

# Rapid Internationalization of SMEs: Evidence from *Born Global* Firms in Chile

RÁPIDA INTERNACIONALIZACIÓN DE LAS PYME: EVIDENCIA DE EMPRESAS *BORN GLOBAL* EN CHILE

**RESUMEN:** La literatura que investiga sobre empresas *born global* en países desarrollados ha revelado algunos factores que influyen a la rápida internacionalización de pequeñas y medianas empresas (PYME), como el nivel tecnológico del sector en que participa la PYME, las distancias psicológicas y geográficas con los mercados objetivos y la existencia de redes de contacto. Hasta ahora, no es mucho lo que se ha investigado al respecto en países latinoamericanos. Este artículo busca explorar cómo algunos factores determinantes influyen a empresas *born global* chilenas. Un modelo de regresión logística se usa para analizar a 112 PYME que desarrollan de forma permanente actividades exportadoras. Los resultados muestran que las empresas *born global* chilenas están influenciadas por las redes de contacto, nacionales e internacionales, que pueden generar sus propios fundadores. Asimismo, la distancia psicológica para las PYME chilenas con respecto a los países desarrollados de Asia, América del Norte y Europa también influye a la internacionalización de una PYME chilena. La principal característica de las empresas *born global* chilenas estudiadas es su falta de participación en sectores de mayor nivel tecnológico, estableciéndose principalmente en sectores que explotan de forma intensiva recursos naturales. Algunas recomendaciones de política pública para fortalecer el desarrollo de un mayor número de PYME exportadoras pueden proponerse según los resultados de este artículo.

**PALABRAS CLAVE:** *Born Globals*, redes, PYME, Chile.

RAPIDE INSTITUTIONNALISATION DES PME : EXEMPLE DES ENTREPRISES *BORN GLOBAL* AU CHILI

**RÉSUMÉ :** Les publications de recherches sur les entreprises *born global* dans les pays développés ont montré plusieurs facteurs qui influencent la rapide internationalisation des petites et moyennes entreprises (PME), comme le niveau technologique du secteur auquel participe la PME, les distances psychologiques et géographiques avec les marchés objectifs et l'existence de réseaux de contact. Jusqu'à présent, très peu de recherches ont été menées sur le sujet dans les pays latino-américains. Cet article tente de montrer de quelle manière certains facteurs déterminants influencent les entreprises *born global* chiliennes. Un modèle de régression logistique est utilisé pour analyser 112 PME qui ont mené en permanence des activités exportatrices. Les résultats montrent que les entreprises *born global* chiliennes sont influencées par les réseaux de contact nationaux et internationaux que peuvent générer leurs propres fondateurs. De même la distance psychologique entre les PME chiliennes et les pays développés d'Asie, d'Amérique du Nord et d'Europe influence aussi leur internationalisation. La principale caractéristique des entreprises *born global* chiliennes étudiées est leur absence de participation dans des secteurs d'un plus grand niveau technologique, se situant principalement dans des secteurs qui exploitent les ressources naturelles de manière intensive. Quelques recommandations de politique publique pour renforcer le développement d'un plus grand nombre de PME exportatrices peuvent être proposées selon les résultats de cet article.

**MOTS-CLÉS :** *Born global*, réseaux, PME, Chili.

A RÁPIDA INTERNACIONALIZAÇÃO DAS PMES: EXEMPLO DE EMPRESAS *BORN GLOBAL* NO CHILE

**RESUMO:** A literatura que pesquisa sobre empresas *born global* em países desenvolvidos revelou alguns fatores que influenciam a rápida internacionalização de pequenas e médias empresas (PME), como o nível tecnológico do setor no qual a PME participa, as distâncias psicológicas e geográficas com os mercados objetivos e a existência de redes de contato. Até agora, não é muito o que foi pesquisado a esse respeito em países latino-americanos. Este artigo busca explorar como alguns fatores determinantes influenciam empresas *born global* chilenas. Um modelo de regressão logística é utilizado para analisar 112 PMEs que realizam, permanentemente, atividades de exportação. Os resultados mostram que as empresas *born global* chilenas estão influenciadas pelas redes de contato, nacionais e internacionais, que os seus próprios fundadores podem gerar. Igualmente, a distância psicológica das PMEs chilenas com relação aos países desenvolvidos da Ásia, América do Norte e Europa também influencia a internacionalização de uma PME chilena. A principal característica das empresas *born global* chilenas estudadas é a sua falta de participação em setores de maior nível tecnológico, estabelecendo-se principalmente em setores que exploram, de maneira intensiva, recursos naturais. Algumas recomendações de política pública para fortalecer o desenvolvimento de um maior número de PMEs exportadoras podem ser propostas segundo os resultados deste artigo.

