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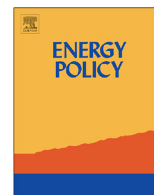

Ten years of corporate action on climate change: What do we have to show for it?

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HIGHLIGHTS

- UK supermarkets have significantly improved their operational efficiency over the period 2000–2010.
- These efficiency gains can continue to be extracted over extended periods of time.
- This requires a focus on energy efficiency when making new investments.
- Over longer periods of time, it is difficult for efficiency gains to run ahead of business growth.

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ABSTRACT

A significant proportion of the world's greenhouse gas emissions can be attributed, directly or indirectly, to corporate activities. An increasing number of companies have set targets and have adopted initiatives to reduce their greenhouse gas emissions, raising the question of what sorts of outcomes can realistically be expected from corporate action on climate change? This paper aims to shed some light on this issue through an analysis of the climate change performance of the UK supermarket sector. This sector is directly responsible for around 1% of UK greenhouse gas emissions, but it has been estimated that indirectly it may be responsible for up to 10% of emissions. In the period between 2000 and 2010, the major UK supermarkets transformed their approach to climate change. This paper examines the outcomes that resulted from these actions. It finds that there have been significant and steady improvements in energy efficiency, but that these efficiency gains are often outstripped by the impacts of business growth. For most companies, short of a radical redesign of their business activities, or an expansion of the scope of their energy management initiatives to include their indirect emissions, total greenhouse gas emissions will tend to increase over time.

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1. Introduction

Over the past 5 years, interest has grown in the contribution that companies can make to reducing global greenhouse gas emissions. This interest has been driven by the significant proportion of the world's greenhouse gas emissions that can be attributed, directly or indirectly to companies' activities, and by the interest among policy makers about the potential for policy measures such as mandatory reporting and self-regulation to contribute to the delivery of environmental policy goals (Okereke et al., 2012). This interest has been further encouraged by the fact that an increasing number of companies have set targets to reduce their greenhouse gas emissions (Clark and Crawford, 2012; Okereke, 2007; Pinske and Kolk, 2009), raising the question of what sorts of outcomes can realistically be expected from corporate action on climate change?

This article aims to shed some light on this issue through an analysis of the climate change performance of the UK supermarket sector. The sector is typical of many sectors outside of heavy industry with significant operational and supply chain emissions; it is estimated that its operational emissions account for almost 1% of the UK's total greenhouse gas emissions and that emissions from its supply and value chains are an order of magnitude higher. Moreover, there is relatively little overarching regulation of these emissions. Over the period 2000–2010, UK supermarkets invested significant resources in reducing their emissions through improving building and transport energy efficiency, reducing refrigerant losses and increasing the use of renewable energy. The sector has also provided a significant amount of information on the actions it has taken and the outcomes (in terms of total greenhouse gas emissions) that have resulted. The sector therefore provides an intriguing case-study of the potential contribution that voluntary

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corporate action has made to greenhouse gas emissions mitigation, and the potential for this type of action to contribute to greenhouse gas emissions reductions in the future.

2. The drivers for corporate action on climate change

2.1. Drivers for action

The literature on business and climate change identifies a range of reasons why companies may take action to reduce their greenhouse gas emissions. These include policy or regulation, increasing costs, litigation risks, and reputation and brand risks (Okereke, 2007; Okereke et al., 2012; Sullivan, 2008). The climate change literature does not provide a definitive answer on which of these is the most important determinant of corporate responses, as the actions taken by individual companies depend on a range of factors such as the greenhouse gas emissions profile of the company, the company's regulatory exposure, the company's competitive position, stakeholder expectations, and management's views on the business significance of climate change (Busch and Hoffmann, 2007; Hoffman, 2006: 19–22; Okereke, 2007).

What is clear is that the nature of the debate on business and climate change, certainly within Europe, has changed significantly since 2005. The publication of the fourth report of the Intergovernmental Panel on Climate Change (IPCC) in 2007, the publication of the Stern Review on the Economics of Climate Change (Stern 2006), the release of Al Gore's film *An Inconvenient Truth*, the introduction of the EU Emissions Trading Scheme and other policy measures directed at reducing greenhouse gas emissions, and the level of press attention on climate change (amongst others) have resulted in climate change being seen as a core business issue for European companies (for a further discussion of how these factors have influenced corporate actions and responses, see Gouldson and Sullivan, 2012; Hoffmann et al., 2008; Pfeifer and Sullivan, 2008; Sullivan and Pfeifer, 2009).

