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Article

# Factors Promoting Environmental Responsibility in European SMEs: The Effect on Performance

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**Abstract:** There is increasing social and political awareness of the importance of developing environmental responsibility at a corporate level. When focusing on issues of responsibility, large companies are frequently perceived to be more responsible for driving climate change and resource depletion. However, small and medium enterprises (SMEs) contribute significantly to the use of resources such as material and energy and produce approximately 64% of the pollution in Europe. Drawing on evidence from “The Eurobarometer 381 Survey on SMEs, Resource Efficiency and Green Markets”, we analyze the environmental responsibility of European SMEs, studying their compliance with environmental legislation and how several factors drive environmental orientation among SMEs. Our sample consists of 3647 SMEs operating in 38 countries. Only around a fifth of the firms go beyond environmental regulations, showing the highest levels of environmental responsibility. We conduct OLS regressions to analyze the factors that affect a positive environmental attitude among European SMEs (internal drivers being more significant than external ones) and then, to observe the positive effect of environmental responsibility and firm’s experience in offering green services/products on performance, although a conjoint effect was not found. Implications for practitioners, academics, and policy-makers are outlined.

**Keywords:** environmental responsibility; drivers; performance

## 1. Introduction

There is increasing social and political awareness of the importance of developing environmental responsibility at corporate level [1]. Corporate Environmental Responsibility (CER) can be defined as company practices that benefit the environment and go beyond simply complying with environmental laws [2]. When focusing on issues of responsibility, large companies are frequently perceived to be more responsible for driving climate change and resource depletion [3], that is, there is a misconception that small and medium-sized firms (SMEs) (following the definition of the European Commission of an SME having fewer than 250 employees—Recommendation 2013/361/EC) are less aware of the negative effects of their operations and lack interest in pursuing environmental practices [3,4]. Furthermore, SMEs provide little information regarding their strategies and financial performance and, therefore, this contributes to their being less studied [5].

Nevertheless, it is important to study SMEs in their own right, since they differ from large corporations in factors such as the amount of resources available, strategies, drivers, or importance of managerial values and level of involvement of stakeholders [6]. SMEs have specific barriers that prevent them from engaging in environmental practices, such as the absence of an appropriate organizational structure (limited resources), culture (frequently depending on a single decision maker with fixed values), and policy (frequently having a short-term business approach) that will support green approaches [7]. However, we have to recognize the heterogeneity of SMEs and that their flexibility

enables them to respond quickly to changing circumstances, taking advantage of new niche markets for sustainable products/services with social and/or environmental benefits [6]. Some organizational characteristics of SMEs (i.e., informal communication style, fewer hierarchical levels) are favorable for implementing environmental practices in core business functions, although they constrain external communication and reporting, while the contrary occurs in large firms [4].

According to the European Commission, 98% of all European firms are SMEs, accounting for 67% of total employment [8]. Therefore, their combined achievements have the potential to generate a major impact on the global economy and society. However, this impact can also be negative since SMEs contribute significantly to the use of resources such as material and energy and produce approximately 64% of the pollution in Europe [9]. Hence, the pro-environmental attitudes of SME entrepreneurs are of particular relevance since they are linked to corporate social activities [10] and lead them to reduce their firms' carbon footprint [11]. Acknowledging this, the European Commission has launched several initiatives to assist SMEs in implementing environmental legislation, upgrading their capabilities and fostering the environmental orientation of their activities.

There has recently been a call to study the pro-environmental attitudes of SME entrepreneurs [10] and what drives environmental innovation in SMEs and how such pursuits impact on performance [12,13]. Hence, our aim is to analyze to what extent European SMEs are environmentally oriented and go beyond regulations, what drives this behavior, and whether having CER policies delivers a competitive advantage. Drawing on evidence from "The Eurobarometer 381 Survey on SMEs, Resource Efficiency and Green Markets", which provides a large sample of data from European firms, our research questions are:

What are the drivers of CER in SMEs?

Does CER have any effect on SMEs performance?

A recent review on green practices of SMEs in the services sector [14] reports that more than half of the studies lack theoretical foundation, with the remainder anchored primarily in stakeholder theory, the resource based view, and institutional theory. The present paper is rooted in stakeholder theory [15], assuming that increased ecological sensitivity from internal and external stakeholders leads a firm towards higher responsiveness to environmental concerns. Additionally, although the focus is normally targeted on external stakeholders [13,16], we aim to highlight that internal ones also have a large impact on establishing values and goals of SMEs.

