FACTORS DETERMINING OF THE INTERNATIONAL COMPETITIVENESS OF FIRMS: EVIDENCES FROM A LATIN AMERICAN DEVELOPING COUNTRY, PERU

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Abstract

This article evaluates the factors determining of the international competitiveness of small and medium multinational enterprises (SMEs) located in developing countries. This took place with a sample of 103 SMEs from a Latin American developing country, Peru. In accordance with Partial Least Squares Structural Equation Modeling (SEM-PLS) methodology, the results seem to confirm that one of the most important factors to compete in foreign markets is the use of a global strategy (GS). SMEs of Peru see the global market as one which allows the standardization of their production. Some HR backgrounds such as a good level of education (Bs MA, PhD), experience in foreign countries and with different cultures play an important role in the utilization of a GS. Moreover, the great level of international competitiveness shown by the Peruvian SMEs is due to the collaboration of their industrial sectors that provide knowledge and experience within the internationalization process.

Key words: Firm competitiveness, applying SEM-PLS, global strategy, collaboration of industrial sector, Latin America developing countries.
1. INTRODUCTION

Many researchers have studied the international competitiveness of enterprises (Buckley et al. 1990; Cho et al. 2007; Dunning and Lundan, 1998; Elenurm, 2007; Fahy, 2002; Jones and Crack, 2001; Moon and Lee, 2004; Pervez et al. 1998), but the vast majority of these studies have been developed in industrialized countries (i.e., Japan, USA, England, Germany, etc.). There have been, however, very few studies carried out in developing countries. The developed countries research cannot always be applied to developing countries (Casanova, 2004; Cuervo-Cazurra, 2008; Peña-Vinces et al. 2012), since the economic behavior of developing countries generally is quite different, and they usually have an unstable and chaotic environment, poor political and educational systems and a low level of industrialization, even in development, and so forth (Jarvenpaa and Leidner, 1998; Peña-Vinces et al. 2012).

Multinational enterprises (MMEs), located in Latin-American have recently become a topic of study for a great number of researchers (Casanova, 2004; Cuervo-Cazurra, 2008; Peña-Vinces et al. 2012), but one might say that they have all concentrated on aspects related to modes of entry into international markets, natural markets (Casanova, 2004), natural resources (Arze and Svensson, 1997), and other issues (Peña-Vinces et al. 2012). Nevertheless, none of them has built a model that explains the competitiveness of small and medium multinational enterprises (SMEs) based on the Latin American developing countries. In other words, they have not shown a complete view of the behavior of these enterprises in foreign markets. The foreign activities of firms (exporting) play a crucial role in both countries and businesses because they represent an opportunity for economic growth (Athukorala, 1994, pp. 112) this is particularly the case of companies from developing countries (Peña-Vinces et al. 2012).

In this study we examine a central question: Do the factors determining of international competitiveness (FDIC) are the same for the SMEs from a developing country (so-called third world), compared to the developed country MNEs? In accordance with the literature reviewed, our paper will cover two gaps. First, we propose a FDIC model of SMEs (SMEs definition see in Knight and Kim, 2009, pp. 255) which includes the approaches of industrial economics and international business. Second, this model is applied to a developing country, taking into account that frequently the theoretical background comes from the developed countries MNEs. In this sense, Cuervo-Cazurra (2008, pp.139) points out that we even know very little about Latin-America MNEs (either large, medium and small), and that it would be interesting to deepen our knowledge of their broader aspects,
especially those of developing countries. To test the FDIC of SMEs, in the developing countries context, we used a sample of 103 SMEs from a Latin-American developing country, Peru provides strong support for the predictions. The statistical analysis was performed with Partial least squares structural equation modeling (PLS-SEM) methodology.

This study holds clear implications for both the CEO of SMEs and governments, as it will help design state public policy, and even more so in the Latin America developing countries, since in these countries there exists a divorce between firms and governments (e.g. in Peru, Bolivia and Ecuador). Taking into account that SMEs are considered the engines of a country’s economic growth (Peña-Vinces et al. 2012)

Our research has been divided in four sections. In the first part, we develop the theoretical framework of the research, defining competitiveness according to its use and application in countries (Cho and Moon 2000; Cho et al. 2007; Porter 1998) and firms (Buckley et al. 1990; Dunning and Lundan 1998; Zeng et al. 2008), due to the lack of consensus among professionals, politicians and some researchers. In the following section, we analyze the factors determining of international competitiveness which allow the establishing of the research hypotheses, and give rise to the construction of our research model. In the third section, we carry out the empirical analysis, sampling and methodology. Then, in the fourth section, the research model is validated (the testing of the hypotheses). Next, we draw conclusions and finally we identify the implications of the study, limitations and the directions for further research.

2. LITERATURE REVIEW AND RESEARCH MODEL

Until the 1990s international competitiveness was analyzed by researchers and professionals through Porter’s diamond (1990). However, this diamond shows some limitations in its practical application in international contexts (Rugman and D’Cruz, 1993). It is weaker because of not including the activities of MMEs within its model, and due to being centered on the country of origin (Dunning and Lundan, 1998; Rugman and D’Cruz, 1993). However, these days the vast majority of revenues of MMEs come from their overseas activities (Buckley et al. 1990; Chen and Lin, 2006; Dunning and Lundan, 1998, Hitt et al. 2006; Moon and Lee, 2004). Therefore, international competitiveness should be assessed not only from a purely local view (country of origin), but also by taking into account the capacity of local businesses for investment abroad either through their subsidiaries there or through direct exports (Moon and Lee, 2004; Pervez et al. 1998).

On the other hand, the concept of competitiveness (i.e., in countries) although broadly controversial, continues to attract the attention of politicians, economists and enterprises all over the world. This controversy lies in the lack of better indicators to evaluate its performance. Generally, when we speak about a country's’ competitiveness, we refer to its capacity to produce goods and services that meet the
market’s requirements while maintaining and enhancing its citizens' real income (Cho and Moon, 2000; Cho et al. 2007; Porter, 1998). Competitiveness definitely depends on the capacity of the firms to successfully compete in domestic and international markets (Cerrato and Depperu, 2011). When it comes to a country’s international competitiveness, this refers to growth and macroeconomic development scenarios (Cho and Moon 2000, p. 187). This is because its competitiveness cannot be measured or defined in terms of world competence among nations. For this type of competitiveness, it is necessary to carry out an analysis of the country's international economic scenario, in order to know its situation in a set period of time (IMD, 2008; WEF, 2008). But, when we refer to the firms’ international competitiveness (FIC), we study internal and external factors that help them to achieve a better international performance in terms of market share, an increase in exports, and better and greater profit margins when they do business overseas, etc. (Cerrato and Depperu, 2001; Buckley et al.1990; Dunning and Lundan 1998; Zeng et al. 2008). To sum up, FIC is a concept that directly refers to a firm’s performance and not a country's performance (Peña-Vinces et al. 2012).

Despite the permanent debate surrounding the use and application of the term “competitiveness”, in countries (Cho and Moon, 2000), in industries (Porter, 1990, 1998) and in business (Buckley et al. 1990; Dunning and Lundan, 1998; Moon and Lee, 2004) given the complexity and the connotations of the use of this word, there finally seems to be an agreement among various researchers (Peña-Vinces, 2009). Thus, the academic community has accepted that it can be used in the three levels: country, industrial sector and firms (Cho et al. 2007; 2009; Porter et al. 2008; Peña-Vinces et al. 2012; Sala-I-Martin et al. 2008).

In this sense, from the perspective of industrial economics it has always been said that firm performance in international markets is associated directly with the country of origin (Cho and Moon, 2000; Cho et al. 2007; Porter, 1990; 1998), although this is defined by other names: local environment, home environment, home country, and so forth. However, from the international management perspective (Knight and Kim, 2009; López and Garcia, 2005; Wheeler et al. 2008), firm international performance (i.e., international competitiveness) is explained by the resources and capabilities that firms have and the way that they exploit them in foreign markets. Hence, the Resource Based View (RBV) plays a very important role in the firm’s international competitiveness (Acedo and Jones, 2007; Hatch and Dyer, 2004; López and García, 2005). This is for the simple reason that this theory (RBV) considers some resources of the firms as sources of competitive advantage (Barney, 1996; Fahy, 2002), since not all firms have similar resources (i.e., firm size, skills of personnel, technology, etc). Therefore, Figure 1 summarizes the proposed research model.
2.1. Global Strategy

In the international business field (Knight and Kim, 2009), to speak of global strategy (GS) is to talk about the set of activities, actions, plans, policies, etc. that a firm makes in order to plan its future in local and international markets, with the unique aim of improving its international performance (Pla-Barber, 2001). In other words, its competitiveness. Hence, one of the major decisions of MNEs is which strategy to utilize to compete successfully in foreign markets. In this sense, firms move away from thinking of a strategy focused on a single country, or a particular culture, and try to make all its processes oriented to competing on a global basis (Anwar, 2003; Pla-Barber, 2001; Rugman, 2001). Therefore, they consider the global strategy as being similar, in most markets. This is due to their products and services only requiring small adaptations (Pla-Barber, 2001; Rugman, 2001; Rugman and Verbeke, 1990).

