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Commitment to Sustainability in Small and Medium-Sized Enterprises: The Influence of Strategic Orientations and Management Values

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ABSTRACT

Ecosystem degradation and social sustainability have become important issues in the corporate sphere during the last few decades. However, research discussing corporate social responsibility and related concepts has often focused on larger companies, sometimes neglecting the specifics of small and medium-sized enterprises (SMEs). The main purpose of this study is to examine the relationships between two common strategic orientations, market orientation (MO) and entrepreneurial orientation (EO), in relation to sustainability commitment, sustainability practices and management values in SMEs. Questionnaire responses from 450 Swedish SMEs were analyzed, confirming the influence of MO, EO and sustainability practices on commitment to sustainability, implying that firms committed to sustainability see both market and entrepreneurial advantages of sustainability. The results also show that different parts of MO and EO differ in importance for commitment to sustainability among SMEs. Implications concern the importance for firms and policymakers to work with sustainability issues using both internal and external perspectives. © 2015 The Authors. Business Strategy and the Environment published by ERP Environment and John Wiley & Sons Ltd

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Introduction

DURING THE LAST FEW DECADES, ECOSYSTEM DEGRADATION HAS GROWN TO BECOME A MAJOR TOPIC AMONG SEVERAL actors in society, such as politicians, NGOs and consumers. In this debate, much responsibility is placed on businesses, which together with consumers often are seen as key players on the road toward increased environmental sustainability (Haddock-Fraser and Tourelle, 2010; Sandhu *et al.*, 2010). Considering the increase in CSR advertising, sustainability reporting and corporate CSR rhetoric (Moore and Manring, 2009;

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Wong *et al.*, 2014), it seems that the corporate sector is increasingly becoming aware of the sustainability and environmental aspects of their operations. However, while this is the case among larger companies, much research indicates that small and medium-sized enterprises (SMEs) are lagging behind (cf. Brammer *et al.*, 2012; Cassells and Lewis, 2011; Revell *et al.*, 2010). On this topic, a recent report from the European Commission (EC) clearly highlights this difference between SMEs and larger companies. The report shows that large European companies are more likely to take actions to be more resource efficient (i.e. save energy and materials), recycle, offer green products and services and have an environmental management system than SMEs (EC, 2012). Given that SMEs play an important role on the road towards a more sustainable development (Klewitz and Hansen, 2014; Revell *et al.*, 2010), understanding the underlying mechanisms of why some SMEs are more committed to sustainability than others is an important research topic.

In this study we address this question by considering the role of strategic orientation. It has been argued that many of the firm's most essential activities, such as what priorities are made, how the company defines its operations and how customers are viewed, depend on the firm's basic strategic orientation (see, e.g., Miles and Arnold, 1991). Two of the most common strategic orientations discussed in the literature are those of market orientation (MO) and entrepreneurial orientation (EO) (Baker and Sinkula, 2009). While previous research (e.g. Grinstein, 2008) has found these two orientations to be correlated (i.e., a firm can be both market and entrepreneurially oriented but to different degrees), a market oriented firm is generally one that primarily focuses on its customers and bases decisions on market information (Baker and Sinkula, 2009). An entrepreneurially oriented company, on the other hand, focuses more on being innovative and proactive, as well as being able to identify and exploit new markets (Miller, 1983).

In previous research, much of the academic debate and empirical research concerning MO and EO has focused on their relationship with company profitability (Baker and Sinkula, 2009; Kohli and Jaworski, 1990; Narver and Slater, 1990). However, given the importance of strategic orientation to the firm's long term goals, strategies, and activities, there is reason to believe that strategic orientation also could explain the manner in which the firm addresses sustainability and environmental aspects of their operations. For example, entrepreneurially oriented companies may possess the willingness to take risks and the ability to think outside the box that is required to respond to challenges in the natural environment (Menguc and Ozanne, 2005). By the same token, as customers are becoming increasingly concerned with sustainability and environmental issues (see, e.g., Belz and Schmidt-Riediger, 2010; Jansson, 2011) it is likely that market oriented companies could consider environmental issues an opportunity to meet and exploit changing customer needs and wants. In fact, a recent study by Belz and Schmidt-Riediger (2010) points in this direction.

Against the background of the discussion above, the main purpose of this study is to examine the role of MO and EO in relation to commitment to sustainability in the SME context. In line with previous research, we also consider the role of management values, which have been shown to be important for commitment to sustainability among SMEs (Jenkins, 2009; Sharma and Sharma, 2011; Williams and Schaefer, 2013). Finally, we relate the strategic orientations to actual sustainability practices. In this way, the study contributes with understanding of how MO and EO are related to each other, to management values, practice and commitment to sustainability. Moreover, as this study takes place in an under-researched empirical context (SMEs; see, e.g., Williams and Schaefer, 2013), it is practically useful since it can inform societal actors of what corporate strategic orientations, or components of these orientations, can contribute to a stronger commitment to sustainability.

