

**SME Managers' Motivations to Engage with Climate Change: The
Role of Values and Emotions**

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SME Managers' Motivations to Engage with Climate Change

SME Managers' Motivations to Engage with Climate Change: The Role of Values and Emotions

Abstract

In this paper we look at the motivations of managers of small and medium sized enterprises (SMEs) to engage with climate change. The paper reports on an exploratory, qualitative study with managers of nine environmentally proactive SMEs in the East of England. The aim of the research was to study what motivated managers of SMEs to engage with environmental issues in general and with climate change in particular and how they constructed the importance of climate change with respect to their own business practice. We found that managers of environmental pro-active SMEs were actively interested in the climate change debate, constructed climate change holistically within a range of wider environmental and social concerns. We found that their motivations to engage with environmental and climate change issues were based on values as much, if not more so, than on business strategic and externally legitimacy considerations and. Values and emotional responses interacted with knowledge and information, in as much as they encouraged respondents to act upon the climate change information gathered through a variety of sources.

Keywords

Climate change; small and medium sized enterprises, motivations; values

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Introduction

Climate change is frequently argued to be the greatest environmental challenge facing the world today (e.g. Henson, 2006; DEFRA, 2009) and is a key focus of international, European and UK policy. While the role of business in contributing to both the problem and potential solutions has been acknowledged for some time (Fineman, 2000; 1996) government policies on climate change often focus predominantly on larger firms (Bradford and Fraser, 2008; Revell and Blackburn, 2007) and seem to neglect the roles that small and medium sized enterprises (SMEs) can play in the effort to address climate change (CCC, 2008). Yet, SMEs constitute 99% of UK businesses, provide 43% of private employment (BERR, 2007) and may account for 20% of total UK carbon emissions (AXA, 2008). Understanding the impact of small business activity on climate change and how they engage with this issue therefore seems highly important (Gadenne et al., 2009; Revell and Blackburn, 2007; Purvis et al., 2000).

There is a scarcity of research into how SMEs engage with environmental and social issues in general (Carr, 2003; Spence and Rutherford, 2003; Noci and Verganti, 1999; Sorrell, 1998). In addition, existing research is often limited in its theoretical and methodological outlook by conceptualisations derived from research in large organisations and there is little theoretical development looking specifically at SMEs (Spence, 2007). Of the limited amount of literature addressing SME engagement with sustainability issues even less has looked at environmentally pro-active firms (Revell and Blackburn, 2007). Yet, the views of this group of managers can be considered to be highly important because, unlike many of their peers, they seem to have already overcome some of the traditional business barriers associated with business greening. They might therefore be expected to show greater interest in climate

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change debates, potentially embracing the challenges and opportunities of climate change ahead of other small (and large) businesses.

In this paper we therefore investigate how managers of environmentally pro-active SMEs engage with the climate change challenge. We specifically look at the following research questions:

- What are the motivations of managers of environmentally pro-active SMEs for engaging with climate change?
- In particular, what role do values and personal commitment play in SME managers' engagement with climate change?
- How does managers' own understanding of their engagement with climate change compare to that of other interested stakeholders, such as local authorities and business support organisations?

Literature Review

In this section we first review the literature relating to business motivations to engage in pro-environmental behaviour in general. We then look at the ways in which SMEs differ from larger firms, particularly with respect to pro-social and pro-environmental behaviour, before reviewing the literature that specifically looks at SME engagement with environmental and climate change issues.

Motivations to engage in pro-environmental behaviour

While there is little previous research on business engagement with climate change specifically, existing work on firms' motivations to engage in pro-environmental behaviour more generally gives us an indication of the motivations to look out for. Most of this existing

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research has been conducted on larger firms. Some of the key motivators identified are legislation (Lampe et al., 1991; Lawrence and Morell, 1995; Post, 1994; Vredenburg and Westley, 1993), stakeholder pressure from customers, local communities, environmental interest groups and others (Berry and Rondinelli, 1998; Bucholz, 1991; Lawrence and Morell, 1995), economic opportunities arising from pro-environmental behaviour (Cordano, 1993; Lampe et al., 1991; Porter and van der Linde, 1995; González-Benito and González-Benito, 2005; Melnyk et al., 2003) and ethical or ecological motivations (Lampe et al., 1975; Wood, 1991; González-Benito and González-Benito, 2005; Melnyk et al., 2003).

Bansal and Roth (2000) conducted an extensive qualitative study to develop a more in-depth understanding of the link between firm motivations and their pro-environmental behaviours. They identified three broad types of motivations: competitiveness, legitimation and ecological responsibility, in effect treating legislation and stakeholder pressure under one type of motivation: legitimation.

Bansal and Roth (2000) found that managers in their study talked about 'competitiveness' in terms of building ecologically related resources and capabilities and linked it to pro-environmental behaviours such as green marketing, source reduction, process intensification and new capital investment. Respondents with this motivation tended to pay greater attention to cost-benefit analyses of pro-environmental behaviour and economic return was rated more highly than ecological impact. 'Legitimacy' was talked about in terms of long-term sustainability or survival of the firm and the license to operate, and was linked to behaviours aimed at avoiding the negative consequences of non-compliance. A legitimation motivation was also linked to mimetic isomorphism (cf. DiMaggio and Powell, 1983) in complying with institutional norms and pressures. 'Ecological concern' as a motivation was linked to a more general concern for the public good and was linked to an emphasis on the ethical rather than

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the pragmatic aspects of pro-environmental behaviour, the importance of environmental champions and the values of individuals and the organisation, as well as top management taking responsibility. This motivation was often linked to independent and innovative behaviours rather than those leading to greater isomorphism.

