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## Do Entrepreneurial SMEs Perform Better Because They are More Responsible

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# **Do entrepreneurial SMEs perform better because they are more responsible?**

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## **Abstract**

Many scholars have investigated the direct impact of entrepreneurial orientation (EO) on performance, but this direct association seems both spurious and ambiguous because many parameters may have an indirect influence on this relationship. The present study thus considers sustainable practices—environmental practices, social practices in the workplace (SPW), and social practices in the community (SPC)—as three probable mediators in the relationship between EO and performance, which is considered in terms of its financial and non-financial dimensions. We seek to show to what extent small- and medium-sized enterprises' (SMEs) sustainable practices are useful assets, which are supported by EO, to improve performance. Using a structural equation modeling approach, data collected from 406 French SMEs were tested against the model. Our findings reveal that EO has a positive impact on the implementation of sustainable practices and that SPW partially mediate the link between EO and performance. Taken together, these findings suggest that EO plays a role in indirectly promoting performance by enhancing certain human resource management practices.

**Keywords** Corporate social responsibility; Entrepreneurial orientation; Performance; Small- and medium-sized enterprise; Sustainable practices

## **Introduction**

Sustainable development (SD) has become a significant issue in research on business strategies and practices. When applied to the business world, SD involves firms' integration of environmental and social concerns into their decisions. In doing so, these firms comply with corporate social responsibility (CSR; Strand 2014, p. 688). From this perspective, outcomes are not only assessed according to economic or financial criteria; such assessments must also consider every dimension of SD.

In small- and medium-sized enterprises (SMEs), the links between SD and an entrepreneurial approach can be established at several levels. First, integrating sustainability requires a broader conceptualization of how to do business (Jenkins 2004). Operationalizing CSR thus demands significant changes within firms and requires that they develop new processes,

products and services, strategies, partnerships, and business models (Bos-Brouwers 2010; Jenkins 2009). Second, “SMEs’ involvement in SD can be considered as an entrepreneurial act” (Spence et al. 2011, p. 338), particularly because SD is a developing market that is characterized by both uncertainties and opportunities (Spence et al. 2011). An “entrepreneurial act” implies strategic changes and an ability to detect and integrate new values (Slevin and Terjesen 2011). The changes that SD requires thus call for entrepreneurial solutions (Dean and McMullen 2007; York and Venkataraman 2010). Third, from this strategic perspective, CSR can be a source of opportunities and innovations and help firms to procure competitive advantages by, for example, allowing for the exploitation of new markets (Porter and Kramer 2006).

In this context, SMEs are further encouraged to implement sustainable practices (Fassin 2008; Hofmann et al. 2012). On the one hand, SD is often presented as a business imperative that firms should adopt because doing so is in their best interest (Banerjee 2008; Besser 2012): the arguments that are used to convince SMEs to establish SD practices generally reflect the “business case” approach (Carroll and Shabana 2010). On the other hand, SMEs are encouraged to assume, in addition to their basic economic functions, further responsibilities at the social and environmental domains and to minimize the negative impacts of their activities in these areas (Brammer et al. 2012; Cassels and Lewis 2011). Given their importance in the economic fabric, SMEs are unsurprisingly asked to contribute to SD. In the European Union, SMEs represent more than 97% of businesses, employ almost 70% of the workforce, and are estimated to be responsible for 60–70% of the total environmental impact (Calogirou et al. 2010). SMEs are an essential vector for achieving the objectives of SD, particularly because they possess both the characteristics and capacities needed to innovate in this field (Aragon-Correa et al. 2008; Bos-Brouwers 2010; Klewitz and Hansen 2014). This capacity for innovation, associated with risk taking, and proactiveness constitute the three dimensions of an entrepreneurial management style, defined by Covin and Slevin (1988) as the entrepreneurial orientation (EO). These three factors may improve SME performance in certain cases (Rauch et al. 2009; Wiklund and Shepherd 2005).

Regardless of SD issues, various empirical studies have shown that EO has a positive effect on firm performance (Wiklund and Shepherd 2005; Zahra and Garvis 2000). Nevertheless, as noted by Lumpkin and Dess (1996), there are two main reasons that the relationship between EO and performance is complex. On the one hand, a number of factors, such as strategies, can mediate this relationship (Lumpkin and Dess 1996; Schepers et al. 2014; Wiklund and Shepherd 2005). On the other hand, performance is a multi-dimensional concept that tends to become more complex, particularly because firms are increasingly incentivized to consider SD, i.e., non-financial considerations, in their decision making (Battisti and Perry 2011; Perrini et al. 2011).

However, no empirical study has examined the extent to which entrepreneurial-oriented SMEs use CSR behavior to improve their performance. Therefore, this article seeks to study the relationships between EO, SMEs’ involvement in SD, and performance. We examine (i) the effect of EO on SMEs’ sustainable practices, (ii) the effects of these practices on performance, and (iii) the ways in which they mediate EO’s effect on performance. In doing so, this article should help to fill various gaps in the literature. First, beyond the generally established positive link between EO and performance, various factors have been shown to affect this

relationship (Messersmith and Wales 2013; Rauch et al. 2009). Nevertheless, little research has examined these mediating variables, which limits our understanding of this relationship and the factors that influence performance (Kollmann and Stöckmann 2014; Lechner and Gudmundsson 2014; Rauch et al. 2009), particularly when SD practices are implemented (Dixon-Fowler et al. 2013). Second, research into the link between SD practices and financial performance remains controversial (Hart and Dowell 2011), and the link between SD practices and non-financial performance has received very little attention to date. Third, as SMEs provide little information regarding their strategies and financial performance, they are less studied than large firms (Baumann-Pauly et al. 2013; Bos-Brouwers 2010), despite that SMEs are the backbone of the economy. Based on a survey of 406 French SMEs that focuses on the link between SD and EO, this research helps to fill these gaps in the literature.

## Background Literature and Theoretical Framework

### *SMEs, SD, and Performance*

Several researchers have noted that a lack of financial, technical, and managerial resources may limit the ability of SMEs to integrate CSR into their objectives (e.g., Gadenne et al. 2009; Revell and Blackburn 2007; Spence 1999, 2007).

However, the notion that SMEs have a low propensity to implement SD practices has also been questioned. The social and environmental activities of SMEs have often been shown to be implicit, and these firms have unknowingly played a part in SD (Ciliberti et al. 2011; Fassin 2008). Accordingly, the tools used to assess commitment to SD, which have been designed for large firms, are not suitable for small firms (Baumann-Pauly et al. 2013; Fassin 2008), and small firms' contributions in terms of SD have been underestimated (Battisti and Perry 2011; Besser 2012; Morsing and Perrini 2009). Furthermore, SMEs have a certain number of characteristics that may facilitate commitment to sustainable actions (e.g., Baumann-Pauly et al. 2013; Bos-Brouwers 2010), as summarized in Table 1.

**Table 1** Characteristics for CSR in SMEs

Characteristics	Possible positive implications for CSR and links with RBV logic
Key role played by the owner-manager/leadership, entrepreneurial management	A simple capital structure which means that the owner-manager does not need to justify any SD investments to external financiers; internal asset to foster possibility of implementing responsible practices rapidly and to develop key capabilities for building an advantage
Flexibility	Capacity to adapt and respond rapidly to the challenges and expectations of the stakeholders; internal asset to develop potential for innovation
Few formal structures/flat hierarchy	Relatively low coordination costs; collaboration and personal relations between the employees/direction, which encourages involvement, the sharing of knowledge and information; employee creativity encouraged and put to profit and better results
Limited resources	Propensity to collaborate with external partners and networks so as to obtain tangible competitive advantages as more resources and possibilities for action
Proximity with the local community	Taking into account the needs of the community; internal pressure encouraging involvement; causal link between business performance and good relations with the community; intangible assets to build a good reputation and gain support for operations among stakeholders

From Aragon-Correa et al. (2008), Baumann-Pauly et al. (2013), Jenkins (2009), and Torugsa et al. (2012, 2013)

The specificities of SMEs can thus be considered sources of competitive advantage when managers know how to use them to establish sustainable strategies, which have positive impacts on financial, commercial, and relational aspects (e.g., Arend 2014; Russo and Perrini 2010; Torugsa et al. 2012, 2013). Of course, this is not the case for all SMEs in all situations (Carroll and Shabana 2010; Dixon-Fowler et al. 2013; Russo and Perrini 2010). However, these competitive advantages serve as economic and strategic justifications that are often used to convince owner-managers that SD is “good for business.”

