



Exporting firm's engagement with trade associations: Insights from Chile

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ABSTRACT

This study addresses the effects of the firm's level of engagement with trade associations located at the company's export market on export performance. It analyzes firm-level data from a South American emerging economy, Chile. Results show 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 study contributes to the international management literature by investigating the direct and moderating effects of overseas trade associations 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. Practical implications are discussed.

1. Introduction

Export performance of small and medium sized firms (SMEs') remain 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, Janssen, Leonidou, & Christodoulides, 2016; Cieřlik, Kaciak, & Thongpapanl, 2015), despite the fact of emerging new global trends on de-globalization (Ghemawat, 2017).

The understanding and modeling of export performance is typically grounded on the Resource Based View (RBV). The resource-based theory posits that firm's internal tangible and intangible resources result in competitive advantage and export performance (Barney, 1991; Zou & Stan, 1998). On the contrary, the contingency approach suggests that the interdependence of firm external and internal factors determines firm's export performance (Cavusgil & Zou, 1994; Yeoh & Jeong, 1995; Sousa, Martínez-López, & Coelho, 2008). This study approaches export performance from the contingency perspective.

Institutional networks need more attention in the study of export performance, especially within SMEs (Chetty & Agndal, 2007). At the same time, external networks and horizontal relationships, such as engaging with trade associations are factors that require further study (Boehe, 2013; Guimón & Paraskevopoulou, 2017). This is 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 (Lavie, 2006; Yiu, Lau, & Bruton, 2007), 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, Yeung, & Cheng, 2009; Phua, 2007). Nevertheless, very few studies that surpass national borders have addressed the relationship between environmental uncertainty on customer needs and inter-organizational collaborations (Matanda & Freeman, 2009). The evidence on the effect of such relationships is scarce when emerging markets are the context of study.

In particular, Kiss, Danis, and Cavusgil (2012), emphasize the necessity to comprehend the connection between firms and international networks in the context of emerging economies. For emerging markets, the predominance of networks is a mechanism to replace formal institutions, which are declining when the latter are strengthened and improved. They ask for a deeper understanding on how firms manage the complexity of resource acquisition while engaging with international networks (Kiss & Danis, 2008; Kiss et al., 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 effects that such engagement exerts on the impact of*

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environmental uncertainty on export performance?

Previous literature has mainly focused on the question “Should firms concentrate more on local or foreign networks?” (Patel, Fernhaber, McDougall-Covin, & van der Have, 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 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 the South American emerging economy, Chile, by Dimitratos, Amorós, Etchebarne, and Felzensztein (2014), which shows that inter-firm networks increases the firm's probability of becoming a micro-multinational and expanding to a diversified portfolio of export markets. A positive effect of networks on internationalization is then suggested by this study. A prior study by Geldes and Felzensztein (2013) reports a negative effect of inter-firm cooperation on marketing innovation in the same context of Chile. Such a decrease in innovation should result in a diminishing firm internationalization.

Nowak (2012) clearly depicts that an inter-firm 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 on networks and export performance by: 1) Outlining the essential inequalities between the determinants of cooperation of local networks (networks located in the home country) and networks overseas (networks located in the host country). 2) Expanding current knowledge on the impact of horizontal networks such as trade associations on export performance, specifically when their location is beyond national boundaries. 3) Broadening the understanding on how the level of engagement with horizontal networks located overseas might assist in reducing export performance barriers, such as environmental uncertainty on customer needs.

In the following section we introduce the theoretical discussion, then hypotheses are presented. Data, Methodology and Results follow. Finally, we discuss the conclusions and the limitations, as well as the practical and theoretical implications of this study.