**PALAVRAS-CHAVE:** *Born Globals*, redes, PME, Chile.

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**ABSTRACT:** The literature on born global firms in developed countries has revealed some factors that influence the rapid internationalization of Small and Medium Enterprises (SMEs), such as the technological level of the sector in which the firm participates, psychological and geographical distances from the target markets, and the existence of contact networks. To date, little research has been carried out on this topic for Latin American countries. This paper explores how certain determinants influence Chilean born global firms. A logistic regression model is used to analyze 112 SMEs with regular export activities. The results show that Chilean born global firms are influenced by national and international contact networks that their founders are able to generate. The psychological distance between Chilean SMEs and developed countries in Asia, North America and Europe also influences the internationalization of Chilean SMEs. The principal characteristic of Chilean born global firms is their lack of participation in highly technological sectors, with these SMEs instead being involved in sectors that actively exploit natural resources. The results of this study permit certain public policy recommendations to be made that might boost the development of export SMEs.

**KEYWORDS:** *Born Globals*, Networks, SMEs, Chile.

## Introduction

Currently, it is possible to observe a modern growth strategy pursued by small and medium enterprises (SMEs), involving rapid participation in foreign trading (Crick, 2009). It is common to encounter reports in the literature about born global (BG) firms (Oviatt & McDougall, 1994); these firms are characterized by the fact they initiate export activities to several international markets from their inception.

The approach of BG differs from the traditional method of gradual internationalization followed by SMEs (Cavusgil, 1984; Johanson & Wiedersheim-Paul, 1975). Gradual, or process, approaches suggest that SMEs undergo slow internationalization, with an incremental commitment of resources, which depends on the organizational learning acquired through years operating in the domestic market (Johanson & Vahlne, 1977).

According to Andersen (1993), BG and the firms with gradual internationalization (FGI) pattern differ in terms of the characteristics that support their internationalization strategies. For example, (1) BG explain their rapid international focus by being able to rely on a larger contact network (Andersson & Wictor, 2003; Coviello & Munro, 1997; Hermel & Khayat, 2011), (2) the previous experience of BG founders and their knowledge of the destination markets for their exports are key factors in deciding where to export (Harveston, Kedia, Davis & Van Scotter, 2001) and (3) the literature asserts that BG tend to participate in sectors with greater technological focus (Crick & Spence, 2005).

There have been numerous studies on the characteristics of BG in developed countries, for example in Australia (McKinsey & Co., 1993), Canada (Preece, Miles & Baetz, 1999), the United States (Zahra, Ireland & Hitt, 2000), New Zealand (Chetty & Campbell-Hunt, 2004), the Nordic countries (Madsen & Servais, 1997) and the United Kingdom (Crick & Spence, 2005). But there are few studies focused on developing economies, and most of the studies that have been carried out are exploratory in nature (Amorós, Etchebarne & Felzensztein, 2011; Cancino & La Paz, 2010; Dib, Da Rocha & Ferreira, 2010; Poblete & Amorós, 2013).

The objective of this paper is to identify factors that explain the propensity of a sample of Chilean SMEs to be founded as BG. One specific objective is to determine whether contact networks help these firms achieve early internationalization. Additionally, we wish to determine whether Chilean BG participate in sectors with greater technological focus, which—as has been seen—is a common characteristic of BG in other countries.

Using the database on SMEs in the export sector maintained by the Pymexporta Program run by ProChile (the official Economic Development Agency, which promotes entrepreneurial internationalization) we employed a model of logistic regression to analyze a sample of 112 Chilean SMEs that are involved continuously, rather than occasionally, in selling to external markets. Of this sample, 43 firms were classified as BG, while 69 were defined as FGI. To distinguish the FGI from BG, we used the criteria proposed by Knight and Cavusgil (1996), who classify a firm as a BG if its export activities start within three years of the launch of the business and if exports account for more than 25% of total sales.

Our results are consistent with the current literature on BG, which indicates that alliances and contact networks are determinant factors for early and rapid internationalization (Coviello & Munro, 1997; Crick & Spence, 2005). Despite this consistency, we also found some differences, particularly with respect to the influence of the technological sector in which a given enterprise participates. In the case of Chilean BG, we found that technological level is not relevant. Chilean export SMEs primarily produce goods that are linked to the extraction and cultivation of natural resources; that is, these SMEs operate in sectors with a low technological content, as do, for instance, handicraft SMEs in Scotland (McAuley, 1999) and wine SMEs in Australia (Wickramasekera & Bond, 2004). These examples show that rapid SME internationalization can be successful in sectors with limited use of technology. Clearly, the concept BG can be used in developing economies, including in Latin America; however, Chilean BG

have different characteristics to those found in developed countries.

This study contributes to a better understanding of the BG phenomenon in developing countries and seeks to encourage the growth and competitiveness of BG via networks. Its outcomes support our understanding of the factors that strengthen the ability of SMEs to boost their participation in the international market.