Therefore, the main challenge concerns identifying and implementing specific capabilities that can foster performance through sustainable behaviors. The resource-based view (RBV) thus seems a relevant theoretical framework, as value-creating SD practices and strategies depend not only on having unique and heterogeneous resources but also, and more important, on being able to mobilize and combine these resources. This approach emphasizes businesses’ resources and internal strategic capabilities that make generating competitive advantages possible (Anderson and Eshima 2013; Castelo Branco and Lima Rodrigues 2006; Hart and Dowell 2011). Tangible resources are linked to practical aspects, while intangible resources refer to immaterial resources and capacities, such as reputation and human capital (Halme and Korpela 2014). According to the RBV, these intangible assets are difficult to imitate or substitute (Barney 1991; Surroca et al. 2010) and play a role in business’ survival (Gardberg and Fombrun 2006).

A variety of studies have examined firms’ capabilities and their influence on CSR or SD. As summarized by Torugsa et al. (2012, p. 486), “such capabilities include a shared vision and employees’ involvement (Andersson and Bateman 2000; Hart 1995; Jenkins 2009), stakeholder management (Buysse and Verbeke 2003), innovation (Christmann 2000; Sharma et al. 2007), strategic proactivity (Aragon-Correa 1998), capital management (Bansal 2005), higher-order learning (Marcus and Geffen 1998) and the integration of CSR issues in strategic planning (Cordano and Frieze 2000).” However, few studies have paid specific attention to SMEs; however, a few have indicated that the most innovative SMEs are also the most involved in SD (Jenkins 2009; Schaltegger and Wagner 2011; Spence et al. 2011), that SME managers generally believe that involvement in SD generates additional operational risks (Fisher et al. 2009), and that strategic proactiveness has been identified as one of the capabilities that enables the development of sustainable practices in small businesses (Torugsa et al. 2012).

Thus, the RBV makes it possible to analyze the links between EO and SD practices by recognizing the importance of tangible and intangible assets as key factors in improving “business performance” (Wagner and Blom 2011). In this sense, integrating SD into SMEs can be considered an asset that makes developing a competitive advantage possible (Arend 2014; Simpson et al. 2004). From this perspective, a firm’s performance includes, in a broad sense, all the positive effects of intangible assets (Carroll and Shabana 2010).

## **Research Model and Hypotheses**

As we underlined previously, the positive effect of EO on performance, shown in many studies, can be notably explained by the impact of factors, including the strategies that are

implemented, that are influenced by EO, and that mediate this relationship. In other words, EO fosters certain behaviors that, in turn, enhance performance. Therefore, examining the joint influence of innovation, proactiveness, and risk taking on SME performance through these firms' sustainability-oriented practices is possible (Moreno and Casillas 2008). These three characteristics of EO can be adapted to the managerial challenges posed by SD, and they may influence the practices that are implemented.

## **Entrepreneurial Orientation and Sustainable Practices**

### *Innovation and SD*

SD supposes significant transformations in ways of thinking and doing business (Hart 1997; Sharma and Henriques 2005), as firms must take on greater social and environmental responsibilities (Jenkins 2004). The firms are thus obliged to innovate substantially (Schaltegger and Wagner 2011; Siebenhüner and Arnold 2007) to develop strategies that allow them to take on such challenges.

In practice, entrepreneurial SMEs have a high propensity for innovation. They are thus well positioned to develop products, services, and processes that, to varying degrees, play a part in SD. The empirical research that has revealed these innovations has focused primarily on the environmental aspect—eco-innovations—rather than on the other aspects of SD (Klewitz and Hansen 2014).

These environmental innovations in SMEs (for an overview, see Klewitz and Hansen 2014) cover a wide range of practices, such as eco-efficiency (Aragon-Correa et al. 2008), cleaner production (Altham 2007; van Berkel 2007), and eco-design (Bos-Brouwers 2010). These innovations also encourage improved productivity (Biondi and Iraldo 2002), the implementation of continuous improvement processes (King and Lenox 2002; van Berkel 2007), and external partnerships (Hansen et al. 2002). These innovative practices in the environmental field are thus also linked to innovations at the level of human resource and community relations. For example, within SMEs, continuous improvement processes encourage the development of training programs and collaborative processes (Jenkins 2009; Kerr 2006). At the community level, innovations encourage constructive collaboration with various stakeholders, thereby allowing SMEs to gain access to complementary resources (Jenkins 2009; Torugsa et al. 2012) and identify potential markets (van Kleef and Roome 2007). These external partnerships thus allow SMEs to compensate for their lack of internal resources (Bos-Brouwers 2010; Halme and Korpela 2014). From an RBV perspective, all these elements are intangible assets that are difficult to imitate (Barney 1991).

### *Proactiveness and SD*

As proactiveness allows firms to better identify and better adapt to social mutations (Anderson 1998; Groza et al. 2011), it appears to encourage the introduction of SD practices (Aragon-Correa et al. 2008; Torugsa et al. 2012, 2013). In more concrete terms, proactiveness implies strategic monitoring of markets, clients, and governmental requirements. Proactive SMEs are then able to innovate to respond to the new needs that SD generates (Anderson

1998; York and Venkataraman 2010). For example, with respect to environmental issues, eco-efficiency measures can be deployed to respond to or even anticipate requirements regarding pollution prevention and waste management (Aragon-Correa et al. 2008). For human resource management practices, proactiveness also makes innovating at the level of organizational processes possible (York and Venkataraman 2010), which encourages employee commitment (Perrini et al. 2011) and, in turn, the development of distinctive organizational capabilities (Aragon-Correa et al. 2008; Sharma and Vredenburg 1998). At the community level, proactiveness allows firms to establish better relations with the various stakeholders and avoid, for example, the costs incurred as a result of potential litigation (Carroll and Shabana 2010; Schaltegger and Wagner 2011).

### *Risk Taking and SD*

In the literature, SD is presented not only as a potential contributor to the mastery or avoidance of risks but also as a risk in its own right (Spence et al. 2011). SD practices can help firms to effectively manage and reduce risks (Zadek 2000). For example, such practices can assist individuals involved in health and safety in the workplace (Perrini et al. 2011) or, more broadly, those who focus on environmental concerns (Menguc and Ozanne 2005). Nevertheless, the significant internal changes that SD requires are believed to introduce various risks. New SD responsibilities generate costs, thereby potentially damaging SMEs' profitability and saddling them with a "competitive disadvantage" (Brammer et al. 2006; Pacheco et al. 2010). Furthermore, providing an economic justification for SD actions remains difficult because the costs of "greener" products and processes cannot necessarily be transferred to consumers (Bianchi and Noci 1998; Simpson et al. 2004) and the return on such investments cannot be perceived rapidly (Arend 2014; Brammer et al. 2012; Spence et al. 2011). However, the ability to take such risks can generate certain advantages. In particular, SMEs can respond to the expectations of various stakeholders. For example, the former can better respond to the requirements of their supply chains and, in turn, develop and gain access to new markets (Bianchi and Noci 1998; Morsing and Perrini 2009). In short, commonalities exist between entrepreneurial SMEs and those that adopt CSR strategies. This rationale has allowed us to formulate the following hypotheses:

**Hypothesis 1** EO is positively associated with the adoption of sustainable practices by SMEs.

**Hypothesis 1a** SME EO is positively associated with the adoption of environmental practices.

**Hypothesis 1b** SME EO is positively associated with the adoption of social practices in the workplace (SPW).

**Hypothesis 1c** SME EO is positively associated with the adoption of social practices in the community (SPC).

### **Sustainable Practices and Performance**

From an RBV perspective, SD practices create social, economic, and environmental value (Cohen et al. 2008). They thus make developing a competitive advantage possible (Arend

2014; Sharma and Vredenburg 1998) by improving overall performance (Aragon-Correa et al. 2008; Barney 1991). Therefore, a positive relationship exists between CSR and performance, particularly because distinctive organizational capabilities are deployed (Russo and Fouts 1997; Sharma and Vredenburg 1998). Specifically, research has highlighted several tangible and intangible advantages associated with SMEs' adoption of environmental and social practices—both internal and external.

