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**Networks, entrepreneurial orientation and internationalisation scope – evidence from Chilean small and medium enterprises**

**Abstract**

During the last twenty years the literature on internationalised small firms discussed at length the speed of internationalisation, illustrating the importance of *born globals*. The geographic scope of small firm internationalisation and its implications for international business and entrepreneurship theories has however been overlooked, especially with regards to firms based in Latin America. This study expands the research agenda on the effects of networks and entrepreneurship orientation for the internationalisation strategy of small firms by examining their effects on internationalisation scope. It uses survey data from small firms based in Chile. The findings suggest that the greater the number of networks utilized, the more entrepreneurs are likely to target markets based in diverse regions of the world. The study has managerial and policy implications, suggesting that nurturing diverse international networks can help entrepreneurs reach a broader number of markets.

**Keywords:** small firm internationalisation, international strategy, entrepreneurial orientation, networks, internationalisation scope, Chile

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***1. Introduction***

Theories of internationalisation strategy were originally developed to explain the behaviour of large firms, typically multinational corporations (Johanson and Vahlne 1977). Since the mid-1990s, several authors pointed to the existence of small firms that operate internationally in spite of having fewer resources than larger firms (Rennie 1994; Madsen and Servais 1997; Oviatt and McDougall, 1994). The internationalisation of small firms has three key dimensions: its speed, intended as the number of years between foundation and the achievement of a certain minimum threshold of exported sales; its intensity, generally measured as the percentage of exports over total average annual sales; and its scope, or the markets penetrated (Crick, 2009). Within the international business literature most empirical studies discussed mainly one aspect of small firm internationalisation: speed. This led to the development of the born global theory (Knight and Cavusgil 2004). Less attention has been dedicated to studying the geographic scope of small firms’ internationalisation strategy (Taylor and Jack 2012; Kuivalainen, Sundqvist, and Servais 2007).

A common item used to measure the scope of internationalisation is the number of export markets (Crick 2009). However, this fails to capture a key aspect of internationalisation strategy: whether firms focus on conquering a set of markets within the same region, or enter markets located in multiple and diverse areas of the world (Dimitratos, Plakoyiannaki, and Pitsoulaki 2010; Kuivalainen Sundqvist, Saarenketo, and McNaughton 2012). Some scholars of born globals argue that the internationalisation of small firms is more global than that of larger firms, often targeting from inception several lead markets and multiple regions (Madsen and Servais 1997; Oviatt and McDougall 2005). Other studies argue the opposite. They illustrate that firms that internationalise fast and intensively may first focus on a small range of markets, being in fact “born regionals” as opposed to “born global” (Taylor and Jack 2012; Lopez, Kundu, and Ciravegna 2009). The debate about the degree of born globalness (Kuivalainen et al. 2007) and the differences between born globals and born regionals (Lopez et al. 2009), suggest that there may be a trade-off between some of the dimensions of internationalisation (speed, scope and intensity). It could be, for example, that firms that rely mainly on export for their sales target fewer markets, whereas others export a lower share of sales but to broader and more geographically diverse economies.

This study aims to advance the research agenda on small firms’ international strategy by analysing the factors that influence the diversity of economic regions they target (Dimitratos, et al. 2010). It examines whether firms that sell a higher percentage of their exports outside of their home region, and thus rank higher in terms of internationalisation intensity, also succeed in penetrating a higher number of economic regions and discusses the factors that may explain this outcome.

For small and medium enterprises, entering new markets is a risky endeavour. Exporting firms are often associated with the pro-active, risk taking, innovative behaviour of entrepreneurs, captured by the concept of Entrepreneurial Orientation (Covin and Slevin 1989, 2011; McDougall and Oviatt 2000; Rauch et al. 2009; Ciravegna, Benitez Majano and Ge 2013; Zahra et al. 2005; Wood, Khavul, Perez‐Nordtvedt, Prakhya, Velarde Dabrowski, and Zheng 2011). There is, however, scarce empirical evidence about the effects of entrepreneurial orientation on the scope of internationalisation. We contribute to the study of small firms’ internationalisation by examining whether firms that have a higher entrepreneurial orientation, are associated to a more global internationalisation strategy.

Small firms, including new firms, rely on a more heterogeneous set of resources than large firms when pursuing their strategic objectives, such as internationalising (Brush et al. 2009; Madsen and Servais 1997). One of the most important resource that they rely on is their networks (Chetty and Blankenburg Holm 2000; Jacks 2008; Coviello 2006). There is a large body of empirical evidence suggesting that firms based in emerging economies benefit from the use of networks (Peng and Luo 2000; Zhou, Wu, and Luo 2007; Musteen, Francis. and Datta 2010). This is partly because they operate in more unstable markets, affected by institutional voids (Khanna and Palepu 2010). However, it is unclear if using a larger number of networks leads entrepreneurs to internationalise in a more focused way, for example targeting only neighbouring countries or multiple clients in only one market, or whether it also supports a global internationalisation strategy. We contribute to the debate by examining the relationship between the number of networks and the internationalisation scope. We use a sample of Chilean small firms. Our results contribute to the international business and international entrepreneurship literature by examining the effects of both the network and entrepreneurial orientation on the scope of small firm internationalisation. These two topics are important and still much disputed aspect of small firm internationalisation (Dimitratos et al. 2010; Robson et al. 2012). Understanding them can provide important insights for entrepreneurs that are choosing their internationalisation strategies as well as for the institutions that may support them, such as export promotion agencies and trade associations.