Theoretical Foundation and Hypotheses

SMEs and Commitment to Sustainability

From a macro perspective, the SME category of companies is central to sustainable development. While individual SMEs naturally are smaller and have less impact on the environment than larger businesses, the fact is that SMEs dominate the business arena in many countries (see, e.g., Cassells and Lewis, 2011). In Europe, for example, SMEs are estimated to make up 99% of all businesses (EC, 2012). As a consequence of this dominance, it is quite natural that the SME group, as a whole, has considerable impact on the environment (Revell *et al.*, 2010). While it is difficult to calculate a precise level of environmental impact to which SMEs give rise, figures between 60% and 70% of total pollution levels have been presented in various reports (Hillary, 2004; Nordic Council of Ministers, 2005; OECD, 2007).

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In spite of their importance, SMEs have often been argued to be laggards when it comes to commitment to sustainability (see, e.g., EC, 2012; Revell *et al.*, 2010). Several factors, often based on the unique characteristics of SMEs, have been brought up in the literature to explain this phenomenon. For example, in a review, del Brío and Junquera (2003) highlight nine different characteristics of SMEs that explain differences in environmental strategy, including aspects such as financial resources, organizational structure, management style and production capabilities. While not fully identical, similar conclusions are reached by Hillary (2004), who outlined four major internal barriers to SMEs implementing environmental management systems. These include aspects such as insufficient resources, a lack of understanding of benefits, and implementation issues, as well as negative attitudes and the company culture. The overall idea of both Hillary (2004) and del Brío and Junquera (2003) is that SMEs generally have different circumstances and competences from those of larger companies, and that these differences explain why SMEs relate to sustainability in a different manner than larger companies.

The foundation for the current study is that there are specific characteristics of individual SMEs that could be considered to be important explanatory variables for commitment to sustainability. Commitment to sustainability here can be understood as an overarching viewpoint that sustainability is an important component in several of the firm's processes and procedures, such as overall management philosophy, strategic product decisions, competiveness and strategic planning. In focusing specifically on the role of strategic orientation, we highlight one of the four barriers outlined by Hillary (2004), that of corporate culture. Strategic orientation is, in essence, a form of corporate culture that could be argued to have an impact on corporate decision making (Narver *et al.*, 1998). Against this background, we claim that both EO and MO can impact the manner in which SMEs deal with environmental and sustainability aspects of their operations. Below, the hypotheses regarding the different types of strategic orientation, as well as management values, are detailed.

The Influence of Market Orientation (MO) on Commitment to Sustainability

MO is, in many ways, one of the foundations of modern marketing theory. Generally, market orientation refers to the implementation of the marketing concept (Kohli and Jaworski, 1990), which is often viewed as the dominant managerial market concept (see, e.g., Goldman and Grinstein, 2010). In their frequently cited definition of MO, Kohli and Jaworski (1990, p. 6) argue that MO is '...the organizationwide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organizationwide responsiveness to it'. Historically, however, different researchers have emphasized somewhat different aspects of MO, where some emphasize the behavioral nature of the concept while others focus on MO as a cultural concept (see, e.g., Kohli and Jaworski, 1990; Narver and Slater, 1990). In a recent study, Oakley (2011) combines the strengths from the different perspectives and argues for a three factor structure of MO. According to this definition, a market oriented company is one that (1) is customer focused, (2) coordinates and plans with marketing as a function of the entire organization and (3) is externally focused.

Customer focus is the extent to which the organization sees the purpose of its business as creating satisfied customers and the degree to which the organization puts the customer first. According to much MO literature (Jaworski and Kohli, 1993; Oakley, 2011), without a focus on the organization's customers, any strategy will eventually fail in a competitive environment. Thus, a major goal of the organization must be to satisfy its present and future customers.

Coordination and planning characterizes the degree to which the organization structures marketing as a function of the entire organization, not only the marketing department. According to this notion, if the entire organization is not integrated into the marketing concept, a strategy focused on the customer will not succeed (Jaworski and Kohli, 1993; Oakley, 2011).

The last part of MO, external focus, represents the extent to which the organization and its processes lead to implementing market-oriented behaviors in the marketplace. To achieve MO, the market and customer focus of the organization must be combined with a view external to the organization focused on competitors and putting new ideas into action (Oakley, 2011). This three-factor-view of MO is useful, since it integrates the most recent developments in the MO literature and can be used to empirically study the phenomenon in the current business climate.

While much research has focused on MO, especially in relation to firm profitability (Baker and Sinkula, 1999; Narver and Slater, 1990), little attention has historically been given to the relationship between MO and commitment to sustainability. Two notable exceptions include papers by Crittenden *et al.* (2011) and González-Benito and

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González-Benito (2008) who both, in slightly different ways, approach MO as a possible predictor of commitment to sustainability among companies. The basic conceptual logic behind this reasoning is that, if the customer and external society demands environmental sustainability, then market oriented companies, because of their orientation toward, and sensitivity to, the customer, will respond. This idea, that it is customer and stakeholder pressures that trigger SMEs to develop pro-environmental measures, has been brought up by several authors (e.g. Cuerva *et al.*, 2014; Perez-Sanchez *et al.*, 2003; Triguero *et al.*, 2013) and has also received support from empirical research on the topic. For example, Agan *et al.* (2013) showed that customer demand has a significant impact on environmental management system adoption. Moreover, Kammerer (2009) shows that firms focus on the environment more if they see it as a way to deliver benefits to the customer.