Regarding environmental considerations, when SMEs adopt “greener” technologies, processes, and practices, they can better differentiate themselves from their rivals, as doing so often contributes to the generation of new ideas for products or services (Bos-Brouwers 2010; Jenkins 2009; Reyes-Rodríguez et al. 2014). Therefore, such practices may lead to the creation of distinctive value in terms of products and services that better satisfy the needs of consumers or the supply chain (Borga et al. 2009). Creating value for both the firm and some of its stakeholders then becomes the primary question (Spence et al. 2011). In a very tangible sense, greener practices tend to decrease operating costs and, in turn, improve profitability (Reyes-Rodríguez et al. 2014; Torugsa et al. 2012, 2013).

In terms of human resource management, SPWs have positive effects on human capital. First, they tend to promote a culture of continuous and collaborative learning (Jenkins 2009; Kerr 2006), which encourages the involvement of employees who contribute, through their knowledge and skills, to the implementation of new measures and the improvement of processes (Davies and Crane 2010; Jenkins 2006). This type of work environment then makes attracting new employees easier, reinforces both their commitment and their motivation, and encourages them to stay (Davies and Crane 2010; Jenkins 2004, 2006; Perrini et al. 2007). All these positive impacts have financial and non-financial knock-on effects because employees represent precious assets and a competitive advantage for SMEs (Hammann et al. 2009).

Regarding SPCs, such as human and financial involvement in local projects and the development of partnerships, SMEs have the potential to obtain an advantage, as they can create positive relationships with external stakeholders. This aspect is particularly important because of the proximity links that are characteristic of SME management (Besser 2012; Courrent and Gundolf 2009). SPCs thus make it possible to maintain a positive image and a good reputation (Jenkins 2009; Murillo and Lozano 2006). More generally, these intangible assets can decrease risks (Ciliberti et al. 2011; Fuller and Tian 2006), which gives them commercial value (Fuller and Tian 2006; Tencati et al. 2004) and has a positive impact on financial performance (Hammann et al. 2009).

Despite all the advantages highlighted in empirical studies, the relationship between SD practices and performance is a question that remains highly controversial in the literature (e.g., Hull and Rothenberg 2008; Orlitzky et al. 2003), particularly with regard to SMEs. The proponents of a positive effect of SD practices on performance and those who argue for a contingent, or even negative, relationship are involved in a heated debate (for reviews on this subject, see Beurden and Gössling 2008; Margolis and Walsh 2003; Orlitzky et al. 2003).

These different positions on the link between CSR and performance have raised questions among researchers, who have identified at least three issues and explanations. First, SD remains a controversial concept and its meaning has been poorly mastered by the key players.



As the concept corresponds to an ambition or an ideal, the outlines of which cannot be drawn with any precision (Milne et al. 2006; Springett 2003), this lack of mastery is not necessarily surprising. Second, this imprecision causes problems for those attempting to measure SD (e.g., Baden and Harwood 2013; Bos-Brouwers 2010). As mentioned above, the methods for evaluating CSR practices vary widely and illustrate the paradoxical tensions between the different aspects of SD and stakeholders' expectations (de Colle et al. 2014; Hahn et al. 2014, 2015). Studies on the subject are thus often limited to the environmental aspect, setting aside the social aspects. Precise, quantitative data are easier to obtain in this field (for example, a percentage decrease in toxic fumes) than are data on more intangible elements (Sharma and Henriques 2005), which may partly explain this environmental focus. Third, and in the same vein, a measurement problem also arises when evaluating performance, which is often restricted to purely financial aspects. The positive input of intangible assets has rarely been considered, despite that these assets play a significant role in properly judging performance (Carroll and Shabana 2010; Perrini et al. 2011).

However, in most cases, empirical studies have reported a positive relationship between CSR and performance (Beurden and Gössling 2008; Margolis and Walsh 2003; Orlitzky et al. 2003). This positive relationship extends to SMEs, in terms of both environmental actions (Aragon-Correa et al. 2008; Dixon-Fowler et al. 2013) and social actions (Hammann et al. 2009).

Based on these results and from the RBV perspective adopted in this article, we are able to formulate the following hypotheses:

**Hypothesis 2** Sustainable practices are positively associated with SME performance.

**Hypothesis 2a** Environmental practices are positively associated with SME performance.

**Hypothesis 2b** SPW are positively associated with SME performance.

**Hypothesis 2c** SPC are positively associated with SME performance.

### **The Mediating Effect of Sustainable Practices**

As observed previously, Hypotheses 1 and 2 link EO with SD practices and SD practices with performance, respectively. Therefore, as shown in the literature, the association between EO and performance is hypothesized to be indirect. SD practices play the role of intermediate variables that mediate the relationship between EO and performance. As EO is a driving force behind SD initiatives, this entrepreneurial posture will share an indirect connection with performance. Specifically, SD practices allow EO to function effectively to achieve enhanced performance. As mentioned above, when justifying the hypotheses proposed thus far, some commentators argue that the changes induced by SD provide entrepreneurial SMEs with business opportunities (Shepherd and Patzelt 2011). Others note that proactiveness in this domain remains a guarantee of success, particularly at the financial level (Aragon-Correa et al. 2008; Jenkins 2009), and that the flexibility of SMEs may allow them to act more rapidly than large firms and competitors (Dixon-Fowler et al. 2013). These elements— business

opportunities/innovation and proactiveness in SD—emphasize SMEs’ ability to take risks by exploiting new markets, products, and processes, which in turn, allows them to perform better (e.g., Rauch et al. 2009; Wiklund and Shepherd 2005). SD practices can thus interact with EO and performance because the actions that they imply allow SMEs to develop intangible assets. If we assume that SMEs generally have fewer tangible assets, such as capital, intangible assets have significant strategic value, and can help SMEs to stand out and ensure their growth (Anderson and Eshima 2013).

Based on these arguments, the present study tests the extent to which SD practices mediate the relationship between EO and performance. In other words, the greater the firm’s level of entrepreneurial behavior, the more the firm will implement SD practices, which will, in turn, positively affect performance. Figure 1 depicts the mediation model that we propose. We can thus advance the following hypotheses:

