

Corporate environmental responsibility – a key determinant of corporate reputation

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Abstract

This paper aims to determine the trend of the relationship between corporate environmental responsibility and corporate reputation by focusing on a study of the European automotive sector. The starting point of our research is content analysis of the sustainability or social responsibility reports published in 2010, 2011, and 2012 by 13 businesses operating in the European automotive industry. Content analysis was carried out in order to identify the indicators used to assess corporate environmental responsibility.

The methodology aimed to produce an evaluation model for corporate environmental responsibility based on the following variables reported by companies: carbon dioxide emissions, water consumption, energy consumption, and amount of waste. Corporate reputation of sampled organizations was assessed based on content analysis of the 2010, 2011, and 2012 reports of the Reputation Institute. We applied the correlation of panel data and emphasised the fact that high levels of corporate environmental responsibility sustain high levels of corporate reputation.

The study highlights the theoretical considerations that support this relationship. As companies become increasingly accountable, the methodology described in our study can be developed in further research by using other variables to measure corporate environmental responsibility.

Keywords: *corporate social responsibility, corporate environmental responsibility, corporate reputation, European automotive industry.*

1. Introduction

The neoclassical view on corporations and their role in society considers their responsibility for achieving objectives, including maximizing profit, and their accountability to stakeholders [1], a category that also includes the environment.

Corporate environmental responsibility is a new form of cooperation between business and environment. Companies promoting environmental objectives generate economic, political and social consequences. Consumers and competitors perceive responsible organizations as friendly, consumers prefer their products and services and believe that they are the result of responsible and sustainable business.

Also, corporate environmental responsibility can contribute to the development of sustainable businesses, while social responsibility actions can be profitable business strategies. In this context, our paper aims to demonstrate the relationship between corporate environmental responsibility and corporate reputation. Section 2 describes the evolution of the concept of corporate environmental responsibility. Section 3, "Corporate reputation", presents the evolution of the concept and various studies that approach it. Section 4 describes the research methodology and the hypothesis testing. The study ends with formulating the conclusions.

2. Corporate environmental responsibility

Scholarly literature highlights some contradictions on the impact of corporate social responsibility. To Reference [2], "an action counts as an act of CSR only if it is unprofitable. Socially beneficial actions that increase profits are merely hypocritical window dressing". On the other hand, Reference [3] differentiates between corporate social responsibility (unprofitable and driven by altruistic motives) and strategic corporate social responsibility (profitable). Reference [4] emphasize the idea that corporate social responsibility requires sacrificing the profit for the social interest.

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A transition occurred from the idea that "the only social responsibility of a company is to use its resources and engage in business designed to increase profits, while obeying the rules of the game" [5] to the idea that caring for the environment and for the people should be a matter of concern. Corporate social responsibility is an umbrella for sustainable practices and the adoption of "green" management is often done due to strategic reasons [6].

Reference [7] known for his interest in corporate social responsibility and sustainable development, outlined three stages in the emergence and development of the concept of corporate social responsibility interacting with the environment. Each stage highlights the on-going construction of the concept of corporate environmental responsibility [8]:

a) The period between 1960 and 1978 saw numerous changes in the legislation of Western states, changes aimed at reducing the environmental consequences of economic activities and encouraging the responsible use of natural resources. International environmental standards were created and all businesses were to comply with them.

b) A shift towards sustainable consumption of natural resources and "green" production occurred between 1980 and 1999. This moment coincides with the emergence and international expansion of the concept of sustainable development.

c) After 1999, new concerns have marked the business world: developing social responsibility practices, relations with the stakeholders, improving corporate governance practices and implementing social responsibility strategies as integral parts of the overall business strategy.

An interesting analysis performed on a total of 37 definitions of corporate social responsibility published by different authors between 1980-2003, Reference [9] shows that the environmental dimension is least mentioned. The environmental dimension has been used in only 8 of the analysed definitions, although the World Business Council for Sustainable Development distinguishes between the concepts of corporate social responsibility and corporate environmental responsibility ([10], [11]).

Corporate environmental responsibility encompasses "environmentally friendly actions not required by law, also referred to as going beyond compliance, the private provision of public goods, or voluntarily internalizing externalities" [12]. Based on the analysis of frontiers of theoretical economic research on corporate environmental responsibility, we can explain the motivations of organizations to engage in such actions: reducing pollution and costs creates opportunities for organizations and the environment, the new generation of "green" consumers is willing to pay a higher price for clean products, businesses tend to become proactive and react before public pressure occurs. It is clear that corporate environmental responsibility can cover a wide range of ecological and environmental objectives that can affect business decisions and policies [13].