The paper is organized as follows. In section two, we develop theory and present the hypotheses. The data and methods utilized to test these hypotheses are discussed in section three. In section four we report and discuss the results. Lastly, conclusions, limitations and avenues for additional research are identified.

***2. Theoretical insights and hypotheses***

Most current studies of small firms’ internationalisation focus on a small range of countries and industries with very few studies examining emerging market firms, despite the increasing role of these markets in the world economy (Robson et al. 2012; Chandra, Styles, and Wilkinson 2012). There is an expanding stream of literature studying the international strategy of emerging market multinationals (Zou and Ghauri, 2010, Boehe, 2013), but there still is very little evidence about small firms based in emerging markets and more specially those located in Latin America and their internationalisation scope. Within emerging markets, there is also a great disparity in terms of coverage: most empirical evidence tends to focus on the so-called BRICs (Brazil, Russia, India and China), and more specifically on China and India, whereas other economies, and especially Latin American and African economies, are grossly underrepresented in the international business and entrepreneurship literature (Wood et al. 2011). On the other hand, Kuivalainen et al. (2007) point that it is important to verify whether and why firms expand internationally only within a specific region, or whether they have a globally diversified client portfolio. Then small firms’ internationalisation and the role of networks and entrepreneurial orientation are key components in our study.

**2.1 Networks and small firms’ internationalisation**

Networks have become more formally accepted as a key firm-level resource by the internationalisation and international entrepreneurship theories (Coviello 2006; Johanson and Vahlne 2009; Sasi and Arenius 2008; Jones, Coviello, and Tang 2011). This is consistent with studies of small entrepreneurial firms (Jacks 2008). Smaller firms suffer from having fewer resources than their larger competitors. For example, it may be too costly for them to advertise their product extensively in international markets in order to acquire new consumers. They compensate to their resource constraints by leveraging their contacts with trusted suppliers, clients, and allied firms (Peng and Luo 2000).

The literature on international entrepreneurship illustrates that entrepreneurs use their personal contacts as firm-level resources, in particular when scanning for business opportunities in new foreign markets (Ellis 2011). Smaller firms use networks to overcome the liability of their smallness, foreignness, and occasionally newness (Coviello 2006; He and Wei 2013). Several studies examine the effects of using networks on different aspects of performance (Peng and Luo 2000; Zhou et al. 2007). On the other hand, the networking perspective favours resource pooling and sharing through alliances and social embeddedness with domestic and host organizations to foster expansion in international markets (Prashantham and Young 2011). This important role for networking in internationalisation is also critical for firms originating in emerging economies (Mesquita and Lazzarini 2008). Entrepreneurial firms that seek and exploit learning opportunities through networks enjoy significant international growth (Prashantham and Dhanaraj 2010). Firms that actively acquire knowledge from alliance partners and disseminate such knowledge within their organizations are more capable of engaging in successful alliance relationships (Liu, Ghauri, and Sinkovics 2010). Networking with both domestic and international partners is the organization-related variable that receives the most attention in the emerging internationalisation of SMEs literature (Prashantham 2011; Felzensztein et al. 2014).

A recent study (Boehe 2013) based on the resource-based view and on the elements from social network theory, analysed a sample of southern Brazilian SMEs to find evidence for the hypothesis that access to local networks, facilitated by a firm´s membership in an industry association, strongly predicts the propensity to export. Boehe (2013) also found that a firm´s local collaborative intensity is positively related to its export intensity and the firm´s distance from the local network´s centre moderates both relations. There is, however, less evidence on whether using networks affects the market selection process of internationalising small firms, especially whether it leads them to focus on a small range of regional markets or helps them expand globally (Lopez et al. 2009).

The diversity of markets a firm targets is an important measurement of whether it is a truly global small firm or whether it is only a small firm that operates internationally (Crick 2009). A firm could be exporting most of its output in only one market. It could also export to a high range of markets, all of them within the same region (Kuivalainen et al. 2007). This a particularly important aspect for the internationalisation of Latin American firms because Latin America is an economic region characterised by strong inter-country similarities (Lopez et al. 2009). Latin American firms focusing their internationalisation on the Latin American region have less linguistic and cultural barriers to overcome than small firms concentrating their exports within their region in Asia and Europe, which have a higher diversity and a long history of country-to-country conflicts. Small firms may choose different internationalisation strategies. Depending on their products, services, and endowment of networks, they may focus on penetrating first the markets within their region or target a broad range of diverse markets (Dimitratos et al. 2010). Evidence on Latin American internationalising small firms is scarce (Dimitratos et al. 2013). A study by Lopez et al (2009) shows that firms targeting a high number of export markets tend to focus on their region as opposed to targeting lead markets and a diverse range of geographic areas. Firms that target multiple regions should be more likely to have a shallower regional presence, as they followed a global international strategy, overcoming the linguistic, cultural and institutional barriers to operating in diverse markets.

Firms based in emerging markets use networks intensively (Zhou et al. 2007). This is partly, as was recently commented for the case of Latin America due to cultural reasons, but it is also a strategy to compensate for the fact that they are based in business environments that are less transparent and predictable than those of developed economies (Ellis 2011; Musteen et al. 2010). Leveraging networks can help emerging markets firms obtain superior performance and to compensate for the institutional voids that affect their domestic context (Peng and Luo 2000; Khanna and Palepu 2010; Boso, Story, and Cadogan 2013). Latin-American countries also exhibit different institutional arrangements that shape new and small firms (Acs and Amorós 2008), by consequence networks could play a very relevant role on the firms ‘strategy including internationalisation decisions. The link between networks and internationalisation speed and intensity has been examined by a large number of papers (Dimitratos et al. 2010; Zhou and Luo 2007), but the link with internationalisation scope received less attention, which is why we focused on this specific aspect and developed the following hypothesis:

H1: The greater the number of networks utilised to internationalise, the more likely the firms are to target export destinations located in multiple regions.