**Hypothesis 3** Sustainable practices mediate the effect of EO on SME performance.

**Hypothesis 3a** Environmental practices mediate the effect of EO on SME performance.

**Hypothesis 3b** SPW mediate the effect of EO on SME performance.

**Hypothesis 3c** SPC mediate the effect of EO on SME performance.

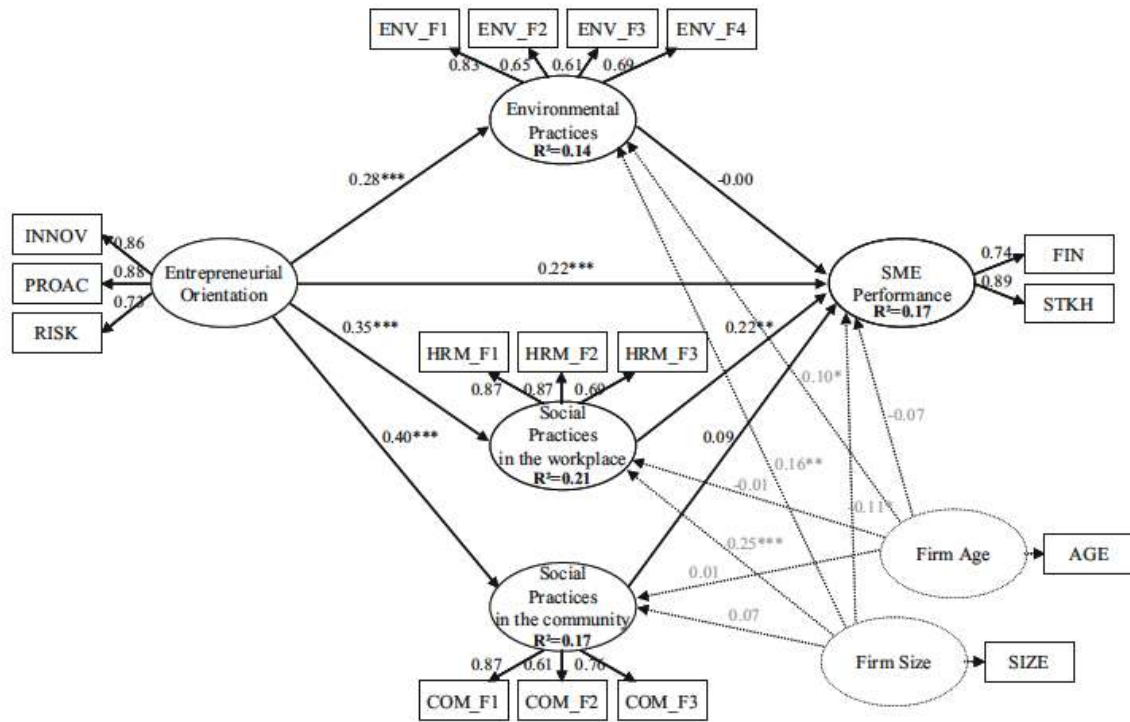
## **Methodology**

### *Data Collection*

The data for this study were gathered from a questionnaire-based survey conducted in late 2013 with a large sample of SME managers in France. In accordance with the European Union’s definition of SMEs, the target population was defined using the following criteria: firms that were autonomous (not more than 25% controlled by another firm) and operating profit-oriented activities with fewer than 250 employees and with turnovers of less than 50 M euros.

The sampling frame was derived from the French directory of businesses and establishments, SIRENE. Proportionate stratified random sampling was used to select the respondents. Region and industrial sector (each divided into five strata; see the “Sample Composition” section below) were considered to ensure the representativeness of SMEs in terms of regional contexts and activities.

A quantitative questionnaire was developed to collect data from each firm regarding its responsible activities, resources, and performance. The questionnaire was based on the extant literature for theoretical domains regarding the constructs of interest, existing published questionnaire items, and discussions with SME owner-managers and academic researchers working in the field of CSR and SME performance. To ensure clarity and content validity, a pre-test was conducted by administering the questionnaire to 15 SME owner-managers in face-to-face interviews. Their responses were not included in the study.



**Fig. 1** Partially mediated structural equation model results. Standardized path coefficients are shown. Bilateral significance was assessed by t-tests \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$

An external data provider (the market research institute IFOP) administered the questionnaire as a computer-assisted telephone interview. Particular attention was paid to personally reach CEOs, managing directors, or general managers because they are in the best position to know the firm's policies, processes, and results. At the end of the survey, 452 completed interviews had been conducted, yielding a response rate of 28.2% (1603 phone calls had been made). To match the requirements of this study, which particularly focuses on social practices within the firm, 46 respondents were excluded, as they did not have any employees. Therefore, a total of 406 SMEs remained in the analysis sample.

### *Sample Composition*

In terms of geographic and sector distribution, the sample profile represents French SMEs that employ at least one worker. Indeed, the responding firms were spread evenly throughout the country (23.2% in the Northwest, 23.2% in the Northeast, 22.9% in the Southwest, 20.2% in the Southeast, and 10.6% in the Paris region), with 31.3% located in rural areas or urban areas with fewer than 20,000 inhabitants. These SMEs were also distributed across the major industrial sectors (7.1% in the primary sector, 25.6% in production or construction activities, 29.8% in trade activities, 24.1% in services primarily for households, and 13.3% in business services) in a manner consistent with the population.

Regarding size distribution, the sample over-represented SMEs employing 10 or more

workers relative to the population that, in France, overwhelmingly comprises micro-undertakings. Among the responding firms, 18.5% had 1–10 employees, 44.8% had 10–49 employees, and 36.7% had 50–249 employees. Most firms were between 13 and 45 years old; only 8.6% had been in existence for less than 5 years. The over-representation of large SMEs in the sampling process may be explained by the data collection method. Large SMEs are more easily reachable by phone and more prone to complete such a survey than are smaller SMEs.

### *Common Method Bias*

As the data were self-reported by single informants from each firm, common method bias (CMB) may have increased the relationships between the variable indicators (Podsakoff et al. 2003). To test whether CMB was a problem, Harman's one-factor test was performed through an exploratory principal components factor analysis of the 44 study items (Podsakoff and Organ 1986). The results showed that 12 distinct factors with eigenvalues  $\geq 1$  accounted for 62.4% of the total variance and that the largest factor did not account for a majority (only 22.1%). While the results of this analysis do not preclude the possibility of CMB, they do suggest that it is not of great concern and is thus unlikely to have an impact on the interpretation of our results.

## **Measures**

### *SME Environmental and Social Practices*

As mentioned above, CSR is a controversial concept, and it is difficult to measure empirically (e.g., Baden and Harwood 2013; Bos-Brouwers 2010). In the SME literature, CSR measures are often based on a checklist of representative actions (e.g., Aragon-Correa et al. 2008; Torugsa et al. 2012), together with measures that evaluate firms' CSR policies in terms of strategic approaches, communication, and dynamic processes (e.g., Murillo-Luna et al. 2008; Pedersen et al. 2016). For this study, we chose to integrate a wide variety of measurements to assess SMEs' sustainable practices in all their activities (see Table 4a, b and c in the Appendix). For each item, the managers were asked about the regularity with which their firms engage in responsible practices. This formulation was designed to apply to most respondents, irrespective of their sector of activity or firm size. In accordance with the European Commission's recommendation (2003) and previous scholarly papers (e.g., Baumann-Pauly et al. 2013), the social practices were divided according to their internal (SPWs) and external (SPCs) dimensions.

A 12-item scale (Cronbach's  $\alpha = 0.845$ ) was used to measure SMEs' environmental practices; an 11-item scale (Cronbach's  $\alpha = 0.841$ ) was used to measure SMEs' SPWs; and an 8-item scale (Cronbach's  $\alpha = 0.769$ ) was used to measure SMEs' SPCs (see Table 4 in the Appendix).

Using the principal components method of extraction with varimax rotation, exploratory factor analyses were conducted on each scale. The results showed that all three were multi-dimensional. The 12 items that evaluated environmental practices formed four factors with

eigen-values  $\geq 1$ , which together accounted for 63.8% of the total variance. The 11 items that evaluated SPWs and the eight items that evaluated SPCs formed three factors that accounted for 59.3 and 65.8% of the total variance, respectively. As all the items showed at least one significant factor loading  $>0.50$  and communalities above 0.50, convergent validity was demonstrated for all factors in the three scales (Hair et al. 1998). The values obtained in subsequent analyses of the measurement model (see the “Analyses and Results” section and Table 2 below) confirmed our confidence in the validity and reliability of all the scales. A measure of each factor was thus calculated as the average of its relevant items. A high score was considered indicative of a high level of responsibility. The SMEs’ environmental practices, SPWs, and SPCs were then modeled as second-order reflective constructs.

### *Entrepreneurial Orientation*

Drawing on previous studies (e.g., Lumpkin and Dess 1996, 2001), a six-item scale was used to assess a firm’s EO using its three most salient dimensions, i.e., innovativeness, proactiveness, and risk taking (Covin and Slevin 1989; Miller 1983). Innovativeness (Cronbach’s  $\alpha = 0.762$ ), proactiveness (Cronbach’s  $\alpha = 0.743$ ), and risk taking (Cronbach’s  $\alpha = 0.699$ ) were each measured using two items (see Table 5 in the Appendix). As expected, principal components analysis with varimax rotation showed that the six items formed three distinct factors, each corresponding to a dimension of EO, with all the loadings being above 0.78. A measure of each factor was calculated as the average of its relevant items. A high score was considered indicative of a high level of innovativeness, proactiveness, and risk taking. The firm’s EO was then modeled as a second-order reflective construct (Covin and Wales 2012).

### *SME Performance*

In line with the literature, which shows a high correlation and concurrent validity between objective and subjective data on performance (Dess and Robinson 1984; Venkatraman and Ramanujam 1986), the respondents’ perceptions of five items related to both financial and non-financial performance were collected (see Table 6 in the Appendix). The respondents were thus asked to rate their performance over the last 3 years on each criterion compared with their objectives. The use of this relative rating scale enabled us to collect a performance measure that could be adapted to the variety of sizes, ages, and industrial sectors of the firms sampled.