To conclude, there is plenty of support for the idea that the customer is important for development of environmental strategies. Seen from this perspective, commitment to sustainability is, in essence, a function of the focus on the customer that, according to the theory, comes naturally to market oriented firms. Against the backdrop of increasing environmental concern among consumers and other stakeholders during the last few decades (see, e.g., Haddock-Fraser and Tourelle, 2010; Sandhu *et al.*, 2010), we hypothesize that MO is positively related to commitment to sustainability among SMEs.

H1. *Market orientation is positively related to commitment to sustainability among SMEs.*

The Influence of Entrepreneurial Orientation (EO) on Commitment to Sustainability

Although the customer, or other relevant stakeholders, could potentially play an important role in the drive towards sustainability, there are also times when customers do not explicitly request sustainable alternatives. Customers may not know ahead of time what they want or, due to the collective and nonlinear nature of environmental problems (see, e.g., Heikkurinen and Bonnedahl, 2013), have enough knowledge to be able to evaluate and request the options that have minimal effects on the natural environment (see, e.g., Menguc and Ozanne, 2005). Thus, it is no surprise that authors who argue for the link between MO and sustainability also see the involvement of stakeholders or customers as a necessary component for sustainability (Crittenden *et al.*, 2011; González-Benito and González-Benito, 2008). Without this involvement of customers or other stakeholders, there is much less incentive for market oriented firms to pay heed to sustainability. It is in this environment, where sustainability may not necessarily come as a function of focusing on customer needs and wants, that the role of EO may be important for businesses commitment to sustainability. EO is generally considered to have three components: innovativeness, proactiveness and risk taking (Covin and Slevin, 1989; Miller, 1983), each of which have clear connections to sustainable business practices. For example, taking risks may result in an increasing tendency to try new untested (pro)environmental technologies (see, e.g., Sharma, 2000). Moreover, innovativeness and proactiveness can be assumed to have a positive connection to finding opportunities in the market and developing new sustainable business ventures (see, e.g., Menguc and Ozanne, 2005). Here, the entrepreneurship literature provides an abundance of studies on sustainable innovations, eco-innovations and sustainable entrepreneurship, which focus on the combination of innovations with sustainable business practices (Cuerva *et al.*, 2014; Hall *et al.*, 2010). In this literature, eco-innovations serve at least two objectives. While competence in the domain of innovations and sustainability is seen as a fundamental business source of competitive advantage, it is also one of the more important means toward increased sustainability (Jenkins, 2009; Klewitz and Hansen, 2014).

The idea that EO, through the components of innovativeness, proactiveness and risk taking, can lead to increased commitment towards sustainability has also received empirical support in previous research. For example, Aragón-Correa *et al.* (2008) showed that proactiveness is connected to sustainable innovative practices in the SME context. Against this background, and in accordance with Menguc and Ozanne (2005), we argue that a higher level of EO, through the flexibility, foresightedness and ability to think in new ways, represents a resource that allow companies to see opportunities, and work with sustainability issues on a strategic level. In line with this argument, we hypothesize that EO will be a significant determinant of commitment to sustainability among SMEs.

H2. *Entrepreneurial orientation is positively related to commitment to sustainability among SMEs.*

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The Influence of Management Values on Commitment to Sustainability

As compared with larger enterprises, SMEs often have a flatter and less formalized organizational structure. This fact, combined with the small size of the company, means that ownership, control and operations is often in the hands of a single individual or a small group of individuals (Jenkins, 2004; Parry, 2012; Sharma and Sharma, 2011). Given this manager and/or owner influence (below we refer to this as management influence only), it is not surprising that a large body of research has studied the environmental values, attitudes and knowledge of owners and managers in SMEs as an explanatory variable of environmental sustainability practices (Burke and Gaughran, 2007; Cassells and Lewis, 2011; Kearins *et al.*, 2010; Williams and Schaefer, 2013). After all, due to the specific nature of SMEs, these individuals have the potential to significantly influence the strategies and culture of the company.

There are indications in the literature that many SME managers hold positive attitudes toward the environment. For example, in a survey to 220 SMEs in the UK, 82% agreed that environmental issues should be a very high management priority, while 70% disagreed with the statement that 'business owners cannot be expected to solve social issues' (Revell *et al.*, 2010). These results are reinforced by qualitative studies that highlight manager attitudes as important for commitment to sustainability in the SME group. For example, Kearins *et al.* (2010) highlight the importance of values in their interviews with visionary small enterprises. Here, the manager values in relation to nature were described as absolutely crucial to the direction of the company, even though the values themselves differed among the three companies. Similarly, in a study on micro-businesses, Parry (2012) shows the importance of the personal ethical beliefs of the managers. In this study, all owner/managers who were interviewed said that their ethical beliefs were a key factor for developing more environmentally friendly practices.

