Diversity, Innovation and Internationalization in Large and Medium-sized enterprises.

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Introduction

The following project continues the emerging trend in the research of diversity, Innovation and Internationalization and aims to carry out a deeper exploration in the relationship between the variables. The study is based on the theoretical framework, included in the bi-relations of the variables to establish their behavior in the firms. The Diversity included in the theoretical framework will be explored as gender, ethnicity, region, academic formation, among others. Innovation as Product, Process, Marketing and Organizational (OECD & Eurostat, 2007). Internationalization, understood as exports, the creation of subsidiaries, implementation of international human resources, strategies for entry to other countries, origin of income and adaptability to new territories.

The study will be carried out with the participation of Medium and Large-Sized Enterprises with some international economic activity with headquarters in Colombia. A survey will be carried out to managers of the companies to obtain information related to diversity, innovation and internationalization. Later a statistical model will be developed (Provit Correlation, Multiple Regression Analysis and Main Factors) to analyze the relation between variables starting from the hypothesis that diversity lead to higher levels of innovation which again leads to more successful internationalization.

1. Diversity

In a more globalized world in which firms operate a multinational and multicultural context it is important to describe how diversity affects the firm performance (Milliken & Martins, 1996b). According to the theory there are two principal types of diversity in organization: observable or readily detectable such as race or ethnic background, age or gender (S E Jackson, May, & Whitney, 1995; Maznevski, 1994; Tsui, Egan, & III, 1992) and less visible or underlying attributes such as education, technical abilities, functional background, tenure in the organization, socioeconomic background, personality characteristic of values (S E Jackson et al., 1995; Tsui et al., 1992). In organization having diverse groups brings difficulty in terms of perspectives, assumptions and casual beliefs. Although a more diverse is a group the more different experiences shared and which led to have different perspectives on key issues or problems (Susan E. Jackson, Brett, Sessa, Cooper, & et al, 1991).

Diversity in race / Ethnic background: Racial diversity has been studied in terms of dissimilar individuals from the majority in the group or supervisors and their experiences. Individuals that are different from their work units in racial or ethnic background tend to be less psychologically committed to the organization, less inclined to stay with the organization and more likely to be absent (Tsui et al., 1992).

Some research on racial diversity suggest that individuals who are different from the majority race in organization experience less positive emotional responses to the organization and are likely to be evaluated less positively by the supervisors which turns into more turn over (Milliken & Martins, 1996). It is important to mentioned that there is no research on this effects in top management groups or boards of directors.

Diversity in nationality of group members: (Verkuyten, de Jong, & Masson, 1993) found that individuals who were not Dutch tended to be less satisfied with their jobs than their Dutch counterparts. (Bochner & Hesketh, 1994) also found that people from countries that were different from Australia on Hofstede´s dimensions of power distance and collectivism perceived more discrimination in their workplace. This negative effects between individuals and their group in organizations are caused basically because of the time it takes for this group members to get over their interpersonal differences on observable dimensions associated with lower levels of initial attraction and social integration (III, Caldwell, & Barnett, 1989; Rohwerder, 2017). However the lack of positive effects in Diversity/Ethnic background there are research in which the high level of variety may bring benefits in terms of perspectives and opinions within diverse groups (Hambrick, 1994; Rohwerder, 2017).

Gender Diversity: Research may point similar conclusions of the effects in diversity in groups between racial diversity and gender diversity. Women were more likely to be absent and to experience turnover than men. (Cummings and colleagues 1993 in Milliken & Martins, 1996). Studies also found that the minority gender in workgroups appeared to have more negative effects on men than women. And people who were different from other members of their work unit in gender were less likely to be attached to their organizations, had higher frequencies of absence, and lower intentions to stay (Tsui et al., 1992).

In sex-integrated firms, women viewed female partners more positively and behave more supportive with their peers. (Ely, 1994; Rohwerder, 2017).Although there are few research about the impact of gender

diversity in organizations (Hoffman & Maier, 1961) conclude that gender diversity in groups facilitated creativity.

Diversity in age: Same as groups that are diverse in race or gender, groups that have more diversity in terms of ages tend to have higher turnover rates (III et al., 1989; Susan E. Jackson et al., 1991; Wagner, Pfeffer, & Reilly, 1984; Margarethe F Wiersema & Bantel, 1993). Regarding subordinators, research found that subordinates who are dissimilar from their supervisors in age appear to experiences higher levels of role ambiguity (Tsui & O'Reilly III, 1989).

