Business Competitiveness and its Association with Strategic Planning and Organizational Dialogical Discourse in Plastics Recycling Companies of the Colombian Caribbean Coast

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Abstract
A statistical association study was carried out between Business Competitiveness and the factors: business dialogic discourse and strategic planning in plastics recycling companies of the Colombian Caribbean region in 2016. The population studied was 68 companies recycling plastics waste from the Colombian Caribbean coast. The instruments to collect the information were: The questionnaire of Ibarra et al (2017) and the IDB's Competitiveness Map. The research was developed in three (3) stages: The first one evaluated the independent variables, business dialogic discourse and strategic planning in each of the companies under study. The second valued the dependent variable Business Competitiveness. In the third, the independent variables were crossed with the dependent variable making the relationship analysis. The results showed a statistical association with a 95% confidence level between business Competitiveness with business dialogic discourse and strategic planning.

Keywords: Business Competitiveness, business dialogic discourse, strategic planning

Introduction
For Padilla (2006), competitiveness can be considered as the capacity of the productive
sector to promote and develop the sustained increase in business productivity processes as well as the ability to successfully insert in both national and international markets and contribute to increase the level of life of the population [1]. For Lall, Albadelejo and Mesquita (2005), business competitiveness is related to the ability of companies to capture resources through the relative growth of participation in the market and that allows them to increase their profitability processes [2]. Zevallos (2007) advanced a study in Latin American countries related to the restrictions of the environment to business competitiveness in which found the following as the main constraints: policy, promotion actions, macroeconomic management, social problems, foreign trade, technology and innovation, infrastructure among others. That is to say, within the main limitations, it is possible to identify strategic planning and communication or dialogic discourse. In this sense, social problems are directly related to the absence of cooperation, corruption, distrust and acting in isolation in internal and external communication issues [3].

For Millward & Brewerton (2001) the work commitment is articulated with the promotion and ascent processes, however, the becoming in the workplace and business environment requires a focus on the experiences of employees and the organization which is mediated by the dialogic discourse that manifests itself in everyday work [4]. In the same sense for Peralta (2004) the values related to processes of dialogic discourse, interpersonal and inter-business relationships allow him to give identity to the organizational culture [5].

The strategic planning according to Aragón et. al (2010), Castellanos et. al (2006), Du and Banwo (2015), Estrada et al (2009) and Rosto (2010) relate to the objectives, policies and goals defined in the organization as well as studies on competition, threats, opportunities and contingency plans among others. However, studies have shown that these aspects are not considered a priority for competitiveness in current organizations [6, 7, 8, 9, 10]. For Valencia (2005), strategic planning is an administrative organizational process that sets objectives through the design of personnel programs, prognosis of the workforce and the resources needed to achieve them in a given period [11]. In the present investigation, the association between business competitiveness, business dialogic discourse and strategic planning in plastic waste recycling companies of the Colombian Caribbean region was evaluated.

**Materials and Methods**

**Population and sample size:** The population was made up of 68 companies from the Colombian Caribbean coast with social object: Recycling of plastic waste. The sample consisted of 58 companies from the departments of the Colombian Caribbean coast based in the departments of: Atlántico, Magdalena, Guajira and Bolívar according to what is indicated in Table 1.
Table 1. Companies participating in the study

<table>
<thead>
<tr>
<th>Department</th>
<th>Small company</th>
<th>Microenterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guajira</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Bolívar</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Magdalena</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Atlántico</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>17</td>
</tr>
</tbody>
</table>

Percentage of companies that participated in the study: 70.7% for Small company and 29.3% for Microenterprise.

Note: Classification according to Zevallos 2003 [12].

The classification of the previous companies was made according to the number of employees as follows:

a. Microenterprise: Number of employees between 0 and 10 (0 < Number of jobs ≤ 10).

b. Small business: Number of employees between 10 and 50 (10 < Number of jobs ≤ 50)

To define the study sample for a finite population of less than 100,000 individuals, it is calculated according to Fong et al. (2017) [13] by equation (1):

\[ n = \frac{\sigma^2 Npq}{e^2 (N - 1) + \sigma^2 pq} \]  

(1)

N: Total population; n: Sample obtained from the population; \( \sigma \): Level of confidence chosen (95%); q: Probability that an element is not selected (p = q); e: Error allowed (5%); p: Probability that an element is selected (50%).