Bansal and Roth (2000) also identified three contextual dimensions that seemed to influence the strength of the different motivations for pro-environmental firm behaviour. These were issue salience, which was positively related to competitiveness and legitimation as motivations; field cohesion, which was positively related to the motivation of legitimation and negatively related to competitiveness and environmental responsibility; and individual concern for the environment, which was positively related to both legitimation and environmental responsibility as motivators of firm pro-environmental behaviour.

How SMEs differ from larger firms with respect to pro-social and pro-environmental engagement

SMEs differ from larger firms in terms of their engagement with social and environmental issues, which is why findings and models derived from studies with larger firms are not necessarily applicable and specific research on small firms is necessary. As a rule, SMEs tend to have less formalised structures and strategies (Hamann et al., 2009) and thus rarely have codified social or environmental policies (Spence, 2007). SMEs are often private enterprises, run by owner-managers, who thus can have greater freedom of decision making and contracting (Hamann et al., 2009) and whose personal responsibility and personal motivations play an important role in the strategic direction of the business (Hamann et al., 2009; Vives, 2006; Jenkins, 2004; Spence, 1999; Longenecker et al., 1989). In addition, SMEs are often more strongly embedded in their local society and culture (Spence, 2007) and

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more reliant on personal relationships (Hamann et al., 2009), which arguably opens them up to greater legitimacy pressures.

On the other hand, SMEs are often highly dependent on a small number of customers and are often not able to compete on price (Spence, 2007). In addition, smaller firms often suffer from greater constraints in financial and managerial resources than their larger counterparts, which is seen as a further barrier to pro-environmental engagement (Hamann et al., 2009; Biondi et al., 2000; Gerrans and Hutchinson, 2000; Hillary, 1999; Netherwood, 1998; Tilley, 1999), can mean that even small firms with pro-environmental organisational cultures can be vulnerable to non-compliance with environmental regulation (Petts et al., 1999). Thus, some authors suggest that many small firms continue to be challenged by expectations for adopting pro-environmental behaviours (Hitchens et al., 2005; Tilley, 1999), tend to be reactive rather than proactive in their environmental engagement (Tilley, 2000) and remain unconvinced of the business case for pro-environmental behaviour (Revell and Blackburn, 2007).

Yet, it is dangerous to assume homogeneity of small firms across regions, sectors, cultures and ownership structures (Jenkins 2004). Small business engagement with environmental and social issues is highly sensitive to sector context (Spence 1999) and may depend on the competitive value that can be expected from pro-environmental change (Cambra-Fierro et al 2008).

In this context it may be useful to distinguish between different types of SMEs in terms of their main motivation for being in business. The concepts of small businesses and entrepreneurial firms have sometimes been conflated in the literature (refs?) but it seems useful to distinguish between typical entrepreneurs, who are thought to be highly driven and most motivated by profit considerations, and 'normal' SME owners, who may be much less concerned with profit maximisation and much more interested in achieving a work-life

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balance while obtaining 'sufficient' profits to earn a living (refs.?). The former are often thought to be largely uninterested in ethical considerations whereas the latter may be much more strongly motivated by personal values and concerns.

Where owner-managers have strong ethical and environmental convictions small businesses – rather than being reticent and reactive in their environmental engagement – may be sustainability pioneers. We can distinguish a third group of small businesses: social entrepreneurs and ecological entrepreneurs (sometimes called *ecopreneurs*). The latter are those that adopt environmentally responsible business practices (Schaper 2002), create green businesses in order to radically transform the sector in which they operate (Isaak,2002) and/or want to make a living while at the same time solving environmental problems (Bennet 1991).

In exploring SME engagement with climate change it therefore seems important to distinguish between different types of small businesses, particular between environmental pioneers and others.

SME motivations to engage with environmental issues

The three broad types of motivations for pro-environmental behaviour reviewed above have also been identified as motivations for pro-social and pro-environmental behaviour in SMEs. These are strategic motivations (the business case, or win-win arguments), external pressure, particularly in the form of legislation and regulation, and personal commitment and values.

The business case or 'win-win' argument underpins the UK Government's approach to encouraging small businesses to engage with climate change and reduce greenhouse gas emissions. It promotes a voluntary approach that aims to deliver carbon reduction through

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improved resource efficiency which in return is argued to produce cost savings and competitive advantage for the companies involved (Revell and Blackburn, 2007). However, the literature suggests that these win-win arguments may actually only have little purchase for SMEs, who may believe that they have no significant impacts on the environment and that improving environmental practice will cost, rather than save, them money (Revell and Blackburn, 2007; Ackroyd, 2002; Purvis et al., 2000; Hilary, 2000). Possible financial benefits from resource efficiency savings may be quite small for SMEs (Fineman, 2000) and may be more easily realised through other than environmental means (Purvis et al., 2000). While financial benefits may sometimes be possible, SMEs do not always realise this or find it easy to convert environmental performance into competitive advantage (Gadenne et al., 2009; Simpson et al., 2004; Lefebvre et al., 2003).

Perhaps because of the voluntary approach favoured by the UK government, SMEs are generally subject to fewer environmental and resource efficiency regulations than larger firms. However, some existing research suggest that a more robust regulatory approach has the potential to encourage more small businesses to engage in pro-environmental and energy efficiency practices (Simpson et al 2004; Bradford and Fraser 2008). Compliance with regulation is also sometimes seen as a good means for initially encouraging companies to take environmental issues seriously (Gadenne et al., 2009; Environment Agency 2007; Fineman, 2000). However, the case for greater regulation is not clear-cut, particularly for very small businesses. In a survey conducted by the UK Environment Agency (2007) just 25% of micro businesses cited legislation as a motivator, compared with 40% of businesses with 50 employees or more.