Principal components analysis with varimax rotation showed that the five items formed two distinct factors with eigenvalues  $\geq 1$ . The two financial performance items (profitability and sales) loaded together on the first (Cronbach’s  $\alpha = 0.762$ ) and the three non-financial performance items (client’s satisfaction, business reputation, and employees’ motivation) loaded together on the second (Cronbach’s  $\alpha = 0.660$ ), with all factor loadings being above 0.65. A measure of each factor was thus calculated as the average of its relevant items. A high score was considered indicative of a high level of financial and non-financial performance. SME performance was then modeled as a second-order reflective construct.

### *Control Variables*

Consistent with past research indicating that the effect of entrepreneurial and sustainable activities on performance may be contingent on firm size and age (Andries and Faems 2013; Aragon-Correa et al. 2008), we controlled for both variables. Firm size was measured by a proxy, namely, the number of full-time equivalent employees who were employed over the last year (1–9, 10–19, 20–49, 50–99, 100–199, and 200–249). Firm age was calculated as the time since business creation.

## **Analyses and Results**

We used structural equation modeling (SEM) with the partial least squares path modeling method (PLSs-PM) to test our hypotheses. PLS-PM is a non-parametric method for estimating path models with latent variables (Lohmöller 1989). PLS path models are characterized by the existence of two sets of linear equations: the inner model (or the structural model in SEM theory), which mirrors the theory-driven hypotheses regarding the associations between latent variables and the outer model (or measurement model), which specifies the associations between the latent variables and the observed variables. In contrast to the covariance-based SEM, PLS modeling uses a variance-based iterative approach based on multivariate regressions that employ the least squares algorithm.

Hair et al. (2013) argued that PLS-SEM has become more common in management research because researchers recognize that, in many cases, its distinctive methodological features make it a useful and highly robust alternative to the more widely used covariance-based SEM. We chose the PLS approach for the following reasons. First, the aim of our study is to predict a key target construct (SME performance) by identifying “driver” constructs. Second, the PLS technique estimates latent variable scores as exact linear combinations of their indicators and takes them as perfect and optimal substitutes for the observable variables. These estimated scores thereby capture the variance, which is central in explaining the dependent latent variable(s). Third, this approach places fewer restrictions on data distribution and normality. Fourth, PLS-PM is generally more favorable for more complex models, such as ours, which uses 42 items (Hair et al. 2012; Reinartz et al. 2009).

PLS estimates are only consistent “at large,” and the method is sometimes criticized because parameter estimates for the paths between observed variables and latent variable constructs are thus upward biased, while parameter estimates for the paths between constructs are attenuated (Gefen et al. 2011). Given our large sample size ( $n = 406$ ), these biases are unlikely to substantially confound the results.

Using a two-step modeling approach (Chin et al. 2008), the quality of the measurement model was assessed prior to testing the structural model. We first conducted a PLS factor analysis to confirm the validity and reliability of the 15 first-order latent constructs. Then, we tested a direct model to estimate the independent effect of EO on SME performance. Finally, we tested a partially mediated model to assess the indirect effect of EO on performance through the three dimensions of SME responsibility (see Fig. 1).

For these analyses, we used the software package Smart PLS 2.0 (Ringle et al. 2005). Standard errors of loadings and path coefficient estimates were obtained through a bootstrap

resampling procedure. In accordance with the recommended approach (Chin 1998) and given the size of the original sample ( $n = 406$ ), we used 500 bootstraps of 300 cases.

#### *Measurement Model Assessment*

All the indicators had statistically significant standardized loadings on their assigned constructs ( $t$ -values were in the range 2.71–58.07, all  $p < 0.01$ ). For all the indicators, loading values were above 0.54 (0.80, on average), and cross-loadings with other constructs (0.42, on average) were always at least 0.21 lower. The average variances extracted from the scales (AVEs were in the range 0.52–0.81) exceeded the recommended cut-off of 0.50 (Table 2). Adequate convergent validity was thus demonstrated for all measures in the model (Hair et al. 1998). The composite reliability values (CR values were in the range 0.76–0.89) confirmed the internal consistency of all the constructs (Gefen et al. 2000).

Discriminant validity was also established within the measurement model. As shown in Table 2, the AVE for each construct largely exceeded the shared variance with any other constructs (Fornell and Larcker 1981). The maximum estimated correlation between the variables ( $r = 0.63$  between innovation and proactiveness) was well below the recommended cut-off of 0.70, meaning that multicollinearity was not an important issue in the subsequent models (Hair et al. 1998).

#### *Structural Model Assessment*

The multiple  $R^2$  values for all the endogenous variables (which were in the range 0.11–0.21)—in both the direct and partial mediation models—were above the recommended level of 0.10 for establishing the overall significance of a PLS-SEM model (Hulland 1999). Moreover, these values are similar to the reported results of performance research that has used the PLS approach (e.g., Lechner and Gudmundsson 2014; Pedersen et al. 2016). Tenenhaus et al. (2005) developed a goodness-of-fit (GoF) index based on effect sizes that offers an operational solution to the global validation of the PLS models. GoF is the geometrical mean of the mean of the communalities and the mean of the  $R^2$  values. For our full model, a value of 0.35 was obtained, which approached the base value for a large effect size. Indeed, Wetzels et al. (2009) proposed the following thresholds for the GoF: small = 0.10, medium = 0.25, and large = 0.36. We thus considered the predictive capability of the structural model to be both substantial and satisfactory (see Fig. 1).

**Table 2** Quality of the measurement model

Constructs	Items	Factor loading	AVE	CR	Mean	SD	MSV
Entrepreneurial orientation							
Innovativeness	INNOV1	0.897	0.676	0.862	3.53	1.23	0.393
	INNOV2	0.895					
Proactiveness	PROAC1	0.892	0.801	0.890	3.04	1.14	0.393
	PROAC2	0.895					
Risk taking	RISK1	0.860	0.780	0.876	2.56	1.04	0.224
	RISK2	0.895					
Environmental practices							
F1	ENV10	0.888	0.671	0.859	3.02	1.20	0.323
	ENV12	0.774					
	ENV11	0.790					
F2	ENV2	0.649	0.598	0.855	3.14	0.99	0.321
	ENV8	0.779					
	ENV9	0.805					
F3	ENV7	0.845	0.671	0.803	2.48	1.13	0.160
	ENV5	0.827					
	ENV6	0.811					
F4	ENV1	0.538	0.517	0.757	3.81	0.84	0.272
	ENV3	0.775					
	ENV4	0.813					
Social practices in the workplace							
F1	HRM9	0.814	0.541	0.855	3.31	1.05	0.348
	HRM7	0.722					
	HRM3	0.693					
	HRM10	0.713					
	HRM11	0.729					
F2	HRM6	0.736	0.566	0.839	3.40	0.90	0.321
	HRM5	0.813					
	HRM8	0.744					
F3	HRM4	0.713	0.626	0.770	3.68	0.93	0.183
	HRM2	0.756					
	HRM1	0.825					
Social practices in the community							
F1	COM6	0.741	0.611	0.863	2.62	1.03	0.348
	COM7	0.808					
	COM8	0.819					
	COM2	0.758					
F2	COM4	0.823	0.672	0.804	3.73	1.00	0.107
	COM5	0.816					
F3	COM3	0.736	0.689	0.814	3.27	1.13	0.147
	COM1	0.915					
Performance							
Financial	FIN1	0.900	0.807	0.893	3.04	0.90	0.112
	FIN2	0.897					
Non-financial	NON-FIN1	0.823	0.603	0.820	3.65	0.67	0.112
	NON-FIN2	0.759					
	NON-FIN3	0.745					

**Table 2** continued

Constructs	Items	Factor loading	AVE	CR	Mean	SD	MSV
Firm size					3.03	1.48	
Firm age					36.43	37.72	

Formulation of items is clarified in [Appendix](#). All factor loadings are significant at the  $p < 0.001$  level  
 AVE average variance extracted, CR composite reliability, MSV maximum shared variance = highest squared correlation between the model constructs



### *Direct Model Results*

In the absence of mediators (SMEs' sustainable practices), a significant positive association between EO and SME performance ( $\beta = 0.34$ ,  $p < 0.001$ ) was detected. While the control variables have insignificant effects (size of the firm:  $\beta = -0.06$ ,  $p > 0.05$ , age of the firm:  $\beta = -0.07$ ,  $p > 0.05$ ) in this direct model, the  $R^2$  was 0.11.