The empirical evidence shows us how Vodafone, a midsize business of the United Kingdom, in only six years managed to multiply its percentage participation in international markets thanks to its global strategy utilized as a source of international competitiveness (Anwar, 2003).

Firms which count on a global strategy as a source of competitiveness are those that have been most successful in international markets (Anwar, 2003; Elenurm, 2007; Hitt et al. 2006; Knight and Kim, 2009). They have attempted to standardize the international tastes and preferences of their customers (Pla-Barber, 2001; Rugman, 2001). However, it is also true that there are some multinationals which do not need to adapt their global strategies to host markets when they sell abroad. This is because they only are interested in the distribution of their products (Subhash, 1989).

Therefore, the success of global strategy in firms is in the differentiation, with respect to their competitors (Anwar, 2003; Hitt et al., 2006). In this case, it will be necessary for them to know very well the sector and country where these competitors operate (Subhash, 1989). They should show an entrepreneurial culture with a strong international orientation (Hitt et al. 2006; Knight and Kim, 2009).
At the same time, firm success depends as well on the ability and characteristics of their managers to conquer the markets (Anwar, 2003; Cho et al. 2009; Jarvenpaa and Leidner, 1998).

One of the limitations of GS is that it could be conditioned by the legislations or the regulations of the countries of destination (Galán et al. 2007). Hence, the planning of GS should pay attention to these types of variables (Anwar, 2003; Galán et al. 2007; Rugman, 2001). In this sense, Pla-Barber (2001) has said that the firm’s competitive position in a country is affected in great measure by its position in other countries and vice versa. Thus, firms tend to leverage their competitive advantages in most countries as quickly as possible. On the other hand, MNEs seek the integration of their production activities in a single place (Mesquita and Lazzarini, 2008), with the finality of standardizing their products. But difficulties arise when abrupt changes in markets occur (Galán et al. 2007).

Taking into account that the literature described above comes from developed countries. Therefore, in the context of developing countries, we propose the following hypothesis.

**Hypothesis 1:** The GS will positively influence the international competitiveness of firms located in a developing country

### 2.2. HR background

The Human Resources background (HRb) could be defined as the set of typical characteristics of employees, which help firms to obtain competitive advantages in foreign markets (Chen and Lin, 2006). The literature reviewed shows us that such characteristics could be: the age of the employees, their level of education (BA, Master, PhD), fluency in foreign languages, and knowledge and experience of foreign markets (Acedo and Jones, 2007, p.249; Pla-Barber, 2001, Peña-Vinces et al. 2012).

Firms consider their employees as a valuable and scarce capital, in terms of knowledge and experience in foreign markets (Acedo and Jones, 2007). Some researchers (Ferrier, 2001; Porter, 1998) believe that employees with experience and contact with other cultures make their firm be more innovative and competitive (Ferrier, 2001). They can see new opportunities that other people do not because they also have other business insights, especially a global view (Hatch and Dyer, 2004; Moen and Servais, 2002). The possession of certain intangible assets, such as the knowledge and talent of employees is a crucial element for improving the competitive position of firms in foreign markets (Hatch and Dyer, 2004; Moen and Servais, 2002). There is strong empirical evidence of this in Asia (Chen and Lin, 2006; Jin and Moon, 2006; Moon and Lee, 2004). In fact, in MNEs this resource (HRb) is seen as a source of competitiveness (Hatch and Dyer, 2004; Knight and Kim, 2009; Wheeler et al. 2008). But Asia is not the unique case. Acedo and Jones (2007), based on Pla-Barber (2001)'s research, have also found that the greater the presence of firms in international markets is mostly explained by the distinctive characteristics of their employees (HRb).
The current hyper-competition in international markets obliges firms to count on highly-qualified personnel. MNEs rather than selling their products in a single market, on the contrary seek to sell worldwide. This makes them distribute standardized products (Pla-Barber, 2001). This, in turn, forces them to hire either directly or indirectly personnel with certain characteristics (HRb). Therefore, MNEs see the international markets as only one. This implies having a profound understanding of the needs and demands of foreign markets (Subhash, 1989). It is specifically the skills of their staff which makes companies produce standard products that are then accepted in global markets (Leonidou et al. 1998; Theodosiou and Leonidou, 2003). On the other hand, several studies (Hatch and Dyer, 2004; Moen and Servais, 2002) have found that firm success and its strategy is due to the HRb with a strong international orientation which is reflected in its international competitiveness (Knight and Kim, 2009; Zeng et al. 2008). Therefore, the literature reviews allow us to establish the following hypotheses.

**Hypothesis 2:** The HR background will positively influence the international competitiveness of firms from a developing country

**Hypothesis 3:** The HR background will positively influence the global strategy of firms from a developing country

### 2.3. Firm Size

Commonly, most studies utilize the firm size (FS) as a control variable and not as a source of competitiveness (Acedo and Jones, 2007; Chen and Lin, 2006; Cho and Moon, 2000; Dunning and Lundan, 1998). However, there is much research in which to compete in foreign markets is a decisive factor (Ito and Pucik, 1998; Moon and Lee 2004; Nadvi, 1999; Wu and Pangarkar, 2006). Bonaccorsi (1992) observed that firm size is not a determinant factor of foreign activities. Whereas current research has found that firm size has a positive effect on the international performance of companies (Cuervo-Cazurra, 2008; Wheeler et al. 2008; Zou and Stan, 1998; Zeng et al. 2008). This is because MNEs can exploit the economies of scale and research and the actions related to international marketing (Cuervo-Cazurra, 2008; Wu and Pangarkar, 2006). In other words, they use their size to reduce costs.

On the other hand, some research has shown that the competitiveness of firms in foreign markets is explained by their size (Ito and Pucik; 1998; Zeng et al. 2008), because, in the case of the largest firms, these have the capacity of creating and producing products on a great scale. Therefore, the firm size will be conditioned by its demand abroad (Nadvi, 1999; Wu and Pangarkar, 2006). Thus, this allows firms to be better prepared to face the actions of the competition. This is due to the largest firms having more capital to acquire new technologies or invest in research and development (Cuervo-Cazurra, 2008; Zeng et al, 2008). In this way they can also homogenize their production (Subhash, 1989). However, being the largest firms on many occasions makes them inflexible (Elenurum, 2007),
since their ability to respond to the market slows down considerably. Therefore, despite the research there is no consensus about firm size.

In our case, taking into account the importance of FS for the FIC, in accordance with the literature described above we pose the following hypothesis.

**Hypothesis 4:** The international competitiveness of firms from a developing country will depend of a lesser size of firm

### 2.4. Firm Age

To speak of firm age (FA) is to speak about the time that it has been operating in markets (Wheeler et al. 2008; Zou and Stan, 1998) or, when this refers to international markets, the time spent operating abroad (Cuervo-Cazurra, 2008).

Even though traditionally time has been associated with knowledge and this in turn with competitiveness, in the study of the "born global firm", Moen and Servais (2002) show us that a greater number of years of operations in international markets is not a decisive factor of international competitiveness, since this type of firms have been internationally competitive since their creation (Oviatt and McDougall, 1994). Obviously, all this is in accordance with the international business perspective (Acedo and Jones, 2007; Oviatt and McDougall, 1994; Knight and Kim, 2009). On the contrary, from the industrial economics approach, and specifically, the “Flying Geese theory” (Chen and Lin, 2004; Kasahara, 2004), it is indicated that firms must prepare locally in their home country, for a determined period of time prior to moving out to compete in international markets. If they do not do so their survival will be put at risk. On the other hand, in recent research (Cuervo-Cazurra, 2008) it continues being demonstrated that FA still plays an important role. This is the case of Latin American multinational companies from emergent economies, such as Brazil and Chile (Arze and Svensson, 1997; Mesquita, and Lazzarini, 2008). Taking into account the born global firm approach (less years of operations), we propose the following hypothesis.