We can conclude that research on directly observable attributes are consistent. The more diverse is the group the more likely is that dissimilar individuals will turn over and be absent. Diversity may lead to discomfort for the members of the group (Susan E. Jackson et al., 1991; Rohwerder, 2017). Although there are some benefits in decision-making task when the group has been working together for long periods (Watson, Kumar, & Michaelsen, 1993).

Educational background: Some studies found that turnover in teams are higher when the level or type of education is different between colleagues (Susan E. Jackson et al., 1991; Milliken & Martins, 1996). Organizations may have better diversification strategies due to team heterogeneity on education background therefore facilitate it organizational adaptation (M. F. Wiersema & BANTEL, 1992). Also (Smith et al., 1994) found that organizations who has team heterogeneity in top management has positive impacts on its return on investment (ROI) and growth in sales. However (Bantel & Jackson, 1989) found that team educational specialization had no effect on innovation of top management.

Functional background: Team-rated performance and innovation are affected negatively by functional diversity however had a countervailing positive indirect effect on innovation through its association due to the high frequency on communication (Ancona & Caldwell, 1992). This negative effect may be because of the existence of process losses which slow down the decision making. Furthermore there is positive effects in functional diversity in the creation of linkages because of frequent communication within the group (Huber & Glick, 1993). Also organizations may increase its returns on assets (ROA) by increasing the functional diversity on top management team (Milliken & Martins, 1996) However (Smith et al., 1994) found that there are no positive relation between organizational performance (i.e., ROI, sales growth) and functional heterogeneity.

As a conclusion creativity and innovative solutions to problems may increase due to diversity on the skill-based dimensions because of the greater variety of perspectives (Martin, 2014; Milliken & Martins, 1996a; Rohwerder, 2017). Also, when the teams are from different areas of the organization the communications between top management and nonmembers is more frequent (Ancona & Caldwell, 1992). Negative effects, such as integration problems, is present with dissimilar groups due to background and skills diversity. (Martin, 2014; Milliken & Martins, 1996a; Rohwerder, 2017).

1.2. Diversity and Internationalization

Firm´s Internationalization has been a trend topic of research, especially during the growth phase of the firm. Aspects such as entry mode, ownership mode, collaboration, competition, cultural differences and organizational implication have been studied specially on the role of top management teams in the decision to internationalize. (Tihanyi, Ellstrand, Daily, & Dalton, 2000).

Characteristic such as age diversity is important with ideas and strategy. Younger managers are more attracted to the complexity and risk associated with international expansion. Energetic managers will accept these risk basically because of career reward advancement. (Tihanyi et al., 2000). Research demonstrated that younger managers are associated with greater strategic change (M. F. Wiersema & BANTEL, 1992) and older executives may be less willing to adapt to new ideas or behaviors (Bantel & Jackson, 1989). Regarding the educational background, executives with an elite educational background may be more aware of international issues and may be more inclined to view international opportunities favorably (Tihanyi et al., 2000). Having a more diverse top management team may get a diverse set of values, experiences and beliefs and this led to a better way to guide the firm into new foreign markets (Tihanyi et al., 2000).

Although there is a lack of studies regarding the relation between Diversity and firm´s internationalization process, studies explain that cultural diversity will be positively associated with firm performance (Gomez-mejia & Palich, 1997). Recent study explain the relation between cultural diversity and internationalization performance (I-P) of the firm, in the results (G. De Jong & van Houten, 2014) empirically showed that the firm I-P is not the same for all MNEs: MNEs get a positive effect if they operate in a similar cultural country and MNEs get a negative effect if they operate in a diverse cultural country. No study has addressed MNE cultural diversity as a determining factor to explain the P-P relationship (Gomez-mejia & Palich, 1997).

2. Innovation

"Innovation is the channel through which productivity growth happens" (Altomonte, et al., 2013 p.2). The literature deepens the theme of innovation in firms as those that introduce or have introduced new products or services at a considered time that positively impact sales, market share, productivity and efficiency (OECD and Eurostat, 2007). Innovation can be done by product, where the company launches a new or significantly improved product or service into the market, in terms of its characteristics or the use that is intended. There also be innovation in services, mainly in goods such as transport and logistics; services linked to information such as customer service centers; services based on knowledge and services related to people such as healthcare. Innovation in highly important the economic growth. In these fields (Jong, et al., 2003).

Firms generate innovation in processes when they imply significant changes in techniques, materials or computer programs in the production or distribution processes (OECD and Eurostat, 2007). These changes may result in the reduction of unit costs of the products, or an improvement in the final quality. Marketing innovations are applied to new marketing methods, generating significant changes in the design or

packaging of the product for its positioning and promotion. (Filippetti, et al., 2009). Under these innovations, firms try in better ways to meet the needs of consumers, open new markets or market a product in a different way to increase sales. Finally, a company can be innovative organizationally, when it introduces a new organizational method in the practices (OECD and Eurostat, 2007), the organization of the workplace or external relations. Firms seek with this type of innovation to improve results by reducing administrative costs and improve the level of job satisfaction by increasing productivity.