However, while previous research largely shows that manager values are important, the extent to which this positive attitude turns into action is still unclear. For example, several studies report an 'attitude–action' or 'values–action' gap, where firms do not necessarily follow the positive values or attitudes from owners and managers (e.g. Cassells and Lewis, 2011; Revell *et al.*, 2010). Cassells and Lewis (2011), for example, report that protecting the environment was more of an accidental byproduct, rather than an intended outcome of activities such as waste management, energy usage and recycling. Thus, apart from the influence of management values on commitment it becomes important to relate these attitudinal factors to sustainability practices as discussed further below.

To conclude, there is much research that indicates that management values are important to understand commitment to sustainability in the SME segment. While not all of the positive attitudes may be translated into a higher order commitment to sustainability, we still expect an underlying positive relationship between management environmental values and commitment to sustainability.

> H3. *Pro-environmental values among management are positively related to commitment to sustainability among SMEs.*

The Influence of Sustainability Practices on Commitment to Sustainability

As the debate concerning humankind's influence on the natural environment has developed, so have approaches to trying to minimize the harm being done. From a business perspective, during the last few decades, several regulations have been enforced with the aim of minimizing waste (through for example recycling) and removing dangerous substances and materials from products. In addition, several non-government-regulated initiatives have developed that for example label products as fairly traded (socially sustainable) and environmentally friendly (Pedersen and Neergaard, 2006; Sammer and Wüstenhagen, 2006). However, firms differ in how and when they adopt these types of sustainability practice and also how these practices are related to management values and sustainability commitment. It might be the case that a firm feels institutional pressure and thus perceives that it is more or less 'forced' to recycle or take part in a third party labeling scheme, and thus there might be little correlation between management values and sustainability practices. On the other hand, these decisions can also be based on management long term commitment to sustainability. As has been discussed in the consumer behavior and marketing literature concerning pro-environmental attitudes and behaviors, correlation and causality are not the same

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thing (see, e.g., Thøgersen and Noblet, 2012); i.e., behavior might lead to attitudes and/or the opposite. Similarly, in the business case we argue here that (forced) sustainable business practices are correlated with commitment to sustainability, but we refrain from pointing to causality, that commitment leads to practices. Either way, actual current sustainability practices might be important in order to understand commitment to sustainability in the SME segment (Cassells and Lewis, 2011). Being forced or voluntarily, sustainability practices are likely to have an effect on commitment to sustainability. Thus we expect a positive relationship between sustainability practices (such as supply of sustainable products and recycling) and commitment to sustainability.

H4. *Business sustainability practices are positively related to commitment to sustainability among SMEs.*

Method

In order to assess the relationship between the two strategic orientations (MO and EO), management pro-environmental values, practices and commitment to sustainability among SMEs, a quantitative approach was chosen. This was mainly due to the nature of the research, but also due to the fact that much research in the area uses case studies or limited samples to study these issues (Hofmann *et al.*, 2012). In this study we want to be able to draw conclusions across SMEs as generally as possible.

Sampling

Thus, a questionnaire survey was carried out during 2013. For practical reasons an online survey was administered through an existing SME database of companies in northern Sweden for which email addresses were available. In total, the link to the web questionnaire was sent to 4714 individuals, each representing one company. Of these, 221 e-mails bounced due to inactive addresses, and 450 fully completed questionnaire surveys were returned after two reminders, resulting in a total response rate to 10%. Considering the short response time and the breadth of companies receiving the survey link, the response rate was deemed acceptable. Of the returned responses, 79% were from micro companies (0–10 employees), 18% from small companies (10–49 employees) and 3% from medium sized and larger companies (50 employees and above). Compared with the national average in Sweden, the sample was estimated to be representative of SMEs in Sweden.

Measures

All dependent and independent measures were assessed using a Likert scale ranging from 1, completely disagree, to 5, completely agree, or 1, not at all, to 5, very large extent.

The dependent variable, commitment to sustainability, was assessed using six items (Cronbach's alpha = 0.92, scale mean = 3.39, SD = 0.92), partly based on the work of Kärnä *et al.* (2003) previously used in Sweden. The items tapped into the respondent's view of sustainability as important in the firm in relation to management philosophy, strategic product decisions, competiveness and strategic planning.

In total, 13 items were used to cover the three dimensions of MO based on previous studies (Deshpandé *et al.*, 1993; Jaworski and Kohli, 1993; Narver and Slater, 1990). For EO 11 items were used, also covering the three dimensions of this construct based on the literature (Covin and Slevin, 1989; Dess and Lumpkin, 2005; Lumpkin and Dess, 1996). All 24 MO and EO items were entered into a factor analysis as a reliability check. The factor analysis is presented in Table 1.