**Hypothesis 5:** The international competitiveness of firms from a developing country will depend of a lesser number of years of old operating in international markets

### 2.5. Collaboration of industrial sector

When we talk about the collaboration of the industrial sector (CIS), we are talking about the mechanisms that one way or another, allow firms to compete more successfully in foreign markets (Belso-Martínez, 2006; Mesquita and Lazzarini, 2008), since, firms need the support or the assistance of their sector to grow and compete internationally (Arze and Svebsson, 1997; Cho and Moon, 2000; Cho et al. 2007; Nadvi, 1999). It is important to mention that the sector variable is widely used as a control variable. However, here in this research the sector is studied from the collaboration between companies belonging or related to similar activities (e.g., textile, farm business, and chemical). The
mere presence only indicates their position within an industrial group, not the role that they play within the FIC.

Porter (1998) argued that the presence in a nation of supplier and similar industries provides advantages for companies that compete internationally. Such benefits may include: innovation, transformation, exchange of information and participating in technological development. Therefore, the success of an internationally-competitive company is associated with the success of home industries (Nadvi, 1999; Porter, 1998). This also allows the companies to be able to form partnership agreements in order to achieve success abroad (D'Cruz and Rugman, 1993). But not only is the presence of similar industries quite important for the FIC, what is also important is the presence of other institutions such as: banks, insurance companies, advertising agencies, competitive universities, and others (Cho and Moon, 2000; Cho et al. 2009; Hao-Sung, 2003; Jin and Moon, 2006).

MNEs achieve the maximum benefits of the environment of their home country when their suppliers' industries are themselves global competitors. This later facilitates the necessary flows of technology to their customers located in foreign markets (Hao-Sung, 2003; Porter, 1998).

On the other hand, according to Porter (1998), within the CIS there is also much important talking about the geographical proximity between enterprises of similar sectors. These have acquired the denomination of cluster (Porter, 1990). This author said that, clusters are geographic concentrations of interconnected companies, suppliers of specialized goods and services, companies and related industries and associated institutions in a particular field in which they compete but also cooperate. In this sense, the local closeness of companies and institutions, and the establishing of relationships between them, seek a better coordination and trust more than the simple market interaction between geographically-dispersed actors (Mesquita and Lazzarini, 2008). This coordination and trust between organizations is much more flexible and less expensive than that provided by vertical integration or formal relationships between companies and networks, alliances or collaborations. Porter (1998) also said that concentrations are a system of interconnected enterprises and institutions in which the whole is greater than the sum of its parts. This is because they represent a source of international competitive advantage, due to the simple fact of the firms being located geographically close to one another (cluster). They can benefit from the economies of scale and scope, and from the high specialization of labor work that exists in some regional areas of the home country (Ito and Pucik, 1998). Empirical evidence shows us that MNEs which are located in highly-competitive industries are benefiting from activities such as research and development. Consequently, the companies that belong to sectors with similar characteristics have recently become competitive (Mesquita and Lazzarini, 2008; Nadvi, 1999; Zent et al. 2008). Furthermore, industrial sectors allow other companies, either due to size, due to their way of operating or due to their the ignorance of foreign markets to achieve their internationalization thanks to the cooperation with other firms of the sector (Nadvi, 1999; Zent et al. 2008).
Wilkinson et al. (2000) argued that the geographical proximity between customers and suppliers allows the mutual adaptation of products and processes, resulting in efficiency gains along the value chain and competitive advantage with respect to third parties.

It is important to mention that MNEs which have strong links with their sector are usually benefiting from the transfer of knowledge, new technology, and the resources and experience which facilitates quick learning and allows a rapid internationalization (Arze and Stevenson, 1997; Lin and Chaney, 2007; Mesquita and Lazzarini, 2008; Wilkinson et al. 2000). Ultimately the collaboration between firms of the same sector allows them to compete better in foreign markets than when they operate in isolation (Toppinen et al. 2007). Hence, they tend to be less vertical (vertical integration) (Mesquita and Lazzarini, 2008) due to the existence of similar companies that enable them to standardize their technology, logistics, marketing, etc.

As mentioned above, all our literature analyzed comes from developed countries. In the context of developing countries, we pose the following hypotheses:

**Hypothesis 6**: The collaboration of the industrial sector will positively influence the international competitiveness of the firms from a developing country.

**Hypothesis 7**: The collaboration of the industrial sector will positively influence the global strategy of the firms from a developing country.

2.6. The environment of the home country

The environment of the home country is defined as the grouping of elements of the country of origin of firms, which may be controllable or uncontrollable by the companies, but that in some way condition their competitiveness (Belso-Martínez, 2006; Fahy, 2002); However, on certain occasions, they can help the firm to improve its competitiveness in foreign markets (Fahy, 2002; Toppinen et al. 2007; Wheeler et al. 2008). In this sense, the literature review shows us that the high level of competition between enterprises in the local market (home country) explains the success of firms in foreign markets (Toppinen et al. 2007). This is because the struggle for the home market makes firms more prepared to face global competitors (Cuervo-Cazurra, 2008; Porter, 1998).

Jarvenpaa and Leidner (1998) have shown, in a study done in Mexico, how firms have achieved a competitive advantage in terms of performance when they efficiently exploit environment factors, despite the fact that the environment in developing countries is usually chaotic (i.e., a lack of R&D, inefficient government, a lack of competitive suppliers). In this line of research, one may find a study carried out in the industrial surgical steel sector of Pakistan (Nadvi, 1999) which shows how the local environment aids the international competitiveness and success in foreign markets. In other words, the performance of an industry or group of firms may be due to local environmental factors such as government policy, the presence of local suppliers with international presence, R&D developed by
local centers of research and universities, and also other factors that affect the FIC (Lefebvre et al. 1998; Peña-Vinces et al. 2012). According to Porter (1998), local infrastructure plays an important role in the competitiveness of industries, especially those from developing countries. Therefore, the sophistication and demand of home customers put pressure on firms to achieve high levels of quality and characteristics of products and services (Porter, 1998). Hence, local industries are constantly pressured to improve and move to new and advanced segments which require firms to innovate faster (Jin and Moon, 2006; Nadvi, 1999), and adapt to new tastes and preferences of customers. These can therefore offer more personalized and differentiated products and services, and so maintain a more close relation with their clients.

On the other hand, within the environment of the home country, it is valuable to analyze the importance of the possibilities of outsourcing some activities in an industrial sector (Elliott, 2006; Lefebvre et al. 1998). Some authors consider that the "outsourcing" of some activities has a positive impact on the firm’s international competitiveness (Hao-Sung, 2003; Nadvi, 1999; Pena-Vinces et al. 2012), especially for those companies that do not know about the functioning of international markets. They can outsource this activity or others which do not have high levels of efficiency (Elenurm, 2007; Lefebvre et al. 1998). The literature review allows us pose:

**Hypothesis 8:** The environment of the home country will positively influence the collaboration of the industrial sector of the firms from a developing country.

### 2.7. The environment of the host country

The firm's international competitiveness is closely linked to the nation of origin and host country of MNEs and therefore all the competitiveness actions of an MNE. These will always be conditioned by the environment of the host country (i.e., macroeconomics and microeconomics) where firms carry out their business operations (Elenurm, 2007; Ferrier, 2001; Nadvi, 1999; Wheeler et al. 2008). Therefore, the strategies of MNEs will be constrained by macroeconomic policies practiced in foreign countries (Galán et al. 2007; Sala-i-Martin et al. 2008; Toppinen et al. 2007).

The literature of international business and international marketing (Hofstede, 1993) shows us that the companies which compete in international markets consider the socio-cultural aspects (i.e., culture, language, religion, attitudes, customs, design, education level, race, etc.) as important and vital aspects to be taken into account to compete in export markets (Galán et al. 2007). These variables will affect the strategy developed by companies, and may influence, positively or negatively, its competitiveness (Hofstede, 1993; Pla-Barber, 2001; Wheeler et al. 2008; Zou et al. 1997). The evidence shows us numerous cases of both success and failure of MMES where socio-cultural variables have played an important role in the firm competitiveness (see for example: Jin and Moon, 2006; Nadvi, 1999; Toppinen et al. 2007). The truth is that the environment of the host country will in one way or another require MNEs to adjust their business strategy in accordance with the type of socio-cultural
characteristics of each international consumer (Anwar, 2002; Galán et al. 2007; Hofstede 1993; Jin and Moon, 2006).