The rest of the paper is structured as follows: Section 2 provides a literature review on BG and proposes the research hypotheses. Section 3 discusses the methodology used to conduct the research. Section 4 presents the results of the study. Section 5 discusses the main findings and, finally, Section 6 presents conclusions and future lines of research.

## Literature Review

During the last several decades, rapid changes in global business have had an important impact on the internationalization processes of most firms (Laanti, Gabrielsson & Gabrielsson, 2007; Sumati, 2011). For the particular case of SMEs, the existing literature shows that these firms have a choice between two internationalization strategies, the first being gradual internationalization, and the second an accelerated strategy. These two strategies have distinctive characteristics that explain the growth and development of SMEs.

Since the 1970s, traditional approaches to the internationalization process—the Uppsala Model (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975) and the Innovation-Related Model (Cavusgil, 1984)—have been used to explain why firms generally do not begin the internationalization process immediately after launch, developing it more gradually.

Process models distinguish different ways in which revenue is obtained from international markets, where successive stages represent a major commitment with the international market (Andersen, 1993). For example, Johanson and Wiedersheim-Paul (1975) detail four stages: (1) non-regular export activities, (2) exports via independent agents, (3) launch of a commercial office overseas (subsidiary) and, finally, (4) the launch of a production unit abroad. Gradual activities in international trade are developed through each of these stages, in which the firm adds knowledge and experience that enable it to increase its competitiveness and decrease the perceived risk of participating in foreign markets (Johanson & Vahlne, 1977).



The Uppsala Model suggests that the initial internationalization activities of a firm are focused on psychologically close markets, that is, markets with similarities in terms of culture, language, political system and market practices (Johanson & Vahlne, 1977). Initial international expansion of this nature is perceived to imply low levels of risk and typically involves indirect exports to similar markets, which enable firms to improve their knowledge of foreign markets. As ventures acquire experience and knowledge, their commitment to foreign trade activities increases, and firms expand into psychologically distant markets (Coviello & Munro, 1997).

Although a large number of firms experience the internationalization phenomenon according to the gradual process, it is not always adequate to explain the internationalization pattern of SMEs (Madsen & Servais, 1997). A series of empirical (Jones, 1999; Laanti *et al.*, 2007; Rennie, 1993; Sullivan, Weerawardena & Liesch, 2012) and theoretical studies (Madsen & Servais, 1997; Oviatt & McDougall, 1994) have revealed the appearance of new ventures, called BG, that participate in foreign trade from their inception.

### **Accelerated Internationalization Strategy**

According to Autio, Sapienza & Almeida (2000), every day new firms appear that develop their commercial activities in foreign markets from their time of foundation. The literature calls these firms BG and defines them as “young, small and medium-sized, entrepreneurial firms that, from or near founding, obtain a substantial portion of total revenue from the sale of outputs in multiple countries” (Knight & Cavusgil, 1996).

According to Knight, Madsen & Servais (2004) the BG phenomenon presents important challenges with respect to the traditional models. First, the internationalization of a BG tends to occur very soon after the firm is founded. Second, overseas sales can occur in multiple destinations simultaneously, with no adherence to traditional internationalization stages. Third, the export destination markets may be either psychologically close or distant with respect to the domestic market.

There is little doubt that BG firms view the world as a large market and define their own domestic environment as

merely a platform for international business (McKinsey & Co., 1993). The primary interest of a BG is to increase the sale of its products in a range of markets where the firm is able to access new networks and obtain financing that will enable it to obtain new resources and improve competitiveness (Chetty & Campbell-Hunt, 2004). Most BG produce highly specialized goods and services that involve an extensive use of technologies (Crick & Spence, 2005). These products or services are typically offered to specific niche markets according to the individual requirements of their clients (Moen, 2002).

Several studies have analyzed the determinant factors of rapid SME internationalization; these are primarily associated with intangible resources:

- Human Capital: (1) the founder has worked in foreign firms or in local firms with an international focus (Anderson & Wictor, 2003; Madsen & Servais, 1997) and (2) the founder has a vision that is focused on the development of a global business from the inception of the firm (McDougall & Oviatt, 2000).
- Relational Capital: (1) networks with public and private firms exist that provide unique resources to SMEs for their rapid internationalization (Hermel & Khayat, 2011; Knight & Cavusgil, 1996; Madsen & Servais, 1997; McKinsey & Co., 1993) and (2) BG pursue positioning in specific market niches using, for example, the knowledge of local distributors (Cancino & La Paz, 2010; Madsen & Servais, 1997).
- Structural Capital: (1) BG participate in productive sectors with a high technological level (Jones, 1999; Roberts & Senturia, 1996), (2) these firms pay little attention to psychological and geographical distances as potential barriers for international expansion (Laanti *et al.*, 2007; Madsen & Servais, 1997) and (3) BG quickly learn the characteristics of the destination markets for their exports (Chetty & Campbell-Hunt, 2004).