**2.2 Entrepreneurial Orientation (EO)**

A wide range of methods has been developed to measure entrepreneurial orientation (Covin and Slevin 1989; Miller 1983; Miller and Friesen 1982; Covin and Slevin 2011; Wales, Gupta, and Mousa 2013). The scale developed by Covin and Slevin (1989) is one the most widely measure of entrepreneurial orientation in the literature (Rauch et al. 2009). It focuses upon three key entrepreneurial components: *innovativeness, proactiveness and risk taking*. There is empirical evidence that the above-mentioned measures of entrepreneurial orientation are associated with firms that perform better both in their domestic and international markets (Knight 1997; McDougall and Oviatt 2000; Dimitratos and Plakoyiannaki 2003; Wiklund and Shepherd 2005; Kuivalainen et al. 2007; Robson et al. 2012; Wood et al. 2011). Especially for small firms, each new market entry is an entrepreneurial act, which involves *risk taking*; *innovation* and a *proactive behaviour* (see Ellis 2011). Targeting multiple regions entails a higher level of *risk* and commitment than focusing on the home region only, as it means overcoming higher cultural, linguistic and institutional barriers (Crick 2009). Operating in a more diverse set of markets entails adjusting to a broad range of contexts, ranging from the legal framework to the macroeconomic environment, level of infrastructural development, and customs. Such adjustments to local markets require continuous *innovation* efforts to “localise” the products, processes, and strategies of internationalising firms (Knight and Cavusgil 2004). The more markets a firm enters, the more it is acting entrepreneurially, the more risks it is taking, and the more actively and innovatively it may be pursuing its international strategy (Ciravegna et al. 2013).

Some authors dispute the role of *proactiveness,* suggesting that internationalisation results from a sequence of serendipitous events (Chandra et al. 2012). However, the idea that firms internationalise in an entrepreneurial, proactive, and strategic way continues to find much support in the literature (Johanson and Vahlne 2009; Knight and Cavusgil 2004). There is empirical evidence that the more firms internationalise proactively, with entrepreneurs committing themselves and their resources to it, the more likely they are to internationalise quickly and to a diverse range of territories (Rasmussen et al. 2009; Wood et al. 2011).

Firms that are more pro-active in their internationalisation tend to target markets that they consider more promising as opposed to markets that are closer to their home-based. This entails *proactively* attempting to overcome psychic distance through *risky* measures, such as *innovating* their products, services, marketing campaigns and sales support in order to adjust them to the needs of a culturally diverse customer base (Madsen and Servais 1997; McDougall and Oviatt 2000; Dimitratos et al. 2010). Following the calls for more examinations of the different elements of entrepreneurial orientation, we test individually how the three components of Entrepreneurial Orientation affect internationalisation scope (Lumpkin and Dess 1996; Sundqvist, Kyläheiko, Kuivalainen, and Cadogan 2012). Specifically, *innovativeness* involves the ability of the firm to promote new and creative ideas, products and processes designed to service the market (Lumpkin and Dess, 1996). Exporting may promote firm learning, and thus, enhance innovative performance (Golovko and Valentini 2011). The more diverse the set of markets a firm is targeting, the more it may be need to be innovative to cater successfully to its customers.

*Proactiveness* has to do with the extent to which the firm initiates moves with competitors as opposed to following them. Proactive firms are able to acquire, exchange and utilize related knowledge intensively (Sapienza, De Clercq, and Sandberg 2005). The propensity for *risk-taking* embraces an attitude that enables firms to undertake significant and risky resource commitments in the marketplace (Miller and Friesen 1978). Risk-taking firms operate in a culture of information sharing and co-learning; thus, they are able to nurture knowledge capabilities and identify opportunities more rapidly than their rivals (Fosfuri and Tribó 2008). Firms that go international spend a higher level of human, financial and production resources abroad than other firms; they are willing to assume the associated risk because they believe that it will enable them to work better with customers, to learn more from competitors, and to cooperate more efficiently with suppliers, distributors and government agencies abroad (Dimitratos et al. 2003; Prashantham 2011). We thus developed the following hypotheses:

H2a: The higher the level of *risk-taking* in the entrepreneurial orientation of the entrepreneurs the more likely the firms are to target multiple export destinations.

H2b: The higher the level of *innovativeness* in the entrepreneurial orientation of the entrepreneurs the more likely the firms are to target multiple export destinations.

H2c: The greater the level of *proactiveness* in the entrepreneurial orientation of the entrepreneurs the more likely the firms are to target multiple export destinations.

**3.1. Data and methods**

*3.1.1. Sample, data collection and respondents*

We focused on Chile because it is one of the most export-oriented economy in Latin America (Felzensztein et al. 2014), endowed with a broad range of internationalising SMEs in the fields of mining, food processing, wine, financial services, and software (Felzensztein et al. 2012). Chile is also a remarkable case in the Latin American region because it was the first economy to liberalise and open its markets to competition, foreign direct investment and trade during the 1980s. Since the mid-1980s Chile has been the most stable economy in the region, with steadily improving economic and social indicators. Chile has several free trade agreements, notably with the USA, European Union, China, Israel and many Latin American countries. Additionally Chile is the first South American country to join the OECD.