It is also important to emphasize that the firm's strategy in the international arena is affected by other factors of the destination markets (Fahy, 2002; Jin Moon, 2006; Moon and Lee 2004), hence the importance of highlighting those that exert a stronger influence on them. Despite the many factors that are found in the literature reviewed, these can be summarized into three groups: a) The factors related to the foreign market, linked to the growth of the demand of foreign markets. b) The factors associated with political and legal aspects of the destination of the products and services of domestic firms. c) Social and cultural factors (Galán et al. 2007; Rugman and Verbeke, 1990; Wheeler et al. 2008). Approaches prevalent in the literature lead us to propose the following hypothesis

**Hypothesis 9:** *The environment of the host country will positively influence the global strategy of the firms located in a developing country*

Once the research model has been developed, in Figure (2) that follows we show the proposal of the hypotheses to be evaluated.

3. METHODOLOGY

3.1. Population and sample description

This study has been carried out in a developing country of South American, Peru, because this country has shown a great level of economic industrial growth over the past three years (a mean rate of 9.9%
of GDP growth). We thus studied the SMEs of Peru according to the classification made by its Ministry of Tourism and Commerce of (Mincetur, 2006). The SMEs belong to the 12 most important industrial sectors of this country. In Table 1 the composition and participation can be appreciated. With respect to the unit sample, the questionnaires have been answered by the international operations managers.

The questionnaire methodology was adopted in this work (Barroso et al, 2010). The people indicated in each company were telephoned, and they were assured of the importance of taking part in the study and also of its usefulness. If so required, we committed ourselves to sending them the results of the research. They were also assured that the information would be dealt with confidentially, globally, and anonymously. Finally, we highlighted the importance of the suggestions that the interviewees proposed to us, and our gratitude for their participation. All of these aspects were emphasized in the introductory letter which was subsequently sent along with the questionnaire and a prepaid envelope for returning upon completion.

The questionnaire was sent to the top 1000 SMEs Ranking (Mincetur, 2006) which make up the population of this study. A total of 103 questionnaires (discounting those that were incomplete) were returned via email and postal mail (from June 2007 to May 2009). This represents a reply rate of 10.3%. The low reply rate is explained in part because many SMEs from developing countries are hesitant to answer surveys from foreign universities, as is in accordance with similar studies carried out in developing countries (Zou et al. 1997) - the study was done from Spain and the subject of study was in Peru. It is very important to highlight that 100% of the SMEs were multinational firms. The study has therefore been carried out in sectors directly linked to international markets (Cuervo-Cazurra, 2008). That is, they are all SMEs. The following Table (Table 1) summarizes the descriptive statistics of the unit analysis.

<table>
<thead>
<tr>
<th>Firm characteristics (2006-2009)</th>
<th>Mean</th>
<th>Standard</th>
</tr>
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<tbody>
<tr>
<td>International sales, in US$</td>
<td>15,600.746</td>
<td>41,205.281</td>
</tr>
<tr>
<td>Rate of growth of international sales</td>
<td>45.72%</td>
<td>104.11</td>
</tr>
<tr>
<td>Firm Size (Number of employees)</td>
<td>554.36</td>
<td>927.25</td>
</tr>
<tr>
<td>Years of local operations</td>
<td>24.41</td>
<td>18.46</td>
</tr>
<tr>
<td>Years of international operation</td>
<td>13.80</td>
<td>10.73</td>
</tr>
<tr>
<td>Number of countries of sales</td>
<td>12.37</td>
<td>11.65</td>
</tr>
</tbody>
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<tr>
<th>Composition of industrial sectors studied</th>
<th>Percentage</th>
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<tr>
<td>Textiles</td>
<td>27%</td>
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<tr>
<td>Agribusiness</td>
<td>22%</td>
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<tr>
<td>Chemical</td>
<td>14%</td>
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<tr>
<td>Fishing</td>
<td>14%</td>
</tr>
<tr>
<td>Iron and steel</td>
<td>8%</td>
</tr>
<tr>
<td>Wood and Paper</td>
<td>6%</td>
</tr>
<tr>
<td>Jewelry</td>
<td>3%</td>
</tr>
<tr>
<td>Mechanical Metals</td>
<td>2%</td>
</tr>
</tbody>
</table>
Footwear and Leather 2%
Nonmetallic Mining 1%
Others 1%

<table>
<thead>
<tr>
<th>Main destination markets, and their participation for sales (2006-2009)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The USA</td>
<td>23.6%</td>
</tr>
<tr>
<td>China</td>
<td>9.6%</td>
</tr>
<tr>
<td>Swiss</td>
<td>7.2%</td>
</tr>
<tr>
<td>Canada</td>
<td>6.8%</td>
</tr>
<tr>
<td>Chile</td>
<td>6%</td>
</tr>
<tr>
<td>Japan</td>
<td>5.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>3.4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>3.4%</td>
</tr>
<tr>
<td>Italy</td>
<td>3.3%</td>
</tr>
<tr>
<td>Spain</td>
<td>3.2%</td>
</tr>
<tr>
<td>Rest of countries</td>
<td>28.3%</td>
</tr>
</tbody>
</table>

3.2. Measures

For this stage of the research, in order to gain better results instruments of measurement were used which have been utilized and validated in previous research. To measure the firm’s international competitiveness, we can find the measures broadly known as: ROE (return on equity) and ROA (return on assets) (Arze and Svebsson, 1997; Buckley et al. 1990; Cho et al. 2007; Ito and Pucik, 1998). However, other measures such as EVA (economic value added) and MVA (market value added) are used as well. Nevertheless, these have not been widely accepted by the academic community. Therefore, we have used the measures developed by Zou and Stan (1998), and revalidated by Wheeler et al. (2008): a) Percentage of local profits / Total profits, b) Percentage of foreign profits / Total profits. Simultaneously, following Cerrato and Depperu (2011)’s recommendations, to measure this construct we also employ measures much more subjectively, related to the perception of objectives and goals achieved in foreign markets, and the perception of success in the foreign market. It is emphasized that this construct was evaluated with a 5-point scale (see items in the appendix).

To evaluate the global strategy the measurement utilized by Pla-Barber (2003) was used. The respondents had to evaluate on a 7-point scale in terms of disagree (1), agree (7). Therefore this construct studied aspects of firms such as the standardization of needs of customers in all markets, the same offer of products worldwide, the standardization of technology for all markets, and the standardization of marketing policies worldwide.

To measure the construct HRb following Acedo and Jones (2007, p. 242) a 7-point scale (1= not at all important, 7= absolutely important) was used. This construct was made up of 6 items that evaluate business success in foreign markets with relation to the importance of the HR background. Studied
herein are aspects of the employees such as: their age and education, fluency in foreign languages, experience in foreign markets, etc.

It is important to mention that this scale has been revalidated by Peña-Vinces et al. (2012), in a study on TICs and its relationship with firms competitiveness on the Latin American context.

The firm size was measured through the number of employees of the firms (the mean of the last three years) in accordance with the literature reviewed (Acedo and Jones, 2007; Arze and Svebsson, 1997; Buckley et al. 1990; Ito and Pucik, 1998; Mesquita and Lazzarini, 2008; Wu and Pangarkar, 2006). In the case of the firm age, two measurement items were used, one referring to the number of years of operating in the local markets of the country of origin of the firm (Powell and Dent-Micallef, 1997; Moen and Servais, 2002; Wheeler et al. 2008) and the other concerning the number of years of exporting (also the mean of the last three years).

Regarding the environment of the home country, Lefebvre et al (1998) have established a set of environment elements which affect a firm’s resources and capabilities that was also used in this research. It is to be emphasized that all the items of this construct were measured in terms of the importance for business success in foreign markets (1= not at all important, 7= absolutely important). Thus themes such as the local clients, the competitors, the possibilities of outsourcing activities, the presence of universities and research centers and the actions made by the governments in favor of the firm’s competitiveness were evaluated.

The environment of the host country involves, as mentioned above, the target markets for the products of the international companies. In this sense, was used a 7-point scale in a reduced version (with only 6 items), with similar characteristics, developed by Galán et al. (2007), where we measured aspects of the business such as factors of the growth of demand of foreign markets, those associated with political and legal aspects and the social and cultural factors of the destination markets.

