ENVIRONMENTAL MARKETING: IMPLEMENTATION IN ORGANIZATIONS

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Abstract Despite business increasing interest in adapting to the green demands of their markets, the publications about Environmental Marketing Strategy (EMS) implementation are still limited. In order to contribute to fill this gap, we propose a model that includes individual, strategic and organizational variables that have an influence on the development of this type of marketing strategy. Using a sample of 115 Spanish companies, we identify and validate the individual variables that motivate managers to implement EMSs – awareness about ecological problems, perception of environmental pressures, expected benefits and administrative mechanisms that can help or impede its application – existence of routines and obstacles. These results mean a great contribution to green marketing literature because they prove that the implementation of strategies depends on the cognitive characteristics of the managers that modify the organizational variables of the firms.

1 INTRODUCTION

Nowadays it exists, at least, two reasons that justify a deep study of EMSs. On the one hand, there is a growing competitive pressure on companies to consider the natural environment as a central issue of their marketing and management strategies (Hart, 1995; Shrivastava, 1994). This is consequence of the increasing societal and governmental pressure to regulate business pollutant activities. On the other hand, natural environment has become so relevant that it is thought to be of critical importance for the next century academic research on marketing (Kilbourne and Beckman, 1998).

However, there is an important gap in theoretical and empirical knowledge about the individual and organizational variables that affect the implementation of these strategies. In our article, we accept that this scarcity of studies may be due to the following reasons: the recentness of the strategic dimension of the natural environment as an opportunity to increase entrepreneurial competitiveness and the necessity of having an extensive theoretical model about implementation.

Therefore considering these problems, in this research we intend to achieve two objectives. The first one involves analysing the individual and organizational variables that have an influence on the level of implementation of this strategy. The second one is based on validating the relationships that are established among them.

2 THEORETICAL FRAMEWORK

2.1 The Implementation of EMSs

Despite implementation being one of the most relevant areas of research in marketing arena (Cravens 1987), it is admitted that the literature does not present a solid conceptual framework or suitable analytical tools for studying this subject (Piercy 1990).
The analysis of the marketing literature shows that interest about implementation aspects is considerably recent (see Ruekert, Walker and Roering 1985; Piercy 1985; Siplard 1986; Cravens 1987), and that to study the implementation issue it has been used approaches developed outside this discipline (psychology, sociology, and administrative theory). As a result, it is required that the marketing research goes more deeply into the knowledge of organizational dynamics related to implementing the decisions of the market (Piercy 1990).

On the other hand, managers agree on that green marketing provides with an important sustainable competitive advantage for companies (Florida 1996; Shrivastava 1995; Dunn 1997), and that its implementation is complex. This complexity is based on that, to adapt themselves to the growing green demands of their markets the companies should change their corporate culture to include ecological issues in all organizational activities. (Mc Daniel and Rylander 1993; Clair, Milliman and Whelan 1996).

Another explanation of this complexity is that the novelty and limited enterpreneurial experience in the implementation of EMSs requires new and little structured organizational behaviour patterns (Gupta 1995). Consequently companies need to manage their dynamics to integrate all functional areas and this is to be oriented by the top ecological compromise of the managers(Klassen 1993). Therefore implementing EMSs is a complex task because it requires integrating different level variables with influence on each other.

In order to facilitate the comprehension of this article figure 1 presents the basic model. It includes different variables that intervene in the implementation of a EMS.

This model is based on a constructivist approach to strategies implementation. This approach requires the integration of individual, group and organizational variables, and permits considering managerial influence strategies formulation and the effects of organizational routines in their level of implementation (for more information see Rivera-Camino 1996).

2.2 Individual Variables

Managerial influence has been recognized by the administrative literature as an important variable when studying implementation. Authors agree on that managerial compromise is one of the most important factors for succeeding in the formulation and implementation of competitive strategies (Urban and Star 1991). Managerial cognition and valor system influences the choice of the strategy and the design of the production systems (Hambrick and Mason 1984).

The natural environment literature also recognizes this individual dynamic. For example, Naes (1993) indicates that managerial perceptions affect his/her behavior regarding the natural environment and the groups that exert pressure for its protection. Moreover, Schmidheiny (1992) states that the roles and responsibilities of top executives and intermediate managers influence significantly organizational green culture. As a result, different authors demand a deeper theoretical and empirical research to know which individual perceptions drive executives to adopt an ecological approach. (Drumwright 1994).