The paper is organized as follows: in the following section, we review the literature on the topic and propose hypotheses to be confirmed. Section 2 addresses the methodological issues. Then, we present the results and findings of our analysis and discuss the results. The final section presents conclusions and practical implications.

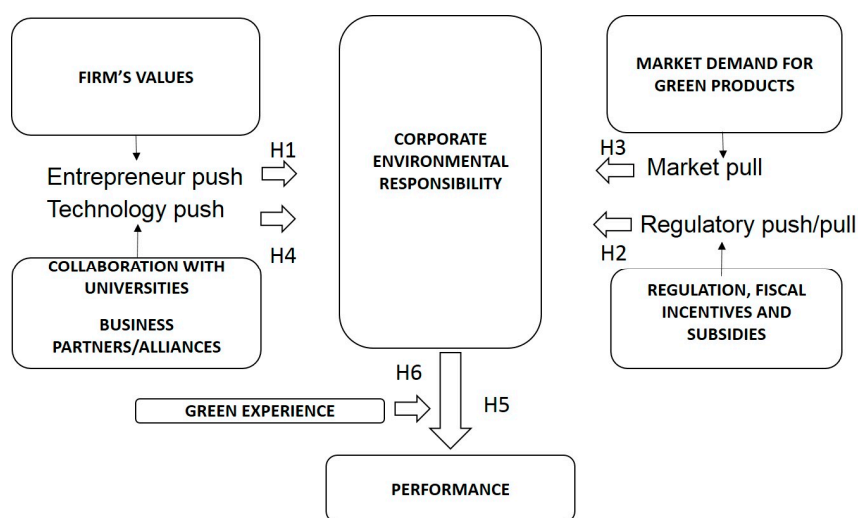
## 2. Theoretical Framework and Hypotheses

CER has its roots in Corporate Social Responsibility (CSR). CSR plays an increasingly important role in today's business world. The European Commission defines CSR as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis. Since Bowen's seminal work describing CSR primarily in terms of social issues [17], many approaches, theories, and terminologies have appeared [18]. Contemporary scholars consider there are three main elements in CSR [16,19], i.e., economic, social, and environmental issues.

CER can be understood as business practice that has extended beyond ensuring compliance with government regulations, and beyond a few proactive initiatives in cutting-edge companies. In this vein, Gunningham defines it as "practices that benefit the environment (or mitigate the adverse impact of business on the environment) that go beyond that which companies are legally obliged to do" [2] (p. 215). The implementation of pollution abatement programs, involvement in voluntary environmental restoration, or the systematic reduction of waste and emissions are just some examples

of activities developed by firms to assess environmental responsibility. Although these practices have drawn substantial interest mainly from practitioners, the driving motives have received less attention in the academic literature, and empirical studies are lacking [1]. Businesses operate nowadays in a more sensitive environment, due to changes in citizens' values (demanding fair trade and/or organic goods) [12] and the awareness raised by regulations to avoid the negative impact of economic activities. This impact may, for example, be ecological (global warming, declining natural resources, pollution) or social (problems of international supply chains and offshoring). These factors increasingly lead different stakeholders to demand attention to sustainability from managers. That is, managers agree with policymakers and the general public that businesses, irrespective of their size, can no longer fail to respond to the needs of the communities in which they do business [16].

A growing body of literature examines the reasons why firms engage in CER [20]. However, a recent literature review states that "important issues that have been widely studied in the broader environmental business literature, such as the role of external influences, internal resources/capabilities, the firm's eco-friendly orientation, and financial implications of environmental initiatives, have only been tangentially tackled" [13] (p. 9). Since managing stakeholders can appropriately reduce risk and improve companies' CER [21], stakeholder theory can be considered an important element of research in the field. Firms engaging in CER (going beyond compliance of legislation) will be more alert to these context changes and will be highly responsive to internal (owners, employees) and external (customers, government, competitors, suppliers, etc.) stakeholders' environmental demands. A number of studies have examined the issue of drivers of eco-innovation proposing different classifications, for example distinguishing between a firm's internal technology-push and regulatory and market-pull motivations [22] or distinguishing between micro (entrepreneur), meso- (market, technology), and macro-level (such as regulations) motives for engaging in CER [23]. We will draw on the first classification for the purposes of showing the impact of different stakeholders on CER adoption. We will also analyze the financial implications of the adoption of CER policies for SMEs, which are summarized in Figure 1.