Based upon the model of social capital developed by Nahapiet and Ghoshal (1998), in this paper we analyze the following variables linked to the relational and structural capital of Chilean export firms: (1) networks involving public and private institutions, (2) foreign capital investment in the firm, (3) technological level of the participating industry, (4) psychological and, (5), geographical distance between the destination countries and the domestic economy and, finally, (6) firm size.

- *Contact with a network involving public and private institutions*

Network theory emphasizes the impact of networks on a firm's development and internationalization (Johanson &

Mattsson, 1988; Johanson & Vahlne, 1990). According to the theory, decisions regarding when and how to enter a market are more influenced by the firm's network of partners than by its own growth strategy. Particularly for SMEs, the relevance of public and private networks is widely discussed in the literature (Coviello & Munro, 1997; Moen & Servais, 2002), according to which the primary objective involves gaining access to resources to enable complementary production, research and development and marketing and allocation. This concept has been taken on board by several Economic Development Agencies (EDAs), which support SMEs through different public programs intended to reduce information asymmetries and transaction costs to allow better commercial operations for SMEs overseas. For many new firms, the first contact with a network that yields improved access to international markets comes through their participation in a public program that supports firms in the take-off and start-up phase.

Hypothesis 1: For Chilean SMEs, participation in networks facilitated by EDA programs improves the probability that they will become BG.

- *Foreign capital investment in the firm*

The investment of foreign capital can support the rapid internationalization of a firm, especially if the funds involved also allow the explicit or implicit transfer of knowledge and experience regarding international markets. This type of contribution is known as *smart money* (Cancino, Coronado & Farías, 2012), as the capital involves not the only amount invested but also the knowledge necessary to support decision-making processes, enabling the adoption of better business practices. In a study of the internationalization of Spanish firms Alonso and Donoso (2000) explain that foreign capital investment has a positive impact on the tendency to export and on export intensity, generally measured as the volume exported relative to total sales. According to Ohmae (1989), there are many cases in which this type of capital structure involving foreign investment has enhanced the access of firms to new international markets in a rapid and profitable manner, without the firm having to take excessive risks.

Hypothesis 2: The investment of foreign capital in Chilean SMEs increases the probability that they will become BG.

- *The technological level of the sector in which the firm participates*

In the literature, there is considerable discussion of the relevance of technology as an explanatory factor in the birth of firms with rapid internationalization. Although

McAuley (1999) and Wickramasekera and Bond (2004) state that BG can be found in sectors with limited technological focus, more authors assert that firms from industries with a higher technological level have a higher probability of starting up with an international focus (Harveston *et al.*, 2001; Knight & Cavusgil, 1996; Moen, 2002). This relationship between technology and international focus is explained by the fact that cutting-edge technology products are usually the result of expensive research and development operations and the high cost implications require markets with more consumers, in order to recover the investment (McKinsey & Co., 1993). Additionally, the authors explain that the entry of more innovative products with a major technological focus into international markets becomes easier due to the limited competition in destination markets.

Hypothesis 3: A higher technological level in the sector in which Chilean SME exporters participate increases the probability that they will become BG.

- *Geographical and psychological distance*

While those FGI prefer starting their export activities in neighboring markets (Andersen, 1993), the literature shows that, for BG firms, geographical distances are less important when deciding which markets they wish to receive their exports (Laanti *et al.*, 2007). The possession of certain intangible assets, such as networks, and familiarity with information and communication technologies allow firms to reduce the costs associated with large geographical distances. Currently, BG firms do not merely contemplate exporting to neighboring markets, preferring to explore the most profitable markets, which for Chile are geographically distant: Asia, Europe and North America.

Hypothesis 4: The large geographical distance between Chilean SMEs and their target markets influences the probability that they will become BG.

Some studies have also found that for BG firms psychological distances (including differences in the behavior of agents in a given market and the purchasing power of consumers) have a minor influence on commercial strategies and on the velocity with which these firms enter markets (Burgel & Murray, 2000; Madsen & Servais, 1997). According to Knight and Cavusgil (2004), BG have human capital with previous experience in international business and a high level of knowledge of languages, factors that support the development of international activities despite existing cultural differences. Psychologically similar markets are not necessarily the most desired, but they are markets where a

firm can develop greater competitive advantages. According to Laanti *et al.* (2007), BG are characterized by their tendency to access markets that are culturally different from the local market.

Hypothesis 5: The greater the psychological distance between Chilean SMEs and their target markets, the greater the probability that they will become BG.