Some organizations believe that social responsibility actions regarding the environment lead to lower profits. "This simplistic perception implies that, because of competition, a good manager has no other option in the market economy than to buy as cheap and sell as expensive as possible. The existence of a legal framework to comply with is only acknowledged without enthusiasm: under the law, all is allowed to reach the sole purpose of any serious business - profit maximization" [14].

Conversely, supporters of sustainable business practices argue that corporate environmental responsibility is inextricably linked to achieving important long-term profits. "The relationship between socially responsible activities and profitability may be best characterized as *some* firms will generate long-term profits from some socially responsible activities *some* of the time" [15].

Studies focused on assessing the environmental performance of organizations revealed conflicting results due to small samples or subjective assessment criteria. Thus, assessing the environmental performance of organizations may seek to determine: the environmental impact, the environmental compliance, and the implementation of organizational processes [16]. Based on economic and statistically significant results, Reference [17] have shown that a low level of environmental performance has a significant negative effect on the intangible assets of S&P 500 companies. Also, Reference [18] ranked 15 organizations based on environmental performance and demonstrated that high levels of environmental performance and compliance with environmental standards lead to better environmental reporting and the adoption of pollution prevention activities.

Achieving high environmental performance is possible when an environmental management system is in place and allows the development, implementation, coordination and monitoring of activities with environmental impact,

in order to reach two objectives: compliance with standards and reduced waste [19]. This idea is supported by other studies that show significant relationships between the presence of an environmental management system and increased environmental performance: reduced costs, increased quality, reduced waste [20].

3. Corporate reputation

Scholarly literature highlights the expanding research on corporate reputation, along with the difficulty of formulating a unified vision on the significance of the concept of reputation. These barriers arise from confusions regarding the concepts of identity, image and reputation [21].

Reference [22] identify in scholarly literature several distinct approaches to corporate reputation (economic, strategic, marketing, organizational, sociological, and accounting). In these authors' opinion, image and identity are core components of corporate reputation: "corporate reputation is a collective representation ... It measures the relative position of the company in relation to employees internally, and other stakeholders externally" [23].

Over time, various attempts to define image, identity and corporate reputation highlighted their interchangeable use. Corporate image is defined as "a collective mood underlying internal efforts to communicate the success or failure of the organization to others" [24]. Corporate identity encompasses "presenting the organization to various stakeholders and the means to distinguish the organization from others" [25]. There are even similarities in how corporate image and corporate identity are defined. For Reference [26], the image of an organization is "what is meant to be viewed from the outside by stakeholders as most important, enduring and distinctive about the organization", while for Reference [27], corporate identity is the "set of values and principles that employees and managers associate with the organization".

Some research highlights three different groups of definitions of corporate reputation: reputation as a state of awareness, as an assessment, and as an asset [28]. This approach allows defining corporate reputation as "judgments of collective observers on the organization based on the evaluation of economic, social and environmental impact over time" [29].

Management research recognizes corporate reputation as an intangible asset with two dimensions: the economic outlook, or how to extend the stakeholders' perceptions about the ability of organizations to produce quality goods, and the institutional perspective, which involves the expansion of what is important for stakeholders [30].

4. The relationship between corporate environmental responsibility and corporate reputation

Numerous studies highlight the positive relationship between corporate reputation and financial performance [31], but relevant to the present research are studies that highlight the influence of corporate social responsibility actions on reputation [32] or the role of innovation in corporate social responsibility practices in creating corporate reputation [33].

Other studies highlight how companies develop their corporate reputation by meeting international standards of corporate social responsibility [34].

Reference [35] produced one of the most interesting studies that establish the relationship between corporate responsibility and corporate reputation, using stakeholder theory. The results show considerable similarity between the concepts of responsibility and reputation and the possibility to use reputation models as a potential standard for many conceptualized aspects of corporate responsibility.

We believe corporate environmental responsibility can help increase corporate reputation. Thus, reducing pollution generates confidence and safety for employees, local communities and consumers, and impacts corporate reputation.

5. Research methodology

This paper aims to assess corporate environmental responsibility of companies operating in the European automotive sector. Research was carried out for 2010, 2011 and 2012 and was based on content analysis of reports published by European automotive sector companies. We created an index of performance of environmental commitment, based on a methodology developed in previous research [36].

Because analysed organizations operate in a sector characterized by strong environmental impact, restrictive legislation on reducing pollution and carbon dioxide emissions, strong competition, and pressure from various external stakeholders with regard to reducing the environmental impact, it is important to investigate the performance of environmental responsibility.