The collaboration of the industrial sector was designed as a second-order factor. This implies that this higher-order variable is measured by a number of first-order latent variables or dimensions (i.e., standard latent variables with measured indicators). Therefore, this second-order factor is not directly connected to any indicators (Chin, 1998). Consequently, we mapped two first-order factors or dimensions, i.e., sector cooperation (SC) and networking (networking), with respect to this higher-level construct (CIS). Hence, to measure the sector cooperation dimension within the CIS, the survey questions developed by Belso-Martinez (2006, p. 217) were used, emphasized in the use of a 7-point Likert scale in terms of its importance for firms (1= not at all important, 7= absolutely important), where what is evaluated are aspects such as the relationship with the client’s relevance in internationalization, the presence of suppliers abroad, the relations with the competitor’s relevance in the internationalization process, etc. In the case of the networking dimension, following the arguments of Lin and Chaney (2007 p. 50), who said that the presence in foreign markets is due to the collaboration of the networks, two measurement items developed by these authors were used (see full survey in the appendix).
4. DATA ANALYSIS AND RESULTS

Partial least squares structural equation modeling (PLS-SEM) was employed to assess the relationships between constructs and to determine the predictive power of the research model for the 100 SMEs. We used the PLS Graph software (Chin and Frye, 2003). Previous use of this methodology is demonstrated in the literature (Acedo and Jones, 2007; Díaz-Casero et al, 2011). The PLS-SEM procedure has been gaining interest and use among researchers in recent years because of its ability to model latent constructs under conditions of non-normality and small to medium sample sizes (Acedo and Jones, 2007; Chin, 1998; Díaz-Casero et al. 2011). For these reasons, PLS-SEM procedures have recently gained acceptance in the management and economics field (Hair et al. 2011a; b; Henseler et al. 2009). The use of this technique involves two stages or approaches (Barclay et al. 1995). The first step requires the evaluation of the measurement model, allowing the relationship between the observable variables and the theoretical concepts to be specified. The second step is to assess the structural model and evaluate the consistency of the relationship proposed with the theory utilized (Hair et al. 2011a; Henseler et al. 2009).

4.1. Measurement model

Evaluation of the reflective constructs

The reflective constructs were evaluated with regards to reliability and validity. Individual item reliability was assessed by analyzing the standardized loadings (Barroso et al. 2010; Hair et al. 2011a). It is to be mentioned that in order for one item’s measure to be accepted as part of a construct, it must exceed a threshold of 0.707 (Carmines and Zeller, 1979). In our study (Table 2), two items of the construct global strategy (GS4 and GS5), and three items of the construct sector cooperation (CIS1 CIS2 CIS5) do not exceed the parameters set. Nonetheless, several researchers think this rule of thumb should not be so rigid in the early stages of scale development (Chin, 1998) and when scales are applied across different contexts (Barclay et al. 1995; Díaz-Casero et al. 2011). Hair et al. (2011) indicate that weaker indicators can be sometimes retained on the basis of their contribution to content validity. Unfortunately, these items have shown a value far beyond the parameters set (0.40), for this reason, these items were deleted (see Table 2).

Following the analysis in this first stage, the next step is the evaluation of the construct reliability. This assessment allows the evaluation of the extent to which a variable or set of variables is consistent in what it intends to measure (Henseler et al, 2009; Hair et al. 2011a; b). Nunnally (1978) has established that the composite reliability (CR) or a value greater than 0.70 is required in the early stages of research and the stricter value of 0.80 for basic research. In the case of our research (Table 2), all
constructs have recorded values above the set limit of 0.70. Simultaneously the convergent validity of the construct which implies that a set of indicators represents one and the same underlying construct was evaluated. This can be demonstrated through their unidimensionality (Henseler et al. 2009). Convergent validity is usually assessed by the average variance extracted (AVE) (Fornell and Larcker, 1981). This measure quantifies the amount of variance that a construct captures from its manifest variables or indicators relative to the amount due to measurement error. This ratio tends to be more conservative than composite reliability (Roldán and Sanchez–Franco, 2012). AVE values should be greater than 0.50. This means that 50% or more of the indicator variance should be accounted for (Henseler et al. 2009; Hair et al. 2011b). In relation to this evaluation, our model never records values below 0.58. Finally, we evaluated the discriminant validity (i.e., the diagonal in Table 3) that indicates the extent to which a given construct differs from other constructs. We followed Fornell and Larcker’s (1981) approach. They suggest that the AVE should be greater than the variance between the construct and other constructs in the model (i.e., the squared correlation between two constructs). With the aim of facilitating this assessment, the square root of the AVE of each latent variable should be greater than its correlations with any other LV (see Table 3).

Concerning the second construct (CIS), we followed a two-step approach (Barroso et al. 2010). This implied that the items for each dimension were optimally weighted and combined using the PLS algorithm in order to create a latent variable score. The resulting score reflects the underlying construct more accurately than any of the individual items by accounting for the unique factors and error measurements that also may affect each item. As a result, the dimensions or first-order factors became the observed indicators of second-order factors (Roldán and Sanchez–Franco, 2012).

**Evaluation of the formative constructs**

Hair et al. (2011a p. 17) have established that when a PLS-SEM, presents formative constructs attention must be paid to three key questions:

A) The indicators’ relative contribution to the construct (report indicator weights)
B) The significance of weights (report t-values, p-values or standard errors)
C) The VIF multicollinearity < 5 / tolerance > 0.20 and/or condition index <30

The results of these evaluations can be seen in Table 2. We can observe the weights, the t-values, and the Variance Inflation Factor (VIF) of all measurement items by type of constructs. In the case of the VIF analysis, we decided to opt for the rule of thumb suggested by Roberts and Thatcher (2009, p. 18). They say a formative construct does not present problems of multicollinearity if any of its indicators record values less than or equal to 3.30. Following this rule, no indicator presents a problem of multicollinearity (see Table 2). It is to be highlighted that the tests of multicollinearity were performed using the SPSS 15.0 program.
<table>
<thead>
<tr>
<th>Constructs/dimension/indicator</th>
<th>CR</th>
<th>AVE</th>
<th>Loading</th>
<th>Weight</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>The environment of host country (common latent construct)</td>
<td>0.898</td>
<td>0.596</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHSC1</td>
<td>0.8652</td>
<td>0.5360</td>
<td></td>
<td>13.3788</td>
<td></td>
</tr>
<tr>
<td>EHSC2</td>
<td>0.7195</td>
<td>0.3444</td>
<td></td>
<td>3.4341</td>
<td></td>
</tr>
<tr>
<td>EHSC3</td>
<td>0.6676</td>
<td>0.4228</td>
<td></td>
<td>5.4619</td>
<td></td>
</tr>
<tr>
<td>EHSC4</td>
<td>0.8068</td>
<td>0.5262</td>
<td></td>
<td>7.0431</td>
<td></td>
</tr>
<tr>
<td>EHSC5</td>
<td>0.8798</td>
<td>0.6541</td>
<td></td>
<td>7.1284</td>
<td></td>
</tr>
<tr>
<td>EHSC6</td>
<td>1.119</td>
<td>0.1726</td>
<td>0.1783</td>
<td>1.6960</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>1.756</td>
<td>-0.1150</td>
<td>0.1352</td>
<td>0.8278</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>2.286</td>
<td>0.5781</td>
<td>0.1671</td>
<td>2.9438</td>
<td></td>
</tr>
<tr>
<td>NFM1</td>
<td>3.015</td>
<td>-0.6923</td>
<td>0.1419</td>
<td>0.7400</td>
<td></td>
</tr>
<tr>
<td>NFM2</td>
<td>1.899</td>
<td>0.9777</td>
<td>0.2824</td>
<td>3.3555</td>
<td></td>
</tr>
<tr>
<td>Firm's International competitiveness (First order common latent construct)</td>
<td>1.600</td>
<td>0.4267</td>
<td>0.4141</td>
<td>1.8011</td>
<td></td>
</tr>
<tr>
<td>EHCC1</td>
<td>1.722</td>
<td>0.1784</td>
<td>0.4793</td>
<td>2.3647</td>
<td></td>
</tr>
<tr>
<td>EHCC2</td>
<td>1.521</td>
<td>0.0755</td>
<td>0.3535</td>
<td>1.2655</td>
<td></td>
</tr>
<tr>
<td>EHCC3</td>
<td>2.532</td>
<td>0.4961</td>
<td>0.8147</td>
<td>7.0642</td>
<td></td>
</tr>
<tr>
<td>EHCC4</td>
<td>1.272</td>
<td>0.0943</td>
<td>0.4364</td>
<td>1.6169</td>
<td></td>
</tr>
<tr>
<td>EHCC5</td>
<td>1.917</td>
<td>0.4990</td>
<td>0.5719</td>
<td>2.6110</td>
<td></td>
</tr>
<tr>
<td>The environment of home country (EHC) (First order common latent construct)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>1.172</td>
<td>0.1783</td>
<td>0.9643</td>
<td>7.3087</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>2.311</td>
<td>0.9643</td>
<td>-0.0165</td>
<td>3.2713</td>
<td></td>
</tr>
<tr>
<td>NFM1</td>
<td>2.292</td>
<td>-0.0165</td>
<td>0.1726</td>
<td>1.2903</td>
<td></td>
</tr>
<tr>
<td>NFM2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHC1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHC2</td>
<td>1.389</td>
<td>-0.3436</td>
<td>-0.4573</td>
<td>2.1570</td>
<td></td>
</tr>
<tr>
<td>EHC3</td>
<td>1.722</td>
<td>0.1784</td>
<td>0.4793</td>
<td>2.3647</td>
<td></td>
</tr>
<tr>
<td>EHC4</td>
<td>1.521</td>
<td>0.0755</td>
<td>0.3535</td>
<td>1.2655</td>
<td></td>
</tr>
<tr>
<td>EHC5</td>
<td>2.532</td>
<td>0.4961</td>
<td>0.8147</td>
<td>7.0642</td>
<td></td>
</tr>
<tr>
<td>EHC6</td>
<td>1.272</td>
<td>0.0943</td>
<td>0.4364</td>
<td>1.6169</td>
<td></td>
</tr>
<tr>
<td>HR background (HRb) (First order common latent construct)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRb1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRb2</td>
<td>1.389</td>
<td>-0.3436</td>
<td>-0.4573</td>
<td>2.1570</td>
<td></td>
</tr>
<tr>
<td>HRb3</td>
<td>1.722</td>
<td>0.1784</td>
<td>0.4793</td>
<td>2.3647</td>
<td></td>
</tr>
<tr>
<td>HRb4</td>
<td>1.521</td>
<td>0.0755</td>
<td>0.3535</td>
<td>1.2655</td>
<td></td>
</tr>
<tr>
<td>HRb5</td>
<td>2.532</td>
<td>0.4961</td>
<td>0.8147</td>
<td>7.0642</td>
<td></td>
</tr>
<tr>
<td>HRb6</td>
<td>1.272</td>
<td>0.0943</td>
<td>0.4364</td>
<td>1.6169</td>
<td></td>
</tr>
</tbody>
</table>

