagement: The survey includes a question that requires respondents to rate their perceptions regarding their engagement with trade associations located at their foreign markets in the last three years. The question asks. “Rate the level of engagement with trade associations located at your export markets” 1= extremely weak, 2=very weak, 3= weak, 4=strong, 5=very strong, 6=extremely strong.

Environmental Uncertainty on Customer Needs: The survey includes a question that requires respondents to rate their perceptions regarding environmental uncertainty in relation to customer needs in the last three years on their export markets. The question asks. “It has been hard to predict customers changing needs and wants” Respondents answered according to a 7 point likert scale where 1= extremely disagree, 2=strongly disagree, 3= disagree, 4=neutral, 5=agree, 6=strongly agree, 7=extremely agree.

### *Control Variables:*

Competitive environmental dynamism: (also referred as competitive intensity) speaks of a high level of rivalry in export markets (Cadogan, Cui & Li, 2003). Such rivalry might drive firms into price competition and the reduction of profits (Slater & Narver, 1994), thus reducing the export performance of firms. Managers were asked to indicate their level of agreement with the following statement: “Competition has changed a lot in our industry in the past 3 years”. They answered: 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree. Three questions on the survey captured this variable. We used principal components analysis to reduce these three questions into one factor. Eigenvalues and loadings are displayed in the appendix. The selected factor captures 67% of total variance.

Size: This study measures size by capturing the number of employees in the firm. Firm size is regularly present in the modeling of export performance (Sousa et al, 2008). Following

Boehe (2013, p.173) this variable was transformed to logarithm to control for dispersion and facilitate interpretation.

Age: Firm age is measured in years, counted since the year that the firm starts its operations. Age is regularly included in export performance models (eg. Zhao & Zou, 2002; Fernhaber et al, 2008). A logarithmic transformation was also applied to this variable.

Risk Taking: The firm's network capabilities and risk taking behavior in search of opportunities are key decisive elements in the pursuit of internationalization (Helm & Gritsch, 2014). This research therefore includes risk-taking as a control variable. The survey includes four questions very similar in wording to the following: "The company export strategy is characterized by a high tendency towards risk". Respondents indicated their degree of agreement with the affirmation. Respondents answered 1= extremely agree, 2=strongly agree, 3= agree, 4=neutral, 5=disagree, 6=strongly disagree, 7=extremely disagree. We used principal components analysis to reduce these four questions into one factor. Eigenvalues and loadings are displayed in the appendix. The factor selected accounts for 72% of the variance.

Industry: Firms were classified into the following industries: 1) Manufacturing Sector. 2)Service Sector. 3) Agriculture and Fishing. 4)Mining Sector.

## **RESULTS**

Table 3 shows the descriptive statistics and correlation matrix of the dependent, independent and control variables of the proposed models. Significant correlations are small, except for the expected correlation between the two dependent variables (0.85). The variance inflation factor (VIF) indicates that there is no multicollinearity problem in the model. Average VIF is 2.75 with all VIF from single variables under the value of 10. In addition, the Wald test of the General Linear Models indicates a  $p > \chi^2$  value of 0, which confirms that the proposed models are effective.

-----TABLE 3 HERE-----

-----TABLE 4 HERE-----

### *Main Effects*

As portrayed in table 4, trade association engagement has a positive and significant effect on international intensity. Boehe (2013), finds that local trade association membership impacts export propensity (the probability of a firm of being an exporter) positively in the furniture manufacturing industry in Brasil. Nonetheless, he does not find a significant effect of local trade associations membership on international intensity. Our results extend current knowledge by showing that not only local networks, but formal inter-organizational networks located overseas, trade associations in particular, do impact international intensity and the percentage of profits derived from exports positively. We therefore fully support H1.

In addition, as summarized in table 4, environmental uncertainty on customer needs exerts a negative effect on international intensity, while its impact on the percentage of profit derived from exports is not statistically significant.

This study tests the moderating effects of overseas trade association engagement on environmental uncertainty using the margins command in the Stata software. This method is outlined step by step by Williams (2012, p.319-320) and does not require the addition of an interaction term as the adjusted predictions of the covariates are evaluated based on the fitted model. Furthermore, following the recommendations of Greene (2010) and Karaca-Mandic et al (2012) we add a graphical representation depicting how the impact of environmental uncertainty on customer needs changes at every level of the firm's engagement with an overseas trade association (Figure 2).