To further investigate the relationship between EO and performance, we separately estimated the direct paths to the financial and non-financial components of performance. The results showed a significant positive association with both ( $\beta = 0.22$ ,  $p < 0.01$ , and  $\beta = 0.32$ ,  $p < 0.001$ , respectively).

### *Partially Mediated Model Results*

To test partial mediation of the effect of EO on performance through SMEs' responsible practices, we followed the approach recommended by Baron and Kenny (1986), which has three specific requirements. First, a significant association must exist between the independent variable (EO) and the mediators (environmental practices, SPWs, and SPCs), which corresponds with H1a–c. Second, a significant association must exist between the mediators and the outcome variable (SME performance), which corresponds with H2a–c. Finally, the inclusion of the mediators weakens the relationships between the independent variable (EO) and the outcome variable (SME performance), while it shows a significant indirect effect through the mediators (environmental practices, SPWs, and SPCs), which corresponds with H3a–c.

Compared with the direct model, the introduction of the three mediators increased the explained variance of performance ( $R^2 = 0.17$  vs. 0.11) and decreased the independent effect of EO ( $\beta = 0.22$  vs. 0.34). The estimation of the hypothesized partially mediated model showed that 17.4% of the variation in the performance of SMEs can be explained by the level of EO and the responsibility of firms.

Based on the results shown in Fig. 1, EO has a significant positive influence on SMEs' adoption of environmental and social practices. For a given size and age, a firm's EO had a positive effect on environmental practices ( $\beta = 0.28$ ,  $p < 0.001$ ), providing support for hypothesis H1a. EO also had a positive effect on SPWs ( $\beta = 0.35$ ,  $p < 0.001$ ) and SPCs ( $\beta = 0.40$ ,  $p < 0.001$ ), providing support for H1b and H1c.

In turn, SME responsibility has different influences on performance depending on the CSR dimensions considered. We found no significant effect of environmental practices ( $\beta = -0.00$ ,  $p > 0.05$ ) or SPCs ( $\beta = 0.09$ ,  $p > 0.05$ ) on performance. Therefore, H2a and H2c were not supported. However, SPWs had a significant positive effect on the performance of SMEs ( $\beta = 0.22$ ,  $p < 0.01$ ), providing support for H2b.

To further investigate the relationship between SME responsibility and performance, we separately estimated alternative partial mediation models for financial performance and non-financial performance. The results showed that SPWs had a significant positive effect on both performance components, although the influence on financial performance ( $\beta = 0.24$ ,  $p <$

0.01) was greater than that on non-financial performance ( $\beta = 0.14$ ,  $p < 0.05$ ). With regard to the other dimensions of CSR, we found no significant effect of environmental practices on financial ( $\beta = -0.02$ ,  $p > 0.05$ ) or non-financial performance ( $\beta = 0.00$ ,  $p > 0.05$ ); SPCs had no significant effect on financial performance ( $\beta = -0.02$ ,  $p > 0.05$ ), but they had a positive influence on non-financial performance ( $\beta = 0.15$ ,  $p < 0.05$ ), which was even greater than the effect of SPWs.

**Table 3** Summary of results of hypothesis testing

Hypothesis	Paths <sup>a</sup>	Effects	Standardized coefficients <sup>b</sup>	Results
Entrepreneurial orientation (EO) is positively associated with the adoption of sustainable practices by SMEs				
H1a	EO → environmental practices	Direct	0.28***	<b>Supported</b>
H1b	EO → workplace practices	Direct	0.35***	<b>Supported</b>
H1c	EO → community practices	Direct	0.40***	<b>Supported</b>
Sustainable practices are positively associated with SME performance				
H2a	Environmental practices → performance	Direct	−0.00	Not supported
	→ <i>Financial performance</i>	<i>Direct</i>	<i>−0.02</i>	<i>Not supported</i>
	→ <i>Non-financial performance</i>	<i>Direct</i>	<i>0.00</i>	<i>Not supported</i>
H2b	Workplace practices → performance	Direct	0.22**	<b>Supported</b>
	→ <i>Financial performance</i>	<i>Direct</i>	<i>0.24**</i>	<i>Supported</i>
	→ <i>Non-financial performance</i>	<i>Direct</i>	<i>0.14*</i>	<i>Supported</i>
H2c	Community practices → performance	Direct	0.09	Not supported
	→ <i>Financial performance</i>	<i>Direct</i>	<i>−0.02</i>	<i>Not supported</i>
	→ <i>Non-financial performance</i>	<i>Direct</i>	<i>0.15*</i>	<i>Supported</i>
Sustainable practices mediate the effect of entrepreneurial orientation on SME performance				
	EO → performance	Direct	0.22***	
	→ <i>Financial performance</i>	<i>Direct</i>	<i>0.14*</i>	
	→ <i>Non-financial performance</i>	<i>Direct</i>	<i>0.21**</i>	
H3a	EO → environmental practices → performance	Indirect	−0.00	Not supported
	→ <i>Financial performance</i>	<i>Indirect</i>	<i>−0.00</i>	<i>Not supported</i>
	→ <i>Non-financial performance</i>	<i>Indirect</i>	<i>0.00</i>	<i>Not supported</i>
H3b	EO → workplace practices → performance	Indirect	0.08*	<b>Supported</b>
	→ <i>Financial performance</i>	<i>Indirect</i>	<i>0.08**</i>	<i>Supported</i>
	→ <i>Non-financial performance</i>	<i>Indirect</i>	<i>0.05</i>	<i>Not supported</i>
H3c	EO → community practices → performance	Indirect	0.04	Not supported
	→ <i>Financial performance</i>	<i>Indirect</i>	<i>−0.01</i>	<i>Not supported</i>
	→ <i>Non-financial performance</i>	<i>Indirect</i>	<i>0.06*</i>	<i>Supported</i>
	EO → performance	Total	0.34***	
	→ <i>Financial performance</i>	<i>Total</i>	<i>0.22***</i>	
	→ <i>Non-financial performance</i>	<i>Total</i>	<i>0.32***</i>	

$n = 406$

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

<sup>a</sup> For paths leading to performance, separate results on both financial and non-financial components are given in italics.

<sup>b</sup> The significance of direct effects was obtained by bootstrapping. The significance of indirect effects was evaluated with a Sobel test of mediation.

Consequently, a positive partial mediating effect of SME responsibility on the EO–performance relationship was only demonstrated for SPWs, providing some support for H3b. The results of the Sobel test (1982) showed that this indirect effect was statistically significant ( $\beta = 0.08$ , Sobel statistics = 2.53,  $p < 0.05$ ). Finally, Table 3 summarizes all the results and provides an overview of hypothesis confirmations.

With regard to the control variables, firm size showed a slightly negative association with the performance of SMEs ( $\beta = -0.11$ ,  $p < 0.05$ ), while the effect of firm age was insignificant ( $\beta = -0.07$ ,  $p > 0.05$ ). Notably, firm size was positively associated with environmental practices ( $\beta = 0.16$ ,  $p < 0.01$ ) and with SPWs ( $\beta = 0.25$ ,  $p < 0.001$ ), but it was not associated with SPCs ( $\beta = 0.07$ ,  $p > 0.05$ ).

## Discussion

This study sought to analyze the effect of EO on SMEs' performance through the implementation of sustainable practices. The results show that this effect is positive.