On the other hand, there are other source for companies to acquire information and knowledge that can be transformed into innovation systems, such as technology centers, universities, clients, suppliers of inputs and technologies, innovation intermediaries and competitors. (Bernal and Frost, 2015). For example, Colombia aspires achievements and challenges in terms of innovation policies for the economy and social development that is still at a very low level:

> *"Colombia's economic history and the emerging signs of its future point to the importance of boosting innovation to raise productivity not only in manufacturing and agriculture but also in service industries, an area in which Colombia's progress has been weak. Both infrastructure, including advanced information and communication technology (ICT) infrastructure, and transport services have a pervasive influence on the competitiveness of other economic sectors. Innovation offers possibilities for entering new activities as part of a cumulative process of economic diversification"* (OECD, 2014, p.14)

To generate more competitive innovations at a social, cultural, economic and political level, it is necessary to understand the importance of collaborative work (Bernal and Frost, 2015). Otherwise companies in Colombia, where the sources of innovations to improve business competitiveness are based on internal experiences beyond external agents. (Bernal and Blanco, 2017).

2.1. Innovation and Internationalization

As we have studied, innovation results from several factors, within which the process of internationalization of firms can be derived. It is said that the firms that operate in different countries are exposed to different innovation contexts and therefore acquire benefits from these experiences. (Filippetti et al., 2009) If the country has a high level of internationalization, it is more likely to have a high innovative performance since (a) its resources, products and institutions are constantly exposed to innovative contexts, allowing firms and people to learn from different environments, (b) competition in some way pressures companies to be innovative

Firms internationalization processes have evolved greatly due to the relationship between innovation and internationalization. Transnational Corporations (TNCs) operate in foreign countries under different modalities from Foreign Direct Investment (FDI) to franchises, subcontracts and joint ventures. This series of activities and behaviors are related to innovation through diffusion (Nelson & Winter, 1982). The companies transmit the knowledge learned in the city where the firm is located through their internal work networks. (Castellani and Antonello, 2006; Castellani and Zanfei, 2004).

On the other hand, not only behaviors and knowledge positively affect the level of innovation. Firms that innovate more are the ones which are active into international markets for this reason they invest more in

innovation than other. (Altomonte, et al.,2013). The processes of the companies - trade, generates high levels of innovation. It is said that imports increase the innovation capacity of a country thanks to the knowledge acquired by new machinery and equipment (Filippetti et al., 2009). In this paper, it is assumed that internationalization positively affects innovation and the performance of firms. Firms and innovative countries are more likely to successfully overcome international markets by having contact with businesses and cultures different from their own, new knowledge is acquired, becoming a great international competitor (Filippetti et al., 2009).

The relationship between R & D and imports continues to be important among firms and their way they become international. For simple internationalization modes such as export, R & D and import become substitutes while for more complex internationalization modes such as Outsourcing or FDI, R & D and imports become complementary. (Altomonte et al., 2013).

2.2 Innovation and Diversity

Organizations have experienced changes in the face of diversity, there are more and more diverse work teams within companies (Williams and O'Reilly, 1998). For this work diversity is worked from the personal distribution among interdependent members of a work unit. In the theory, two kinds of diversity are worked on for organizations: optimistic, where diversity generates benefits for the organization and pessimists, where diversity generates costs for the organization (Mannix and Neale, 2005). However, diversity is now deepened from a multidimensional perspective since having multiple variables can influence the teams, the processes and therefore the results.

Literature categorizes diversity into two types: superficial level, which are visible, for example, age, race, ethnicity, gender and nationality (Williams and O'Reilly, 1998; Milliken & Martins, 1996) On the other hand, there is a deep level, being unobservable or underlying, for example, skills, personality, attitudes and values (Harrison, et al., 2002).

Like Innovation and Internationalization, theory contributes to the relationship between gender diversity, innovation and creativity in the way it contributes to the creation of divergent perspectives and thoughts (Barczak, et al., 2010). As same, the experiences lived, the knowledge, the different perspectives and the different levels of risk and competition differ between men and women contributing different contexts that encourages innovation. (Sastre, 2015)

On the other hand, there are theories that predict negative associations against gender diversity, emphasizing that these create a certain social identity in groups (men and women) where people cooperate with another group of people but not with members belonging to another identity (Sastre, 2015) however, assuming that people tend to relate to people of the same gender, this causes networks in relationships to increase with people outside the organization (Reagans and Mcevily, 2004).