2. Networks, trade associations and firm's export performance

Resource based view suggests that 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 (Sousa et al., 2008). 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 model may posit that outcomes are contingent upon intervening variables. Cavusgil and Zou (1994) discussed that export performance is “determined by the alignment between export

marketing strategy, and internal and external environments of the firm.” Hence, the contingency approach tests the theory that the firm external environment exerts an important role on its export outcome (Cavusgil & Zou, 1994; Yeoh & Jeong, 1995). Studies have shown that external networks and its markets, which are positioned through network theory, are used to obtain resources/capabilities lacking in the firm (Griffith & Harvey, 2001). 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, especially for small firms in international markets (Chetty & Agndal, 2007; Felzensztein, Ciravegna, Robson, & Amorós, 2015; Guimón & Paraskevopoulou, 2017).

2.1. A classification of networks

Firms manage a set of networks that include: social networks, reputational networks, marketing information networks, *coopetition* networks and cooperative technology networks (Hong & Snell, 2015; Nicholson, Gimmon, & Felzensztein, 2017). The concept of social networks refers to relationships among individuals. These relationships with friends and non-business acquaintances are relevant start-up resources that assist small firms in securing finance, suppliers, information, and customers (Lechner, Dowling, & Welpé, 2006; Pinho & Prange, 2016). This is also relevant for SMEs operating in emerging economies like Chile (Felzensztein et al., 2015). Reputational networks, on the other hand, have a signaling purpose (Deeds, Mang, & Frandsen, 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 inter-connected stakeholders (Johanson & Vahlne, 2009). *Coopetition* networks are made of direct inter-firm relationships. Such direct relationships have a positive effect on export intensity (Boeche, 2013).

Chetty and 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 being 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 (Boeche, 2013).

2.2. Impact of external networks on export performance

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” (Boeche, 2013, pp. 168). Network resources may include business contacts, market information, weight in the political arena, or specialized equipment (Ciravegna, Lopez, & Kundu, 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). Networks are of special importance in emerging economies (Meyer & Peng, 2015; Zhu, Hitt, & Tihanyi, 2006). This is because networks create social capital that turns to be essential in the internationalization of firms (Felzensztein et al., 2015), as found in the case of Chilean SMEs. It also plays a key role in the development of trust (Felzensztein, Gimmon, & Carter, 2010; Guimón & Paraskevopoulou, 2017), as found in Chile, Scotland and Costa Rica. Trust assists firms in coping with conditions of uncertainty, and allows them to share information about export markets (Felzensztein, Brodt, & Gimmon, 2014; Shirokova & McDougall-Covin, 2012). 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.

2.3. Differences in cooperation determinants of local networks and networks located overseas

Firms might acquire knowledge of different sorts (technological, institutional, business and market knowledge or internationalization knowledge) by cooperating directly with a foreign partner or cooperating through overseas institutional networks such as trade associations (Patel et al., 2014). Nevertheless, the theoretical differences in the determinants of cooperation of local and overseas networks remain under-explained in the international business literature. Though several researches extend on the benefits of collaborating with overseas partners (e.g. Musteen, Francis, & Datta, 2010) no explicit differentiations on the cooperation motives between local and overseas networks, other than the cultural and institutional contrasts portrayed by Kiss et al. (2012), have been outlined previously. The question on the unique determinants of cooperation of local and overseas networks is key for impact on 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. In this study, 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.

From Nowak (2006) and Chetty and Agndal (2007), we single out the theoretical differences in the cooperation determinants of local and foreign networks in Table 1.

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 (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.

Nevertheless, this condition does not mean that cooperation will not arise and prevail. Nowak (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 (Nowak, 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.

2.4. Trade associations and inter-firm cooperation

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 (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 & Stanisławski, 2015). 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. Trade associations, which are integrated in specific industries, could adopt a competitive stance and support competitive actions, thus generating a negative outcome from cooperation.

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 experiment a loss expressed as an opportunity cost because it could have allocated its resources in more profitable venues. Cooperation at different levels of commitment may cause losses to one of the cooperating partners. 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. Rabellotti (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.