Chile is an interesting study setting because it presents the highest rates of “opportunity-driven” new venture creation among Latin American economies (Amorós, Fernández, and Tapia 2012). In addition, smaller firms in Chile represent 99% of all firms in the country and generate 75% of the employment. Their scarce resources and the limited access they have to financial services and sources of innovation render it difficult to meet the challenges of global competitiveness (Organisation for Economic Co-operation and Development [OECD], 2012). Nevertheless, small firms in Chile increasingly exhibit high levels of international activity (Felzensztein, Gimmon, and Aqueveque, 2012).

Analysing the behaviour of entrepreneurial firms based in Chile holds important implications for the region at large and for other emerging markets that are adopting an export oriented development model (Nicholls-Nixon et al. 2011). The sample frame for the survey was assembled using database provided by the National Direction of Export Promotion, ProChile, that includes 7005 registered firms. Following established good practice the firms to be surveyed needed to meet the following criteria: the firms needed to be independent; the firms should have at most 100 employees; and, they should have an email address (Wiklund and Shepherd 2011). The questionnaire was administered as an on-line survey during 2012-2013. The respondent, termed the entrepreneur was a founder/principal owner in the firms, and well placed to answer the questionnaire because they were the key decision-maker in the firms.

After applying the above criteria and cleaning the original database this resulted in a sample framework of 3,456 firms. The entrepreneurs were contacted by email on three occasions and a total of 446 firms completed the questionnaire which provides a response rate of 12.9%. For this paper and the multivariate analysis the number of respondents who answered all of the questions utilised was 110. The average age of the respondents was 42 years old. The average age of the firms was 10 years. 35.5% of the firms are micro businesses with less than ten employees, 33.6% of the firms are small with ten to forty-nine employees, and 30.9% are medium sized with fifty to one hundred employees. 78.2% of the firms were team starts: 37.3% of these firms were started by two people, 13.6% were started by three people, and 27.3% were started by four or more people.

In order to ensure that sample representation was satisfactory a combination of parametric (i.e. Bonferroni) and also non-parametric tests (i.e. Mann Whitney and Chi-Square) were performed between respondents and non-respondents on the following characteristics: main industrial sector activity, the number of employees, and the age of the firms. These tests found no evidence of systematic statistical representation problems at the 0.05 level between respondents and non-respondents at the 0.05 level, or better. Given the results of the above statistical tests there is no evidence to believe that our sample of respondents is systematically different from the population.

**3.2 Measures**

*3.2.1 Dependent variables: internationalisation scope*

The owner-managers in each firm were asked, “What is the percentage of sales represented by each of the following markets to total sales (Chile, Other South American Countries, Rest of Latin America and / or Caribbean, United States and / or Canada, Europe, Asia, Other) (0-100%)”. The question was followed with grid boxes for each of the aforementioned markets to enter the percentage values from 0 to 100%. For operationalize the dependent variables we carte a series of binomial variables for each international scope region as follows: Respondents who indicated a value greater than zero for Other South American Countries were recoded as ‘1’ and those who gave a value of ‘0’ were kept as ‘0’ (South America). Respondents providing values above zero for the Rest of Latin America and/or the Caribbean were recoded as ‘1’ whilst the zeros were retained as ‘0’ (Latin/Caribbean). Owner-managers who gave values above zero for the United States and/or Canada were recoded as ‘1’ and the owner-managers who gave ‘0’ remained as ‘0’ (USA/Canada). Entrepreneurs who gave values in excess of zero for Europe were coded as ‘1’ and the entrepreneurs who gave ‘0’ remained as ‘0’ (Europe). Owner-managers with the responses of values in excess of zero for Asia were recoded as ‘1’ and the owner-managers who gave ‘0’ remained as ‘0’ (Asia). Entrepreneurs who provided exporting values of greater than zero for other geographical markets were coded as ‘1’ and those with zero remained ‘0’ (Others). Among the firms examined, 35.5% exported to Europe, 30.0% to Asia, 34.6% exported to the USA and Canada and 70.9% to Latin America and/or the Caribbean.

*3.2.2. Independent variables*

*Networks*

Networks were measure with a continuum variable from zero to nine. The respondents were asked to name each organisation or individual that helped them through their internationalisation process, for example by introducing them to clients in new markets. The firms were required to specify exactly which organisation supported them. More specifically the full question was as follows. “In the process of internationalisation of the company, which of the following bodies and organisations have been relevant to the development of internationalisation: National Exporters’ Association (ASEXMA), Export Promotion Agency (ProChile), Chilean Economic Development Agency (CORFO) (e.g. ProChile, INNOVA CORFO, etc.), Support from private institutions, Support from Universities, Alliance with international companies, alliance with national companies, Support from Incubators, None, Other Please Specify”. Each firm used an average of 1.8 networks (See Table 1).