**Figure 1.** Theoretical framework: Drivers of CER in SMEs.

The approach of SMEs to CER is different from that of large firms in that it is personalized and informal. SMEs' engagement with CER reflects the values of their owners and the needs of their community, since their engagement results more from a genuine concern for the community and the environment than the anticipated business benefits [16]. The Top Management Team has an important role in defining the environmental orientation of the firm, since their values and environmental orientation determine to a great extent the corporate responsibility assumed and the environmentally practices implemented by the firm [24]. Entrepreneur's values and personal commitment are linked

to a more general concern for the environment [11], especially in SMEs where the manager is the main strategic decision-maker [25]. Small owners' perceptions about potential intangible benefits (understanding the business context, goodwill development, attractive to employees, brand-building) are positively related to small firms' environmental engagement [26]. Therefore, we could expect that company values will drive the adoption of CER in SMEs (see Figure 1). Formally, we propose the following hypothesis (H1):

*H1: The values of a firm encourage the development of CER in SMEs*

The motivation to comply with environmental law (with regards to clean technologies—carbon emissions, pollution prevention, standards for products or package recycling, waste management protocols, energy efficiency) has been found to be an important driver for CER practices by SMEs [13,27–30]. Apart from raising their awareness of environmental issues and helping to establish formalized procedures, these regulations are normally associated with fines that are too high for SMEs' financial resources. Thus, companies comply with the regulations to avoid excessive penalties. Governments can also exercise a regulatory push by offering tax reductions and subsidies to firms that are responsive to environmental issues. Experience confirms that SMEs tend to comply with external pressures on environmental responsibility, regulation are thus an important driver to be considered [31]. Regulations can be more effective for engaging SMEs in CER than the expectations of cost reduction, since cost-leadership focused small firms do not emphasize environmental engagement [16]. Hence, we can propose that environmental regulations will drive SMEs environmental responsibility (see Figure 1). Formally, we propose:

*H2: Environmental regulation promotes the development of CER in SMEs*

Additionally, customers are now more aware of environmental issues and transmit to businesses their expectation that if they do not engage in environmental activities, they will be penalized in some way [24,32], especially in certain industries (e.g., Chemical industry). CER-oriented behavior and green managerial practices can be fostered by consumers exhibiting greater willingness to pay for products or services produced in an environmentally conscious way [33]. This often makes entrepreneurs engage in sustainable behaviors beyond complying with government regulations [34]. Consequently, there is pressure from customers and clients for companies to engage in pro-environmental behavior. Hence, market pull can be considered one of the drivers of CER (see Figure 1). Therefore, we propose:

*H3: Customers' demands for green products/services encourage the development of CER in SMEs*

Finally, a review of the literature on the drivers of CER shows that apart from customers and governments, other stakeholders can pressurize firms to adopt pro-environmental behavior. For example, the stakeholders with which a small firm cooperates, such as suppliers and business partners in technological alliances [35–37] and Universities and research institutions [38], usually play a key role in fostering CER in SMEs.

*H4: Cooperation with suppliers, competitors, and other agents will lead to CER in SMEs*

Figure 1 summarizes how different stakeholders can encourage SMEs to develop environmentally friendly behavior. Thus far, we have analyzed the drivers of CER in SMEs and we will now study whether this behavior can lead to an increase in a company's performance.

Researchers have approached the relationship between CER and performance from different theoretical perspectives but their results are inconclusive [39]. Following stakeholder theory, firms have predetermined commitments and contracts with different internal and external partners. This theory assumes that the adoption of CER will be positively reflected in a firm's performance [39]. Engaging in environmental management practices can improve competitiveness, leading firms to obtain a competitive advantage [36,40,41] either by reducing costs (e.g., reducing waste, energy/water

consumption, fines) [42–45] or by increasing benefits (e.g., enhancing customer satisfaction, corporate image, and/or brand loyalty) as proposed and observed in previous literature [4,43,45]. The so-called Porter Hypothesis assumes that environmental regulation stimulates eco-innovation and leads to “win-win” opportunities where, simultaneously, pollution is reduced and a firm’s competitiveness is increased. In this line, there is a *virtuous circle* with regard to the relationship between CER and a firm’s performance [46]. Other studies have also found that implementing proactive environmental business practices is related to better financial results [13,24,47,48].