The positive effect of EO on the implementation of sustainable practices—as H1 predicts—is separately validated for each of the three dimensions (environmental, SPW, and SPC concerns). However, this effect is greater in the social dimensions than in the environmental dimension. Several explanations can be presented here. First, the worldwide public debate regarding SD focuses primarily on environmental aspects (Cassels and Lewis 2011), which tends to make many environmental practices commonplace (e.g., sorting waste and monitoring energy consumption) to such an extent that these practices no longer seem particularly innovative, proactive, or risky. Second, the environmental issues are generally presented as being of global interest (“for the planet”). For SME managers, social issues are, by contrast, embedded in their local community or within the firm itself (Santos 2011). Thus, the environmental aspects of SD differ from the internal and external social aspects, as they do not belong to the same spatial frame of reference for the entrepreneur. As shown by Courrent and Gundolf (2009), French SME owner-managers adopt CSR practices that focus on the stakeholders that are the closest and of greatest use to the firm. Similarly, Russo and Perrini (2010, p. 211) explain that, contrary to large firms, “small businesses need such relations with the community to survive” and, a fortiori, to develop. The implementation of SD practices, particularly in most entrepreneurial firms, thus probably explains why actions linked to social dimensions are more privileged. As emphasized in the background literature, these actions may be considered ways of motivating employees (Jenkins 2006; Perrini et al. 2007), reducing staff turnover (e.g., Davies and Crane 2010; Perrini et al. 2007), and improving processes (Davies and Crane 2010; Jenkins 2006) by fostering a learning culture (Jenkins 2009; Kerr 2006)—in line with the RBV. Thus, in the French context, in which social legislation is often considered a constraint, the development of even more demanding SPWs may be considered an asset, as it helps these entrepreneurial firms to attract and retain competent employees and to create, in turn, an environment that will induce the dynamic capabilities of innovation, proactiveness, and risk taking (Aragon-Correa et al. 2008; Arend 2014). Therefore, SPWs are unsurprisingly considered strategic for “entrepreneurial” owner-managers. Similarly, in this national context in which community programs are traditionally the responsibility of public authorities, voluntarily developing actions in this field can be chosen—given its innovativeness—as a means of standing out from other firms. In an entrepreneurial context, concerns about image, the implications in relevant networks, and the perceived dependency on stakeholders may lead firms to regard community involvement as having strategic value in relation to attaining their objectives.

Nevertheless, only SPWs have a (positive) effect on performance—as posited in H2. As

mentioned above, the managers of entrepreneurial-oriented SMEs agree on the positive impact of SPWs on performance. Our results show that this impact on both the financial and non-financial dimensions is real. According to the RBV, these findings tend to reinforce the idea that such practices are assets, as they encourage employees' skill development and involvement, thus helping improve results (Davies and Crane 2010; Jenkins 2006). By contrast, our study has not revealed any significant effects of environmental and community practices on performance. Regarding environmental aspects, this lack of effect was observed in both the financial and non-financial dimensions. Our findings weaken the range of the arguments presented in the SD literature, which state that environmental practices support differentiation (Bos-Brouwers 2010; Jenkins 2009; Reyes-Rodríguez et al. 2012, 2014) and reduced operating costs (Reyes-Rodríguez et al. 2012, 2014; Torugsa et al. 2012). Nevertheless, these works focused on proactive CSR, whereas we studied sustainable practices from a more general perspective, without reference to the intentionality of the approach adopted. However, our results reinforce the conclusions of Brammer et al. (2012, p. 423), who argued, "that the smallest companies perceive significantly fewer benefits of engagement with environmental issues" (see also Revell and Blackburn 2007; Revell and Rutherford 2003; Simpson et al. 2004). For most businesses, the reduced operating costs that are linked with the decreased consumption of materials or energy remain very limited. Similarly, in environmental terms, successfully standing out from one's competitors—thereby sufficiently improving one's reputation and having a significant effect on performance—is difficult. For the community aspects, the lack of effect on performance results from a combination of two diverging effects: a significantly positive effect on stakeholder satisfaction and a non-existent effect on financial results. Thus, although community practices contribute to a firm having a good image, as underlined by several authors (Jenkins 2009; Murillo and Lozano 2006), they do not sufficiently improve financial performance and overall performance.

Finally, only one dimension of CSR—SPWs—has a mediating effect in the relationship between EO and performance, as predicted in H3. This mediating effect can be discussed with reference to the study conducted by Torugsa et al. (2012, 2013), based on a previous study by Aragon-Correa et al. (2008), which analyzes the mediating effects of proactive CSR in the relationship between certain capabilities (shared vision, stakeholder management and strategic proactiveness) and financial performance. In the context of Australian SMEs in the machinery and equipment sector, these authors show that the environmental and social dimensions of CSR have no effect on performance, except when they coincide with economic objectives (e.g., cost reduction, product differentiation, and protection of firm interests). The comparison of these two studies remains difficult for several reasons. The authors in question examined proactive CSR, whereas we adopted a broader approach regarding sustainable practices. In addition, Torugsa et al. (2012, 2013) included economic concerns (measured via the implementation of actions with a strictly economic objective) as another dimension of CSR. In the social dimension, they pooled human resource management and community practices, which we distinguished in our research, as they do not concern the same stakeholders. Finally, Torugsa et al. (2012, 2013) focused solely on financial performance, whereas we also considered non-financial performance. The authors in question thus adopted a more economic approach to the CSR rationale, in service of financial performance, whereas we focused on a more general conception of performance.

Nevertheless, their results clarify or corroborate our findings on two essential points. First, adopting CSR practices, whether or not as part of a proactive strategy, “makes [an] effective and efficient use of a firm’s capabilities, driving a firm’s [...] success, which is consistent with RBV theory (Grant 1991)” (Torugsa et al. 2012, p. 493). Second, contrary to the idea widely held by the owner-managers of SMEs that implementing sustainable practices is difficult because of their businesses’ lack of means (Aragon-Correa et al. 2008; Bansal 2005; Gadenne et al. 2009), these two studies show that organizational capabilities “can be used to compensate for the absence of slack resources” (Torugsa et al. 2012, p. 494) when adopting sustainable behaviors. Arend (2014, p. 553) provided a similar interpretation: SMEs “with the more capability-relevant commitments, are the most successful firms at improving and exploiting their CSR/Green activities.”

### *Practical Implications of the Study*

The essential practical implications concern the means of inducing SMEs to commit to actions that contribute to SD. There are many obstacles to commitment, and they are often found in the “why” and “how” of such commitment (Battisti and Perry 2011; Bos-Brouwers 2010; Roxas and Lindsay 2012). Our research first provides a response to the “how” question; encouraging the implementation of entrepreneurial organization in SMEs appears to be a pertinent means of more easily implementing sustainable practices, which are often considered innovative, risky, and proactive, in the three environmental, SPW and SPC dimensions. Our results also suggest refinements to the arguments used to convince managers, revealing that sustainable practices in SMEs are not only possible but also useful. Those seeking to promote increased commitment by small businesses to the logic of SD often effectively make use of the business case for CSR. In addition, and particularly in the French context, SD awareness-raising campaigns primarily (though not exclusively) focus on the environmental dimension, insisting, for example, on reducing costs through the decreased consumption of materials or energy. However, our study shows that only SPWs have a positive effect on financial performance. Strictly speaking, the economic argument should thus be used with greater care, as the interest lies less in reducing costs than in doing business, reaching new markets and maximizing opportunities and innovation (Jenkins 2009). As a result, the most entrepreneurial SMEs have the best performance because they develop SPWs that are assets in developing their activity.

### *Limitations and Suggestions for Future Research*

Naturally, this study has some limitations, particularly in relation to our methodological choices. First, performance was measured based on subjective data collected from a single respondent per firm. This method was justified by the difficulty of obtaining this type of information from SMEs (Bos-Brouwers 2010; Dixon-Fowler et al. 2013). Furthermore, as we have mentioned, previous research has shown that a high correlation and concurrent validity exist between objective and subjective data in terms of performance (Dess and Robinson 1984; Venkatraman and Ramanujam 1986). Nevertheless, questioning the right-hand person of the owner-manager or the top manager would make it possible to triangulate information sources.

Second, the responses that the owner-managers provided could have been affected by a social

desirability bias. This bias is specific to the subject studied, as SD practices are generally considered socially desirable (Roxas and Lindsay 2012). The impact of this bias seems limited because the questions asked concerned actual practices rather than attitudes. Only direct observation of these practices by the researcher, in the context of qualitative methodologies, could completely clarify this situation.

Third, the study did not consider certain contextual elements, such as the “family” nature (or lack thereof) of the SMEs studied, although it has been shown to have an impact on the relationship between EO and performance (Casillas et al. 2010; Huybrechts et al. 2011). Similarly, although forming a multi-sectoral sample was seemingly a significant asset of this study, as it considers a wide range of contexts, these sectoral effects can now be studied in greater depth. Many authors have highlighted the utmost importance of considering the industrial sector when analyzing CSR issues (e.g., Moore and Spence 2006; Spence 1999, 2007). On the one hand, sustainable issues can be evaluated effectively in terms of positive and negative externalities, which differ greatly according to the nature of the activity (Russo and Perrini 2010); on the other hand, the firm’s influential stakeholders and their expectations also differ (Courrent and Gundolf 2009).