- *Size*

A certain level of agreement is observed in the literature, indicating a positive relationship between the size of a firm and its export development (Fonfria, 1997; Jovell, 2005). For example, Calof (1993) identifies the size of a company as an explanatory factor of the existence of entrance barriers to international markets. Larger companies have more skills with which to expand their resources and to absorb risks than small firms; moreover, larger firms can have greater trading power (Erramilli & Rao, 1993). When a firm is large, not only is a certain level of resources reached but broader commercial activities that support access to new markets are also involved (Alonso & Donoso, 2000).

Hypothesis 6: The larger a Chilean SME, the greater the probability that it will become a BG.

## Methodology

Using these six hypotheses and a sample of 112 Chilean SMEs with regular export activities, we employed a logistic regression model (Davidson & Mackinnon, 1992) to study the change in the probability that a given SME would be classified as a BG. The sample of 112 SMEs was obtained from a database of 1,500 SMEs maintained by the Pymexporta [SME Export] Program, run by ProChile's Export Promotion Directorate. The study sample was chosen after identifying those companies which have been operating for more than 3 years, present permanent overseas sales (*i.e.* not just casual exports) and that were able to respond to a survey, be it by way of telephone or email, to supplement the information from the ProChile database. Although information on the amount exported by each firm, the export destinations, the number of employees, and the technological level of the sector in which it participates could be retrieved from the database, the telephone and email surveys were useful in establishing information regarding the levels of foreign capital in the company and its participation in EDA-facilitated networks that enhance their export development. The sample contained 43 SMEs classified as BG (using the criteria proposed by Knight & Cavusgil, 1996) and 69 SMEs classified as FGI.

The dependent variable of the model is the probability that a young exporter firm will follow the internationalization pattern of a BG. The closer the value of this dependent variable is to 1, the greater the probability that the firm will be classified as a BG. The independent variables used in this study are the following: EDA Network, Foreign Capital, Technological Capital, Technological Level, Geographical Distance, Psychological Distance, and finally Firm Size. The proxies used are as follows:

*EDA Network (EDA).* In Chile, there are several Economic Development Agencies, associations and guild organizations that facilitate the internationalization of SMEs (Pro Chile, CORFO, SERCOTEC, among others). For the purposes of this paper all these bodies are described as EDAs. We defined EDA Network as a binary variable that indicates whether or not the SME is supported by public or private institutions that encourage export development. The variable takes a value of 1 when there is one EDA providing financial and technical resources to an SME and takes a value of 0 otherwise.

*Foreign Capital (FC).* Foreign Capital is a binary variable that takes a value of 1 when more than 10% of the capital of the SME is international in origin (under independent management) and 0 when the capital includes only Chilean funds.

*Technological Level (TL).* According to the OECD (1995), it is possible to assign the products of a firm to at least four levels of technological intensity (high, mid-high, mid-low, and low technology). Here, we define Technological Level as a binary variable with a value of 1 when the firm participates in technological sectors classified by the OECD as high (aerospace, computers and office machinery, communications-electronics, pharmaceuticals) or mid-high (scientific instruments, electrical machinery, automobile industry, chemistry) and a value of 0 for mid-low or low technological sectors. To classify the sectors, we used the 3<sup>rd</sup> revision of the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 3).

*Geographical Distance (GD).* This variable describes the percentage of foreign clients (purchasers) from countries to which the SME exports that are geographically distant relative to the total number of countries defined as close. We classified all Latin American countries as close to Chile and all other countries as distant. Thus, a value of 1 indicates that the firm exports mainly to countries outside Latin America, and a value of 0 indicates that firm exports mainly to countries within Latin America.

*Psychological Distance (PD).* Some relevant empirical studies have used differences in language as a proxy for

cultural or psychological differences between countries (Klein & Roth, 1990; Luostarinen, 1980). In this study, the variable of psychological distance describes the percentage of client countries that have a high cultural difference relative to the total number of countries to which the SME exports. We have defined psychologically close countries as those countries whose official languages are Spanish and Portuguese (note that, although the language is different, Brazilian and Portuguese cultures are similar to those of Spanish-speaking Latin American countries). All other countries are classified as distant. The greater the psychological distance of the countries to which the SME exports, the closer the value of the variable is to 1.

*Size (S).* This is a categorical variable that indicates the number of workers in each SME exporter. We used the same classification used in the ProChile database, which uses ranges of employee numbers to classify firm size. The size variable can take a value 1, 2 or 3 depending on the number of workers, with 1, 2 and 3 corresponding to 1 to 9, 10 to 49 and 50 to 250 workers, respectively.

Here are the descriptive statistics for the sample under analysis:

TABLE 1. Descriptive Statistics

Variable	Obs	Unique	Mean	Min	Max
1. BG (Born global)	112	2	0.383929	0	1
2. FC (Foreign capital)	112	2	0.241071	0	1
3. EDA (EDA network)	112	2	0.455357	0	1
4. PD (Psychological distance)	112	88	0.558398	0	1
5. GD (Geographic distance)	112	77	0.729286	0	1
6. TL (Technological level)	112	2	0.080357	0	1
7. S (Size)	112	3	1.616071	1	3

Source: Author's own.