This brings us to the third broad group of motivations: values and personal commitment. In small firms ownership and control often coincide and owner-managers are often inseparable

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from the business in terms of values, policies, and everyday practice (Murillo and Lozano 2006). Founders of small business organisations often build firms that are in line with their personal aspirations and philosophies, have greater strategic and operational discretion over their business and, unlike the managers and leaders of large organisations, it is usually within their power to disseminate their own vision to permeate organisational values and culture (Hamann et al., 2009; Heugens et al., 2008; Schein 2004; Dawson et al., 2002). Thus, personal ethics and business ethics are likely to be more closely aligned (Jenkins, 2004; Spence, 1999; Werner, 2008; Vyakarnam et al., 1997). For these reasons Vives (2006) argues that ethics and religious values are the most consistent reasons behind socially responsible practice among SMEs. In addition, as small businesses are flatter and potentially quicker to change, and more likely to value qualities such as honesty and integrity they may well be better placed to adopt socially responsible practices than larger corporations (Sarbutts 2003). These considerations have been born out to some extent in empirical studies. Values and environmental concern were found to be linked with pro-environmental SME behaviour (Environment Agency, 2007; Cordano et al., 2009; Dawson et al., 2002; Flannery and May, 2000).

On other hand, the link between personal values and pro-social and pro-environmental behaviour is also not clear cut. Spence and Rutherford (2003) found that while personal ethics were important it was difficult to categorise SME managers easily into value categories and their response to social issues depended also on other personal or outside factors. In a slightly different context Marta et al. (2008) found that personal moral philosophy was not a good predictor of small business managers' ethical decision making. The literature thus suggests that personal values may well have a role to play in SME engagement with sustainability and climate change but that it may be incorrect to assume a simple feed-through from values to behaviour. Values may be best considered in the specific

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social, cultural and historical context in which a small business operates. For example, Fuller and Tian (2006) argue that there is a clear link between values and morality and the nature of mutual obligations, expectations and responsibility between economic actors, and it would therefore seem reasonable to assume that the specific social context would be influential in the way in which small business managers' values impact on their business decisions.

Based on this literature review, there seem to be several gaps in our understanding of SME managers' engagement with environmental issues in general and climate change in particular. Firstly, there seems to be little research taking into account differences between various types of SMEs and particularly focusing on environmentally pro-active SMEs (albeit not necessarily ecological entrepreneurs). However, the motivations and behaviours of such firms may well give valuable insights into how managers of 'normal' SMEs in general might be motivated to engage more with these issues. Secondly, the UK government favours a voluntary approach to environmental engagement in SMEs, based on a business-case argument for cost saving through environmental efficiency. However, the limited literature suggests that many SMEs may not be convinced by the business case and that personal values and commitment may indeed play a significant role. This research therefore looks specifically at motivations of SME managers to engage with climate change, focusing on all three types of motivations with special attention to values and personal commitment. It also compares managers' accounts of their motivations with the perceptions of government and business advice organisations.

Methodology

This paper is based on an exploratory, qualitative study into the way in which managers of environmentally pro-active SME construct and engage with climate change issues. This aims to address a gap identified in the literature, namely that SME engagement with climate

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change is under-researched in general and that there is very little work on the engagement of environmentally pro-active SMEs with sustainability and climate change issues. By exploring how the minority of managers who have actually engaged with the environmental agenda construct climate change and what motivates them to engage with the issue in the way they do we are hoping to contribute to a better general understanding of SMEs' engagement with environmental and climate change issues and thus inform future research and potential directions for policy.

In this paper we take a social-constructionist approach to help us uncover how the owner/managers of a number of environmentally pro-active small firms understand and engage with climate change, and how their personal values frame this understanding and engagement. Following McNaghten and Urry's (1998) argument that the complex social practices of constructing nature need to be researched by methodologies which are able to represent and capture some of these ambivalent and multiple characteristics, and Eder's (1996) call for comparative and case study methodologies to capture the social construction of the environment empirically, we here used comparative, in-depth, qualitative methodology to explore the understandings, values and meanings that managers of environmentally pro-active small firms express concerning their and their firms' engagement with climate change. Nine in-depth interviews were carried out with SME managers between March and May 2009. Respondents were recruited in a number of ways, using the principal researcher's contacts through her previous work as a consultant for environmental business support organisations and a snowball sampling technique. All interviewees were either owner-managers or directors.

The interviews with business managers were supplemented with interviews with nine key informants, recruited using the principal researcher's contacts among business support

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organisations and local authorities, as well as some informal talks with 10 SME managers during a training day in December 2008 and while facilitating a round table discussion of a further 10 managers as part of a local authority Climate Change Conference in March 2009. The use of key informant interviews at an early stage gave the researcher the opportunity to refine research questions and uncover key environmental and climate change issues that might be explored further in the later stages of the research (cf. Revell and Blackburn, 2007, for a similar approach) as well as exploring the views of these local authority and business support officers regarding the best approach to encourage SMEs to engage with climate change. The informal talks with managers enabled the principal researcher to gather first views on small business engagement with climate change, thus suggesting topics for the more formal interviews. They also helped to identify some potential respondents for the in-depth interviews with managers.