The marginal effects coefficients corresponding to environmental uncertainty "customer needs" on international intensity at increasing levels of trade association engagement are significant at a 90% confidence level, while the marginal effects coefficients corresponding

to environmental uncertainty “customer needs” on the percentage of profits derived from exports at increasing levels of trade association engagement are not significant at a 90% confidence level.

-----FIGURE 2 HERE-----

As shown in Figure 2 (Table 5 in the appendix), as the level of engagement with trade associations increase, the negative effect of environmental uncertainty “customer needs” on international intensity decreases in absolute value. But even when the level of engagement with a trade association located at the export market is extremely strong, the effects of environmental uncertainty “customer needs” on international intensity remain negative. The total difference in the marginal effects coefficients between firms with an extremely weak level of engagement and firms with an extremely strong level of engagement is only 0,005. We conclude that a stronger engagement with a trade association located at the firm’s export market moderately decreases the negative effects of environmental uncertainty “customer needs” on international intensity. No statistically significant impact is observed when the dependent variable is the percentage of profits derived from exports. We therefore partially support H2.

#### *Effects of Covariates*

**Size:** The effect of size on international intensity and the percentage of profits derived from firms is not significant, this result contrasts with Fernhaber et al (2008) and Zhao & Zou (2002), who find positive and significant effects of size on export performance.

The age of the firm shows a negative and significant effect on export performance. This result suggests that firms in this emerging economy have a tendency to consolidate their position as time goes by. In other words, as firms grow older, they surpass the liabilities of newness and they accept the distribution of exports and local sales. As they do not try to increase their exports more than local sales, their level of international intensity consolidates.

Risk Taking and Competitive Dynamism do not show a statistically significant effect on either international intensity or the percentage of profits derived from exports.

The industries show a statistically significant effect on export performance. We left out the mining industry as reference in the estimation models. This means that all sectors are compared to the mining sector on the results. The results show that the firms within the manufacturing and service sectors experience lower export performance than firms in the mining sector. But the firms in the agriculture and fishing sector do not show a statistically significant difference with the mining sector on export performance.

## **DISCUSSION**

In order to justify the analysis of “foreign” networks as a separate subject of study from “local” networks, this research first addressed the question: How different are the cooperation determinants of local networks from networks located at the firm’s export markets? Table 1 renders a graphic view of the most relevant cooperation determinants of networks at the local and international level. It shows that there are less opportunities for cooperation mechanisms to emerge between local firms and international networks than for cooperation mechanisms to arise between local firms and local networks . Nevertheless, it extends on the weight of the cost benefit relationship of each cooperative initiative as the key factor that delivers the impulse towards cooperation (Nowack, 2012).

An adequate cost-benefit ratio is the hidden reason behind positive sustainable cooperation (Nowack, 2012). This cost-benefit ratio, in this case resulting from a cooperative venue between a local firm and a foreign network, is driven by firm’s resources and capabilities as well as by environmental factors. Such a cost-benefit ratio is therefore contextual and embedded in the contingency theoretical framework that explains export performance. The results portrayed in Table 4 speak of cost-benefit ratios that do promote positive stable cooperation between local businesses and trade associations located at the firm’s export market.

Based on the results of this research, the authors conclude that a stronger engagement with trade associations located at the firm's export market influences the export performance of firms positively. Also, the negative effects of environmental uncertainty on customer needs diminish as the engagement with trade associations located at the firm's export market become stronger, though unexpectedly, this reduction is rather small and only statistically significant on international intensity. This outcome indicates that although engaging with a trade association located at the firm's export market results in a positive impact on export performance, the cutback on environmental uncertainty on customer needs is not the most relevant product of engaging with a foreign trade association.

This study contributes to the literature on export performance by:

- 1) Analyzing the underexplored effects of institutional networks located at export markets on export performance. In concrete, the impact of the level of engagement with foreign trade associations on firm export performance.
- 2) Scrutinizing on the moderating effects of the level of engagement with trade associations located at the firm's export market on environmental uncertainty on customer needs.
- 3) Explaining the nuance differences in the cooperation determinants of local and foreign networks.