Therefore we consider highly important analyzing the effects of managerial perceptions on
the level of implementation of a EMSs, and propose three hypotheses:

**H1** The greater the natural environmental protection pressure perceived by the managers, the greater the level of organizational routines

**H2** The greater the level of benefits associated with adopting EMSs, the greater the level of organizational routines

**H3** The greater managerial awareness about ecological problems, the greater the level of organizational routines.

### 2.3 Organizational Variables

#### 2.3.1 Administrative routines

The EMSs require new behaviors that allow for organizational change in companies. Therefore their implementation success depends on deep knowledge about organizational variables that favour their adoption and performance.

In the environmental literature, the limited studies that exist about this issue are exclusively normative and referred to environmental management standards implementation of (see Randall, 1995; Ciu and Pun, 1998). However this literature neither validates its recommendations, nor justifies theoretically the influence of proposed variables on the implementation of environmental management standards.

In the administrative literature, even though previous research is also normative, it exists a more developed theoretical framework about the organizational variables related to strategies implementation. These studies suggest that strategies can be implemented by reorganizing the variables that are in connection with the organizational structure (Daft and Macintosh 1984). In this type of variables it is included the *specialization*, which allows the organization to work in functional units, so that the employees can deal with new tasks - they require investment in cognitive resources by the workers (Lawrence and Lorsch 1967). Another variable is the *formalization* or changes in the written rules and in the procedures that govern the roles and behaviors (Daniels, *et al.* 1984). The *centralization* is another structural variable that can be used to implement strategies. This variable is defined as delegation in decision taking -the organizational members participate in decisional processes (Aiken and Hage 1968). The literature shows that centralization is only convenient for routine activities in stable environments (Ruekert, Walker and Roering 1985).

Systems or procedures that help to assign and redistribute organizational resources are another type of variables that companies can use to implement strategies. According to the literature, organizations can implement their strategic decisions by establishing budget systems, training methods and compensations systems (Hambrick and Schecter 1983, Gómez-Mejía and Welbourne 1988).

Processes or actions that are episodic or the result of individual conducts -not systematic organizational actions- (Skivington and Daft 1991) are also important mechanisms of implementation (Guth and Mac Millan 1986). Among these processes, there are the communications used by organizations to diminish the uncertainty that is derived from the implementation of strategies- these are perceived as organizational changes or innovations. Another example of these processes are mechanisms used to reduce conflict or disagreement in two or more departments resulting from incompatibilities in functional objectives (Walker and Ruekert 1987), given that conflicts can inhibit the coordination required to implement strategies. Therefore we suggest that:

**H4** The higher the administrative routines addressed to a support EMS, the higher its level of implementation in the company.

#### 2.3.2 Potential obstacles to the implementation

According to the literature, organizational variables influence on implementation is not always positive. For this reason, it should also be analyzed employees and organizational actions that can hinder the activities of the company to implement a new strategy. Authors in the research area of implementation of projects (Pinto and Prescott 1990) show a list of variables (empirically obtained) that coincide with those mentioned by Weimer and Vining (1989), in the analysis of public politic programs. These authors state that the administrative actions or variables that can prevent implementation are lack of specification of individual actions required for the project, little clearness of goals and general guidelines, lack of support from top management, unavailability of needed technology, and little supply of resources and relevant information for all the actors.
In this research we intend to know which are business perceptions about these obstacles, and their influence on a EMSs implementation process. Assuming that high awareness about organizational problems will predispose companies to develop more measures to avoid them, we raise the following hypothesis:

\( H_5 \) The greater the knowledge about obstacles to implementation, the higher the level of administrative routines adopted to support a EMS.

3. EMPIRIC ANALYSIS AND RESULTS

3.1 Sample Description

In order to define the targeted population we used a stratified process of the main economic sectors having negative ecological impact. Despite some of these sectors were suggested by the net formed by 11 European universities participating in Eurobarometer project, to make the selection we compared them with SIC Codes provided by Dun & Bradsstreet, and with C.N.A.E (Economic Activities National Classification). Finally, we chose a targeted population of 1200 Spanish companies having turnovers above €500 million. From this population we obtained 160 questionnaires, and 115 of them were considered valid. The questionnaires were sent to top executives, as they were the more appropriated persons to inform about their companies’ environmental strategy. Table 1 shows the sample used for this research.