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, different kinds of proximities in social networks influences collaboration between firms at a larger extent than spatial proximity (Geldes, Felzensztein, Turkina, & Durand, 2016; Guimón & Paraskevopoulou, 2017). This fact could explain an underlying tendency in this emerging economy towards the development of social ties for SMEs internationalization (Felzensztein et al., 2015).

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

Table 1
Probabilities of different cooperation mechanisms to encourage cooperation.

Engagement of Local firms with:	Kin Selection	Direct Reciprocity	Indirect Reciprocity	Spatial Selection	Group Selection
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.

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 (Guimón & Paraskevopoulou, 2017; Felzensztein et al., 2014). In this sense, and based on previous studies, foreign trade association networks influence firms across national boundaries fostering exports. Hence, we propose:

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

2.5. Trade associations and 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, Lioukas, & Carter, 2004). This study considers environmental uncertainty on customer needs, also known as market turbulence, as it relates to managers constraints in predicting future trends of consumers (Cadogan, Sundqvist, Salminen, & Puumalainen, 2005; Hoque, 2004; Jaworski & Kohli, 1993). Market turbulence is negatively associated with the increase of export performance (Matanda & Freeman, 2009). Determining market turbulence using Jaworski and Kohli (1993) scale determines the fluctuation of export customers’ products needs and requirements over time (Cadogan et al., 2005). It is well known that lack of institutional support in emerging economies could result in an increase of environmental uncertainty (Ghauri, Lutz, & Tesfom, 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, Manev, & Gyoshev, 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 (Zhang & 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 propose:

H2. *As the level of engagement between firms and trade associations located at their export market increases, the negative effect from environmental uncertainty on export performance approaches zero.*

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

3. Methodology

3.1. Context

Chile is a desirable country for this research because of several reasons: Firstly, inter-firm collaboration has been well documented in previous recent studies (Felzensztein et al., 2015; Felzensztein et al., 2014; Geldes et al., 2016; Guimón & Paraskevopoulou, 2017), thus providing hints on the effects of cooperation on export performance. Secondly, it is a small emerging export-oriented economy (Guimón, Chaminade, Maggi, & Salazar-Elena, 2017), where the study of overseas networks needs further attention. Finally, it is a country where a high percentage of its exports concentrate on natural resource industries, which currently suffer from international commodity prices. Under these conditions, export performance is becoming an even more relevant subject of study to policy makers.

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 (Guimón et al., 2017; Nicholson et al., 2017). On top of that, it is especially pertinent to further develop research on cooperation in the context of emerging economies (Beamish & Lupton, 2016), as the ones suggested at the latest 2017 Strategic Management Society conferences in Latin America. The contextual variations found in emerging markets constitute the core of a new approach to theory on business phenomena (Meyer & Peng, 2015).

3.2. Data collection

We collected primary data by a survey in 2015–2016 aiming to explore the effects of overseas trade association engagement on export performance and the moderating effects of foreign trade association engagement on environmental uncertainty (survey questions are shown in the appendix).

Before implementing the survey, a pre-test with ten general managers based in Chile was conducted. 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 exports promotion office. A total of 800 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 (general managers) answered the questions while consulting other firm’s managers to control information bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p.881). Surveys were applied in Spanish and translated to English with the back-translation method. 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 only 26 percent are large firms (with more than 200 employees, but less than 250 full-time employees). Therefore, we can consider our sample based on SMEs.

3.3. Measurement

This study uses a General Linear Model (GLM) to test hypotheses. Considering that both dependent variables are proportions, we selected as methodology a GLM model with a logit transformation and robust standard errors as suggested by Papke and Wooldridge (1993). The model’s dependent and independent variables are shown in Table 2.

3.3.1. Dependent variables

This study measures export performance through two distinct ratios: On one hand International Intensity is the volume of exports in the firm divided by total sales (Boehe, 2013; Fernhaber, Gilbert, & McDougall, 2008). On the other hand, the survey asked general 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.

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
Control Variables	
Competitive Environmental Dynamism	
Industry	
Size	
Age	
Risk Taking	

3.3.2. 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: 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 and Rossiter (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).