*Entrepreneurial Orientation*

We use a variation of the original EO scale develop by Covin and Slevin (1989) adapted to international entrepreneurship orientation (Rasmussen et al. 2009). Respondents were asked, “Please evaluate the following sentences by circling the appropriate number” We used a five point Liker scale where 1 means that the sentence on the left is valid, and 5 that the sentence on the right is valid. The respondents were then presented with two statements relating to Attitude to risk (EO\_Risk). The first statements was, “*When confronted in the international marketplace with decision-making situations involving uncertainty, my firm typically adopts a*…*Cautious*, ‘wait and see’ posture in order to minimize the probability of making costly decisions” versus “*Bold*, aggressive posture to maximize the probability of exploiting potential opportunities. Secondly, they were given, “In general, we believe that owing to the nature of the environment it is best to achieve the firm’s objectives in the international marketplace via… Favour *low risk* projects (with normal and certain rates of return)” versus “Favour *high risk* projects (with chances of a very high return)”.

The respondents were provided with three statements relating to innovativeness on international business (E0 Innovativeness). The first was, “With regard to the activities of my firm in the international marketplace, we generally… Favour the *marketing of tried and tested* products or services” versus “Favour *research and technological leadership* and *innovations*”. The second was, “Again thinking about new lines of products/services has your firm marketed in the international marketplace in the past 5 years…the Changes in product or service lines have been mostly of a *minor nature*” versus “the Changes in product or service lines have usually been quite *major*”. The third was “How many new lines of products/services has your firm marketed in the international marketplace in the past 5 years? *No* new lines of products or services” versus “*Very many* new lines of products or services”. The owner-managers were given three statements relating to proactiveness to go to international markets (E0\_Proactiveness). The first was, “*When confronted in the international marketplace with decision-making situations involving uncertainty, my firm typically adopts an approach of…Typically seeks to avoid competitive clashes,* preferring a *‘live-and-let-live’* posture” versus “Typically adopts a very ‘beat-the-competitors’ posture”. The second was, “*In dealing with its competitors in the international marketplace, my firm*…Is *very seldom* the first firm to introduce new products/services, administrative techniques and operating technologies” versus “Is *very often* the first firm to introduce new products/services, administrative techniques and operating technologies”. The third was, “*In dealing with its competitors in the international marketplace, my firm*…Typically *responds* to actions which competitors *initiate*” versus “Typically *initiates* actions to which competitors then *respond.*

Three conceptually meaningful varimax rotated components relating to EO Risk, EO Innovativeness and EO Proactiveness were identified. Appropriate statistical tests were carried out to ensure that the three components were robust. The Bartlett Test of sphericity was highly statistically significant at the 0.001 level (**χ2 =**1888). The Kaiser-Meyer-Olkin (KMO) measure was 0.90. The KMO statistic measures the degree of intercorrelation between variables, and this has a range of values from 0 to 1 (Hair et al. 1995). Ucbasaran et al. (2006) indicate that the KMO measure can be interpreted along the following lines: 0.90, or above – marvellous; 0.80 to 0.89, meritorious; 0.70 to 0.79 – middling; 0.60 to 0.69, mediocre; 0.50 to 0.59, miserable; and measures below 0.50, unacceptable. In order to ensure the internal consistency, and reliability the Cronbach’s alpha coefficients were calculated. The Cronbach's alphas attempt to measure the correlation between scale items. The Cronbach’s alphas relating to the EO Risk, EO Innovativeness and EO Proactiveness SV scales were 0.84, 0.87 and 0.85, respectively. Accordingly, the component scores relating to each of these three valid and reliable learning scales were computed, and considered as measures of entrepreneurial orientation independent variables.

*3.2.3. Control variables*

Entrepreneurs with a greater level of human capital may be more likely to export goods and services to each of the exporting markets. Two general human capital variables were operationalised and included in the models: log of the age of the owner-manager in years (Age Entrepreneur), and the log of the number of years of schooling (School). Entrepreneur-specific human capital was incorporated into the models by looking at the human capital of the team of entrepreneurs at start-up of the firms, and also the number of years of experience of exporting to international markets. A series of dummy variables was created for firms to capture the number of people in the start-up team: one person (OnePerson), two persons (TwoPerson), three persons (ThreePerson), and four or more persons (FourPerson). The number of years of experience of exporting to international markets was used to create a series of three dummy variables: firstly, firms with up to 4 years of experience (Experience4), secondly, firms with 5 to 9 years of experience (Experience5to9), and thirdly, firms with 10 or more years of experience (Experience10). In the models Experience4 was the excluded comparison category.

Several firm level characteristics may influence the probability of the firms exporting to markets. Firstly, the respondents were asked to indicate the “Total number of employees (for part-time employees please convert to full-time equivalents e.g. 10 part-time employees on a 50% basis equal 5 full-time employees”. The number of employees was used to create a series of three dummy variables. Firms with less than 10 full time equivalents are micro businesses (Micro), those with 10 to 49 full time equivalents are small businesses (Small), and medium sized businesses were those with 50 to 99 full time equivalents. The log of the age of the firms was included in our models (AgeFirm). The industrial activities of the firms were classified into four categories, primary activities (Primary), manufacturing (Manufacturing), retail services (Retail), and professional services (Prof\_Services). Three dummy sector variables were included in the models and the excluded comparison dummy sector variable was Primary.