Additionally, Table 2 shows the correlation matrix between the variables of the model. A direct relationship may be observed for the overall probability of an SME being born global in most variables. The Size (S) variable is the only exception and displays an inverse relationship.

## Results

According to the results of the logistic regression (see Table 3), there are three parameters that demonstrate statistically significant values. These parameters are associated with: Foreign Capital (FC), EDA Networks (EDA) and Psychological Distance (PD).

**TABLE 2. Matrix of Correlations**

	BG	FC	EDA	PD	GD	TL	S
1. BG (Born global)	1,000						
2. FC (Foreign capital)	0,242	1,000					
3. EDA (EDA network)	0,237	0,365	1,000				
4. PD (Psychological distance)	0,303	-0,051	-0,086	1,000			
5. GD (Geographic distance)	0,280	-0,013	-0,020	0,760	1,000		
6. TL (Technological level)	0,037	0,064	-0,007	-0,207	-0,163	1,000	
7. S (Size)	-0,011	0,061	0,079	-0,099	-0,139	-0,143	1,000

Source: Author's own.

**TABLE 3. Logistic Regression**

BG	Coef.		Std. Err.	z	P >  z	[95% Conf. Interval]	
Cons	-3.2084		0.8588	-3.74	0.000	-4.89159	-1.52523
Foreign capital	0.9990	*	0.5570	1.79	0.073	-0.09265	2.09062
EDA network	1.0714	**	0.4842	2.21	0.027	0.12233	2.02045
Psychological distance	1.8412	**	0.9384	1.96	0.050	0.00195	3.68049
Geographic distance	1.0916		1.1687	0.93	0.350	-1.19903	3.38224
Technological level	1.0363		0.8907	1.16	0.245	-0.70937	2.78204
Size							
2	-0.6117		0.6262	-0.98	0.329	-1.83895	0.61556
3	0.2549		0.5682	0.45	0.654	-0.85871	1.36861

\*Statistically significant at a confidence level of 90%. \*\*Statistically significant at a confidence level of 95%.

Source: Author's own.

**TABLE 4. Marginal Effects**

BG	Odds Ratio		Std. Err.	z	P >  z	[95% Conf. Interval]	
Cons	0.0404		0.0347	-3.74	0.000	0.00751	0.21757
Foreign capital	2.7155	*	1.5125	1.79	0.073	0.91151	8.08992
EDA network	2.9194	**	1.4137	2.21	0.027	1.13013	7.54169
Psychological distance	6.3042	**	5.9160	1.96	0.050	1.00195	39.66579
Geographic distance	2.9791		3.4817	0.93	0.350	0.30149	29.43671
Technological level	2.8189		2.5107	1.16	0.245	0.49195	16.15193
Size							
2	0.5424		0.3396	-0.98	0.329	0.15898	1.85069
3	1.2904		0.7332	0.45	0.654	0.42371	3.92987

\*Statistically significant at a confidence level of 90%. \*\*Statistically significant at a confidence level of 95%.

Source: Author's own.

Table 4 shows the marginal effects of the regression. It is apparent that the magnitude of the impact of each variable is different. According to the results, the most important factor in explaining the dependent variable is Psychological Distance from client countries, followed by EDA networks and Foreign Capital.

The variable Psychological Distance has a positive effect on the likelihood that an SME exporter from Chile may be classified as a BG. The influence of psychological distance on the speed of the internationalization process of a firm

may be explained by the interest of new firms in exporting to more developed countries, all of which are psychologically distant from Chile. Additionally, there is frequently high demand for the product because of client countries' lack of natural resources. In general, in contrast to the situation of SMEs with a gradual internationalization process, the customers of Chilean BG come from Asia, Europe and North America.

Furthermore, the coefficient for EDA Network is statistically significant. Connections with different EDAs give a

firm access to new competitive resources that positively influence its rapid internationalization. For Chilean BG, EDA networks appear to be important factors that differentiate the export behavior of SMEs and their commitment to sales in international markets.

According to the results, the last coefficient that is statistically significant is Foreign Capital. Given that the Chilean market is so small, an SME that initiates its activities with an international target will obviously grow rapidly if foreign firms trust and invest in it. The support of external resources validates the business idea, enabling the firm to take more risks in international markets. Foreign companies only invest in Chilean firms that have very attractive business plans and promote rapid export development.

For the rest of the variables—Technological Level, Geographical Distance and Size—the coefficients were not statistically significant.