3.2 Questionnaires

The following measures were used to study suggested variables:

3.2.1 “Pressure groups and environmental forces perception”

The questionnaire considered the 6 pressure groups that can influence on companies’ decision to adopt an environmental initiative. We evaluated answers using a scale from 1 to 5 (1=“any influence”, 5=“high influence”). Given that all items were grouped in a factor that explained 49\% of the variance (Eigenvalue =2.93408), and that their mean correlation was .3767**, we took obtained scores weighted average.

3.2.2 “Benefits associated with EMSs implementation”

There were 7 questions to assess these environmental actions results. It was used a graduated scale from 1 to 5 (1=“very negative”, 5=“very positive”). Considering that items were grouped in a factor that explained 48\% of the variance (Eigenvalue =2.38390), and that their mean correlation was 3131**, we took obtained scores weighted average.

3.2.3 “Awareness about environmental problems”

We chose environmental problems opinions from literature review and previous interviews with managers. It was used questions of the type Likert, in order to evaluate managers’ level of agreement on the natural environmental problems that their companies have to face. Answers were graduated from 1 to 5 (1= “Total disagreement”, 5= “Total Agreement”). Considering that all items were grouped in a factor that explained 54\% of the variance (Eigenvalue =2.1551), and that their mean correlation was 3814**, we took obtained scores weighted average.

3.2.4 “Organizational routines to be implemented”

“Organizational routines” were evaluated using 13 items that included diverse administrative actions to implement EMSs. We used the following scale to evaluate organizational EMSs implementation routines: 1=“Null degree”, 3=“Medium degree”, 5=“Upper degree”. As a result that all items were grouped in a factor that explained 76\% of the variance (Eigenvalue =9.8303), and that their mean correlation was .7322**, we took obtained scores weighted average.

3.2.5 “Obstacles to implementation”

6 items that included organizational variables able to impede EMSs implementation evaluated potential obstacles to implementation. A scale from 1 to 5 (1=“Null”, 5=“Total”) was used to evaluate impediment level. Considering that all items were grouped in a factor that explained 58.8\% of the variance (Eigenvalue =3.5274), and that their mean correlation was .5015**, we took obtained scores weighted average.
<table>
<thead>
<tr>
<th>SECTOR</th>
<th>Targeted Population</th>
<th>Obtained Sample</th>
<th>Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Food and beverage</td>
<td>100</td>
<td>14</td>
<td>14%</td>
</tr>
<tr>
<td>2. Textile</td>
<td>100</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td>3. Leather products</td>
<td>100</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>4. Paper and printer</td>
<td>100</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>5. Oil products</td>
<td>100</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>6. Chemistry and synthetic fiber</td>
<td>100</td>
<td>11</td>
<td>11%</td>
</tr>
<tr>
<td>7. Rubber and plastic</td>
<td>100</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td>8. Other non metallic products</td>
<td>100</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>9. Basic metals and metal products</td>
<td>100</td>
<td>17</td>
<td>17%</td>
</tr>
<tr>
<td>10. Machinery and equipment</td>
<td>100</td>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td>11. Electronic and optical equipment</td>
<td>100</td>
<td>14</td>
<td>14%</td>
</tr>
<tr>
<td>12. Transport equipment</td>
<td>50</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>13. Other</td>
<td>50</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1200</strong></td>
<td><strong>115</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

Table 1: Sample Description

4. RESULTS

Before validating the hypothesis of our model, we analyzed the reliability of our research questionnaires. According to Table 2, all the scales achieved a high level of reliability.

4.1 Individual and Organizational Variables linked to EMSs implementation

In order to evaluate the hypothesis we used a procedure based on Goodness-Of-Fit test of Chi-Square test, RMSEA and RMSR (Root Mean Squared Error of Approximation, Root Mean Square Residual, Steiger 1990), GFI (Goodness-of-Fit Index, Jöreskog y Sörbom 1993) and RNI (Relative Noncentrality Index, Bentler 1990) indexes. The aim was validating the initial model (figure 1), that showed the influence of individual variables on organizational variables, and the effects of the latter on EMSs level of development.

The results of our model were considerably satisfactory, as the Goodness-Of-Fit achieved by our data was optimal. It should also be mentioned that the residuals of our model were very little (see table 3).

After several analyzing processes, we concluded that the following model allowed for the best fitting (see figure 2).

Estimating the relations among the variables of the final model, allowed us to prove that these results validate the managerial positive influence on the routines developed to implement a EMS (H1, H2, H3).