#### *Future Research*

The details within the mechanism explaining the influence of foreign trade associations on the export performance of firms located in emerging economies need to be further explored with qualitative analysis in order to grasp an in-depth understanding on how and why they work. A deeper look into the cost-benefit ratio within cooperative venues is also required.

How and why questions demand a more exhaustive approach and may require extensive interviews with company managers. Some of the research questions that our study unleashes are: "Under which circumstances a relationship with an overseas trade association can be profitable or harmful for the firm's export performance?" "Why are

firms motivated to engage with foreign networks?”, “What factors deter firms from engaging with an overseas trade association?” “How are formal institutional networks such as foreign trade associations and local informal social networks intertwined?”. “Which networks contribute more to export performance? “Are the benefits from trade association engagement sustainable?” These questions need to be addressed by future research.

Another question that needs extra scrutiny revolves around the results on the moderating effects of the level of engagement with trade associations located at the firm’s export market on environmental uncertainty on customer needs. Why is the moderating effect of engagement on environmental uncertainty customer needs almost negligible? Specifically, how does trade association engagement impact export performance? Is it mostly by the generation of new opportunities? Is it by the elimination of the liability of outsidership? These aspects need further consideration.

### *Limitations*

This study acknowledges several limitations. Firstly, the use of cross section data constraints the capacity to measure year to year changes in country variables. Endogeneity is therefore a potential threat in all cross section data analysis. Also, data gathering is a difficult endeavor in emerging economies, and a bigger sample could allow for better calculations.

### *Practical Implications*

#### *Policy Makers*

From a public policy perspective it is possible to identify the most influential trade associations in the country’s principal export markets by locating those associations that mirror the ones that currently exist in the country. The objective of public policy should be to develop a government based collaborative network that includes local trade associations, overseas trade associations, as well as local and foreign firms. The proposed network should reduce information, technology, market and capital flow barriers.

The impact of trade on country growth shown by Frankel (1999) is the evidence confirming that when countries cooperate in reducing trade barriers their gains are bigger than their losses in the long run. Our study contributes to the development of public policy by showing that overseas trade associations are an effective collaborative platform in transmitting valuable information to firms. These findings are relevant in a global context where the flow of information and tacit knowledge remain as some the most relevant trade barriers nowadays.

A network composed of local and overseas trade associations, as well as firms, would reinforce the elimination of barriers in international commerce between countries. Such efforts could ease the flow of resources and would foster the emergence of new capabilities among firms. Furthermore, the proposed initiative would provide incentives for collaboration among local and overseas competitors. These cooperative behaviors have been shown to influence export performance and competitive advantage positively (Boehe, 2013, Felzensztein, 2008).

A government program as the one described above should contemplate the promotion of trust among participants because trust leads to a more effective cooperation (Mesquita & Larranzini, 2010). It should also consider the creation of specialized channels such as conferences, seminars and courses where social networks and formal (institutional) networks might develop and strengthen.

### *Managers*

In light of the results presented in this research, practitioners should increase their efforts towards developing a strong relationship with overseas networks, especially with trade associations located at their export markets. This action should reflect positively on the firm's export performance and could moderately decrease the negative impact of environmental uncertainty "customer needs" on export performance.