Variables, stages, instruments and reliability of the test: The study variables were:

a. Dependent variable: Business competitiveness

b. Independent variables: Business dialogic discourse and strategic planning.

The research was carried out in three (3) stages: In the first, the business dialogical discourse and strategic planning variables were evaluated by means of a survey applied to each participating company according to the classification established in Table 1 indicated. The second, evaluated business competitiveness according to the following indicators: Use of competitive strategies and innovation, business improvement and competitive situation of the company with respect to the plastic waste recycling sector.

In the third, the business competitiveness dependent variable was crossed with the independent variables: business dialogic discourse and strategic planning, building the bar diagrams of the relationship analysis from the contingency tables.

Instruments: Business competitiveness and strategic planning were measured according to the indicators: competitive situation, use of competitive strategies and...
business improvement according to Ibarra et. al [14] and the instrument designed by the IDB called the IDB’s Map of Competitiveness, whose questions were modified and adapted to the case at hand. The instrument was validated for its application in Latin America by the IDB [15]. The internal consistency of the test was determined by Cronbach's Alpha [16]. The business dialogic discourse was evaluated by means of a survey using the elements of the dialogic discourse of Sánchez, Uceros, Sánchez & Paz (2016) [17]. The instruments were structured according to the Likert scale where each variable studied was rated on a scale of 0 to 100 points where the scores were classified as follows: Low: 0-60 points and High: 61-100. The instruments were applied to each of the companies classified in Table 1: one, for the micro-enterprises of plastic waste recycling and the other, for the small plastic waste recycling company. 

**Reliability of the test:** The coefficients obtained for the Cronbach's Alpha by means of equation 2 for the questionnaire with the indicators of Ibarra et. al (2017) and the competitiveness map of the IDB were 0.90 and 0.88 indicating high levels of reliability.

The dependent variable Business competitiveness was classified into two categories: LBC: Low Business competitiveness (scores below 60 points (LBC <60)) and HBC: High Business competitiveness (scores equal or greater than 60 (HBC ≥ 60)). The independent variables were classified into two categories: a) Low business dialog discourse (BDSL <60 points) and high business dialog discourse (BDSH ≥60 points) b) Low strategic planning (LSP <60 points) and high strategic planning (HSP≥ 60).

**Statistic analysis:** First, business competitiveness was measured using the “IDB Competitiveness Map” instrument [15] classified into two (2) categories: Low (0-60 points) and high (61-100 points). The same was done for the questionnaire with the indicators of Ibarra et. al (2017) [14]. Subsequently, the number of cases in each category (low and high) was identified for each of the study variables building with this information the contingency tables. Next, the statistical test of Chi-Square independence was made between business competitiveness and independent variables (business dialogic discourse and strategic planning) calculating the degree of statistical association between them.

**Results and Discussion**

According to equation 1, with a confidence level of 95%, a sample size of 58 business is obtained. The instruments were applied for each of the companies classified in Table 1. Small companies (70.7%) and Microenterprise (29.3%). Table 2 indicates the values of p (statistical significance) where it is observed that there is a relationship of high statistical significance between business competitiveness, business dialogic discourse and strategic planning (p <0.05).
**Table 2 Chi-Square Test for Business Competitiveness**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Chi-square</th>
<th>GL</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business dialogic discourse</td>
<td>12</td>
<td>1</td>
<td>0.0005</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>7.82</td>
<td>1</td>
<td>0.0052</td>
</tr>
</tbody>
</table>

**Statistical significance at a confidence level of 95%**

Figure 1 shows the bar graph between business competitiveness and business dialogic discourse.