All nine respondents for the in-depth interviews with SME managers were recruited from companies that had shown some signs of being environmentally pro-active, as it was one of the key aims of the study to explore how such managers constructed environmental issues and climate change and thus gain insights into what might motivate SME managers to engage seriously with the climate change challenge and inform potential future policy. It is difficult to operationalise environmental pro-activity in a rigorous, objective fashion that fits all businesses and their contexts, and we are not aware of any reliable measure of this proposed in the literature. In classifying socially or environmentally pro-active SMEs it seems important to bear in mind that many of the institutionalised control mechanisms found in larger firms are uncommon in small firms and so are not likely to provide a useful indicator of ethical values in this sector (Spence 1999). For that reason, SME managers may often not even recognise their own business practice in the elements that typically are promoted as constituting good social and environmental practice and may thus be unknowingly socially

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responsible (Jenkins, 2004; Longo et al., 2005; Perrini, 2006; Raynard and Forstater, 2002; Roberts et al., 2006). Thus, a fairly flexible and intuitive approach to identifying environmental pro-active firms for this study was adopted. Respondents were initially approached because they had expressed interest in environmental issues to the principal researcher (for example in the course of a training event facilitated by her) or their companies were known (by key informants or the principal researcher herself) to be engaging in a series of pro-environmental practices. In order to cross-reference environmental pro-activity, managers were then asked during the interviews to describe the pro-environmental practices their business currently engaged in. These are summarised in Table 1 and confirm that these businesses can indeed be categorised as environmentally pro-active.

Table 1: Pro-environmental practices carried out by sample firms

- | |
|--|
| <p>1. Complying with environmental legislation and regulations (all)</p> <p>2. Complying with demands of supply chain (M1, M2, M3, M4, M5, M6, M8)</p> <p>a. Environmental policy (M1, M2, M4, M7, M8)</p> <p>b. Accreditation to formal Environmental standard (M1, M2)</p> <p>3. Aspiring to do what larger companies do but in 'microcosm' way</p> <p>a. Keeping environmental considerations forefront in decision making (all)</p> |
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- b. Embedding sustainability into business culture (M2, M3, M4, M5, M6, M8)
- c. Include environmental best option as default to customers (M2, M3, M5, M6, M7, M8, M9)
- d. Carbon reduction (all)
- e. Carbon offsetting (M7)
- f. Action plan (M3, M4, M5)
- g. Measure and monitor against targets (M1, M2, M, M4)
- h. Developing on site wildlife gardens (M4, M6)
- i. Providing pro bono / voluntary services within local community (M4, M5, M8)
- j. Educating customers in what doing e.g. e-newsletter, website (all)
- k. Awareness of influence on (& responsibilities to) supply chain (M1, M2, M5, M6, M8)
- l. Ensuring consistency between message / mission and actions (all)
- m. Taking responsibility for products used e.g. tracing back supplier claims (M5, M6, M8, M9)
- n. Working with other local companies with similar beliefs (M5, M6, M8)
- o. Working with investors with similar beliefs (M8)
- p. Keeping the business of local customers (M4, M5, M6, M7, M9)

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q. Sourcing locally, as close to home as possible (to reduce food miles / energy / support local economy) (M5, M6)

r. Buy and use eco friendly products (M3, M5, M6)

s. Look for outside learning / support (all)

4. Engaging staff

a. Environmental sub committee including senior management (M1, M2, M3, M4, M5, M6)

b. Training (M1, M2, M8)

c. awareness raising (M1, M2, M3, M4, M5, M6, M8)

d. Use of staff ideas (M2, M3, M4)

5. Reducing reliance on bought in energy

a. Switch things off (all)

b. Improve natural light (M1, M3)

c. Insulation (preferably using recycled materials) (M1, M2, M3, M4, M5)

d. Switch to low energy lighting (all)

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- e. Window film insulation / secondary glazing (M1, M2, M3, M5, M6)
 - f. Make better (more efficient) use of equipment (all)
 - g. clean roof panels to increase natural light & reduce energy use (M1)
 - h. Use hand driers that automatically switch off and / or use cold air (M1)
 - i. Use of energy management systems to improve energy efficiency (M5, M6)
 - j. (aspire to) Wind turbine / solar panels / solar heating (M1, M2)
 - k. (aspire to) Combined heat & power unit (M3)
- 6. Reviewing energy contract to increase green energy (M3)**
- 7. Reducing water use**
- a. Rain water harvesting (M5)
 - b. Water taps that automatically switch off (M1, M2, M3)
 - c. Use less water (all)
 - d. Provide filtered watered to reduce need for bottled (M5, M6)
- 8. Reducing waste**

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- a. Recycling, plastic cups, paper (all)
- b. Re use of materials / items between organisations (M3, M5)
- c. Encourage suppliers to reduce packaging (M1, M2, M3, M5, M6, M9)
- d. Reduce own packaging / use of compostable materials (all)
- e. Composting (on site or take materials home) (M3, M5, M6, M8)
- f. Replace consumable items with refillable (eg milk UHT to flasks) (M5, M6)

9. Transport

- a. car share (M3, M4, M5)
- b. use smallest vehicle needed (M4, M7, M9)
- c. walk / cycle (M4, M4, M6, M8)
- d. dual fuel vehicles (M7)
- e. look at how drive (M9)
- f. look at where driving / choice of vehicle (M7, M9)

The semi-structured interviews explored the following topics: managers' understanding and cognitive construction of climate change, as well as sources of information on climate change; managers' personal beliefs and values with respect to pro-environmental engagement and climate change. In addition the interviews probed into the perceived drivers and barriers

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to pro-environmental action. Each interview lasted approximately 60-90minutes and was digitally recorded and fully transcribed.