Note: VIF: Variance inflation factor; CR: Composed reliability; AVE: Average variance extracted.
Table 3: Discriminant validity coefficients

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Firm’s international competitiveness</td>
<td>N.A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Global Strategy</td>
<td>0.518</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Collaboration of industrial sector</td>
<td>0.540</td>
<td>0.377</td>
<td>0.792</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Environment of home country</td>
<td>0.229</td>
<td>0.129</td>
<td>0.372</td>
<td>N.A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>HR background</td>
<td>0.304</td>
<td>0.392</td>
<td>0.331</td>
<td>0.257</td>
<td>N.A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Environment of host country</td>
<td>0.212</td>
<td>0.318</td>
<td>0.168</td>
<td>0.098</td>
<td>0.291</td>
<td>0.772</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Firm size</td>
<td>0.147</td>
<td>0.247</td>
<td>0.090</td>
<td>0.258</td>
<td>0.035</td>
<td>0.126</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Firm Age</td>
<td>-0.186</td>
<td>0.097</td>
<td>-0.022</td>
<td>0.212</td>
<td>-0.073</td>
<td>-0.088</td>
<td>0.391</td>
</tr>
</tbody>
</table>

Notes: Diagonal elements (italicized) are square root of variance shared between constructs and their measures (AVE). Off-diagonal elements are correlations among constructs. For discriminant validity, diagonal elements should be larger than off-diagonal elements; N.A – not applicable.

4.2. Structural model

Once we have achieved a satisfactory assessment of the measurement mode, the structural (inner) model is evaluated. Taking into account that PLS-SEM is focused on prediction and its goal is the maximizing of the explained variance of the dependent variables (Chin, 1998), the first criterion in order to evaluate a PLS-SEM is the assessment of the coefficient of determination ($R^2$) of the endogenous constructs (Hair et al. 2011b; Roldán and Sanchez-Franco, 2012). The $R^2$ value represents a measure of the predictive power and indicates the amount of variance in the construct in question which is explained by its antecedent variables in the model (Henseler et al. 2009). Falk and Miller (1992) recommend that the $R^2$ should be at least greater than 0.10. Our model shows good values with respect to this question, and in a special manner for the case of the main variable of this study (Firm competitiveness $R^2=0.47$). Next, the individual path estimates or standardized regression coefficients were analyzed. We have assessed the algebraic sign, magnitude, and significance of the path coefficients. To estimate the precision of the PLS estimates, a nonparametric technique of re-sampling is commonly used. This is bootstrapping which entails a repeated random sampling with replacement from the original sample to create a bootstrap sample (Hair et al. 2011a). As a result of this process, standard errors and t-statistics of the parameters are provided which allow the testing of the hypotheses. In order to study this question we have utilized a re-sample procedure of 5000 samples, following Hair et al. (2011a, p.16)'s recommendations (see Table 4 and Figure 3). Finally, Stone-Geisser’s $Q^2$ test was used to assess the predictive relevance of the endogenous constructs with a reflective measurement model, obtained from cross-validated redundancy (Roldán and Sanchez-Franco, 2012), Chin (1998) suggests using the latter to examine the predictive relevance of the theoretical/structural model. A $Q^2$ greater than 0 implies that the model has predictive relevance, whereas a $Q^2$ less than 0 implies that the model lacks predictive relevance (Hair et al. 2011a). In relation to the $Q^2$, our model shows a good predictive relevance, since it presents good values (see Table 5).
### Table 4: Structural Model Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Suggested effect</th>
<th>Path coefficients (bootstrap)</th>
<th>T-values</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Global Strategy → Firm’s international competitiveness</td>
<td>+</td>
<td>0.364**</td>
<td>2.7831</td>
<td>Yes</td>
</tr>
<tr>
<td>H2: HR background → Firm’s international competitiveness</td>
<td>+</td>
<td>0.012(0.06)</td>
<td>0.1057</td>
<td>No</td>
</tr>
<tr>
<td>H3: HR background → Global strategy</td>
<td>+</td>
<td>0.247 *</td>
<td>2.0059</td>
<td>Yes</td>
</tr>
<tr>
<td>H4: Firm size → Firm’s international competitiveness</td>
<td>+</td>
<td>0.124(0.09)</td>
<td>1.3188</td>
<td>No</td>
</tr>
<tr>
<td>H5: Firm Age → Firm’s international competitiveness</td>
<td>-</td>
<td>-0.261(0.03)</td>
<td>-1.3787</td>
<td>No</td>
</tr>
<tr>
<td>H6: Collaboration of industrial sector → Firm’s international competitiveness</td>
<td>+</td>
<td>0.382**</td>
<td>2.8337</td>
<td>Yes</td>
</tr>
<tr>
<td>H7: Collaboration of industrial sector → Global strategy</td>
<td>+</td>
<td>0.261**</td>
<td>2.2887</td>
<td>Yes</td>
</tr>
<tr>
<td>H8: Environment of home country → Collaboration of industrial sector</td>
<td>+</td>
<td>0.372**</td>
<td>2.8788</td>
<td>Yes</td>
</tr>
<tr>
<td>H9: Environment of host country → Global strategy</td>
<td>+</td>
<td>0.202*</td>
<td>2.0519</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*p < 0.05 (based on t(4979), one-tailed test; t-values are: 1.6451585)

**p < 0.01 (based on t(4979), one-tailed test; t-values are 2.3270495)

***p < 0.001 (based on t(4979), one-tailed test; t-values are: 3.09156344)

**IS: Not significant

### Figure 3: Results of PLS-SEM

5. DISCUSSION OF RESULTS

Our results show that the global strategy (GS) of SMEs located in developing countries as well as of MNEs based in industrialized countries is one of the most important factor to compete in foreign markets (H1, p<0.01), according to the literature used for building SEM-PLS (Anwar, 2003; Elenurm, 2007; Hitt et al. 2006; and Knight and Kim 2009; Wu and Pangarkar 2006). In this sense, we can see
how the use of a global strategy compared to a strategy of diversification and adaptation to national markets is preferred by the SMEs from a developing country, Peru. It is also interesting to observe how the collaboration of the industrial sector (see Figure 3) plays a very important role in the use of the global strategy and contributes 9.8% to explaining the variance of this factor of competitiveness ($R^2 = 0.260$). This reinforces the approach of industrial economics in the CIS (Porter, 1990; Cho and Moon, 2002; Lin and Chaney, 2007). On the other hand, the GS variance is also explained by the HR background ($H_3$, $p < 0.05$), and, according to the Resource Based View (RBV) (Barney, 1996; Grant, 1991; Hatch and Dyer, 2004), this type of resource in SMEs from developing countries acquired the denomination of being valuable and necessary to compete in foreign markets. Therefore, according to the international business approach in the firm’s international competitiveness, our model coincides with Grant (1991)’s model, about the advantage and competitive strategy, stressing the importance of certain resources and capabilities to compete in a global environment (Fahy, 2002).