**3.3. Validity**

In order to ensure that the contents of the questionnaire were valid it was piloted with six people who were well placed to check on the robustness of the questionnaire contents and these were two scholars, two business owners and two professional people who worked in agencies that provided international business support. After the feedback the questionnaire was simplified with the number of questions being reduced and the wording on some questions was refined. After this first pilot the revised questionnaire then was subject to a second pilot where 100 firms were contacted to complete the revised questionnaire on line. This served two purposes. Firstly, it ensured that the questionnaire was now of an acceptable length and not onerous on time demands to complete, and secondly to make sure that the on-line platform was going to work satisfactorily and without technical glitches. The feedback from the entrepreneurs was positive, although a few technical glitches were identified and easily rectified. Also, following Krishnan et al. (2006) it is good practice to minimise as far as possible the amount of common methods bias. As indicated above the questionnaire was comprehensively piloted and refined with the feedback to ensure that the questions were clear and unambiguous and could not easily be misinterpreted; whilst the survey was completed online we guaranteed the respondents anonymity; and, lastly, the questions which were used to produce the series of dependent variables used in this paper were strategically placed on the questionnaire well away from the independent and control variables. None of the questionnaires from the pilots was included in our sample utilised in this paper.

**3.4 Data Analysis**

Logistic regression estimation was used to establish the combination of variables associated with the propensity of entrepreneurs to report ‘exporting’ to each of the four models associated with each of the regional divisions. It is difficult to establish the goodness-of-fit of logistic models. Following good practice we have reported and utilised two measures to help establish the goodness of fit of our models. Firstly, deviance as shown by the log likelihood coefficient is viewed as a ‘badness-of-fit’ measure. As a rule of thumb weak ‘explanatory’ models tend to be characterised by higher deviance coefficients. Secondly, the Cox and Snell coefficient is shown as a measure to help show the ‘explanatory’ capabilities of models. The Cox and Snell coefficient is similar in principle to the coefficient of determination reported in OLS models, but in non-OLS models the Cox and Snell coefficient usually reports low values.

***4. Results and discussion***

**4.1 Sample Demographics**

Table 1 shows the means and standard deviations. Additionally, the correlation coefficients and the VIF scores reported in Table 1 suggest our models are not subject to the problem of multicollinearity. The hypotheses were tested using logistic regression analysis.

**4.2 Hypothesis testing**

In Table 2 the Cox and Snell coefficients ranged from 0.414 in Model 4 which was the model of exporting propensity to the South America and Latin/ Caribbean regional division to 0.578 in Model 1 which was the corresponding model for the regional division of Europe. The log likelihoods ranged from -39.56 for Model 4 which related to exporting propensity to South America and Latin/ Caribbean regional division to -31.59 which related to the corresponding market for Europe.

We find support for hypothesis H1 with regard to Asia (Model 2), the USA and Canada (Model 3) and South America and Latin America/ Caribbean (Model 4). In each of the aforementioned models the greater the number of networks utilised the greater the likelihood of the entrepreneurs exporting to each of the regional divisions of markets, and these relationships are statistically significant at the 0.05 level. We also re-run the models incorporating a squared term to capture possible non-linear relationships, but the models found no evidence of non-linear relationships.

We do not find support for hypothesis H2a. EORisk is not statistically significant at the 0.05 level in any of the four models. EORisk is weakly statistically significant at the 0.10 level in model 3 for the USA and Canada. There is thus no support for H2b, and in the case of the USA and Canada the nature of the relationship found is counter to our expectations. The higher the level of innovativeness in the entrepreneurial orientation of the entrepreneurs the more likely the entrepreneurs’ firms are to target multiple export destinations – with regard to the USA and Canada, as well as Asia. This relationship is statistically significant at the 0.01 and 0.10 level, respectively. However, for model 4 it was found that the higher the level of innovativeness in the entrepreneurial orientation of the entrepreneurs are less likely to export to South America and Latin/ Caribbean regional market and this is statistically significant at the 0.01 level. There is mixed support for hypothesis H2c with regard to Europe (model 1) where the coefficient EO Proactiveness is statistically significant at the 0.05 level.

--- INSERT TABLE 1 HERE ---

**4.3 Discussion**

This paper used logit regression models to test our hypotheses. The results supported the hypotheses related to networks. Networks appear to be an important means that Chilean firms use to support their internationalisation, especially when targeting markets outside of their region. The experience of the entrepreneurs examined suggests that having a higher number of networks leads to a more diverse internationalisation, as consistent with the network approach to internationalisation (Coviello 2006). Additional research is needed to analyse the nature of the networks utilized and to see whether there are common patterns in which networks are conducive to exporting to specific regions (Kontinen and Ojala 2011). If the goal of policy makers in Chile is to increase the number of regional divisions where domestic entrepreneurs export, then they need to encourage them to increase the number of networks utilised.

Our study included three entrepreneurial orientation variables. Entrepreneurs with stronger attitudes to risk (H2a) were not related to exporting propensity. However, there was mixed support for hypotheses H2b and H2c. Higher levels of innovation and also higher levels of proactiveness were associated with higher probabilities of exporting although this did not apply across all regional divisions.

Several control variables were found to be significantly related with the dependent variables. Small firms were less likely than micro firms to export to Europe, but the reverse was found for exporting to Asia. Medium sized firms were more likely to export to all regions with the exception of Europe. The general human capital of education and also the age of the entrepreneurs were not significant in any of the models. The education variable was only weakly positively statistically related to exporting to Europe. This suggests that general human capital is not necessarily important for exporting propensity.