The objectives of this research are:

- O1. Create the sample to be investigated;*
- O2. Perform a content analysis of reports published by these companies in 2010, 2011, and 2012 and create a database with indicators evaluating the performance of environmental commitment;*
- O3. Create an index of performance of environmental commitment, based on an original methodology;*
- O4. Rank European automotive industry organizations according to the values of the index of performance of environmental commitment in 2010, 2011, and 2012;*
- O5. Perform a content analysis of the Reputation Institute reports and add the values of the reputation index to the database;*
- O6. Apply panel data correlation to highlight the relationship between corporate environmental responsibility and corporate reputation.*

The hypothesis of the study is as follows: There is a relationship between the overall index of corporate reputation and the index of performance of environmental commitment.

The 13 companies included the sample are members of the European Automobile Manufacturer's Association. Performing content analysis of sustainability, CSR or environmental reports published in 2010, 2011, and 2012 helped select the variables used to assess the performance of environmental commitment.

The performance of environmental commitment (PEC) was assessed using an original evaluation model based on four measuring variables: CO₂ emissions in g/km per vehicle, water consumption per vehicle, energy consumption per vehicle, and waste in kg/vehicle.

The methodology to calculate the index of performance of environmental commitment (IPEC) involved several steps: we ordered in descending order the values of each variable and determined the value that contributes to performance of environmental commitment; we scored each value of the indicators using a 0 to 1000 scale (0 for the minimum and 1000 for the maximum); we normalized values; aggregation was achieved by multiplying the points awarded by normalizing with a weighting coefficient of 0.25; we calculated the index by summing the scores obtained by each organization after aggregation; we ranked organizations according to the results of IPEC, the organization with the highest index value being also the organization with the highest environmental performance [37]. The data are summarized in Table no. 1.

Table no. 1. Ranking European automotive sector organizations by IPEC

Company	IPEC 2010	IPEC 2011	IPEC 2012	Average IPEC _M
TOYOTA	747	858	862	822
BMW	777	831	854	821
RENAULT GROUP	741	788	765	765
PSA PEUGEOT CITROEN	786	790	706	761
FORD	704	757	793	751
VOLKSWAGEN	662	684	701	682
VOLVO	618	649	615	627
JAGUAR/LAND RO	535	652	645	611
HYUNDAI	607	615	587	603
GM	557	579	575	570
PACCAR	502	544	518	521
DAIMLER GROUP	385	548	556	496
FIAT GROUP	483	499	495	492

Source: calculated by authors

It appears that the majority of analysed organizations have average and above average environmental performance. Performance evaluation of environmental commitment highlights BMW Group in the leading position and a homogeneous spreading of scores among the first nine analysed producers. The leading position of

BMW Group is supported by their ability to recycle waste. An analysis of each evaluation variable shows that Ford is the organization with the lowest CO₂ emissions, and the lowest water and energy consumption is reported by Toyota [38].

Hypothesis testing was done using panel data and the Eviews 8 software. Data processing involved documenting the values of the index of performance of environmental commitment (IPEC) and the values of the corporate reputation index (ICR), available in the Reputation Institute 2010, 2011, and 2012 reports ([39], [40], [41]). This led to 12 observations, given the lack of data for nine of the companies included the sample.

We studied the relationship between the two indexes using statistical correlation. The correlation coefficient is -0.372 and it shows a negative and moderate link between IPEC and ICR (Table no. 2).

Table no. 2. IPEC and ICR correlation matrix

	IPEC	ICR
IPEC	1	-0.372
ICR	-0.372	1

Source: calculated by authors

Consequently, the hypothesis of our study, according to which “There is a relationship between the overall index of corporate reputation and the index of performance of environmental commitment”, is partially validated, requiring additional statistical analysis when longer data series are available. Organizations focused on obtaining a high level of corporate reputation realize the importance of going beyond the minimum environmental requirements imposed by law or regulations, and implement additional, voluntary actions to ensure business sustainability.

We believe that the methodology used to determine IPEC for the automotive industry organizations can be improved and applied to other sectors.

6. Conclusions

This research allows the assessment of corporate environmental performance based on an original methodology, which facilitates the identification of corporate strengths and weaknesses using four indicators, and it provides all stakeholders with an overview of environmental performance and of each measurement indicator. It offers researchers and practitioners an overview of environmental indicators reported by companies in the automotive industry and of their interest to adhere to the voluntary principles of sustainability reporting, it offers the possibility to complete and perfect the methodology by including new indicators that could be applied to businesses, regardless of industry.

The study demonstrates that there is a relationship between corporate environmental responsibility and corporate reputation.

The limits of this study arise from the existence of restrictions in the choice of indicators, due to the need to report similar indicators, the exclusive use of reports published by companies (sustainability reports, annual reports, CSR reports), the necessity of calculations in the case of companies that reported custom indicators, the need to place equal importance to all indicators evaluated to determine the total index, the lack of data for few of the companies included the sample.

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