On the other hand, it has not been possible to check that the FIC in the context of a developing country is positively affected by the HR background of the staff that work in the SMEs with relation to their level of study, international experience, and fluency in languages. Since the results obtained have not supported this hypothesis ($H_2$), it seems appropriate to go deeper into the matter through future lines of research in this relationship, in order to explain why, in this context, these factors had have little influence on the FIC (only explaining 0.4% of the variance, see Table 5).

From the industrial economics theory (Belso-Martínez, 2006; Chen and Lin, 2006; Cho and Moon, 2000; Cho et al. 2007; Porter, 1990) it is observed that foreign markets (i.e., EHSC) do exert a positive influence on the use of a Global strategy ($H_9$, $p < .05$). This is consistent with the traditional literature on international business (Cuervo-Cazurra, 2008; Leonidou et al. 1998; Theodosiou and Leonidou, 2003) which reminds us of the need to analyze the destination markets before moving out to compete globally. In these senses, this hypothesis coincides with the qualitative information of the sample. This reveals that more than 60% of sales of the Peruvian SMEs go to foreign markets.

The environment of the home country of the Peruvian SMEs is shown as a very important variable for the cooperation between companies (CIS). This is in accordance with Belso-Martínez (2006), Porter (1998), and Lin and Chaney (2007), ($H_7$, $p < 0.01$). Therefore, the collaboration of the industrial sector is key because it allows SMEs to grow and compete and achieve their internationalization ($H_6$, $p < .01$), centered on a network approach (D’Cruz and Rugman, 1993; Chen and Lin, 2006). This also, on the other hand, allows companies to focus on certain activities of the industry value chain and achieve the competitiveness to survive and remain in international markets (Lin and Chaney, 2007).

Lastly, in our SEM-PLS it can be seen that the firm age variable has not been supported ($H_5$). However, it is important to highlight its tendency. This could indicate that a lesser number of years of operations in the home markets would positively contribute to the competitiveness of SMEs located in a Latin American developing country. These findings would show a closer approach centered on that of the Born global firms (Moen and Servais, 2002; Oviatt and McDougall, 1994). That is to say, SMEs
from a developing country, Peru could be more interested in creating economies of scale and the
standardization of their processes that makes their advantage competitive in the access to low cost
resources.
To sum up, our model reveals that when the competitiveness of SMEs from a Latin American
developing country as Peru is studied (i.e., similar characteristics both economics and institutional) it
is absolutely important to study the collaboration of the industrial sector and the global strategy, since
these two variables explain the high $R^2$ level of the competitiveness of SMEs ($R^2=0.466$). The first
(CIS) contributes to explaining the variance of the FIC with 20.6% and the second (GS) with 18.9%.

Table 5: Effects on the endogenous variables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$R^2$</th>
<th>$Q^2$</th>
<th>Direct effect</th>
<th>Correlation</th>
<th>Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm’s international competitiveness</td>
<td>0.466</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: Global Strategy</td>
<td>0.364</td>
<td>0.518</td>
<td>18.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2: HR background</td>
<td>0.012</td>
<td>0.304</td>
<td>0.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4: Firm Size</td>
<td>0.124</td>
<td>0.147</td>
<td>1.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5: Firm Age</td>
<td>-0.261</td>
<td>-0.186</td>
<td>4.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6: Collaboration of industrial sector</td>
<td>0.382</td>
<td>0.540</td>
<td>20.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Global Strategy</strong></td>
<td>0.260</td>
<td>0.270</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3: HR background</td>
<td>0.247</td>
<td>0.392</td>
<td>9.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H7: Collaboration of industrial sector</td>
<td>0.261</td>
<td>0.377</td>
<td>9.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H9: Environment of host country</td>
<td>0.202</td>
<td>0.318</td>
<td>6.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Collaboration of industrial sector</strong></td>
<td>0.139</td>
<td>0.285</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H8: Environment of home country</td>
<td>0.372</td>
<td>0.372</td>
<td>13.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: N/A: Not applicable

6. CONCLUSIONS

The main conclusion that can be drawn from the different analyses performed is the fundamental role
of having a global strategy ($H_1$). In other words, this is the main determinant of international
competitiveness or also, if one wishes, of the competitive advantage of SMEs, called Multilatinas (i.e.,
Multinational firms from Latin America Cuervo-Cazurra, 2008), particularly for sectors such as:
textile, agribusiness, chemical, and fishing (see Table 1).
As our results show, the Peruvian SMEs utilize a global strategy to compete overseas instead of
relying on a strategy of differentiation and national adaptation. We therefore must note what
determines the adopting of this type of strategy. We can extract that the environment of the host
countries of SMEs (i.e., the factors of destination markets) where they operate, is one of the most
favorable factors for the standardization of their products. That is, the host market size, the growth rate
of the foreign demand, the international trade agreements, political stability and aspects of social and
cultural factors such as race, income, consumption habits, religion, etc. are the issues that permit to the
Peruvian SMEs to exploit their global strategy.
Based on the existence of a GS within Peruvian SMEs, their operations in international markets would not be possible without the collaboration of the industrial sectors (CIS). This coincides with the results of a great number of investigations (e.g., Nadvi, 1999; Arze and Svebsson, 1997; Porter, 1998; Belso-Martinez, 2006). That is, the functioning of a GS in SMEs is found to be associated with the collaboration of its suppliers: those of raw materials, finance and insurance, international transportation and qualified staff, etc. At the same time it also depends on the organizational networks (D'Cruz and Rugman, 1993; Mesquita and Lazzarini, 2008), or the cooperative agreements that SMEs maintain either with sales or for the acquisition and transfer of knowledge. These are factors that have also enabled them to reduce their costs and their internationalization. But we do not forget that, according to the models of Grant (1991), Fahy (2002), and Toppinen et al (2007), the sector collaboration does not occur in isolation but is linked to an environment that has been described here as the environment of the firm's home country (Galán et al. 2007). In this sense, the collaboration between SMEs is conditioned by the local customers, competitors, outsourcing possibilities, and universities, since the latter contribute with the creation of new knowledge (Chen y Lin, 2006; Cho and Moon, 2000; Porter, 1998, p. 253). In addition, the CIS is also affected by the actions of governments, such as the promoting of certain sectors and the implementation of particular international policies that promote the macroeconomic development and internationalization of their SMEs (Arze and Stevenson, 1998; Nadvi, 1999; Wilkinson et al. 2000). However, it has not been possible to confirm that the CIS would be favored by the existence of research centers since our results show a value contrary to that expected (see Table 2; weight, -0.6923).