Analysis followed an iterative, close reading approach, where the data was first coded using categories derived from the literature. Summaries of individual interviews were sent to the respondents in order to allow them to comment. After feedback from respondents and a comparison of the initial results with the literature, a second round of analysis followed, using new codes arising out of the data. Data was then grouped into four themes: behaviours; motivation and barriers; values and beliefs; climate change. Each interview text was then analysed and re-coded in order to reflect on the content of the data and what was being said that either added to, or was new to, existing knowledge as identified in the literature review. During the next stage key ideas were drawn out and re-considered, before cataloguing and ordering took place. This stage also drew on data reduction methods from Miles and Huberman (1994), in particular, the use of lists and cognitive mapping to identify themes and patterns. Re-coding back to original sources was followed by a replacement of formal language derived from the literature with language used by the managers themselves in the categorisation, allowing us to be truer to the texts being studied. Data was then linked back with the literature and re-evaluated on the basis of external comment from both key informants and two academic colleagues.

Findings

Managers' construction of climate change

In this section we discuss how the managers discussed their construction of climate change during the interviews. All nine managers were able to talk about climate change and had views on how this affected their personal lives and their businesses. It was noticeable that our

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respondents all constructed climate change within a wider understanding of the environmental and social dimensions of sustainability, and not necessarily in a particularly technical environmental sense. It was further noticeable that they built this understanding on a diverse range of sources of information, most of it popular sources, such as media and film, rather than information targeted at them as businesses.

All respondents stated that their understanding of climate change had been significantly affected by viewing the film *An Inconvenient Truth*. Managers said their views had developed over a period of time, with the film stimulating debate and aiding their understanding. They explained that they found the fact-based approach used in the film powerful although further discussion highlighted how the facts presented in the film were interpreted differently. This meant that in some cases managers reacted by changing behaviour while in others they showed no change or questioned the information given. The different reactions that exposition to the film elicited are illustrated by the following quote:

[M4] "And so I will feel compelled to switch those lights off and he (partner) doesn't. He knows the facts of climate change, he knows it's there, so in one sense, he's got the information, he's watched *Inconvenient Truth* with me, he sat down and watched it with me, but he isn't compelled to turn the lights off like I do..."

[Researcher] "What's the difference?"

M4: "What is the difference between him and me? I suppose because I feel that, is it because I feel I can make a difference by switching the lights off and he feels it's not worth it, but, you see to me, what his opinion is, it's convenient to me to have the lights on so I can see where I'm going, whereas to me, convenience is no argument."

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In the narrative above, M4 suggests that the difference in commitment related not only to a belief in climate change as something real and threatening but to a commitment to act upon it. The belief that, as individuals, they could make a difference to issues of concern to them (including climate change) through their own personal actions was common to all the managers in this study. M4 went on to describe how earlier feelings connected with the enormity of climate change related to powerlessness but that these had been overcome by understanding that lots of small actions could add up to make a big difference. A conscious decision was made to make such a difference.

However, while they all seemed influenced by the movie and the message behind it, some managers also expressed some scepticism about the climate change message as well as the motives of the movie's producer, former US vice-president Al Gore. This led to wider discussions concerning the issue of trusting spokespeople on climate change. Managers referred to confusion caused by contradictory opinions on the science and anticipated impacts of climate change, and to their own difficulty in accessing trusted information to help them make specific business decisions. While it was noted there was a "*growing body of evidence over time*" [M2] that anthropogenic climate change existed, our respondents were clearly influenced by alternative arguments, especially where they came from trusted industry sources. In addition, managers believed that people more widely needed better information to help with contradictions and for them to prepare for anticipated changes. While some managers said they made a conscious effort to read and understand differences in opinion and to make their own judgement, mistrust of those speaking on climate change, particularly politicians, and the influence of anti-climate change arguments were quite evident in several interviews. The following quote illustrates this feeling:

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M8: "I still feel, I'm a floating boater on that one I think. I want to believe it, but actually I don't want to believe it, I hope it's not true. But you know, you look at the *Inconvenient Truth* and you think my god, you know, this is real, this is happening. Then I went to this [...] presentation, and what they didn't show you on *Inconvenient Truth*, [...] was that 20 miles to the west, there's the largest arctic shelf forming, on record... Al Gore was on a presidential ticket, [...], are these necessarily the right figure heads for telling us..?"

On the other hand, it also seems that the extensive information on climate change over several years has had a generally educating effect, with less confusion about the phenomenon exhibited by our respondents. Contrary to some findings of about a decade ago for example, managers did not express confusion between climate change and ozone depletion indeed the reverse was true: Having previously understood how CFCs and spray cans could have global atmospheric consequences, the managers in this study found it entirely understandable that the burning of fossil fuels could also produce global climate changes. However, contradictions were seen as being apparent within Government policy and behaviour which was seen as piecemeal and inconsistent. In this regard reference was made to the earlier CFC / ozone crisis, which managers suggested had been addressed through concerted national and international governmental action coupled with fast tracked technical change. While it was acknowledged to be more difficult in the current global political context, the need for clear leadership was argued to be stronger than ever.

As mentioned above, respondents constructed climate change quite holistically, in a wider sustainability context (although they didn't necessarily use that term). Climate change was not just viewed from an environmental perspective but seen as a serious issue with both social and environmental consequences. Understanding of climate change was described as

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being extended from, or built upon existing environmental and / or social concerns and knowledge.

M2: "To me everything's the same. You know, ok bits are different to other bits, but it's a global view of the environment that I've got I think..."

M5: "...it is all part and parcel of the same thing because everything that we do adds to the warming up... I don't know how you can take it out it's all inter-linked"

M3: "...it's the effect we're having on the environment, it's people like Coca-Cola, putting in Coca-Cola plants into Bangladesh, using all the water sources which then means the farmers don't have any water for the crops, so it's the effects on people. But it's also what's happening on the environment as well, you know, the big question about bio-fuels, palm oil, stripping out the natural kind of forest in Borneo, and the effect that its having around the Orang-utan population...".