The age of the firms is also not statistically related to exporting propensity. The series of dummy variables included to capture the number of people in the start-up team showed that firms which had one or two persons at start-up were less likely than those with four or more persons at start-up to export to Europe, Asia and the USA and Canada. However, the one-person variable was only weakly statistically significant in the model of Europe; and the two person variable was only statistically significant in the model of the USA and Canada. In contrast firms with one, and also two persons at start-up were more likely than those firms with four or more persons at start-up to export to South America and the Caribbean firms and these variables were statistically significant at the 0.05 level. In all four models firms with three persons at start-up were more likely than firms with four persons at start-up to export, and this was statistically significant in the models of Europe and weakly statistically significant in the model of South America and the Caribbean. This could be explained by looking at the importance of networks: firms that were founded by smaller teams are less likely to have internationally diverse networks, and hence are less likely to export outside of their regional market. Firms with larger teams with three persons at start-up are more likely to have internationally diverse networks, and hence more likely to be global as opposed to regional exporters, but beyond that number in the team at start-up causes diseconomies. The results suggest that three persons at start-up brings a good range of knowledge, skills and networks which are manageable and where the lead entrepreneur is able to leverage the expertise and networks with greater effect and higher intensity than larger comparable teams. In other words, having large teams at start-up with four or more persons may make it harder for the lead entrepreneur to use and coordinate information and networks and that hinders their capacity to export to many regions.

The number of years of experience of exporting to international markets was positively related to exporting propensity to each of the regions, but the dummy variables were only statistically significant in the exporting to Latin America and the Caribbean. The result is consistent with the born global and international new ventures literature, which suggests that new firms do not necessarily internationalise gradually, and that their networks are more important than their age when determining export performance (Coviello 2006).

***5. Conclusions***

This study responds to calls for more research on Latin American businesses (Wood et al. 2011; Nicholls-Nixon et al. 2011). It extends the international strategy and small firm internationalisation research agenda proposed by López et al. (2009) and Dimitratos (2010). Our findings suggest that the greater the number of both formal and informal networks utilized; the more likely the entrepreneurs’ firms are to target multiple export destinations. This has important managerial implications: it shows that networks can help firms increase the geographic scope of their international strategy, corroborating the tenets of the network theory of internationalisation and small firm performance (Coviello 2006; Jacks 2008; Dimitratos et al. 2013). Our findings also offer some insight for policy makers of emerging economies that aim at promoting the exports of small entrepreneurial firms and trade links with diverse regions. They illustrate that having a broad range of networks supports the internationalisation of small firms, contributing positively not only to its speed and intensity, but also to its scope (Dimitratos et al. 2010; Zahra 2005).

**5.1. Limitations and future research**

We have captured a good selection of human capital and resource variables in the models but clearly there is the need to include additional entrepreneurial experience variables and to differentiate between novice and habitual entrepreneurs (Ucbasaran et al. 2008). Virtually all of the entrepreneurs in our data set were male which reflected the nature of the industry investigated. Clearly there is a need to expand the sectorial coverage and to be in a position to see whether gender (Marlow et al. 2009) has a role in the exporting to specific regional divisions. There is also a need to include measures to capture the financial resources of the firms (Marlow and Patton 2005; Riding et al. 2012) at start-up, and subsequently to see if that influences the capabilities to export to multiple regions. Another limitation of our study is that it is cross-sectional, which may have implications for the reliability of our results. Examining longitudinal data would provide interesting insights into the market selection sequence of internationalising small firms, clarifying whether they searched for their first international business opportunities within their region or not. In order to develop the small firm internationalisation theory it would also be beneficial to collect further evidence from other countries of Latin America and from other emerging market regions, such as Africa or Asia. Additional research is needed to analyse the exact networks utilised and to see whether there are common patterns in which networks are conducive to exporting to specific regional divisions.

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**Table 1 Descriptive statistics and correlation matrix**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Mean | S.D. | VIF | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
| 1. Network | 1.83 | 1.23 | 1.17 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| 2. EORisk | 0.03 | 1.01 | 1.27 | -0.01 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| 3. EOInnovativeness  | -0.01 | 1.01 | 1.16 | 0.04 | 0.00 | 1.00 |  |  |  |  |  |  |  |  |  |
| 4. EOBehaviour | -0.03 | 0.97 | 1.17 | 0.01 | 0.05 | 0.01 | 1.00 |  |  |  |  |  |  |  |  |
| 5. Micro | 0.36 | 0.48 | 1.45 | -0.02 | -0.23b | 0.01 | 0.14 | 1.00 |  |  |  |  |  |  |  |
| 6. Small | 0.34 | 0.48 | 1.45 | 0.01 | 0.20b | 0.04 | -0.04 | -0.45a | 1.00 |  |  |  |  |  |  |
| 7. Medium | 0.31 | 0.46 | 1.45 | 0.01 | 0.04 | -0.05 | -0.11 | -0.46a | -0.48a | 1.00 |  |  |  |  |  |
| 8. AgeFirm | 2.30 | 0.92 | 1.40 | 0.05 | 0.08 | 0.02 | -0.17c | -0.22b | 0.00 | 0.23b | 1.00 |  |  |  |  |
| 9. Experience4 | 0.14 | 0.35 | 1.88 | -0.05 | 0.03 | 0.11 | -0.05 | 0.15 | -0.17c | 0.02 | -0.14 | 1.00 |  |  |  |
| 10. Experience5to9 | 0.18 | 0.39 | 1.73 | 0.05 | -0.11 | -0.14 | -0.02 | -0.05 | 0.11 | -0.06 | -0.07 | -0.19c | 1.00 |  |  |
| 11. Experiene10 | 0.68 | 0.47 | 1.95 | 0.00 | 0.07 | 0.03 | 0.05 | -0.06 | 0.03 | 0.03 | 0.17c | -0.48a | -0.39a | 1.00 |  |
| 12. AgeEntrepreneur | 3.74 | 0.44 | 1.34 | 0.04 | 0.08 | -0.06 | -0.14 | -0.16 | 0.16c | 0.00 | 0.31a | -0.23b | -0.21b | 0.35a | 1.00 |
| 13. School | 1.86 | 0.43 | 1.13 | 0.05 | 0.10 | 0.07 | 0.13 | 0.04 | -0.06 | 0.02 | -0.15 | 0.03 | -0.12 | 0.08 | -0.03 |
| 14. OnePerson | 0.22 | 0.42 | 1.41 | 0.02 | 0.08 | 0.02 | 0.03 | 0.02 | 0.00 | -0.02 | 0.22b | 0.04 | 0.09 | -0.11 | -0.04 |
| 15. TwoPerson | 0.37 | 0.49 | 1.30 | 0.08 | 0.00 | 0.02 | 0.10 | 0.21b | 0.00 | -0.23b | -0.09 | 0.02 | -0.02 | 0.00 | -0.04 |
| 16. ThreePerson | 0.14 | 0.35 | 1.43 | 0.03 | -0.19 | 0.00 | -0.03 | -0.13 | 0.05 | 0.08 | -0.07 | 0.07 | 0.02 | -0.07 | -0.04 |
| 17. FourPerson | 0.27 | 0.45 | 1.40 | -0.13 | 0.07 | -0.04 | -0.11 | -0.16 | -0.05 | 0.21b | -0.04 | -0.12 | -0.08 | 0.16 | 0.12 |