However, some studies still suggest that smaller companies perceive significantly fewer benefits of engagement with environmental issues [49], and this could be related, at least partly, to heterogeneity across eco-innovations and the broad array of performance measures. For example, a recent study [12] found that two forms of process eco-innovation (reduction of CO<sub>2</sub> footprint and recycling of waste/water/materials) were positively related to productivity while a product eco-innovation (improved recycling of product after use) was not. Since most of the literature observes a positive effect and drawing on the arguments previously mentioned, we propose the following hypothesis:

*H5: CER leads to higher performance in SMEs*

Furthermore, drawing on the resource-based theory [50], which adopts an inward-looking perspective regarding the firm, we explore the role of resources as moderators of the relationship between CER and performance. SMEs that can make use of appropriate resources and instrumental capabilities (such as shared vision, stakeholder management, and strategic proactivity) for environmentally friendly purposes are very likely to achieve superior performance [48]. Certain capabilities have been identified as contributing to develop sustainability programs, which, in turn, are related to environmental and organizational performance. These capabilities are shared vision, cross-functional coordination, and technology response [51–53]. A recent empirical study [13] shows that environmental orientation has a critical role in enhancing a firm’s financial results, and that this link is stronger when the firm possesses adequate resources and capabilities committed to environmental activities. By having green experience (offering green products/services), SMEs will have developed organizational resources and capabilities which are crucial in supporting CER. Therefore, we would expect that firms with green experience will improve the effect of CER on performance, outperforming their competitors. Hence, we propose:

*H6: The positive influence of CER on performance is stronger for SMEs with green experience.*

### 3. Materials and Methods

The dataset is the Flash Eurobarometer Survey No. 381, titled “SMEs, resource efficiency and green markets, wave 2”, conducted upon the request of the European Commission in September 2013. In this survey, a random technique is used in order to obtain a nationally representative sample of SMEs operating in 38 countries (28 Member States of the European Union plus Albania, Israel, Iceland, Liechtenstein, Montenegro, Former Yugoslav Republic of Macedonia, Norway, Republic of Serbia, Turkey, and the United States). From this dataset, we selected the SMEs for which we had information regarding their CER behavior and the related variables presented below. Our sample consists of 3647 SMEs, of which 42% are micro-firms, 36% are small, and 22% are medium-sized.

We conduct an Ordinary Least Square (OLS) regression model to analyze the factors that affect a positive environmental attitude among European SMEs (see Table 1). This method is a linear regression analysis that finds the line of best fit for a dataset, minimizing the squared residuals resulting from differences in the observed value and the value anticipated, based on the model. The line of best fit explains the potential relationship between a dependent variable and various independent variables. Additionally, we analyze the effect of this CER on sales growth in Table 2 through another OLS regression model. We will interpret that the variable has statistical significance when the *p*-value is less than the significance level (we will establish three significance levels: 0.01 high,

0.05 moderate, and 0.1 low significance). The significance level is the probability of rejecting the null hypothesis given that it is true, which is often set to 0.01 (1%), 0.05 (5%), and 0.1 (10%).

### Definition of Variables

We develop two models. In our first model, we examine the drivers of CER. The dependent variable reflects a gradual scale of CER adopted by SMEs. We measure Corporate Environmental Responsibility through a variable that reflects a gradual scale of pro-environmental attitudes of these SMEs—see Table 1. In this first model, the explanatory variables are related to motivations for engaging in environmental practices such as energy saving, minimising waste, saving materials, saving water, recycling, or using predominantly renewable energy. These motivations are clustered following Figure 1. Nine dummy variables are included in the model in order to show this motivations or drivers of CER.