Fourth, the sampling method resulted in an imperfect representation of the size distribution of the full population and the final sample was skewed towards large SMEs. Therefore, we think that our findings can be used to make generalizations about SMEs with more than 10 employees, but they still need to be confirmed for micro-undertakings.

Fifth, as this research was solely conducted in one national context—although the regions are quite different in cultural terms—the extent to which our results can be generalized to all countries is questionable. Consequently, an international comparison must be envisioned.

Sixth, studying the link between sustainable practices and performance raises the question of time when assessing the consequences of such practices. In our questionnaire, we noted that the sustainable practices that were reported predated the stated performance. Nevertheless, a finer analysis argues for further longitudinal surveys.

Finally, our research has highlighted certain relationships between EO, SD practices, and performance, which are in line with our conceptual model. However, as in most research on EO (Rosenbusch et al. 2013), we do not demonstrate causal links because only qualitative methods allow for the establishment of causality. SMEs with better financial performance can thus be better positioned to develop SD practices (Dixon-Fowler et al. 2013; Orlitzky 2008). Therefore, remaining humble with regard to our conclusions is necessary to avoid categorical statements arguing that EO, via SD practices (specifically SPWs), definitively leads to improved performance (Gonzalez-Benito and Gonzalez-Benito 2005). These limitations obviously pave the way for new avenues of research.

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## Compliance with Ethical Standards

**Ethical Standards** This research has been approved by the appropriate Ethics Committee and has been performed in accordance with ethical standards. All participants gave their informed consent prior to their inclusion in the study.

## Appendix

See Tables 4, 5, and 6.

**Table 4** Measures of SME environmental practices (a), social practices in the workplace (b), and social practices in the community (c)

Items	Factor loadings on varimax rotated components <sup>a</sup>				
	1	2	3	4	Extraction
(a)					
Have established metrics, e.g., environmental risks, levels of pollution, energy consumption, waste, that you monitor (ENV10)	<b>0.793</b>				0.701
Communicate, e.g., meetings with staff, intranet, reports, your environmental actions to your internal stakeholders (ENV12)	<b>0.749</b>				0.624
Communicate, e.g., website, reports, your environmental actions to your external stakeholders (ENV11)	<b>0.730</b>	0.334			0.645
Give priority to reusable, used, or recycled materials (ENV2)		<b>0.795</b>			0.687
Integrate environmental considerations in the conception and development of products and services in all phases of their life cycle (ENV8)	0.308	<b>0.691</b>			0.614
Consult your stakeholders for your environment-related decisions (ENV9)	0.468	<b>0.588</b>			0.612
Integrate environmental considerations in your purchase decisions and the evaluation of your suppliers (ENV7)	0.436	<b>0.582</b>			0.622
Give priority to less-polluting vehicles and modes of transportation and/or optimize your distribution network (ENV5)			<b>0.779</b>		0.652
Encourage your employees to use alternative means of transportation to commute, e.g., ride share, public transport, bicycle, instead of single-occupancy cars (ENV6)			<b>0.785</b>		0.658
Separate your garbage and waste for recycling (ENV1)				<b>0.827</b>	0.709
Raise the awareness and/or train your employees in water and/or energy conservation (ENV3)	0.501			<b>0.547</b>	0.605
Give priority to more water and energy-efficient equipment (ENV4)		0.408		<b>0.530</b>	0.525
Explained variance (%)	21.5	18.4	12.3	11.6	63.8
(b)					
Have established metrics, e.g., training costs, absenteeism, career management, equity, labor accidents, that you monitor (HRM9)	<b>0.788</b>				0.661



Items	Factor loadings on varimax rotated components <sup>a</sup>				
	1	2	3	4	Extraction
Allow employees to participate in the profits or capital, e.g., bonuses, shareholding (HRM7)	<b>0.742</b>				0.557
Organize health and safety training at work (HRM3)	<b>0.622</b>	0.312			0.489
Communicate, e.g., website, reports, your social actions to your external stakeholders (HRM10)	<b>0.586</b>	0.382			0.524
Communicate, e.g., meetings with staff, intranet, reports, your social actions to your internal stakeholders (HRM11)	<b>0.564</b>	0.485			0.601
Involve employees in decision making (HRM6)		<b>0.817</b>			0.669
Inform employees on the firm's strategic orientation (HRM5)		<b>0.746</b>			0.638
Consult your stakeholders for your decisions relating to human resource management (HRM8)		<b>0.591</b>	0.306		0.516
Promote and support employees to go on training (HRM4)	0.401	<b>0.538</b>			0.469
Take into account employees' personal constraints when organizing work (HRM2)		0.353	<b>0.751</b>		0.694
Seek to obtain great diversity, e.g., young, old, immigrants, in reinserction, men, women, amongst your employees (HRM1)	0.371		<b>0.750</b>		0.700
Explained variance (%)	24.1	22.7	12.5		59.3
(c)					
Communicate, e.g., website, reports, your community actions to your external stakeholders (COM7)	<b>0.778</b>				0.661
Consult your stakeholders for your decisions concerning local development (COM2)	<b>0.778</b>				0.641
Communicate, e.g., meetings with staff, intranet, reports, your community actions to your internal stakeholders (COM8)	<b>0.773</b>				0.647
Have established metrics, e.g., amounts spent, allocated time, types of beneficiaries, that you monitor (COM6)	<b>0.766</b>				0.607
Favor job creation in your region (COM4)		<b>0.817</b>			0.684
Favor local suppliers (COM5)		<b>0.769</b>			0.636
Offer internships and contribute to student training (COM3)			<b>0.885</b>		0.796
Contribute to community cultural, sporting, or teaching activities (COM1)	0.327		<b>0.676</b>		0.588
Explained variance (%)	31.7	17.1	16.9		65.8

Please indicate the regularity with which your firm engages in each of the following action or procedure (1 = "never" to 5 = "systematically")

<sup>a</sup> Only values above 0.30 are reported

Main loading for each item appears in bold

**Table 5** Entrepreneurial orientation

Items	Factor loadings on varimax rotated components <sup>a</sup>			
	INNOV	PROAC	RISK	Extraction
My firm...				
has implemented important modifications in its products and services in the last 5 years (INNOV1)	<b>0.837</b>			0.808
has introduced several new lines of products and services in the last 5 years (INNOV2)	<b>0.820</b>	0.321		0.798
is often the first to introduce innovations (e.g., new products and services, new techniques and technologies, production methods) (PROAC1)		<b>0.831</b>		0.803
is generally the one to make the moves to which our competition replies (PROAC2)	0.346	<b>0.784</b>		0.759
favors high-risk projects that are supposed to bring in a lot of profit (RISK1)			<b>0.877</b>	0.833
due to the environment in which it operates, goes through with audacious and risky opportunities in order to reach its objectives (RISK2)		0.384	<b>0.787</b>	0.775
Explained variance (%)	27.1	27.0	25.4	79.6

To what extent do the following statements reflect your firm's reality? (1 = "completely disagree" to 5 = "completely agree")

<sup>a</sup> Only values above 0.30 are reported

Main loading for each item appears in bold



**Table 6** SME performance

Items	Factor loadings on varimax rotated components <sup>a</sup>		
	NON-FIN	FIN	Extraction
Client's satisfaction (NON-FIN1)	<b>0.828</b>		0.688
Business reputation and image (NON-FIN2)	<b>0.791</b>		0.666
Employee's motivation (NON-FIN3)	<b>0.647</b>	0.302	0.509
Profitability (FIN1)		<b>0.895</b>	0.813
Revenue (sales) (FIN2)		<b>0.863</b>	0.773
Explained variance (%)	35.4	33.6	69.0

Over the last 3 years, compared to the following criteria, the firm's results have been: (1 = "much lower than your objectives" to 5 = "much higher than your objectives," 3 = "in line with your objectives")

<sup>a</sup> Only values above 0.30 are reported

Main loading for each item appears in bold

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