It is also noticeable individual variables positive influence on managerial knowledge about obstacles to implementation. Likewise, it is validated the hypothesis that suggested that a greater knowledge about obstacles to implementation would involve a higher level of administrative routines assigned to support EMSs (H5). Furthermore, it is confirmed the hypothesis that stated that there was a positive impact of positive routines on the EMS level of implementation (H4). Tables 4, 5, and 6 show the connections among these variables.
### Table 2: Research questionnaires reliability

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>VALUE</th>
<th>P-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2 (n)$</td>
<td>0.383</td>
<td>0.944</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.000</td>
<td>0.961</td>
</tr>
<tr>
<td>RMSR</td>
<td>0.009</td>
<td>-</td>
</tr>
<tr>
<td>GFI</td>
<td>0.993</td>
<td>-</td>
</tr>
<tr>
<td>RFI</td>
<td>0.966</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table 3: Final model results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Pressures</th>
<th>Benefits</th>
<th>Opinions</th>
<th>Obstacles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficients ($\beta_i$)</td>
<td>0.356</td>
<td>0.447</td>
<td>0.673</td>
<td>0.196</td>
</tr>
<tr>
<td>t-values</td>
<td>1.621</td>
<td>1.856</td>
<td>2.289</td>
<td>1.011</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.220</td>
<td>0.241</td>
<td>0.294</td>
<td>0.194</td>
</tr>
</tbody>
</table>

$\text{Routine} = \beta_1 \times \text{Pressur} + \beta_2 \times \text{Benef} + \beta_3 \times \text{Opin} + \beta_4 \times \text{Obst}$

### Table 4: Influence on administrative routines

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Pressures</th>
<th>Benefits</th>
<th>Opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficients ($\beta_i$)</td>
<td>0.194</td>
<td>0.0418</td>
<td>-0.0942</td>
</tr>
<tr>
<td>t-values</td>
<td>2.040</td>
<td>0.423</td>
<td>-0.963</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.0950</td>
<td>0.0987</td>
<td>0.0987</td>
</tr>
</tbody>
</table>

$\text{Obst} = \beta_1 \times \text{Pressur} + \beta_2 \times \text{Benef} + \beta_3 \times \text{Opin}$

### Table 5: Influence on obstacles

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Pressures</th>
<th>Benefits</th>
<th>Opinions</th>
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<td>0.0950</td>
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</tr>
</tbody>
</table>
5 CONCLUSIONS

This study means an important contribution to the existing limited literature about environmental marketing implementation. Its relevance lies in proposing a model that integrates individual and organizational variables able to facilitate or impede business EMSs implementation. Using questionnaires that showed acceptable levels of reliability, we have identified and validated cognitive features that drive managers to implement EMSs, and administrative mechanisms that can favour or hinder this implementation.

Moreover, the final model shows the effects of managerial variables on the administrative routines of their companies to implement EMSs. These results are consistent with literature that states that managerial influence is one of the most important factors that affect the formulation and implementation of competitive strategies (Urban and Star 1991). This is due to the influence of their perceptions on their behavior regarding the natural protection pressure groups (Naes 1993). Furthermore, these managers have an important impact on creating the ecological culture of their companies (Schmidheiny 1992). It was also founded influence of these individual variables on obstacles to EMSs implementation -greater managerial awareness about organizational problems would direct them to develop more measures to avoid these impediments.

Moreover hypothesis validation showed that the administrative routines have an influence on EMSs implementation level. It confirms the organizational dynamics stated – even though, only normatively- by authors. Therefore, this study is a significant contribution to the environmental and administrative literature, and confirms that strategies can be implemented by reorganizing variables in connection with organizational structure, processes and systems.

For all these reasons, our research shows very interesting results for the ecological management of companies. It has identified and validated empirically organizational variables that executives can manage to implement EMSs successfully. Consequently, marketing directors have tools to plan an efficient use of organizational resources to implement this type of strategy.

5.1 Study limitations

The methodology used in this research means some restrictions in the interpretation of the results. The questionnaires might have been biased by subjectivity and by the characteristic limitations of using interval scales. Over-representation of some economic sectors and the stratified method are also limitations that mean difficulty in results generalization.

Even though our results come from a heterogeneous sampling and therefore prove no general rules, they showed a relevant tendency in the use of environmental variables. Consequently, they can be very useful as previous research for deeper studies. Moreover, despite using different sectors, the questionnaires showed acceptable reliability indexes and allowed for the validation of the proposed hypothesis.

5.2 Future research

Given that implementation process is highly complex and the knowledge EMSs extremely recent, in our opinion future research should develop sector studies and analyze the influence of other environmental and individual factors on the implementation of EMSs.

REFERENCES


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