**Table 1.** Variable definition.

Variables	Variables' Operationalization
Corporate Environmental Responsibility (CER)	A Likert-type variable that reflects a gradual scale of pro-environmental attitudes. The options are: <ol style="list-style-type: none"> <li>i the company has difficulties in complying with national environmental legislation;</li> <li>ii the company just complies with it;</li> <li>iii the company complies and contemplates to do more;</li> <li>iv the company goes beyond compliance despite the lack of pro-environmental attitudes of the entrepreneur;</li> <li>v the company goes beyond compliance and consider environmental concerns as one of their priorities.</li> </ol>
DRIVERS OF CER: MARKET PULL	
Clients' demands	A dummy variable that takes the value 1 when the firm indicates that consumers' willingness to pay for environmental products/services fostered the development of environmental practices and 0 otherwise.
Business opportunity	A dummy variable that takes the value 1 when the firm indicates that the possibility of creating a competitive advantage of a business opportunity motivated the development environmental practices, and 0 otherwise
DRIVERS OF CER: TECHNOLOGY PUSH	
Competitors	A dummy variable that takes the value 1 when the firm indicates that catching up with main competitors who have already taken action motivated the development of environmental practices, and 0 otherwise.
DRIVERS OF CER: REGULATORY PUSH/PULL	
Subsidies	A dummy variable that takes the value 1 when the firm indicates that subsidies fostered the development of environmental practices, and 0 otherwise.
Fiscal incentives	A dummy variable that takes the value 1 when the firm indicates that financial incentives received through private and public external support fostered the development of environmental practices, and 0 otherwise.
Compliance	A dummy variable that takes the value 1 when the firm indicates that the need to comply with environmental law fosters the development of environmental practices, and 0 otherwise.

Table 1. Cont.

Variables	Variables' Operationalization
<b>DRIVERS OF CER: ENTREPRENEUR PUSH</b>	
Company values and mission	A dummy variable that takes the value 1 when the firm indicates that environmental practices were developed because they were part of the company values and mission, and 0 otherwise.
Corporate image	A dummy variable that takes the value 1 when the firm indicates that environmental practices were developed to maintain a corporate image, and 0 otherwise
Others	A dummy variable that takes the value 1 when the firm indicates that other factors fostered the development of environmental practices, and 0 otherwise
<b>SECTOR</b>	
Manufacturing	Dummy variable
Retail	Dummy variable
Service	Dummy variable
Industry	Dummy variable
<b>SIZE OF THE FIRM</b>	
Micro-firms	A dummy variable that takes the value 1 when the firm has less than 9 employees, and 0 otherwise.
Small-firms	A dummy variable that takes the value 1 when the firm has from 10 to 49 employees, and 0 otherwise.
Medium-firms	A dummy variable that takes the value 1 when the firm has from 50 to 249 employees, and 0 otherwise.
<b>OTHER VARIABLES</b>	
Country	38 dummy variables reflecting the current 28 Member States of the European Union plus Albania, Israel, Iceland, Liechtenstein, Montenegro, Former Yugoslav Republic of Macedonia, Norway, Republic of Serbia, Turkey, and the United States
Investment in resource efficiency	The firm's financial effort to improve its efficiency. This variable is a scale that reflects the percentage of total annual income invested to improve resource efficiency with the following options: <ul style="list-style-type: none"> <li>i less than 1% of total income,</li> <li>ii from 1% to 5%,</li> <li>iii from 6% to 10%,</li> <li>iv from 11% to 30%,</li> <li>v from 31% to 50%,</li> <li>vi from 51% to 75%,</li> <li>vii more than 75%</li> </ul>
Green experience	The firm experience offering green services or producing green products in areas such as products/services with environmental features, recycled material, solid waste management, renewable energy, air pollution control and/or heat/energy saving audits. This variable is a scale with four possible options: <ul style="list-style-type: none"> <li>i no experience,</li> <li>ii less than 12 months,</li> <li>iii from 1 to 3 years,</li> <li>iv more than 3 years of experience.</li> </ul>
Sales growth	In the last two years, your company turnover has increased (1), remained unchanged (0), or decreased (-1)?



Regarding control variables, we control for industry. Four dummy variables are included, reflecting manufacturing, retail, service, and industry. Additionally, we include the firm's financial effort to improve its efficiency.