Based on this analysis, MO in this study is assessed using in total of eight items (Cronbach's alpha = 0.73). Three of these items related to coordination and planning (Cronbach's alpha = 0.78), two items to external focus (Cronbach's alpha = 0.83) and three items to customer focus (Cronbach's alpha = 0.75). For EO the factor analysis pointed to six items (Cronbach's alpha = 0.82). Two of these related to risk-taking (Cronbach's alpha = 0.77), and four to proactiveness (Cronbach's alpha = 0.87). Although four items tapping into innovativeness were used in

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	Mean	SD	Component					Communality
			1	2	3	4	5	
Market orientation – coordination and planning, summated	3.64	0.93						
We periodically review our product development efforts to ensure that they are in line with what customers want.	3.66	1.04	0.707					0.642
In our organization, marketing personnel spend time discussing customers' future needs with different functional departments.	3.52	1.14	0.821					0.753
Data on customer satisfaction are disseminated at all levels of the organization on a regular basis.	3.75	1.15	0.852					0.749
Market orientation – external focus, summated	3.85	0.85						
We are slow to detect fundamental shifts in our market (competition, technology, etc.). (R)	3.85	0.93		0.908				0.846
We are slow to detect changes in our customers' preferences. (R)	3.84	0.91		0.901				0.851
Market orientation – customer focus, summated	3.96	0.77						
The customers' interests always come first, ahead of the level of profitability.	4.06	0.89			0.738			0.553
This organization exists primarily to serve customers.	3.90	1.02			0.850			0.735
The business objectives of our organization are driven by customer satisfaction.	3.92	0.90			0.838			0.732
Entrepreneurial orientation – risk taking, summated	2.81	0.98						
Generally our firm views risk as something positive, we encourage projects although the outcome might be uncertain.	2.83	1.11				0.892		0.834
In tough business situations our firm often chooses an aggressive stance to potential business opportunities.	2.79	1.07				0.838		0.800
Entrepreneurial orientation – proactiveness	3.04	1.00						
The last three years our firm has launched several new products/services.	2.92	1.19					0.853	0.773
In our organization, creativity and experimenting are encouraged.	3.00	1.20					0.861	0.783
When we change and develop products and services, the changes are more often radical than incremental.	3.11	1.18					0.770	0.692
In our firm we prioritize product development ahead of marketing existing products.	3.12	1.13					0.783	0.695
Cronbach's alpha			0.78	0.83	0.75	0.77	0.87	
Percentage of variance explained			20.98	14.92	14.45	12.68	11.52	

Table 1. Construct measures and scale reliabilities for market orientation and entrepreneurial orientation
Scale: 1, strongly disagree... 5, strongly agree.
Principal component analysis; Varimax rotation with Kaiser normalization; loadings less than 0.40 are not shown. Total variance explained = 74.5%; KMO = 0.781; Bartlett's test Chi-sq. = 2550.738, df = 91, p = 0.000.

the questionnaire, these items cross loaded heavily with proactiveness and were thus dropped from further analysis. Reviewing the items and the literature, it is clear that innovativeness and proactiveness are closely related conceptually and in some studies they have been hard to separate empirically (e.g. Covin and Slevin, 1989; Lumpkin and Dess, 2001).

Management values in relation to sustainability were measured as adherence to the New Ecological Paradigm (NEP; Dunlap *et al.*, 2000) using four items from the original scale of 15 (Cronbach's alpha = 0.62). The NEP scale is a measure of endorsement of a pro-ecological world view, and has been found to be reliable across many cultures (Dunlap, 2008).

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Last, sustainability practices were measured using seven items. Four of these assessed the firm's supply of sustainable products (Cronbach's alpha = 0.83) and three items their recycling in operations (Cronbach's alpha = 0.75). The types of actual sustainability practice have been discussed in previous literature (Cassells and Lewis, 2011).

Results

Initially, descriptive statistics were analyzed and then multivariate regression analyses were conducted. Descriptively, it was found that the surveyed firms exhibited a higher degree of MO (mean = 3.81, SD = 0.59) than EO (M = 2.86, SD = 0.86). Of the components of MO customer focus achieved the highest mean (3.96, SD = 0.77), and of the EO components proactiveness was the highest rated, with a mean of 3.04 (SD = 1.00). All scales used in this paper are presented in Table 2.

To test the hypotheses, regression analyses were run. As a first step MO and EO were tested as composite constructs. In the second step each part of MO and EO was tested together with the other constructs. All regression analyses are presented in Table 3.

The first regression (upper left in Table 3) shows that both MO and EO contribute significantly to commitment to sustainability among the SMEs. Judging by the betas in the table, MO contributes more than EO. As there were significant relationships between both MO and EO and commitment to sustainability, H1 and H2 are supported.

In order to further examine the relationships and explore which parts of MO and EO contribute, the individual components of MO and EO were tested on commitment to sustainability (upper right in Table 3). These results show that the MO component coordination and planning and the EO component proactiveness are the only components that contribute significantly to commitment to sustainability. Thus, the results indicate that not all components of MO and EO are equally important in explaining why the firm is committed to sustainability. Instead, there are specific components of both orientations that explain why certain SMEs are committed to sustainability while others are not.

In the third regression, H3 and H4 are tested (lower left in Table 3). The results show that management values are not significantly related to commitment to sustainability, thus H3 is rejected. The results also show that supply of sustainable products and recycling in operations are positively and significantly related to the dependent construct, supporting H4.

Last, it was tested which parts of MO and EO contribute together with the other independent constructs to explain commitment to sustainability (lower right in Table 3). It was found that the MO component coordination and planning and the EO component proactiveness are still significant, as well as supply of sustainable products and recycling in operations. This last model achieved the highest R square (0.304, $F = 25.56$, $p < 0.001$) of the four regression models.