Notes: Experience4 is up to 4 years of experience, Experience5to9 is 5 to 9 years of experience, and Experience10 is 10 or more years of experience; c p < 0.10; b p < 0.05; a p < 0.01; Pearson´s correlations, two-tailed significance.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Mean | S.D. | VIF | 13. | 14. | 15. | 16. | 17. |
| 13. School | 1.855 | 0.425 | 1.131 | 1.00 |  |  |  |  |
| 14. OnePerson | 0.218 | 0.415 | 1.414 | 0.09 | 1.00 |  |  |  |
| 15. TwoPerson | 0.373 | 0.486 | 1.300 | -0.07 | -0.41a | 1.00 |  |  |
| 16. ThreePerson | 0.136 | 0.345 | 1.430 | 0.00 | -0.21b | -0.31a | 1.00 |  |
| 17. FourPerson | 0.273 | 0.447 | 1.399 | -0.01 | -0.33a | -0.47a | -0.24b | 1.00 |

c p < 0.10; b p < 0.05; a p < 0.01; Pearson´s correlations, two-tailed significance.

**Table 2: Logit Regression Models Relating to the Likelihood of Respondents being Exporters by Continents or Countries**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1Europe | Model 2Asia | Model 3 USA/ Canada | Model 4 South America + Latin/ Caribbean |
| Network | 1.216(0.67) | **1.9390****(2.18)b** | **1.805****(2.17)b** | **1.831****(2.08)b** |
| EORisk | 1.507(1.06) | 0.955(-0.13) | **0.561****(-1.66)c** | 0.906(-0.30) |
| EOInnovativeness | 1.121(0.29) | **1.840 (1.70)c** | **2.957****(2.65)a** | **0.307****(-2.85)a** |
| EOBehaviour | **3.049****(2.28)b** | 0.582(-1.41) | 0.966(-0.09) | 0.716(-1.02) |
| Small | **0.178****(-1.81)c** | **13.187****(2.07)b** | **6.993****(1.77)c** | 4.474(1.57) |
| Medium | 0.444(-0.77) | **9.217****(2.27)b** | **12.318****(2.21)b** | **8.303****(2.19)b** |
| AgeFirm | 1.149(0.29) | 2.044(1.40) | 1.415(0.87) | 0.824(-0.54) |
| Experience5to9 | 3.011(0.62) | 3.290(0.88) | 4.803(1.09) | **11.725****(2.53)b** |
| Experience10 | 11.044(1.41) | 1.660(0.40) | 2.536(0.69) | **22.533****(3.47)a** |
| AgeEntrepreneur | 1.717(0.73) | 0.534(-0.94) | 1.468(0.51) | 0.622(-0.65) |
| School | **3.941****(1.71)c** | 1.131(0.16) | 0.513(-0.82) | 2.074(1.21) |
| OnePerson | **0.937****(-1.88)c** | 0.238(-1.37) | 0.394(-0.93) | **8.978****(2.31)b** |
| TwoPerson | 0.477(-0.87) | 0.998(0.07) | **0.131****(-2.04)b** | **6.617****(2.09)b** |
| ThreePerson | **18.257****(2.54)b** | 1.117(0.26) | 1.747(0.49) | **10.939****(1.87)c** |
| Constant | **0.001****(-2.53)b** | **0.005****(-1.68)c** | **0.001****(2.54)b** | **0.007****(-1.98)b** |
| Likelihood Ratio | **79.87a** | **65.83a** | **71.18a** | **53.53a** |
| Log likelihood | -31.59 | -34.28 | -35.31 | -39.56 |
| Cox & Snell | 0.578 | 0.494 | 0.505 | 0.414 |

Notes: n=110 in all models. c p < 0.10; b p < 0.05; a p < 0.01 Odds ratios with Z scores in parentheses. Excluded comparisons: experience – <5 years; size – micro; number of owners involved at start-up – four or more persons. Three industry dummy variables were included in the model.