TRADE ASSOCIATIONS, NETWORKS AND EXPORT PERFORMANCE
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ABSTRACT

Purpose:
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.

Methodology:
The authors analyze firm-level data from a South American emerging economy using a General Linear Model with a logistic transformation and robust standard errors (Papke & Wooldridge, 1993).

Findings:
The authors 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.

Originality:
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.

NETWORKS & EXPORT PERFORMANCE

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).

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, coopetition 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). Coopetition 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).

**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.

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. In this paper, we argue that on top of the dissimilarities portrayed by Perry (2009), 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 in the following table.

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. 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 (such as trade associations) 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. Cooperation mechanisms (in probabilistic terms) are fewer between local firms and overseas networks and cooperation is therefore less probable.

**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).

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.

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. Knorringa (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.

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). 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 coopetition 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: As the level of engagement between firms and trade associations located at their export market increases, the negative effect from environmental uncertainty “customer needs” on export performance approaches zero. The complete model proposed by this research is depicted in the following figure:

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

METHODOLOGY & CONTEXT

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.

3.2 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

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.

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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.

Both independent variables are single item measures. Bergkvist (2015) and Bergkvist & Rosssiter (2008) show that the appropriate use of single item measures is as predictively valid as the use of multiple-items measures. They clarify that single item measures offer adequate validity and reliability. This study includes both single item measures and multiple item measures in the model. Both types of measurements are predictively valid and reliable (Bergkvist, 2015).
**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>chi2 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--NAME OF FIGURE DETAIL---

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 approaches zero. 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 an statistically significant difference with the mining sector on export performance.

5. 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 amalgamates the ideas of Nowack (2006) and Chetty & Agndal (2007) revealing novel theoretical insights on the most relevant cooperation determinants of networks at the local and international level.

Table 1 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. These arguments do not need to be hypothesized and tested empirically as cooperation mechanisms have already been proven to exist in human cooperation and within human networks (Rand & Nowack, 2013). The originality of our proposal lies in the unconventional combination of the ideas of Nowack (2006) and Chetty & Agndal (2007), and the subsequent merge of two separate literature streams, one grounded on the theory of networks and the other on the theory of human cooperation.

The proposed blend illustrated in Table 1 extends our existing knowledge in a significant matter as it brings into the international business field the subject of cooperation mechanisms within specific networks. As Corley & Gioia (2011, p.19) highlight, our contribution integrates past research into a new framework,
undertaking the phenomenon from a different angle. It offers theoretical utility as it enhances our understanding of the complex cooperation phenomena and opens potential lines of research. It also renders practical utility as it serves as a guide for business managers on the development of cooperation expectations at local and international levels. These elements of originality and utility, both present on the set of ideas portrayed in Table 1, are the key factors defining a strong theoretical contribution (Corley & Gioia, 2011).

Our research also argues that a cooperative venue might produce a positive or negative outcome on cooperating partners and extends on the weight of the cost benefit relationship of each cooperative initiative as the key factor that delivers the impulse towards sustainable cooperation and positive results (Nowack, 2012). Our view discards the idea of cooperation as a monotonic function. It is not solely that cooperation exerts a positive impact on export performance on every context, but that the presence of an appropriate cost-benefit ratio in a determined context fosters cooperation in a way that it ultimately impacts export performance positively.

This cost-benefit ratio is driven by firm’s resources and capabilities as well as by environmental factors. Such a cost-benefit ratio is therefore contextual, contingent on a very difficult to grasp plethora of elements. Our empirical results (coefficients shown in Table 4) are a first attempt to approach the realm of cost-benefit ratios in the international cooperation of firms with trade associations. Our findings confirm that the actual cooperation cost-benefit ratio in Chile promotes a positive stable cooperation between local businesses and trade associations located at the firm’s export market.

In this sense, our results are a novel measure of an unaccounted phenomena. They challenge current assumptions by pointing out that the reduction of the negative effects of environmental uncertainty on customer needs as the engagement with a trade association increases are basically negligible and only statistically significant on international intensity. Agerfalk (2014, p.594) defines an empirical contribution as a “novel account of an empirical phenomenon that challenges existing assumptions about the world or reveals something previously undocumented”. Empirical contributions have a foremost role in many scientific disciplines (the most relevant example is medicine) and should also have a distinguished place on the study of international entrepreneurship and international business.

Our findings indicate 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. It is the task of further study and measurement to pave the way into a clearer conceptualization on why this effect is not more significant (Agerfalk, 2014).
References


**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.

<table>
<thead>
<tr>
<th>Engagement of Local firms with:</th>
<th>Kin Selection</th>
<th>Direct Reciprocity</th>
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Informal Structure
Actors are Organizations

Foreign Networks
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Actors are Individuals

Informal Structure
Actors are Individuals

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.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Independent Variables</th>
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<td>International Intensity</td>
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<td>Environmental Uncertainty on Customer Needs</td>
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Table 3. Descriptive Statistics & Correlation Matrix.

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(*) Significant at 95% level.
Table 4. GLM Coefficients. Dependent Variables: International Intensity and Percentage of Profit derived from exports.

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<tr>
<th>VARIABLES</th>
<th>(1) Int. Intensity</th>
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<th>(3) % of Profit from Exports</th>
<th>(4) % of Profit from Exports</th>
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<td>(0.126)</td>
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<td>Uncertainty “Customer”</td>
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<td></td>
<td>(0.0941)</td>
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<td>(0.148)</td>
<td>(0.146)</td>
<td>(0.148)</td>
<td>(0.146)</td>
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<td>-0.112</td>
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<td>(0.140)</td>
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<td>(1.098)</td>
<td>(0.971)</td>
<td>(1.029)</td>
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</tr>
<tr>
<td>Service</td>
<td>-2.080**</td>
<td>-2.100**</td>
<td>-1.376</td>
<td>-1.415*</td>
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<td>-0.464</td>
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<td>(1.013)</td>
<td>(0.880)</td>
<td>(0.929)</td>
<td>(0.775)</td>
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<td>2.397**</td>
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<td>(1.110)</td>
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</table>

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).
N=116
Dependent variable: International Intensity
Coefficients for Marginal Effects Reported.

Table 6. Principal Components Analysis: Risk Taking.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Difference</th>
<th>Proportion</th>
<th>Cumulative</th>
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</thead>
<tbody>
<tr>
<td>Factor1</td>
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p>Chi2=0

Factor Loadings:

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<tr>
<td>var2</td>
<td>0.8685</td>
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<td>var4</td>
<td>0.852</td>
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Table 7. Principal Components Analysis: Competitive Dynamism.

<table>
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<th>Difference</th>
<th>Proportion</th>
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p>Chi2=0

**Factor Loadings:**

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<tr>
<th>Variable</th>
<th>Factor</th>
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</tr>
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<tbody>
<tr>
<td>var1</td>
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<td>var2</td>
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<tr>
<td>var3</td>
<td>0,8212</td>
<td>0,3257</td>
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**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.