On the other hand, we believe that the functioning of the global strategy in foreign markets would not be possible if the companies had not counted on the major source of competitive advantage, such as the Human Resources background of staff working within the Peruvian SMEs. In our case, we can observe that they have a high level of academic preparation, such as having Masters (MBAs) and even PhDs and, in addition, the knowledge of various languages, and the behavior of foreign markets, either through traveling for business or tourism. Simultaneously, this type of background makes the SMEs from developing countries aware of their global reality and their possibilities of opting for standardization rather than a differentiation strategy in international markets. Nevertheless, when the HRb was analyzed in relation to the FIC, our results show that the characteristics discussed above do not have a significant effect on it. We can underline their positive trend, although it is slight. One possible explanation could be that in Latin American developing countries, the possession of certificates (BA, MBA, PhD) is not necessarily a synonym of the presence of globally-qualified staff in the firm, because on certain occasions it is purely a requirement to either change status or obtain the incentives that employees receive when they have done this type of studies. It also could confirm, through the absence of Peruvian universities in the world ranking, a lower competitiveness in terms of education.
Moreover, Subhash (1989) has stated that companies that compete internationally with standardized products need to fully understand the nature and demands of foreign markets in order to unify them. This requires the training and qualifications of personnel mentioned above. The results also indicate that the Peruvian SMEs compete mainly in the international arena through standardized products. In this sense, several researchers (Subhash, 1989; Zou et al. 2002) have argued that this occurs because the products of these companies always or almost always go to mature markets (USA, Europe and Asia, see Table 1) where the acceptance of homogenized products is much easier. A clear example of this is that we can find sugars, perfumes, coffee, chocolates, juice, and drinks, etc. in the USA market, produced by the Peruvian SMEs that are the same that it is possible to find in other markets such as Europe and Asia, only with minute differences such as in the label language adapted for each country or group of countries.

Regarding the firm age, our results suggest that a lesser number of years of operations in local markets make SMEs have greater possibilities of success in foreign markets (a firm's competitiveness). That is to say, SMEs not prepared for an extended period of time prior to competing internationally.

7. IMPLICATIONS

As noted above, global strategy is the main determinant of the international competitiveness of SMEs located in a Latin American developing country as Peru without regard to their national adaptation to the destination markets. Hence, their functioning and design is not found in the hands of a single person but rather in a good staff and with the features described above (HR background). In this regard, the staff that work in the Peruvian SMEs are conscious of their weaknesses to compete abroad with an international strategy of national diversification. Therefore, it is more than clear that this type of firms (Peruvian SMEs) have a very defined market niche (standardized products).

On the other hand, the outsourcing of some activities is very important to compete abroad in the early stages of the internationalization process. We however believe that in more mature stages, it could be a barrier to doing so, since SMEs do not have the control of some processes, and it might be even worse when it comes to key activities such as manufacturing or marketing for foreign customers (see Table 3, EHC3).

According to the literature reviewed, universities in countries with a high level of industrial development (Japan, Singapore, USA, etc.) play an important role in the international competitiveness of enterprises and enable the configuration of their competitive advantage (Peña-Vinces, 2009). This is because these institutions provide new knowledge that often cannot be developed by an individual company, or its development would entail high costs. However, here in this research it has not been possible to confirm that these institutions have a positive influence on the international competitiveness of SMEs. The descriptive analysis of the sample reveals that 86% of the SMEs...
surveyed did not consider the role played by universities to be important. We therefore suggest SMEs and universities to sign cooperative agreements in which both institutions (universities ↔ SMEs) participate in the development of joint activities. This is because in some Latin American developing countries (e.g., Peru), universities do not develop knowledge. This situation seems to be due to a lack of funding by government and businesses to cooperate in the financing of projects for the development of new knowledge.

Along with universities, the work of governments is to be found with regard to the firms’ international competitiveness. As indicated earlier, in industrialized countries, government efforts have been crucial for the success of SMEs in their entrance into foreign markets. Descriptive information revealed that 80% of the SMEs surveyed considered that the actions taken by the governments have not promoted their success in foreign markets. Thus, we can say that the governments had not played an important role in the international competitiveness. This also took place in a study of SMEs located in an African developing country, Nigeria (Abereijo et al. 2009). In this sense, it is recommended for managers to be responsible for the design of policies for the promotion of international activities. SMEs should be more taken into account as they are the main generators of the economic development of countries and, consequently, foster the progress of underdeveloped countries through creating jobs (Peña-Vinces, 2009).

Lastly, the results obtained show a certain degree of coincidence with the theoretical backgrounds (economic industrial and international business theories) posed in the study. These suggest the need for the use of a global approach. This is because not all theoretical approaches proposed by the literature have shown a significant importance of the competitiveness of SMEs when they are applied in other contexts, such as that of the Latin American developing economies (see H2, H4, and H5 not being significant). This is in accordance with other studies (Abereijo et al. 2009; Casanova, 2004; Cuervo-Cazurra, 2008; Peña-Vinces et al 2012).

8. LIMITATIONS AND FUTURE LINES OF RESEARCH

One of the main limitations is the cross-sectional character of this research. Another is the lack of other factors that also exist which influence the firm’s international competitiveness and which, for reasons of the size of the model and sample, could not be studied here. In this sense our model could be improved with the inclusion of other variables, such as the international marketing strategy, the research and development and others which are directly related to FIC. Future research may tackle similar phenomena through the use of panel datasets that observe SMEs through time in other regions of Latin America, such as Bolivia, Ecuador, Venezuela, Chile, etc. Our study has been carried out in the industrial sectors and it would be interesting to do a study within the services sectors, in order to determine if similar results are obtained. As we commented in the introduction, we need to continue to learn more about the different aspects of Latin American SMEs, due to the lack of empirical studies
from these countries. Finally, the high correlations between variables having been shown as significant is a door open to a range of multiple studies between the factors of competitiveness.

References


Kasahara, S. (2004): The flying geese paradigm: a critical study of its application to East Asian regional development; Discussion Papers, UNCTAD.


Appendix (Survey)

Global strategy (GS)
Where: 1 = strongly disagree, 7: Absolute agreement.

GS1) Are standardized worldwide needs of our customers
GS2) Our products/services are known worldwide
GS3) Our technology is standardized worldwide
GS4) We encounter the same competitors in most markets
GS5) Our Marketing policies can be standardized worldwide

Firm’s International Competitiveness (FIC)
Financial measures and non-financial measures

ROA) The approximate average percentage of net profits your company has achieved during the last three years.
ROE) The approximate average percentage of net profits your company has achieved during the last three years, as a consequence of its sales overseas (exporting).
NFM1) Assess the success of your company in foreign countries during the last three years
(NFM2) Satisfaction of objectives compliance and goals achieved in foreign markets in the last three years
Where: 1 = very bad between 5% - 10%; 2 = bad, between 10% - 20%; 3 = average, between 20% - 40%;
5 = very good, between 80% -100%. This Likert scale is applicable in the last two items of measure for FIC.

Collaboration of Industrial Sector (CIS)
Dimension 1 (sector cooperation)
Where: 1 = not at all important, 7 = absolutely important.
(CIS1) International client’s relevance
(CIS2) Relationship with client’s relevance in internationalization
(CIS3) Presence of suppliers abroad
(CIS4) Relationship with supplier’s relevance in internationalization
(CIS5) Presence of competitors in the international environment
(CIS6) Relationship with competitor’s relevance in internationalization

Dimension 2 (Networking)
Where: 1 = Never, 7 = Always
(Net1) The decisions of internationalization of their company generally are always made on their industry experience and knowledge which other companies in its sector give. (Where: 1 = Never, 7 = Always)
(Net1) Learning among business groups, the membership to a network, considers that these can help to reduce the risk and the uncertainty to go out and to compete for foreign markets without having to wait to know and dominate their own market (local market). (Where: 1 = Never, 7 = Always)

The environment of home country (EHC)
Where: 1 = not at all important, 7 = absolutely important.
(EHC1) Local customers and clients (Sophistication)
(EHC2) The validates with local competitors
(EHC3) Existence of outsourcing
(EHC4) Centers of local research
(EHC5) Local universities
(EHC6) Actions of the governments

HR background (HRb)
Where: 1 = not at all important, 7 = absolutely important.
(RHb1) Age of employees
(RHb2) Level of education (BH, MA, PhD) and experience
(RHb3) Fluency in foreign languages
(RHb4) Knowledge of foreign markets
(RHb5) Experience in other countries and cultures
(RHb6) English as a means to work in the firm

Firm Size (FS)
(FS) Number of employees of the firms during the last three years (Official Data)

Firm Age (FA)
(FA1) Local Age of Firms (Number of years operating in the local markets of country of origin)
(FA2) International Age of Firms (Number of years exporting) (Official Data)

The environment of host country (EHSC)
Where: 1 Not at all important 7. Absolutely important
(EHSC1) Large size of host markets
(EHSC2) Growth of demand in the host markets (potential growth)
(EHSC3) Low levels of competition in the host markets
(EHSC4) Incentives of tax reduction measures in the host market
(EHSC5) Incentives of tax cuts in the country of origin
(EHSC6) The demographic similarities of customers and foreign consumers (race, religion, habits, etc).