This construction of climate change within a wider ranging understanding of environmental and social issues is also reflected to some extent in the environmental practices adopted by these firms (see Table 1 above). The wide range of actions described suggests that climate change was not viewed separately to other environmental issues. For example, M1 described how his company met environmental legislation and responded to environmental demands from the supply chain. The company measures and monitors energy, waste and packaging reductions against targets. In the same way, the company had instigated specific carbon reduction targets and was looking to reduce their reliance on purchased energy. This was said to be done in order to manage costs as well as improve resilience in the face of climate change. Managers explained how an holistic approach meant that environmental considerations were thought about as part of every decision and, by doing so, a wide range of less obvious, deeper actions were addressed. Managers spoke of social, environmental and

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economic actions and clearly demonstrated a perceived interconnectedness between issues. For example they described how reducing transport movements by buying locally produced goods reduced local air pollution and carbon dioxide emissions and supported local businesses and communities. They also recognised their own potential role in educating customers and peers about what they were doing and looked to ensure consistency between what they did and said when engaging staff, customers and their communities of interest.

While the understanding by the managers in our study seemed more sophisticated than that found by other studies about 10 years ago, it is still noteworthy that respondents felt they lacked technical knowledge on the subject and that this made it difficult for them to sift through sometimes contradictory information and to decide who to trust. This might also explain why sceptical arguments clearly showed some potential to influence these managers. Several of our respondents contrasted their holistic general understanding of climate change with what they described as a limited knowledge in a technical sense. M3 argued that lacking technical knowledge was important because contradictions in detail undermined her ability to make decisions at a personal level. This difficulty was also acknowledged by other managers. The difficulty in understanding climate change, therefore, related to the detail regarding what needed to be done at a personal level – beyond changing light-bulbs and reducing energy use:

M3: "... and actually there are some things that appear to be better for the environment but it might take more energy to produce. For example, one of the things is cotton, cotton seems to be very natural, but actually from what I understand, the chemicals that actually go into the water that goes into producing cotton actually mean that environmentally it's not actually a very good thing".

Another respondents argued that the best way to understand anything is to experience it personally:

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M8: "There's nothing like experiencing it yourself, is there, I don't think, but, you know, you can listen to 101 different opinions, until you've done a bungee jump, you don't know what it's like!"

This statement could be said to relate not only to personally experiencing climate change and understanding that experience in the context of global climate change but also to the closeness of the information giver. For example, although M8 had been moved by seeing *An Inconvenient Truth* on television, hearing a powerful speaker from a trusted business organisation give a presentation in person had had greater effect.

The holistic understanding of climate change displayed by manager respondents contrasts with the view expressed by key informants in local government and business support organisations. Key informants felt that SMEs saw climate change as largely separate from other environmental concerns. They also felt that SME managers had many demands on their time and that climate change was too complex, and too long term an issue to engage their attention. Key informants were also largely sceptical of the ability of SME managers to see how their own actions 'impacted on the bigger picture' and believed that SME managers were often sceptical of the science behind climate change. Our findings suggest that at least environmentally pro-active SME managers were both able and willing to engage with the climate change debate and saw this very much within a wider sustainability agenda. However, managers' views that they often lacked the technical knowledge to make judgements on conflicting climate change claims was to some extent echoed by key informants, several of whom thought that SME managers needed a better understanding of climate change and that a certain amount of belief was needed in order to motivate action.

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Business strategy, external influences and values

During the interviews we discussed with managers what, in their view, encouraged or hindered their business's engagement with sustainability and climate change issues. The responses can be broadly classified according to the business strategy / business case / win-win – external business environment (including regulation) – personal engagement / values lines discussed in the literature review. These responses are summarised in Tables 2 and 3 below.

Table 2: Perceived drivers of pro-environmental practice

Business strategy / win-win	External business environment	Personal engagement / values
<ul style="list-style-type: none"> • Competitive advantage through pro-environmental practice [M1, M4, M9] • New business opportunity [M8, M9] • Cost control [M1, M2, M3, M4] • Business size allows strategic freedom [M5, M6, M7, M8, M9] • Advantage in recruiting 	<ul style="list-style-type: none"> • Local authority permit requirements [M1, M2] • External information, e.g. about technology [M1, M2, M5, M6, M7] • Government policy initiatives, e.g. environmental taxes [M1, M6] • Legislation requiring less harmful technology / processes [M1, M2] 	<ul style="list-style-type: none"> • Environmental commitment of boss [M1, M2, M3] • Own environmental commitment (M1, M2, M3, M4, M5, M7) • Personal commitment of team and life partners [all] • Working with similarly minded other businesses and suppliers [M5, M6, M7]

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<p>good calibre staff [M4, M8]</p>	<ul style="list-style-type: none"> • Local authority funding agreements [M3, M4] • Requirements for tendering for contracts [M1, M2, M4] • External support and advice [M1, M3, M4, M5, M6] 	<ul style="list-style-type: none"> • Community responsible organisational culture [M3, M4, M5, M6] • Long-term view on investment [M1, M5, M6, M9] • Encouragement and sharing ideas with people outside organisation [all] • Fusion of own values with business opportunities [all]
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Table 3: Perceived barriers to pro-environmental practice

Business strategy / win-win	External business environment	Personal engagement / values
<ul style="list-style-type: none"> • Long payback times [M1, M4, M6] • Reduced financial incentive due to falling energy prices [M1, M4] 	<ul style="list-style-type: none"> • Inconsistent government policy, e.g. with respect to incentives / charges [M1, M6] • Cost of trade recycling 	<ul style="list-style-type: none"> • Owner / manager less prepared to take risks on improvements [M1] • Not knowing how to access incentives [M3, M4]