![Contingency Chart](image)

Figure 1. Bar chart business competitiveness-dialogic business discourse

The 60.3% (35 cases) of plastic waste recycling companies developed high business competitiveness due to the implementation of strategies that contribute to developing high levels of dialogical discourse in the organization. This is due to the fact that this type of company promotes and develops the sustained increase in productivity processes and they have been inserted successfully into both national and international markets [1]. In the same way, this type of plastic waste recycling companies have been increasing their participation in the markets, which has generated an increase in their profitability [2]. Likewise, they are companies that are betting to strengthening of the dialogical discourse in the organization, which has generated trust and collaborative work, positively impacting the processes of competitiveness, fulfilling in this way what Zevallos proposed [3].

The 17.2% (10 cases) of plastic waste recycling companies developed low business competitiveness due to the poor implementation of dialogic discourse strategies in the organization. This correspondence shows the statistical association between business competitiveness and dialogic discourse. This is due to the fact that what was stated by Millward & Brewerton (2001) is not fulfilled since it was possible to demonstrate the lack of commitment in this personnel to reach aspects related to promotion and ascent based on experience [4]. The 13.8% (8 cases) of plastic waste recycling companies developed high levels of business competitiveness due to the poor implementation of dialogical discourse strategies in the organization. This is because in this group of companies classified in this category they have some recogni-
tion in the sector from years ago and where the strength has focused on the product. The 8.6% (5 cases) of plastic waste recycling companies developed low business competitiveness due to the implementation of strategies that contribute to the development of high levels of dialogical discourse in the organization. This is very possibly due to the fact that they are relatively new companies in the market and that they are initiating organizational processes of strategic planning with elements of dialogic discourse and that they require some time to have a positive impact on competitiveness processes and of organizational identity according to the approaches of Peralta (2004) [5].

![Contingency Chart](image.png)

**Figure 2. Bar chart business competitiveness-strategic planning**

15.5% (9 cases) of the companies studied reached high levels of business competitiveness by implementing high levels of strategic planning in their processes. This is because in these types of companies the objectives, policies and goals of the organization are defined based on studies on the competition, threats, opportunities and contingency plans. That is to say, they have adequate strategic planning according to the market they serve, as proposed by Aragon et. al (2010), Castellanos et. al (2006), Du and Banwo (2015), Estrada et. al (2009) and Rosto (2010) [6,7,8,9,10]. 15.5% (9 cases) of the companies studied reached low levels of business competitiveness by using low levels of strategic planning in their processes. This is because in this type of companies they do not have a strategic plan for organizational development, that is, they do not have studies on competition, threats, opportunities or contingency plans and do not consider this strategy a priority, which affects their levels of competitiveness in the market. That is, in these companies should be implemented the approaches of Aragon et. al (2010), Castellanos et. al (2006), Du and Banwo (2015), Estrada et. al (2009) and Rosto (2010) [6,7,8,9,10].

41.4% (24 cases) of the companies studied developed low levels of business competitiveness by implementing high levels of strategic planning in their processes. This is probably due to the fact that the strategic planning processes are focusing more on the organization than in the strategies that impact on business competitiveness.
That is, in these companies it is necessary to fully implement strategic planning processes that impact on customers and the market as proposed by Valencia (2005) [11]. 27.6% (16 cases) of the companies studied achieved high levels of business competitiveness by using low levels of strategic planning in their processes. This is most likely due to the positioning of these companies in the regional market. However, it was possible to identify in this type of companies that focus a lot on product improvement and customer satisfaction more than on the strategic planning processes as such. In this type of companies it is necessary to implement the strategies defined by Aragon et. al (2010), Castellanos et. al (2006), Du and Banwo (2015), Estrada et. al (2009), Rosto (2010) and Valencia (2005) [6,7,8,9,10,11].

Conclusion

Based on the analysis as above, it is concluded as follow: It was possible to identify significant statistical significance at 95% of the level of confidence between business competitiveness and the processes of dialogical discourse. This is largely due to the implementation of action plans, seminars, forums, courses and workshops that have allowed this type of companies to strengthen their human resources in aspects of "dialogical discourse" both within the organization and in the processes of marketing and advertising. There is statistical significance at a 95% level of confidence between business competitiveness and strategic planning. This is because these types of companies know the competition completely. That is, they know their strengths, opportunities, weaknesses and threats, which allows them to build contingency plans that contribute to improving their competitive situation, use of strategies and business improvement.

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