	Items	Mean	SD	Cronbach's α
Dependent construct				
Commitment to sustainability	6	3.39	0.92	0.92
Independent constructs				
MO, summated	8	3.81	0.59	0.73
Coordination and planning	3	3.64	0.93	0.78
External focus	2	3.85	0.85	0.83
Customer focus	3	3.96	0.77	0.75
EO, summated	6	2.96	0.86	0.82
Risk taking	2	2.81	0.98	0.77
Proactiveness	4	3.04	1.00	0.87
Management values	4	3.86	0.75	0.62
Supply of sustainable products	4	2.28	1.09	0.83
Recycling in operations	3	3.79	1.11	0.75

Table 2. Scale reliabilities and descriptives
Scale: 1, strongly disagree... 5, strongly agree.

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		Composite model			Factor model		
		ß	*T*	Sig.	ß	*T*	Sig.
Step 1	MO	0.348	4.74	0.000			
	Coordination and planning				.210	4.30	0.000
	External focus				.067	1.36	0.174
	Customer focus				.021	0.40	0.690
	EO	0.267	5.32	0.000			
	Risk taking				−0.030	−0.68	0.495
	Proactiveness				0.251	5.29	0.000
	F	40.00		0.000	19.15		0.000
	Adjusted R^2	0.148			0.168		
Step 2	MO	0.255	3.74	0.000			
	Coordination and planning				0.153	3.38	0.001
	External focus				0.066	1.44	0.150
	Customer focus				0.008	0.17	0.864
	EO	0.218	4.68	0.000			
	Risk taking				−0.001	−0.03	0.978
	Proactiveness				0.188	4.24	0.000
	Management values	0.094	1.89	0.059	0.089	1.80	0.073
	Supply of sustainable products	0.262	7.52	0.000	0.250	7.13	0.000
	Recycling in operations	0.148	4.27	0.000	0.146	4.24	0.000
	F	38.92		0.000	25.56		0.000
	Adjusted R^2	0.297			0.304		

Table 3. Regression models with commitment to sustainability as dependent

Discussion

The purpose of this paper was to assess the manner in which commitment to sustainability in SMEs is related to MO, EO, management values and sustainability practices. Overall, the results show support for three out of four hypotheses, indicating that MO, EO and sustainability practices are related to commitment to sustainability in SMEs. However, management values were found not to be related to commitment to sustainability in SMEs (H3) in this study. Our analyses also show that one component of MO (coordination and planning) and one of EO (proactiveness) explain commitment to sustainability over the other components in MO and EO.

The Influence of MO and EO on Commitment to Sustainability

One of the primary hypotheses of this paper was that market orientation, due to changing customer and societal demands, would be connected to commitment to sustainability among SMEs. This builds on the assumption that companies are focused toward the market and thus likely to pick up on increasing environmental demands from customers and society in general (see, e.g., Crittenden *et al.*, 2011). The results of this study confirm the relationship between MO and commitment to sustainability. Thus, companies that are oriented towards the market also commit to sustainability to a higher extent than less market oriented companies. However, further analysis of the MO concept also showed that not all components of MO contribute equally to commitment to sustainability. In fact, only the coordination and planning dimension was shown to have a significant relationship. This relationship can be explained by the fact that a large part of implementing sustainability is about coordinating the activities of several organizational parts and functions. For instance, it is important that procurement activities and communication functions are coordinated in order to lessen environmental impact and draw competitive (often, promotional) advantages from these activities.

While the relationship between coordination and planning and commitment to sustainability can be expected, the fact that the MO components of external focus and customer focus did not contribute to commitment to sustainability

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was more surprising. Studying the items that formed the coordination and planning construct, however, shows that it can be conceptualized as a lesser form of customer orientation, whereas the items for customer orientation are more clearly pronounced. In this way our results indicate that how MO is conceptualized in relation to commitment to sustainability might have an effect. In addition, our results show that sustainability committed companies may not see external focus and a more strict customer focus as being as important as coordination planning and a less strict form of customer focus. However, and as we discuss below, these results need to be replicated in order to be conclusive.

Our study also shows that SMEs that hold an entrepreneurial orientation are generally more committed to sustainability than companies that are not entrepreneurially oriented. Since challenges based on environmental challenges may generate business opportunities, confirmation of the hypothesis was expected. Further analysis, however, showed that not all components of EO drive commitment to sustainability. In fact, only proactiveness was a significant determinant of commitment to sustainability. In this way, the current research supports previous research arguing for the importance of proactiveness (Aragón-Correa *et al.*, 2008). A proactive company is in many ways a leader, acting on opportunities in the marketplace before other actors. On this note, Lumpkin and Dess (2001, p. 433) argue that 'Proactiveness is an opportunity-seeking, forward-looking perspective [...] acting in anticipation of future demand to create change and shape the environment'. Given that sustainability has even been described as an emerging megatrend (see, Lubin and Esty, 2010) it is only natural that proactive companies lead and act on sustainability related issues. In this way, proactiveness can be viewed as a necessary condition for firms to be able to grasp the sustainability challenges and transform them into competitive products and services on the market.