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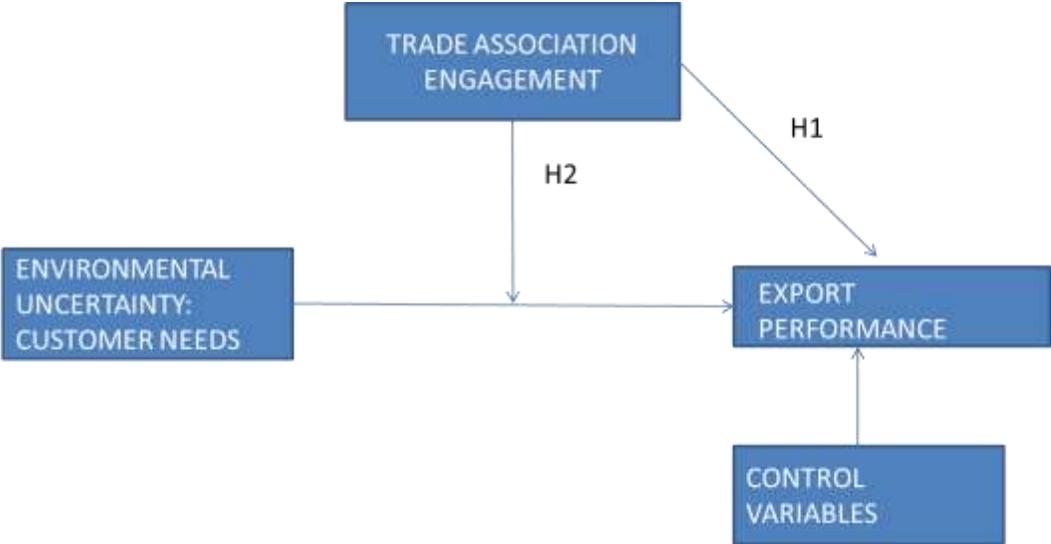
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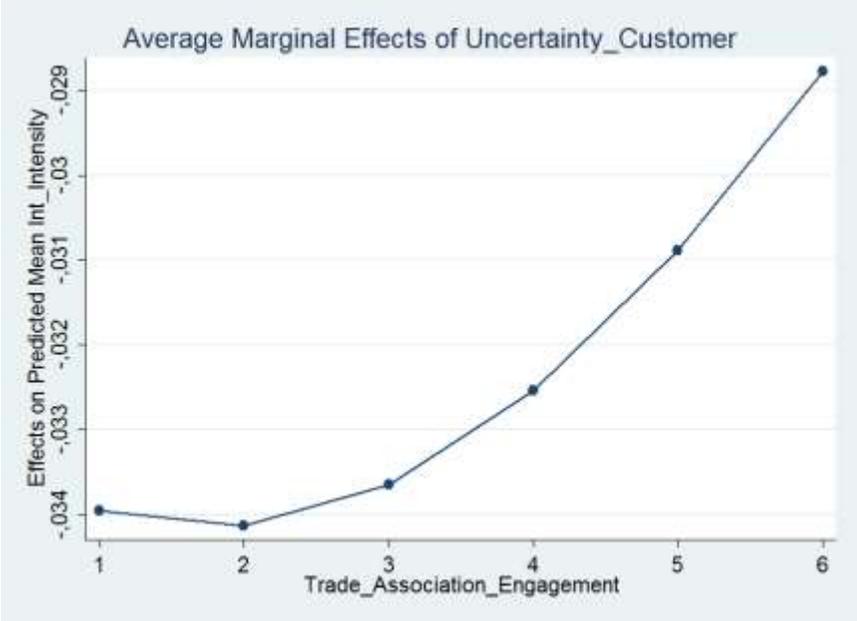
**FIGURES**

**FIGURE 1. CONCEPTUAL MODEL.**



The model is measured separately on 2 dependent variables representing export performance. These variables are: International intensity and The percentage of profit generated by exports.

**FIGURE 2. EFFECTS OF ENVIRONMENTAL UNCERTAINTY “CUSTOMER NEEDS” ON INTERNATIONAL INTENSITY AT DIFFERENT LEVELS OF TRADE ASSOCIATION ENGAGEMENT.**



Trade Association Engagement: 1=Extremely Weak Engagement, 6= Extremely Strong Engagement.

**TABLES**

**Table 1. Probabilities of Different Cooperation Mechanisms to Encourage Cooperation Between Local Firms and Local or Foreign Networks.**