In a second model, we measure the effect of CER on sales growth. This dependent variable was selected following a recent call [13] to study financial implications of environmental initiatives for SMEs. Several studies, focusing specifically on SMEs, analyze the impact of CER on financial performance using earnings/sales growth as an item to measure it [13,48], although they also use other measures such as: profit, profit growth, return on assets, sales, and cash flow [13] and return on investment [13,48]. Subjective perception of managers have been used to measure firm performance and provide details about the potential of this process of measurement [48]. The Flash Eurobarometer Survey No. 381 only informs about this financial variable. As in the previous model, we control for the effect of size, industry, and country of origin, and include green experience. The latter refers to a firm's experience in offering green services or producing green products in areas such as products/services with environmental features, recycled material, solid waste management, renewable energy, air pollution control and/or heat/energy saving audits—see Table 1.

## 4. Results

### 4.1. Descriptives

From the analysis of our measure of CER (see Figure 2), it can be observed that 97% of SMEs in Europe comply with environmental legislation. Only 3% of the firms in our sample face difficulties in complying with environmental legislation and declare it a problem for their business. Half of the firms (48%) do not want to go further than their regulatory requirements. However, 27% of the firms are contemplating doing so in the future and 22% of the firms already go beyond environmental regulation. A total of 9% of the firms in the sample declare that environmental concerns are not a priority and 13% state that environmental concerns are among their priority objectives.

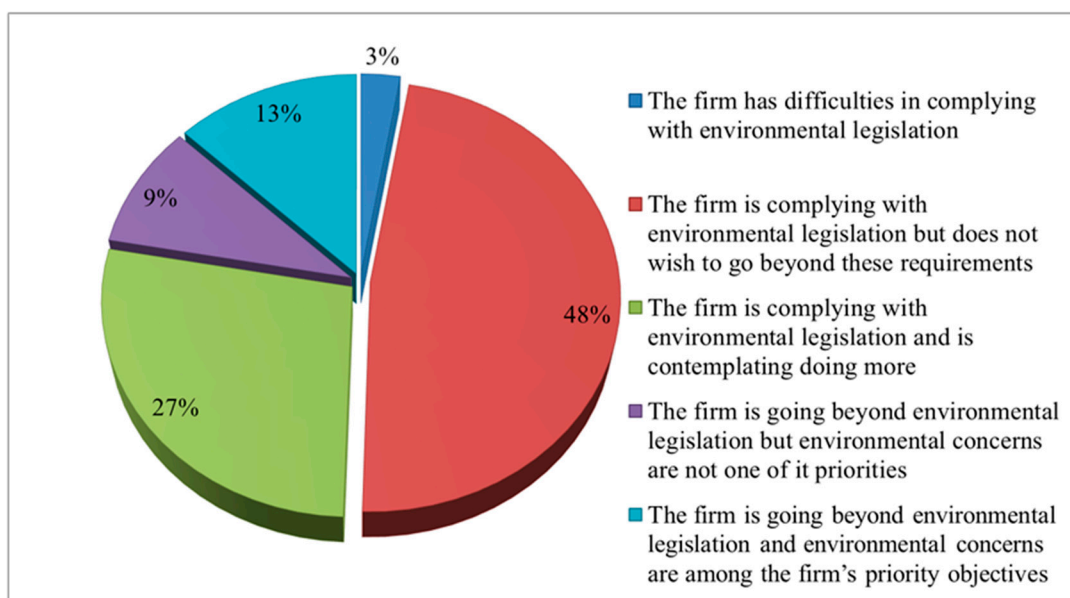


Figure 2. Corporate Environmental Responsibility in European SMEs.

### 4.2. OLS Regression on CER

Table 2 shows the results of the OLS analysis on the drivers of CER. As can be observed, the model has a moderate fit to the data, since the adjusted  $R^2$  indicates that almost 11% of the variation is

explained by the model. The significance of the F test is high, which means that the effects contribute to the model.

Size is a key structural factor that facilitates environmental engagement. Compared to micro-firms, small firms are more likely to engage in CER behavior (coefficient 0.163;  $p < 0.01$ ). Similarly, the probability increases for medium-sized companies compared to micro-firms (coefficient 0.474;  $p < 0.01$ ).