3.3.3. Control variables

Competitive environmental dynamism: (also referred as competitive intensity) speaks of a high level of rivalry in export markets (Cadogan, Cui, & Kwok Yeung 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 factor analysis to reduce these three questions into one factor. Eigenvalues and loadings are displayed in the appendix. The selected factor has an Eigenvalue of 1.5.

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, which also captures the firm experience. Age is regularly included in export performance models (Fernhaber et al., 2008; Zhao & Zou, 2002). 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 factor analysis to reduce these four questions into one factor. Eigenvalues and loadings are displayed in the appendix. The factor selected has an Eigenvalue of 2.5.

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

4. Results

Table 3 shows the descriptive statistics and correlation matrix of the dependent, independent and control variables of the proposed models.

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	0,576773	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 Dynamism	116	1,41e-09	,0928477	-0,0598	-0,0585	0,0003	-0,0772	-0,1062	-0,0423	1					
8 Risk Taking	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.

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 (Table A4 shown in Appendix). Average VIF is 1.76 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 confirms that the proposed models are effective, reliable, and valid.

4.1. 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 positively in the furniture manufacturing industry in Brazil. Nonetheless, he does not find a significant effect of local trade association 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

Table 4
GLM coefficients: international intensity and percentage of profit derived from exports.

VARIABLES	(1)	(2)	(3)	(4)
	Int. Intensity	Int Intensity	% Profit Export	% Profit Export
Trade		0.239*		0.327**
		(0.126)		(0.139)
Uncertainty “Customer”		-0.155*		-0.137
		(0.0928)		(0.107)
Size	0.0915	0.102	0.0849	0.0936
	(0.0863)	(0.0853)	(0.0920)	(0.0925)
Age	-0.320**	-0.367**	-0.252*	-0.310**
	(0.148)	(0.147)	(0.148)	(0.146)
Competitive Dynamism	-0.0493	-0.0602	-0.0412	-0.0486
	(0.156)	(0.159)	(0.169)	(0.172)
Risk Taking	-0.128	-0.180	-0.111	-0.178
	(0.156)	(0.160)	(0.162)	(0.170)
Manufacturing	-2.478**	-2.435**	-1.751*	-1.765**
	(1.096)	(0.971)	(1.022)	(0.885)
Service	-2.097**	-2.123**	-1.399	-1.444*
	(1.026)	(0.893)	(0.951)	(0.801)
Agriculture	-0.875	-1.143	-0.162	-0.493
	(1.009)	(0.879)	(0.921)	(0.771)
Constant	2.456**	2.394**	1.413	0.999
	(1.107)	(1.092)	(1.018)	(1.027)
Observations	116	116	110	110

Robust standard errors in parentheses.

Mining sector left out as reference.

**p < 0.01; *p < 0.05; p < 0.1.

international intensity and the percentage of profits derived from exports positively. Results 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 (Fig. 1).

Following Williams (2012), p.326–327 we calculated the marginal effects of environmental uncertainty customer on export performance at representative values of overseas trade association engagement using the margins command in the Stata software. Following the recommendations of Greene (2010) and Karaca-Mandic, Norton, and Dowd (2012) we add a graphical representation depicting how the impact of environmental uncertainty changes at every level of the firm’s engagement with an overseas trade association (Fig. 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 on the percentage of profits derived from exports at increasing levels of trade association engagement are not significant at a 90% confidence level.