<b>Engagement of Local firms with:</b>	<b>Kin Selection</b>	<b>Direct Reciprocity</b>	<b>Indirect Reciprocity</b>	<b>Spatial Selection</b>	<b>Group Selection</b>
Local Networks Formal Structure Actors are Organizations	Pr>0	Pr>0	Pr>0	Pr>0	Pr>0
Local Networks Informal Structure Actors are Organizations	Pr>0	Pr>0	Pr>0	Pr>0	Pr>0
Local Networks Formal Structure Actors are Individuals	Pr>0	Pr>0	Pr>0	Pr>0	Pr>0
Local Networks Informal Structure Actors are Individuals	Pr>0	Pr>0	Pr>0	Pr>0	Pr>0
Foreign Networks Formal Structure Actors are Organizations	Highly Improbable	Pr>0	Pr>0	Pr=0	Pr>0
Foreign Networks Informal Structure Actors are Organizations	Highly Improbable	Pr>0	Pr>0	Pr=0	Pr>0
Foreign Networks Formal Structure Actors are Individuals	Highly Improbable	Pr>0	Pr>0	Pr=0	Pr>0
Foreign Networks Informal Structure Actors are Individuals	Highly Improbable	Pr>0	Pr>0	Pr=0	Pr>0

Pr>0 There is probability for the mechanism to nurture cooperation.

Pr=0 There is no probability for the mechanism to foster cooperation.

**Table 2. GLM Regression Models Dependent and Independent Variables.**

Dependent Variables	Independent Variables
International Intensity	Trade Association Engagement
Percentage of Profit Generated by Exports	Environmental Uncertainty on Customer Needs
	<b>Control Variables</b>
	Competitive Environmental Dynamism
	Industry
	Size
	Age
	Risk Taking

**Table 3. Descriptive Statistics & Correlation Matrix.**

	N	Mean	St. Error	1	2	3	4	5	6	7	8	9	10	11	12
1 Int. Intensity	116	,6145776	,0322146	1											
2 % of Profit from Exports	110	0,57673	0,03392	0,8492*	1										
3 Trade Association	116	4,03448	,1009186	0,2034*	0,2668*	1									
4 Uncertainty Customer	116	4,18103	,134465	-0,2148*	-0,2041*	-0,0261	1								
5 Size	116	4,15709	0,17584	0,1277	0,0814	0,0252	0,0695	1							
6 Age	116	2,84797	0,09662	-0,1875*	-0,1264	0,1363	0,0167	0,2089*	1						
7 Competitive Dynamisms	116	1,41e-09	,0928477	-0,0598	-0,0585	0,0003	-0,0772	-0,1062	-0,0423	1					
8 Risk Taging	116	3,69e-09	,0928477	-0,0803	-0,0684	0,0407	-0,1790	0,0022	-0,0943	0,0307	1				
9 Agriculture	116	,5344828	,0465142	0,3770*	0,3928*	0,3012*	-0,3023*	-0,0247	0,0727	0,0548	0,0173	1			
10 Mining	116	,0431034	,0189382	0,1803	0,1376	-0,1244	0,0322	0,4189*	-0,0562	-0,1039	-0,0962	0,2274*	1		
11 Service	116	,3275862	,0437655	-0,3277*	-0,3422*	-0,1920*	0,2053*	-0,1233	-0,0590	0,0323	0,0091	0,7479*	-0,1481	1	
12 Manufacture	116	,0948276	,0273202	-0,2419*	-0,2194*	-0,1191	0,1634	-0,0508	0,0097	-0,0730	0,0227	0,3468*	-0,0687	-0,2259*	1

(\*) Significant at 95% level.

**Table 4. GLM Coefficients. Dependent Variables: International Intensity and Percentage of Profit derived from exports.**

VARIABLES	(1) Int. Intensity	(2) Int. Intensity	(3) % of Profit from Exports	(4) % of Profit from Exports
Trade		0.239* (0.126)		0.327** (0.138)
Uncertainty “Customer”		-0.157* (0.0941)		-0.140 (0.109)
Size	0.0898 (0.0864)	0.100 (0.0855)	0.0831 (0.0914)	0.0920 (0.0918)
Age	-0.322** (0.148)	-0.369** (0.146)	-0.254* (0.148)	-0.313** (0.146)
Competitive Dynamism	-0.0991 (0.140)	-0.112 (0.144)	-0.0948 (0.152)	-0.104 (0.157)
Risk Taking	-0.114 (0.148)	-0.163 (0.153)	-0.106 (0.154)	-0.169 (0.165)
Manufacturing	-2.475** (1.098)	-2.427** (0.971)	-1.741* (1.029)	-1.751** (0.890)
Service	-2.080** (1.030)	-2.100** (0.895)	-1.376 (0.960)	-1.415* (0.806)
Agriculture	-0.856 (1.013)	-1.120 (0.880)	-0.137 (0.929)	-0.464 (0.775)
Constant	2.453** (1.110)	2.397** (1.093)	1.407 (1.023)	1.004 (1.028)
Observations	116	116	110	110

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Mining sector left out as reference.