The analyses also showed that the other component of EO, risk taking, was not significantly related to commitment to sustainability. This indicates that risk-accepting companies do not commit to sustainability to a higher extent than less risk-accepting companies do. This may indicate either that sustainability is seen as an undesirable risk by SMEs or that sustainability is not perceived as a risk in the business climate today. There may simply be other areas where risk taking is perceived to have a higher pay-off than in the sustainability area.

The Influence of Management Values and Sustainability Practices

One of the more researched aspects when it comes to sustainability in SMEs has historically been that of the influence of management attitudes or values (Jenkins, 2009; Williams and Schaefer, 2013). Since SMEs usually consist of fewer people, individual opinions and attitudes are arguably more important for the behavior of the company than in larger companies. In line with this reasoning, it was expected that pro-environmental values among management would impact commitment to sustainability. However, in our study we did not find support for this relationship. An explanation might be that the scale used in our study is more abstract and thus less related to specific firm behaviors in accordance with the specificity principle of attitudes (cf. Eagly and Chaiken, 1993). On the other hand, our study showed that sustainability practices were significantly related to commitment to sustainability in SMEs. This indicates that actual practices, such as developing and supplying less environmentally harmful products and recycling in operations, is positively related to commitment. Since regression analysis only indicates a relationship and not causality, it is not possible to clearly show if practices lead to commitment or if it is the opposite way. However, the effects are strong and show that the more a firm is committed to sustainability, the more actual practices they also report. This is not surprising and in line with previous research in the area (e.g. Cassells and Lewis, 2011).

Conclusions and Implications

Business Strategy Implications

In total, our results show that MO and EO are important factors in relation to commitment to sustainability, together with sustainability practices. The overall strategic orientations (EO and MO) are better predictors of commitment to sustainability than management values, and sustainability practices also have an important role in the explanation. This implies that firms committed to sustainability see both strategic market and entrepreneurial advantages in their efforts. However it also means that firms that are less market and/or entrepreneurially oriented are less apt

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to pursue sustainability agendas for their firms. In this sense the overall results of the study point to the importance of working with sustainability issues from several perspectives, i.e. both from within the firm in the strategic orientation, and by influencing the firm from the outside by creating a market and stimulating demand for less environmentally and socially harmful products (see, e.g., Crittenden *et al.*, 2011). These signals would positively affect sustainability-committed firms and in the longer run facilitate these firms outcompeting firms that are less prone to see sustainability as an important strategic issue. On the other hand, as the market environment changes, firms that are less market oriented and entrepreneurially oriented (and thus less committed to sustainability) would, according to the literature, be less profitable and thus less likely to survive in the long run. Thus a pronounced market orientation and/or entrepreneurial orientation might be good business strategy both for strategic (i.e. long term survival of the firm) and for actual sustainable development in business overall.

The findings that coordination and planning (part of MO) and proactiveness (part of EO) are significantly related to sustainability commitment in SMEs, and that external focus was not found to be significant, suggest that sustainability performance is more internally than externally oriented. An important part of any firm's operations is to abide by the environmental regulations and laws, and other studies have found that the regulations (or the anticipation of them) indeed exert a pressure on sustainability practices (González-Benito and González-Benito, 2008). Thus it seems as if SMEs might be less influenced by stakeholder and regulatory pressures than previously researched, mainly larger, firms have expressed. In this sense, SMEs might view sustainability challenges as representing more of a business opportunity and less of an external pressure. In total, this might imply that SMEs consider sustainability issues differently than larger firms, and perhaps, on an aggregated level, this lies behind the purported lower levels of sustainability work in SMEs in relation to larger firms (del Brío and Junquera, 2003; EC, 2012; Hillary, 2004). For environmental and sustainability perspectives this implies that SMEs may require more support when new regulations are implemented. In developing this support it is of some importance to frame it, as there are synergies in working with sustainability issues and business strategy development together.

Policy and Sustainability Implications

In highlighting the relationships between strategic orientation, management values, sustainability practices and commitment to sustainability in the SME context, this study holds several implications for policy and sustainability.

SMEs, as well as larger companies, need to consider regulations in many different areas. Although there have been efforts in the EU and Sweden to ease the regulatory and administrative burden on SMEs, many complaints can still be heard in the debate. Thus implementing policies and regulations that force all SMEs to consider social and environmental sustainability issues to a higher degree might run the risk of meeting with severe resistance from SMEs and connected stakeholders.

As discussed by Revell *et al.* (2010), increased regulatory force risks turning sustainability into a reactive rather than a proactive issue among SMEs. In focusing on commitment to sustainability, our study emphasizes the determinants of a proactive way of dealing with sustainability related challenges. The study shows that there are traits present in some SMEs, based on both a market and an entrepreneurial orientation, that relate to a having a proactive stance towards sustainability. However, the other side of the coin implies that these traits are not present among all SMEs. For these companies, which are more likely to treat sustainability as a reactive issue from the outset, regulation is, and most likely will be, the most important tool available. As discussed by Jansson and Nilsson (2010), regulatory force together with pressure from other stakeholders, such as consumers, might shift values and practices on the market in a sustainability direction. The challenge for policymakers then becomes dealing with this need for regulation among less committed companies, while at the same time encouraging already proactive companies to keep dealing with sustainability issues and for them to also develop innovations and practices that continuously move forward what sustainable business is. In this task, understanding the relationships presented in this study is likely to be of help to regulators.