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<ul style="list-style-type: none"> • Reduced production efficiency due to economic crisis [M1] • Relatively higher cost of newer (environmentally preferable) technology [M1, M4] 	<p>[M3]</p> <ul style="list-style-type: none"> • Complexity and time needed to access incentive schemes (e.g. bike loan) [M4] 	<ul style="list-style-type: none"> • People stick with what they know / resistance to change and new ideas [M1, M2, M7, M8] • Internal politics, e.g. around personal status [M4]
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The above tables show that managers perceived their pro-environmental practices to be encouraged and hindered by factors relating to all three categories identified. It is interesting to notice, that business strategy and cost factors were seen more often as a barrier than as an encouragement, suggesting that even these environmentally proactive businesses do not see the business case for pro-environmental engagement as that strong. In contrast, personal values and engagement of owners, managers, staff and/or other contacts are the driver most commonly mentioned. External factors were also perceived to be important, either in the form of (local) government initiatives or through customer demands.

The relatively strong role that personal factors seemed to play reinforced the view, gained from the literature review, that personal values could be particularly important in understanding the pro-environmental engagement of proactive firms and their managers. The interviewer therefore probed more deeply into respondents' construction of their own values and how they interacted with their business practices.

Managers were asked to talk about their personal beliefs and values and whether and how this impacted on their engagement with sustainability and climate issues. All managers were

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able to link their views on environmental issues and climate change to personal beliefs and values. These values were quite wide ranging in nature and not, at first glance, necessarily environment related in the most obvious sense. With one exception – a manager who was a practising Muslim – the values expressed were all non-religious, and several respondents explicitly stated that they had no religious affiliation or beliefs.

Despite their evident environmental concern, respondents also did not see themselves as 'environmentalists' in the sense of 'new age environmentalism' and 'tree hugger types'. They were also quite clear about seeing themselves as businesspeople, not social or environmental entrepreneurs, i.e. their motivation was primarily a business one. Only M8 made reference to membership of an environmental organisation and this was to gain information rather than to provide support. The two organisations that were positively referenced both shared a social and environmental element: These were the Transition Town Movement and Fair Trade. It was argued by M6 that these 'tree hugger types' distanced themselves from society and that it was important to be part of society to influence people, one person at a time. This perception is further illustrated in the following quote:

M8: "...I haven't got braids in my hair and smoke spliffs and go dancing over an open fire at the weekend and all that, but I'm really interested in our future, in how we're going to get there, how it can be delivered, what I can do at micro level..."

By contrast, managers constructed their values as being 'humanistic' in nature, or derived from science.

M1: "...so, I'm not particularly religious, but I think that perhaps it's a more humanistic sort of approach really, just to feel that we've got this beautiful planet and we should look after it and the creatures on it as well, obviously. You know, have respect".

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M4: "... I value the environment I think because I know the science behind why we're here and how we're here, and without every little bit of it we're in trouble... I don't like faith but a philosophy of life, that encompasses compassion and care, just care for what's around you, you know, instead of just shitting on your planet, is extremely important to me.."

Respondents said they had come to hold their values through a variety of routes. Some felt the main influence had been their up-bringing, again not necessarily in terms of instilling explicitly environmental values but, for example, in terms of taking responsibility for your actions and avoiding wastefulness.

M3: "...you took responsibility for your actions and how they affected those people around you and the community as well, and that has been something that has always been very important to me too..."

M2: " I can't explain it but it's a values driven upbringing that I think would lead me naturally to want to do something that's right rather than what's obviously wrong..... I just don't think you can close your eyes to what's there anymore... ... I think we owe it to everybody now and in the future to try and change it".

In addition, a minority of managers also spoke of personal epiphanies as the source of their current interest in sustainability and climate change issues. Two kinds of experiences were mentioned: travelling (particularly in developing countries) and divorce. This showed how potentially unrelated issues could lead to a fundamental questioning of personal values. In the latter case, there was a realisation of the futility of unnecessary consumption which resulted in a questioning of consumerism and wastefulness; in the former, there was a realisation of the abhorrence of the scale of what the respondent saw as developing country poverty driven by affluent consumption. The theme of consumer wastefulness and the pressures this was putting on sustainability in general, and the living conditions of people in developing

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countries in particular was a recurring motive in some of the interviews, and further illustrates how respondents thought about sustainability very much in holistic terms, connecting social and environmental themes. Indeed, although managers demonstrated commitment to the environment this varied from 'interest' to 'passion' and was not generally referred to without reference to social concerns. Social concerns relating to injustice and poverty were linked to the perceived injustice of climate change: It was the '*rampant consumerism*' (M3) of the developed world that was driving climate change through greed, energy consumption and wastefulness, yet the impacts would be felt greatest by those least able to respond, i.e. the poorest people, particularly in the developing world though also in the UK, and by vulnerable systems and species of the natural world. This perceived injustice, coupled with instilled parental values that encouraged a strong sense of personal responsibility, respect and conscience, encouraged managers to acknowledge a duty to act. In this duty, managers acknowledged a responsibility to the future through their children as well as to current needs.

M8: "You know, I mean, the Western world washes its dirty linen in China and Asia, and we're all blissfully unaware. How can Tesco [UK supermarket chain] sell jeans for a fiver? How can they, how can they have been produced, on the other side of the world, been manufactured, transported, packaged, sold on the shelf, and for somebody to make money? How has that happened for five quid for a pair of jeans? You know, somebody, somewhere is being exploited, and it's not a person it's the earth, you know, it's both actually."