Focusing on the reasons why SMEs go beyond regulations and engage in CER behavior, it seems that the main reasons are internal, as the values of a company seem to have a positive and significant effect on CER behavior. The main reasons for developing CER declared by the firms are the fact that environmental responsibility is in the company's core values (coefficient 0.459;  $p < 0.01$ ) and due to corporate image (coefficient 0.198;  $p < 0.01$ ). Therefore, we can corroborate H1. Regarding other drivers, our results are not conclusive. Market pull seems to foster CER, at least partially, since although clients' demands for green products/service do not seem to significantly influence CER, the identification of a business opportunity in the market does have a positive and significant effect (coefficient 0.259;  $p < 0.01$ ). Regulation, tax incentives, and public support or subsidies do not seem to have a strong significant effect, although the latter is slightly significant (coefficient 0.157;  $p < 0.1$ ). Similarly, we find no effect for technology push. Therefore, we can support H1 and H2 partially but not H3 and H4.

**Table 2.** Drivers of CER.

Independent Variables	
Constant	2.417 ***
Size (micro-firms category of reference)	
Small firm	0.163 ***
Medium-sized firm	0.474 ***
Investment in resource efficiency	0.029 ***
Industry (manufacturing category of reference)	
Retail	−0.05
Service	0.127 **
Industry	0.029
Country dummies	Yes
Market pull	
Clients' demands	0.062
Business opportunity	0.259 ***
Technology push	
Competitors	−0.062
Regulatory push/pull	
Subsidies	0.157 *
Fiscal Incentives	0.076
Compliance	0.034
Entrepreneur push	
Company values and mission	0.459 ***
Corporate image	0.198 ***
Others	0.102
Adj R <sup>2</sup>	0.108
F	9.506 ***
N (number of observations)	3647

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

#### 4.3. OLS Regression on Sales

Additionally, and in order to test our hypotheses, we carried out an OLS regression on the effect of CER on sales growth. Table 3 shows the results of this analysis.

As can be observed in Model 1 in Table 3, CER has a positive and significant effect on sales growth in SMEs (coefficient 0.050;  $p < 0.01$ ), controlling for size, industry, and country of origin of the firm. Therefore, we can accept H5 and state that CER leads to higher performance in SMEs.

Similarly, we found that green experience is positively and significantly related to sales growth (coefficient 0.016;  $p < 0.01$ ).

In order to contrast the moderating positive effect of green experience on the influence of CER on performance (H6), we included the product of both variables in model 2 of Table 3. Contrary to our expectations, the moderating effect of green experience on the relationship between CER and SME performance is non-significant and, therefore, there is no support for H6.

**Table 3.** CER impact on sales growth.

Independent Variables	Model 1	Model 2
Constant	−0.035	−0.035
Size (micro-firms category of reference)		
Small firm	0.177 ***	0.177 ***
Medium-sized firm	0.323 ***	0.323 ***
Sector (Manufacturing category of ref.)		
Retail	−0.002	−0.002
Service	0.085 ***	0.085 ***
Industry	−0.016	−0.016
Country dummies	Yes	Yes
Green experience	0.016 **	0.016 **
CER	0.050 ***	0.050 ***
Env. Resp. X Green Exp.		0.001
Adj R <sup>2</sup>	0.119	0.119
F	38.588 ***	37.728 ***
N	3647	3647

\*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

## 5. Discussion

Our findings indicate that most managers perceive no clear benefit in environmental behavior and do not see going beyond environmental legislation as a source of competitive advantage. Only 9% of the firms consider environmental responsibility as one of their priority objectives (see Figure 2). This result is consistent with previous literature that suggests small firms perceive significantly fewer benefits of engagement with environmental issues [49].

However, some SMEs go beyond regulations and engage in CER behavior, mainly due to internal motives (values/mission, corporate image). It seems that SMEs are increasingly focusing on CER from a strategic perspective. These results are to some extent similar to previous qualitative analysis on single industries [1] that show both strategic and legitimacy motives for adopting environmental management practices. In SMEs, entrepreneurs' values and personal commitment to environmental issues are tied to company behavior [26] and the role of entrepreneurs in defining a firm's environmental orientation is key as it largely determines the extent to which CER is adopted.

In the light of our results, most other external drivers identified in the literature have no impact on CER behavior by SMEs. According to our findings, we can only partially corroborate the effect of market pull and regulatory framework, showing no effect for technology push. Additionally, and in line with recent research [4], we have corroborated that size matters for CER orientation. Therefore, the difference between our findings and the expected relationships identified in the literature might be due to how different small firms are from larger ones with respect to environmentally responsible behavior, as recent literature suggests [4]. It might be that large firms, with enough organizational resources and capabilities to engage in green practices, can stay ahead of clients' demands or competitors' initiatives by following voluntary/proactive programs, but this is not the case for small firms, for which these drivers only encourage them to comply with the minimum environmental requirements [54].