In Europe, climate change-related regulation and policy are widely recognised as proper matters for management attention and, at least in some sectors, as key drivers for future business growth (see, for example, Carbon Disclosure Project, 2011; Sullivan, 2008). Companies have taken a variety of actions, including establishing corporate management systems, making public commitments to emissions reductions or carbon neutrality, participating in voluntary initiatives such as product labelling, and seeking to influence their supply chains and their customers to reduce their emissions (see, for example, Carbon Disclosure Project (2011)).

The question this raises is how far this type of action will take us given the recognised weaknesses in the public policy frameworks for corporate action on climate change. These include the significant gaps in the coverage of public policy (with many sources of greenhouse gas emissions not yet regulated), the cost of carbon frequently not being sufficiently high to incentivise significant reductions in greenhouse gas emissions (Kolk and Pinske, 2008), and the many uncertainties in climate change policy (including the level of government support for climate policy measures, the manner in which climate change concerns can be reconciled with energy security or wider competitiveness issues, the specific targets that are to be met, the policy instruments that are to be used, and the duration of climate change policy instruments) (Hoffmann et al., 2008; Sullivan and Blyth, 2006). The consequence has been that while companies have been happy to take actions that involve relatively low costs or that can be justified in cost-benefit terms, in situations where reducing emissions is likely to require significant capital investment and where the profitability of such investments is highly sensitive to climate change policy, companies have tended to adopt a 'wait and see' approach (Hoffman, 2006; Okereke, 2007; Sullivan and Blyth, 2006).

The other policy question relates to the longevity of corporate commitments to action on climate change. Many corporations have been happy enough to take voluntary action and to sustain this commitment for a number of years because there are often economic returns from doing so (Gouldson and Sullivan, 2012). The question is what happens once the easy options have been exploited? Do companies learn from the early phases of transition so that when the challenges become more significant (as they surely will if we are to achieve 80% reductions in carbon emissions) they are better able to cope? Or will they continue to take action so long as it is economically attractive to do so, but then gradually withdraw their active support and drift towards active opposition as the changes required become more challenging?

2.2. Why focus on supermarkets?

There are three reasons for focusing on UK supermarkets. The first is that the characteristics of the companies in the sector – significant operational (specifically, building and transport-related) emissions, large supply chain emissions, significant stakeholder and consumer pressure, complex supply chains, relatively little overarching regulation but significant regulation of specific activities – are common to many sectors outside of heavy industry. That is, the sector's challenges and experiences are relevant to many other sectors of the economy.

The second is that the sector is both economically and environmentally significant. From an economic perspective, the UK grocery market was the world's 9th largest grocery market in 2011 (IGD 2012). The supermarkets headquartered or listed in the UK rank amongst the largest in the world; based on sales in 2010, Tesco was the third largest retailer in the world, with J Sainsbury ranked 29th, Wm Morrison 32nd, Marks and Spencer 55th, the Co-operative Group 69th and the John Lewis Partnership (which includes Waitrose) 80th (Deloitte, 2012). The sector's environmental footprint is correspondingly large. It has been estimated that UK supermarket's emissions through the use of lighting, heating, cold stores and on-shelf refrigeration account for 0.9% of the UK's greenhouse gas emissions, and that emissions from the sector's value and supply chains – for example, agricultural inputs, food manufacture, transport, storage, distribution, refrigeration and packaging, as well as home cooking – are an order of magnitude higher (Sustainable Development Commission (SDC), 2008: 40).

The third is that the sector has a reasonably long record of corporate responsibility reporting, which allows the sector's actions on climate change to be tracked over time. For example, Sainsbury's first reported in 1998 and Waitrose, Tesco and Marks and Spencer first reported in the early 2000s. Of the nine major UK supermarkets (Aldi, Asda, Co-operative, Lidl, Marks and Spencer, Morrisons, Sainsbury's, Tesco and Waitrose), seven – the exceptions are Aldi and Lidl – produce corporate responsibility (or similar) reports. All seven report on their greenhouse gas emissions and provide a description of the actions they have taken to reduce their energy consumption and their greenhouse gas emissions. There is now a reasonable body of information on the sector's emissions performance over the past decade, and on the performance of individual companies against the targets that they have set themselves. However, it is important to note – as is discussed further below – that there are a number of significant limitations in the information that has been provided.

2.3. The evolution of action

The UK supermarket's climate change strategies (or, more specifically, the strategies of the seven that have reported on their corporate responsibility practices and performance) have evolved

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