In the case of the Technological Level variable, the results differ from the results found for most developed economies worldwide, for which technological level is a relevant factor influencing rapid internationalization. This difference can be explained if the characteristics that sustain the competitiveness of Chilean firms are understood. In general, Chile is a country that focuses its exports on the production of goods linked to natural resources; thus, its products are not highly technological in nature. The biggest markets for products from Chilean firms are in Asia, Europe and North America, all of which base their competitiveness on products with high technological levels but which also have high levels of demand for products associated with natural resources that are not available locally. Given this demand, it becomes clearer why in Chile the technological level of the sector in which a firm participates is not relevant to rapid internationalization.

In the case of the Geographical Distance variable, it is possible to observe that those firms with gradual internationalization (FGIs) are not greatly interested in exporting either to geographically close markets (*i.e.*, in Latin America) or geographically distant markets that are psychologically close (primarily Spain and Mexico). The cultural proximity with these economies diminishes the perception of risk related to commercial internationalization—so much so that 33% of the SMEs in our sample export to Spain or Mexico (equally spread between BG and FGI). These psychologically close markets are attractive both for BG and for FGI. Kilometers are not relevant when psychological distances are short. What really differentiates between BG and FGI is the fact that the former are more likely to export to economies that are culturally more distant.

Finally, with respect to the Size variable, our results refute the idea of Jovell (2005), who postulates that firm size influences internationalization. Some representative firms of the Chilean industry, such as seafood producers, do not need many employees for their production processes. Additionally, viticulture companies only need to hire additional staff for certain seasons of the year. For the case of Chile, the Size variable, measured according to the number of employees, is not, therefore, a determinant that explains the speed with which SMEs undergo internationalization.

## Discussion

Empirical and theoretical studies have concluded that there is limited participation of SMEs in international markets relative to the level of participation of large organizations (Chetty & Campbell-Hunt, 2004; Crick & Spence, 2005; Dib *et al.*, 2010). This is generally explained by referring to a series of restrictions arising from the scarcity of financial resources, poor contact networks, and lack of founder experience and knowledge regarding the characteristics of international markets.

The results of this study indicate certain actions that EDAs in Chile could promote to facilitate the creation of a greater number of born global firms.

Firstly, a key point to be considered by EDAs is the influence of psychological distance on the choices Chilean BG make when deciding which markets to export to. As is the case with BG from developed economies (Madsen & Servais, 1997; Moen, 2002; Sullivan *et al.*, 2012), Chilean SMEs export to psychologically distant markets, which for Chile include North America, Asia and Europe. As was mentioned before, Chilean firms base their competitiveness on the sale of goods linked to natural resources, as do firms in other Latin American countries, all of which are culturally close (Poblete & Amorós, 2013). For an SME exporter from Chile, it is more difficult to enter similar markets because there are more restrictions on the products offered in these markets (as the products are similar, the level of competition is greater and, therefore, profitability is lower). Currently, SMEs that want to undergo rapid internationalization will not consider markets that are psychologically close (Latin American countries) as immediate clients, choosing instead to export directly to markets that are psychologically distant. Given that the most attractive markets (Asia, Europe and North America) base their competitiveness on the production of goods with a high technological content, these markets do not restrict the entry of products from Chilean SME exporters. That is, for a Chilean BG, it is easier and more profitable



to compete in psychologically distant markets than in psychologically close ones.

Evidently, the internationalization pattern of Chilean BG is not based on cultural proximity with customer markets, but on the competitive advantages that come from trading large volumes of products based on natural resources in developed markets. In this regard, Chilean BG can leverage the large number of Free Trade Agreements (FTAs) that the Chilean government has signed with the most developed countries in the world in order to reach a greater number of foreign clients, while increasing exports and diversifying trade activities towards different economies. Among the fundamental tasks of the EDAs in this context are: the provision of information to Chilean entrepreneurs on the main features of FTAs and about the most important Chilean products demanded by consumers in developed economies, as well as advice on how to conduct business in those distant markets. Support for Chilean entrepreneurs to operate in developed psychologically distant markets increases the likelihood that a greater number of Chilean BG firms will begin to appear.

Secondly, as is the case for firms in Canada, France and the United Kingdom (Crick & Spence, 2005; Moen, 2002; Preece *et al.*, 1999), contact networks and international alliances are fundamental to the enhancement of developing BG firms in Chile. For Chilean BG it is particularly necessary to make use of the networks provided by EDAs because they provide financial resources and managerial support that increase the likelihood of successful participation in international markets. Most public programs in Chile provide not only economic benefits to new ventures but also administrative support and business management advice. This is relevant for the success of public programs, as the literature has determined that those programs that provide only economic resources do not generate a major impact on subsidized firms (Bonilla & Cancino, 2011; Lopez-Acevedo & Tan, 2010). The data for the SMEs analyzed in this study support the idea that without the help of these networks, it would not have been possible for some SMEs to undergo rapid internationalization. So it is important to provide entrepreneurs access to public programs that support productive and commercial activities. Through these networks SMEs would be able to obtain, among other things, financial support to enable them to attend international trade fairs, develop alliances with potential distributors in non-domestic markets, be assigned interpreters when language is a cultural barrier to business development and even receive advice on administrative and legal issues in markets with different business practices.