Regarding the effect of CER on performance, our study finds similar results to current research on large firms ([21] (p. 1) for a relation of them). We find that CER behavior has a positive and significant effect on sales growth in European SMEs, in line with recent studies [13] suggesting that there might be a business case for CER in SMEs, as is being debated in the current literature [27]. Additionally, we find that green experience is positively related to performance in SMEs. However, when the firm has greater CER the fact of having green experience does not improve performance to a greater extent. There is no cumulative effect of alignment of green goals (CER) and green experience as predicted, since these variables seem to have a significant effect on their own.

## 6. Conclusions

The aim of this paper was to analyze the factors that drive SMEs to go beyond complying with environmental legislation and engage in CER behavior. Our findings show that this is a strategic decision, since SMEs engage in these practices because they are considered part of the company's core values and in order to create a competitive advantage of a business opportunity.

Although our models have a relatively low explanatory power, we can conclude that being CER-oriented has a positive and significant effect on sales growth. That is, SMEs that go beyond environmental legislation and consider environmental concerns among their objectives have a larger increase in sales. However, our results also show that although almost all SMEs in Europe comply with environmental legislation, half of them do not want to go further than the regulatory requirements. Therefore, the results also suggest that firms might need to shift to a new strategic logic in order to continue to "pay to be green". Our finding is that considering CER as a strategic issue leads firms to obtain a competitive advantage. In line with these arguments, a recent study [55] also highlights that although specific actions can be recognized as CER practices, to boost performance, firms need to improve their focus on CER as an explicit goal of their strategies. Firms need to focus on manageable internal factors in order to fully adopt CER, going beyond mere compliance with external factors over which they have no control.

This paper has several implications for managers, as well as for policy-makers. First, the results reflect that most entrepreneurs perceive no clear benefit in engaging in environmentally responsible behavior, that is, many entrepreneurs are still sceptical about potential cost savings and market benefits accompanying environmental improvements. Therefore, policy-makers should make an effort to inform these firms about the prevailing environmental legislation and its repercussions, fostering voluntary initiatives that promote environmental self-regulation, providing support for, and even giving recognition to, firms engaging in this type of practice.

Second, the results show that European SME entrepreneurs may engage in CER mainly as result of internal drivers (core values, corporate image, and competitive advantage) and that being CER-oriented delivers better performance. We contend that this is helpful for policy-makers in order to stimulate environmental behavior within SMEs, by transmitting its strategic importance to obtain competitive advantage, precisely when it is considered a core value can it lead to an improvement in corporate image and the attainment of a business opportunity. In our paper, only 22% of the firms go beyond environmental regulations and only 13% consider environmental concerns among their priority objectives. Therefore, entrepreneurs have to be convinced of the benefits of CER and environmentally friendly management practices in terms of performance and productivity. Environmental issues are strategic issues for SMEs (not merely compliance with legislation). The reasons why small businesses do not engage in environmentally friendly practices or make environmental improvements are their perceptions that these represent a cost and that opportunities for creating a competitive advantage are low. However, we believe that there is a win-win scenario in improving environmental management practices, as it also increases sales.

Third, this study highlights the decisive role of the top manager in being sensitive to ecological issues in order to undertake green initiatives. Consequently, firms aiming to achieve a competitive advantage should look for environmentally committed individuals when filling this position.

One of the limitations of our study is the measurement of the different variables used. Measures that are more accurate would definitively enhance the robustness of the findings. Furthermore, the database does not provide information on the precise actions the firms have taken, so as to relate the level of performance with the degree of CER (actions taken beyond compliance with legislation).

Future lines of research could be related to ascertaining which particular CER practices yield a greater increase in sales and other measures of performance, examining the capabilities that are specifically related to green actions and their effect on environmental and organizational performance, attempting to test an integrated model using Structural Equation Model (SEM). Finally, our paper shows a link between CER and strategic choices of SMEs. The identification of a business opportunity and the firm's corporate image as well as their values and mission are the main drivers of CER in SMEs. Some SMEs consider CER a strategic choice and integrate it into their core values. As this link has not been explicitly explored in the literature, we believe it is an interesting and promising research line currently being developed by scholars [16].

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