From an SME perspective, one conclusion based on our study is the importance of dealing with sustainability issues in a proactive manner. That is, SMEs that voluntarily see sustainability challenges as business opportunities might be ahead of regulations and could draw benefits from this position (see, e.g., Kärnä *et al.*, 2003). In fact, both MO and EO revolve around an (either external or internal) notion of how to conduct successful business. For policymakers and other actors interested in promoting sustainable business practices, it may thus be worthwhile

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to develop context specific tools to help companies spot sustainable business opportunities relevant to their operations. This could, for example, be done by focusing on issues such as potential sustainable future customer demand and how current environmental challenges may result in new regulations for customers, or by encouraging innovations and research and focusing on how sustainable business opportunities can be developed from such initiatives. It also becomes important to communicate these notions in the SME community, so that an awareness develops that taking sustainability challenges seriously does not have to be pitted against successful business operations or profitability. SMEs that are sustainability driven and policymakers both have a role to play in this communication effort. Another implication for SMEs and connected stakeholders such as SME organizations is that proactive insight into sustainability issues is important. As has been pointed out by Porter and colleagues (Porter and Kramer, 2011; Porter and van der Linde, 1995), forming relationships with both environmental organizations and regulators can deliver this insight and be a way for SMEs who take sustainability challenges seriously to outcompete sustainability laggards.

Finally, our study shows a close correlation between sustainable practices and commitment to sustainability. While this relationship is expected, and it is difficult to evaluate causality, these results point to the importance of current practices for dealing with sustainability issues in a proactive manner among SMEs. Developing eco-innovations and sustainable products, recycling programs, environmental labeling and environmental management systems may thus, beside the immediate environmental gain, also trigger a more long term proactive stance towards environmental issues. Policymakers and other actors who want to push the heterogeneous group of SME companies towards increased sustainability may thus do well to encourage these practices. Thus, it might be that first enforcing sustainability practices, such as recycling, might pave the way for sustainability values to develop and spread within, as well as across, SMEs. Here, the dynamic tension between regulation, sustainability values and practices among SMEs, and the influence from other stakeholders in encouraging dealing with sustainability challenges needs to be recognized.

Contributions, Limitations and Further Research

This study has examined the relationship between MO, EO, owner/manager values and commitment to sustainability among Swedish SMEs. In confirming three out of four hypotheses, the study verifies the role of all three constructs for how SMEs deal with environmental issues. As such, this study contributes to the current literature in at least three ways. First, the study makes a theoretical contribution in highlighting the relationship between EO, MO and commitment to sustainability in general. Previous research on these concepts has primarily focused on financial consequences of adopting a certain orientation. In connecting these orientations with sustainability commitment, we widen the scope and show the usefulness of the orientations to other aspects of corporate behavior. Moreover, in further analyzing the components of EO and MO, rather than just the concepts overall, the study sheds light on the intricate nature of the relationships that exist between a firm's strategic orientations and commitment to sustainability. Furthermore, the study shows that there is a strong relationship between commitment to sustainability and sustainability practices, furthering our insight into the workings of actual behavior in firms and their sustainability commitment. A third, more practically oriented contribution, of the study is that it furthers our understanding of commitment to sustainability in the SME context. Given the fact that SMEs, as a group, have significant environmental and social impacts (Revell *et al.*, 2010), this is important information for policymakers and NGOs alike.

In interpreting the results of this study several limitations need to be considered. One limitation concerns the operationalization of both dependent and independent variables. The literature on MO, EO and sustainability in organizations is large, and several definitions and measurement scales exist. It is possible that different conceptualizations of these variables would yield differing results. However, since our measures to almost full extent build on previously used scales we assume that a replication would yield similar results. Another limitation is the online nature of the study and the sample and response rate. However, despite a relatively low response rate, with the large response database, the results pertaining to the theoretical aspects of MO and EO can be argued to be reliable for the Swedish context. Further research, however, is needed to corroborate our results internationally. Our study also

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gives rise to another set of questions concerning if MO and EO are thought of as linked in a casual chain concerning commitment to sustainability. Does commitment to sustainability arise in tandem with MO or EO or does one lead to the other? In addition, since previous research has found correlations between EO and MO as well as with other strategic orientations (e.g. Grinstein, 2008) it could be relevant to relate sustainability commitment and practices to other strategies in order to further understand what causes what. These types of study would need a longitudinal set-up where the development of sustainability commitment and strategic orientations are monitored over time.

This is one of the first studies to analyze the impact of strategic orientation on how SMEs work with sustainability issues. As such, it could be used as a starting point for future research that could, for example, further elucidate how different types of SME in different sectors perform, and compare MO and EO to other orientations in relation to sustainability, for example the stakeholder view (see, e.g., Heikkurinen and Bonnedahl, 2013). Further work would also gain from cross country comparisons and longitudinal studies of how strategic orientations change in relation to sustainability commitment and practices over time.

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