Product, service and process innovations are positively affected by gender diversity for the R & D employees in the companies. However, at high levels of gender diversity are related to a low percentage for the introduction of new products and processes. Therefore, gender diversity improves innovation to a certain extent (Sastre, 2015). Likewise, gender diversity has a greater impact on product innovation for manufacturing companies compared to process innovations. Since process innovations are more related

to technical solutions to problems while product innovations are related to solutions to personal problems requiring market visions where gender diversity contributes to form better social relationships (Nielsen & Huse, 2010).

Innovative companies must be increasingly concerned about the management of human resources and their practices, as well as the implementation of policies that maintain gender diversity; contrary to the majority of foreign firms that still have weaknesses in this aspect (Sastre, 2015).

On the other hand, theories point out that ethnic diversity can become a negative factor for innovation in terms of decision making and implementation. The more ethnic groups coexist in a country, the more individual preferences and interests are represented. (Zhan, et al., 2015). Meanwhile, the preferences and interests of people are often formed by the belonging and identity of their ethnic group (Phinney, JS (1989) in (Zhan et al., 2015). Cultural diversity positively affects innovation because it adds a variety of perspectives and ideas resulting in more creative and innovative solutions than having a culturally homogeneous group (Zhan et al., 2015; Mannix and Neale, 2005).

3. Internationalization

"Internationalization of the firms is a process in which the firms gradually increase their international involvement" (J Johanson & Vahlne, 1977). The internationalization theory focuses on the use and development of knowledge about the foreign entry country and their operations. The importance of this studies revealed the issue about how firms handle the uncertainty because of the lack of knowledge in a foreign country (J Johanson & Vahlne, 1977; Jan Johanson & Wiedersheim-Paul, 1975). Due to the market uncertainty most of times firms make the process of internationalization as a process or steps in which "learning by doing" is the principal factor (Johnson, 1988; Lindblom, 1959). As (Jan Johanson & Wiedersheim-Paul, 1975) mentioned there are four different stages in which the firms start their operations in a foreign country: 1) No regular export activities 2) export via independent representatives (agent) 3) sales subsidiaries and 4) production/manufacturing.

However, the Uppsala model was created in the 1977, there have been changes in business practices and theoretical advances. Those changes focus in web of relationships and networks responding to the developing of new knowledge (Jan Johanson & Vahlne, 2009). The Uppsala model should be seen as a whole, i.e., level of strategic actions and reactions providing a holistic explanation of multi-business enterprise (MBE) evolution in a micro-level analysis (Vahlne & Johanson, 2017).

4. Methodology

This descriptive study was carried out with the information obtained from a sample of 30 executives from an equal number of companies. The companies in which the respondents work correspond to the following sectors: Food and Beverage (27%), Construction and Industrial (27%), Finance (10%), Technology (7%), Foreign Trade (7%), Retail (7%), Consulting, (7%), Pharmaceutics (3%), Mass Consumption (3%), Telecommunications (3%). The information was obtained with a Likert scale questionnaire designed by the authors of the study based on the theoretical framework about diversity, innovation and

internationalization. The questionnaire was applied in a personalized way, during the period of May to July 2018, by the authors of the research and the support of a group of students of research seminar (last semester of career) of the School's Business Administration program. International of Economic and Administrative Sciences of the University of La Sabana.

The survey evaluated (on a Likert scale with scores between 1 and 5) ten principal aspects of each variable such as: a) Diversity: Gender, Nationality, Functional Background, Educational Background and Age. b) Innovation: Product, Process, Marketing, Administration, Research and Development (R&D) and Patents. c) Internationalization: Export, Joint Ventures, Foreign Trade Shows, Foreign Trade and Foreign Investment

The analysis of the data was made from a descriptive statistic (estimation of averages and standard deviations) and a correspondence analysis to evidence the relation between variables.

5. Conclusions

In general aspects we conclude that firms with high level of Diversity has also high levels of innovation and internationalization. The hypothesis is confirmed and supported with the theoretical background in which indicates the relation between the variables. The subsectors of Construction, Industrial, Food and Beverages present the high levels for these variables.

There is a limitation on data analysis due to the lack of information. It is important to establish which variable affect the others using Principal Components PCA. For the methodology of the data it's going to be used R tool to analyze and visualize Likert Type Items (Bryer & Speerschneider, 2015; Field, Miles, & Field, 2012; S. Jackson, 2016; Murdoch, 2016; Wei & Simko, 2016).

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