As already seen above, a sense of personal responsibility – derived from personal values – impacted on how respondents reacted to climate change information, for example in the form of the movie *An Inconvenient Truth* or more targeted business information. Respondents felt that the difference between themselves, who did act on the information being given, and others who also had the same information but chose not to act on it, was whether they

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believed they personally could make a difference and it was their personal responsibility to do so. In this sense, knowledge and values can be seen to interact in producing pro-environmental practices.

In summary, the role of personal values, and the need for a fit between personal and professional values, was essential in underpinning respondents' construction of climate change and encouraging a responsibility for personal actions and global issues. However, these values were quite diverse, not necessarily explicitly environmental at first glance and actually critical of what was perceived as 'environmentalism', and gained via a number of different routes. This suggests that values are important in SME managers engagement with sustainability and climate change but that a broader understanding of values may be necessary to uncover the ways in which values influence managerial understanding and practice.

Again, these findings contrast with the views expressed by key informants from local government and business support organisations. Due to their view that SME managers found it difficult to relate climate change to their business and were not really interested in it, after stressing the need to comply with environmental legislation, all key informants said they engaged businesses solely using the cost-saving, win-win arguments. Conversations with businesses were solely in economic terms highlighting potential cost savings, principally from low and no cost actions, along with perceived longer term benefits of investment that would result in improved sustainability and better public relations. One key informant, however, argued that it was necessary to 'convince' SMEs of the social and environmental aspects of climate change, rather than just the economic. Without 'scare-mongering', this respondent argued that

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“We need to simplify the message; make it scientifically based but more emotional. People either believe this or they don't. We need much greater commitment; people still believe science can engineer us out of this without any need to change behaviour. There's a difference between being aware of something and really understanding what it means to you and your kids”.

This sentiment would seem to sit well with our findings that environmentally pro-active SME managers did construct climate change in environmental and social terms and were driven to a significant extent by their values, rather than merely economic arguments.

Conclusion

In summary, this study found that managers of environmental pro-active SMEs not only engaged in a wide range of pro-environmental activities, many of them linked to energy use reduction, but were actively interested in the climate change debate, constructed climate change holistically within a range of wider environmental and social concerns, and engaged with sustainability and climate change issues as much, if not more so, on a values-based and partly emotional basis as from business strategic and externally driven perspectives. Values and commitment interacted with knowledge and information, in as much as they encouraged respondents to act upon the climate change information gathered through a variety of sources.

In this respect the views of our respondents contrasted with a view among some key informants from government and business support organisations, as well as part of the literature, which suggest that it is difficult to encourage SMEs in general to engage with environmental debates in general and climate change in particular. In this sense, our study suggests that environmentally pro-active SMEs are different from SMEs in general, which is

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what one might expect at some level. However, our findings may hold some lessons for engagement with SMEs in general, too.

Importantly, managers of environmentally pro-active SMEs in our study constructed climate change holistically within a wider sustainability agenda, and their understandings of the issues were driven as much – if not more – by social as by environmental concerns. In particular, it was found that the managers successfully extended their own pre-existing environmental and social concerns to climate change and were able to link their own actions to the global picture. Contrary to the views of our key informants and some parts of the literature, cost savings and competitive advantage did not appear to be the main driver for our respondents' pro-environmental practices, although they all considered themselves primarily commercially-minded. Running a successful business was important to them but business strategy was not just about saving money and was not value-free.

This suggests that perhaps a more holistic view of climate change and its consequences could also be used in information geared towards SMEs in general and might be as or possibly more productive than arguments based purely on cost considerations and the business case. The view of one of our key respondents, that a different kind of engagement with SMEs might be appropriate, would seem to fit in well with this notion. Future research in this area could fruitfully explore and test the construction of climate change by a wider range of SME managers, not those in environmentally pro-active businesses, to see whether there is some overlap in understandings or whether environmentally pro-active SME managers construct climate change in fundamentally different ways from the others SMEs. It would also be interesting and useful to present managers from normal, i.e. not environmentally pro-active SMEs, with a more holistic, emotionally meaningful picture of climate change to explore and test whether such an approach allows them to engage with the topic more successfully.

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It should also be noted that even the managers in our sample felt they lacked technical knowledge on the subject of climate change and found it difficult to evaluate competing claims. In addition they expressed scepticism about the trustworthiness of some sources of climate change information, even if these sources of information clearly influenced their understanding. There was at least some sense that business sources would be trusted more than political or overtly environmentalist sources. From a practical policy perspective this would suggest that messages that align with trustworthy sources (from an SME perspective) are more likely to be heard. Future research could further explore this area by looking at what sources of climate change information are perceived as trustworthy by SMEs in general and what messages on climate change such sources of information are currently giving.

Equally importantly, our exploratory study found that personal values and commitment, as well as some emotional engagement, seemed the most notable driver for pro-environmental practice among our respondents. This stands also in some contrast with the views expressed by our key informants, in particular, and would suggest that it might not be impossible to bring in some reference to values when addressing SME audiences with climate change messages. However, it was also noticeable that the values expressed were quite wide ranging and not necessarily expressed in terms of environmentalism but more in terms of general, emphatic values. Humanism and science were both cited as the basis for respondents' values, and their own upbringing, as well as some key experiences in their lives were among the sources cited for these values and beliefs. From a practical policy perspective this suggests that there may be some potential in using a wider range of potential values, not all of them necessarily 'environmentalist', as a basis on which to attempt to engage SMEs in general with climate change issues. This would reduce the danger of 'preaching to the converted' or being seen as part of the loony fringe which key informants feared if business support organisations adopted a more values based approach. Future research could usefully explore

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whether such emphatic values, which are not necessarily explicitly environmental in nature, are also found among managers of SMEs in general, and if so, whether suitable information and/or training would allow such managers to connect these values to sustainability and climate change issues.

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