As shown in Fig. 2 (Table A1 in the appendix), as the level of engagement with trade association 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 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 0005. We conclude that a stronger engagement with a trade association located at the firm’s

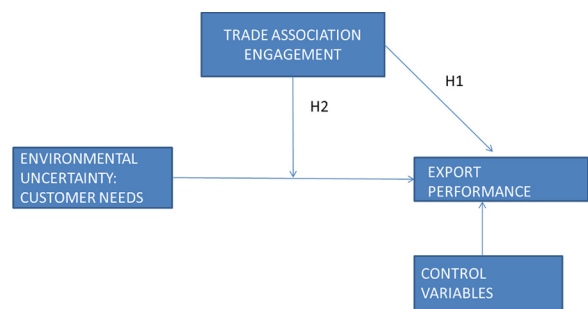


Fig. 1. Conceptual Model. The model is measured separately on 2 dependent variables representing export performance. These variables are: International intensity and The percentage of profit generated by exports.

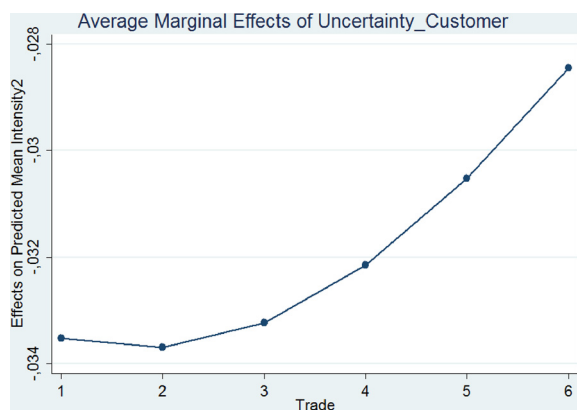


Fig. 2. Effects of environmental uncertainty on Export Intensity at different levels of trade association engagement. Trade Association Engagement: 1 = Extremely Weak Engagement, 6 = Extremely Strong Engagement.

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. Results partially support H2.

4.2. 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 and Zou (2002), who find positive and significant effects of size on export performance. This result indicates that in this emerging economy, companies with a larger size do not have an advantage on export performance when compared with smaller companies.

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 and does not grow.

Risk taking and competitive dynamism do not show a statistically significant effect on either international intensity or the percentage of profits derived from exports. Further studies should focus on this two variables and try to answer why they do not exert a relevant impact on the Chilean economy.

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 merges the ideas of Nowak (2006) and Chetty and 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 & Nowak, 2013). The originality of our proposal lies in the unconventional combination of the ideas of Nowak (2006) and Chetty and 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.

Our study 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 (Nowak, 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 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.

6. Conclusion, limitations and implications

Results show 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. Our results are a novel measure of an unaccounted phenomena and challenge current assumptions by pointing out that 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 the effect of trade association engagement on the reduction of environmental uncertainty as a barrier to export performance is not more significant (Ågerfalk, 2014). Future research could use qualitative analysis in order to grasp an in-depth understanding on how and why this results emerges. How and why questions demand a more exhaustive approach and may require extensive interviews with general 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? 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. In addition, a deeper look into the cost-benefit ratio within cooperative venues is also required

6.1. 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. Secondly, data gathering is a difficult endeavor in emerging economies, and a bigger sample could allow for the inclusion of more control variables to the proposed model and a better measurement. The lack of more control variables is a limitation to the current model. In addition, although international intensity as a measure of export performance has been present in multiple studies (Boehe, 2013; Fernhaber et al., 2008). This measure as well as the percentage of profits derived from exports might not capture the complete multidimensional essence of export performance. Thirdly, the case for a single item measure is only applicable to the environmental uncertainty on customer needs and the trade association engagement variables in the study. While Bergkvist (2015) points out that the appropriate use of single items measure is as predictively valid as multiple-item measurements, a problem may arise when the single item is interpreted with a high degree of ambiguity. Lastly, the survey to the general managers may have had response biases, wherein the participants may have given acceptable, albeit imprecise, answers so as not to harm the firm they represent.

6.2. Practical implications

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. The findings are relevant in a global context where the flow of information and tacit knowledge remain as some of 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.

Therefore, government programs should focus on the creation and development of networks composed of local trade associations, trade associations located in export markets, and local firms. First of all, a centralized information center should be created at every country. This information center should provide contact information of key representatives of trade associations in host countries with high demand of the country's products.