## APPENDIX

**Table 5. Effects of Environmental Uncertainty “ Customer Needs” on International Intensity at different levels of Trade Association Engagement (From Extremely Weak Engagement to Extremely Strong Engagement).**

	Coeff	St. Error	P>z
Ext. Weak	-0,0339511	0,0198709	0,088
Very Weak	-0,0341267	0,0200667	0,089
Weak	-0,033646	0,0198592	0,09
Strong	-0,0325429	0,0192348	0,091
Very Strong	-0,0308884	0,0182799	0,091
Ext. Strong	-0,0287826	0,0171504	0,093

N=116

Dependent variable: International Intensity

Coefficients for Marginal Effects Reported.

**Table 6. Principal Components Analysis: Risk Taking.**

Number of  
Observations: 116  
Retained Factors: 1  
Number of Parameters: 4

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2,89276	2,31927	0,7232	0,7232
Factor2	0,57348	0,27079	0,1434	0,8666
Factor3	0,30269	0,07161	0,0757	0,9422
Factor4	0,23108	.	0,0578	1

p>Chi2=0

**Factor Loadings:**

Variable	Factor	Uniqueness
var1	0,8049	0,3522
var2	0,8685	0,2457
var3	0,8745	0,2352
var4	0,852	0,2741

**Table 7. Principal Components Analysis: Competitive Dynamism.**

Number of  
Observations: 116  
Retained Factors: 1  
Number of Parameters: 3

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2,00767	1,41529	0,6692	0,6692
Factor2	0,59238	0,19242	0,1975	0,8667
Factor3	0,39995	.	0,1333	1

p>Chi2=0

**Factor Loadings:**

Variable	Factor	Uniqueness
var1	0,8606	0,2593
var2	0,7698	0,4074
var3	0,8212	0,3257

## SURVEY QUESTIONS

**International Intensity:**

Approximately what percentage of your company's total sales turnover was generated by exports? .

**Age:**

Approximately how long has your company been in business?

**Size:**

About how many full-time staff does your company employ on this country?

**Industry:**

In which industry does your company operate?

**Percentage of Profits Derived from Exports:**

Approximately what percentage of your annual total profit was derived from exports?

**Trade Association Engagement:**

Rate the level of engagement with trade associations located at your export markets in the past 3 years:

1= extremely weak, 2=very weak, 3= weak, 4=strong, 5=very strong, 6=extremely strong.

### **Environmental Uncertainty on Customer Needs:**

Consider the past 3 years: what number best represents your levels of agreement with the following:

“It has been hard to predict customers changing needs and wants”

1= extremely disagree, 2=strongly disagree, 3= disagree, 4=neutral, 5=agree, 6=strongly agree, 7=extremely agree.

### **Competitive Environmental Dynamism:**

Consider the past 3 years: what number best represents your levels of agreement with the following:

The competitive environment of our company has been highly dynamic

1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree.

Competition in our industry has changed a lot

1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree.

Our competitive environment has been evolving continuously

1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree.

### **Risk Taking:**

Please circle the numbers that best reflect your degree of agreement with the following statements. In your export operations over the past 3 years:

Our top export managers tended to invest in high-risk export projects

1= extremely agree, 2=strongly agree, 3= agree, 4=neutral, 5=disagree, 6=strongly disagree, 7=extremely disagree.

Our company has shown a great deal of tolerance for high risk export projects

1= extremely agree, 2=strongly agree, 3= agree, 4=neutral, 5=disagree, 6=strongly disagree, 7=extremely disagree.

Our export strategy was characterized by a strong tendency to take risks

1= extremely agree, 2=strongly agree, 3= agree, 4=neutral, 5=disagree, 6=strongly disagree, 7=extremely disagree.

Taking chances has been part of our export business strategy

1= extremely agree, 2=strongly agree, 3= agree, 4=neutral, 5=disagree, 6=strongly disagree, 7=extremely disagree.