Additionally, the literature has studied not only the positive effect of publically facilitated networking, but also of private networks and alliances that generate excellent conditions necessary to support a fast SME internationalization process (Andersson & Wictor, 2003; Coviello & Munro, 1997; Hermel & Khayat, 2011). For Chilean BG, it is important that foreign investors be made aware of the growth of the business. When foreign firms provide financial resources to a Chilean SME, money is not the only benefit obtained. The SMEs also benefit from smart money, which can transmit knowledge about external markets and information regarding possible clients and international dealers (Cancino *et al.*, 2012). Furthermore, these firms share their experiences, providing information that all new firms require to participate abroad. In Chile, it is not common for firms from different countries to invest in or participate in new SMEs. In this sense, it seems reasonable to organize programs intended to support visits by international companies to publicize the reality and characteristics of the products and services developed by Chilean firms. Attracting more foreign companies to Chile could boost foreign investment to encourage the growth of Chilean SMEs, helping them participate in international markets, especially if the financial investment is complemented by adding knowledge, experience and information about potential foreign customers. Chile has signed FTAs with many countries. However, these agreements have only been used to reduce tariffs and not to increase the flow of capital between firms. It is clear that it is important to use FTAs to enhance the link between Chilean SMEs and international companies as a quick way to enhance export development.

The results of this study could be used as the basis for public policies with the aim of facilitating the rapid internationalization of SMEs in Chile. It is necessary to provide support to create commercial and institutional networks to give access to new markets in which businesses can not only attract more clients but also find new investors to facilitate the growth of the business. Additionally, SME exporters should participate in fairs or international commercial meetings, with the objective of exploring new markets and cultures and reducing the negative effects of psychological distance.

## Conclusions

This paper presents the results of a study of factors that might explain the development and growth of Chilean SMEs in international markets and allow SMEs to be classified as BG firms. It shows that Chilean BG present similarities and differences with respect to SMEs from developed countries.

An important result of this study was to corroborate that the establishment of public and private networks is positively correlated to the participation of SMEs in international markets. In this sense, the participation of SMEs in public programs that support exports and foreign investment in businesses generate a wider network of contacts, improving competitiveness. It would be beneficial to provide aid and public programs to enable Chilean business people to attend international commercial fairs, where they can generate more contacts, promote their products and consider changes that might increase demand for their products. Agencies concerned with export development should increase the number of entrepreneurs that attend international fairs and invite foreign investors to Chile to foster stronger commercial relationships.

The differences between Chilean and developed country BG draw attention to the different technological levels of the products exported. Whereas for the USA and the UK, a higher technological level is one of the relevant characteristics of BG (Crick & Spence, 2005; Zahra *et al.*, 2000), in Chile the technological level of the sector in which the SME participates has no influence on the internationalization speed of the company. The strong dependence of Chilean exports on natural resources allows Chilean products to be widely distributed in international markets. Chilean BG primarily produce goods of low technological level, as is the case with SME-produced handicrafts from Scotland (McAuley, 1999) and wine from Australia (Wickramasekera & Bond, 2004). Chilean BG participate in international markets independently of the technology involved in the development of their products. The unimportance of the technological level is a particular characteristic of the Chilean BG that can be extrapolated to other Latin American economies whose economic growth on the exploitation of natural resources.

The results obtained by this research could contribute to the preparation of public policies that encourage the rapid internationalization of SMEs in Chile. Obviously, these results are not transferable to all other economies, especially the largest economies in Europe, Asia and North America, which are characterized by the production of goods with higher added value, using different technologies and which have followed different internationalization processes. In contrast, for those economies whose primary exports are commodities and products with low added value, such as are found in Latin America, the results obtained for Chile should be applicable. Any generalization of these results to other economies should, however, be made carefully.

Given that different proxies were used for the variables analyzed, it is important to bear in mind that the choice of

proxy can be criticized and that the results depend on this choice. Furthermore, although the variables used are interesting, it is necessary to evaluate other factors related to rapid export development -particularly those linked to the characteristics of the entrepreneur/founder of each firm. Nevertheless, we think that the proxies used in this study capture the major factors typically analyzed in works on new international ventures.

In upcoming research we hope to expand the set of variables examined in respect of the intellectual capital of a firm. In this study it was only possible to collect data on the structural and relational capital of a firm; it would be very valuable to expand this data by adding information on the human capital present in each company, in particular the personal characteristics of the entrepreneurs behind each business idea.

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