For instance, the agriculture sector has strong exports in Chile. If a firm that exports grapes wants to increase its engagement with a trade association in a country that it is targeting as a potential buyer, it should be able to swiftly access the information on key contacts from the trade associations of grape producers and grape distributors in the targeted country. The database should include information on previous involvement of the trade association with local businesses, so that the reputation of a trade association as a cooperation partner can be assessed with ease. Reputation could be incorporated in the information system with a peer to peer validation technology. New technologies that facilitate the validation of information and the creation of consensus, such as the blockchain and other distributed ledger technologies, could assist in facilitating the creation of effective open data reliable information sources at the country level. In this way, local firms would engage mostly with trade associations located at their export markets that have shown a record of cooperating at high levels with local companies. The latter should reduce inefficiencies arising from cooperating with the wrong trade associations.

In addition to that, governments should assign resources to the promotion of events that bring together local firms and trade associations located at their export market. That could be achieved by organizing trade fairs at the local level where firms could cover part of the cost of bringing trade associations from their export markets, while a substantial part of such cost is covered by government.

On the other hand, firm managers that wish to increase the export potential of their companies should improve their efforts to engage trade associations located at their export markets. If information on the key contacts from trade associations overseas in the company's sector is

not available, managers should pursue the creation of their own dataset. This effort should be followed by an approach towards these trade associations and potential participation in events organized by the trade associations at the host market. In today's world, tools like webinars, online courses, and video calls are regular. The use of these instruments to facilitate the interaction with trade associations located in export markets is key.

For instance, a firm could participate in a webinar organized by an overseas trade association, it could also approach the trade association and propose a joint effort designing a course in an area that the company has expertise. These activities would increase the engagement level with the trade association at the export market. Efforts like these could very well be underestimated in current business practices, but the results of this research show that a set of actions that may not imply a substantial increase in operational cost for firms, such as the ones previously mentioned, could provide a tangible advantage to the firm in accessing foreign markets.

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.

Appendix A

See Tables A2 and A3

Table A1

Marginal effects of environmental uncertainty on international intensity (from extremely weak engagement to extremely strong engagement).

	Coeff	St. Error	P < z
Ext. Weak	-,0335201	,0196249	0,088
Very Weak	-,0336999	,0198217	0,089
Weak	-,0332326	,019621	0,090
Strong	-,0321506	,0190082	0,091
Very Strong	-,030523	,018068	0,091
Ext. Strong	-,028447	,016955	0,093

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

Table A2

Factor analysis: risk taking.

Number of Observations:	116			
Retained Factors:	1			
Number of Parameters:	4			
Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2,53275	2,34563	1	1
Factor2	0,18712	0,26278	0,0739	1,0739
Factor3	-0,07565	0,03583	-0,0299	1,0440
Factor4	-0,11148	0	-0,0440	1
p > Chi2 = 0.				
Factor Loadings:				
Variable	Factor		Uniqueness	
var1	0,7150		0,4887	
var2	0,8233		0,3222	
var3	0,8412		0,2924	
var4	0,7975		0,3639	

Table A3

Factor analysis: competitive dynamism.

Number of Observations:	116			
Retained Factors:	1			
Number of Parameters:	3			
Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1,54962	1,54949	1	1
Factor2	0,00013	0,00029	0,0001	1,0001
Factor3	-0,00016	0	-0,0001	1
p > Chi2 = 0				
Factor Loadings:				
Variable	Factor		Uniqueness	
var1	0,8368		0,2998	
var2	0,5988		0,6414	
var3	0,7006		0,5091	

Table A4
VIF of variables in the model.

		VIF
1	Int. Intensity	3,88
2	% Profit Exports	3,77
3	Trade Association	1,12
4	Uncertainty Customer	1,2
5	Size	1,18
6	Age	1,16
7	Competitive Dynamism	1,03
8	Risk Taking	1,11
9	Industry	1,43

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