Available online at www.sciencedirect.com
ScienceDirect
Accounting, Organizations and Society 34 (2009) 488–498
Accounting, Organizations and Society
www.elsevier.com/locate/aos

The European Emissions Trading Scheme: An exploratory study of how companies learn to account for carbon ☆

Anita Engels *

Centre for Globalisation and Governance, Faculty of Economics and Social Sciences, University of Hamburg, Hamburg, Germany

Abstract

European companies were confronted with new organisational challenges when the European Emissions Trading Scheme (EU ETS) was introduced in 2005. What were their cognitive sources for developing an orientation in this scheme? This paper presents original data from a survey of the University of Hamburg, dealing with companies' responses to the EU ETS in 2005–2007. The survey was conducted three times and addressed all companies covered by the trading scheme in Germany, the United Kingdom, Denmark and the Netherlands (response rate of 19%–23% over three years). Results are provided on the share of companies that traded emission allowances, on the knowledge of their own CO_2 abatement costs, on the organisational unit that was responsible for decisions on emissions trading, and on the use of internal and external sources of advice. The data thus provides an insight into the cognitive resources that companies brought to bear when looking for an orientation in the new trading scheme. The sources of advice and the internal assignment of responsibility build the framework of competencies in which companies learn to account for carbon.

Introduction

The European Emissions Trading Scheme can be regarded as a major policy innovation (Voß, 2007a) that diffused from the United States to various European states and finally to the European Union at a surprising speed (Braun, 2009; Christiansen & Wettestad, 2003; Wettestad, 2005). Since January 2005, the scheme has become mandatory for all member countries of the European Union, including the accession countries from the moment in which they acquire membership status. More than 10,000 plants and installations are covered by the scheme. It is the largest mandatory scheme in the world, and is seen by many as the prototype of a future global carbon trading scheme. Emissions trading requires companies operating under the new scheme to develop new knowledge and competencies within the organisation. Companies need to develop organisational routines to deal with emission allowances and represent this new "object" in the company's accounting system (MacKenzie, 2007). From a social sciences point of view, the EU ETS is a fascinating subject area worth studying in some depth, as

☆ The study is funded by the German Research Council (DFG 488/2-1; August 2006–August 2009). A first version of the paper was presented to the workshop 'Carbon Markets in Social Science Perspective' at the Institute of Advanced Study, Durham University, on 7 November 2007. I thank Martin Huth, Lisa Knoll and two anonymous reviewers for helpful comments.
* Tel.: +49 40 42838 3832; fax: +49 40 42838 5255.
E-mail address: anita.engels@uni-hamburg.de

0361-3682/$ - see front matter © 2008 Elsevier Ltd. All rights reserved.
doi:10.1016/j.aos.2008.08.005

it introduces a new uniform regulation into national contexts that vary substantially with regard to their regulatory traditions and their national political economies. As many studies have demonstrated, these contexts serve as an important institutional environment to companies and their decision-making processes (e.g., Hall & Soskice, 2001; Lane & Bachmann, 1996; Heritier, Knill, & Mingers, 1996). It can therefore be expected – and has already been shown (Bailey, 2007; Engels, Huth, & Knoll, 2008) – that companies in various European member states find different typical solutions to the problem of accounting for their carbon emissions and finding an orientation in the new trading scheme. The question of which sources of knowledge and expertise companies choose to take into consideration is crucial to this process, as the new tool of emissions trading is open to a whole range of different interpretations, depending on the emphasis of the respective problem framework (e.g., legal, financial, technological emphasis).

This article presents selected findings of a quantitative survey of all companies covered by the scheme in Germany, the UK, the Netherlands and Denmark. Data are given on the sources of advice companies used during the first three years of the EU ETS, and on the organisational unit within the company that was assigned responsibility for emissions trading. The results clearly indicate important variations across countries. The article is organised in four sections: first, a brief introduction of the EU ETS will be given, followed by an account of the methodology applied in the questionnaire and the type of data presented in this article. Third, the results are given in a cross-country comparison that also looks at varying emphases over time. Fourth, the implications of these results are discussed with regard to the question of how companies in the EU ETS learn to account for carbon.

The European Emissions Trading Scheme and the need for companies to develop a new mindset

The EU ETS is organised in two different phases. Phase 1, from 2005 to 2007, served many companies and national administrations as a period of learning about the options and problems of this new policy tool (Convery, Ellerman, & de Perthuis, 2008). The second phase, from 2008 to 2012, is congruent with the compliance period of the Kyoto Protocol, in which the EU agreed to reduce its emission levels by 8%, compared to the baseline year of 1990 (Decision 2002/358/EG). In Phase 1, allowances for emitting 2.1 billion tons of CO_2 per year were issued to the companies under the scheme (Convery et al., 2008, p.13). As the allocation process was organised in a decentralised way by the individual member states, the volume of allocated allowances in each national constituency was subject to heavy negotiations and industrial lobbying (Kruger & Wallace E. Pizer, 2007). The result in many member states was generous allocation of allowances so that, across the scheme, the number of allowances allocated surpassed the number of allowances actually needed in this phase by 4% (Ellerman & Buchner, 2007, p. 78; Kettner, Köppl, Stefan, Schleicher, & Thenius, 2007). This over-allocation became obvious after the first half of Phase 1, and was followed by a steep decline in the price of CO_2 allowances in the scheme. As the allowances were not transferable to Phase 2, the price for an allowance to emit one ton of CO_2 closed at 0.02 € at the end of Phase 1, after reaching a peak of 30.50 € in the spot market on 18 April 2006 (see www.nordpool.com). Despite the disconnection between Phase 1 and Phase 2, companies had the option to trade future allowances throughout Phase 1. This means a contracted promise to sell or buy allowances in a fixed year in Phase 2 for a fixed price. These prices are much less volatile and have been well above the 20 €-level since September 2007 (www.nordpool.com).

What were companies required to do in Phase 1 of the EU ETS, and what were the obligations but also the new options that were created by their participation in the scheme? First and foremost, the EU ETS means that companies operating installations under the scheme need allowances for their CO_2 emissions in order to receive or renew an operating licence. National authorities were created that organised the initial allocation process: each company received a certain amount of emission allowances on a personal allowance account. At the end of each trading year (March), the company is obliged to transfer back to the national authority the amount of allowances equivalent to their verified emissions of the past year. Throughout the year, companies can transfer their allowances to other accounts across the EU, i.e., they can sell their own allowances or buy allowances from others. They may utilize several possible channels for trading: they can agree on a direct exchange with other emitters, or they can commission a broker with this task. They can also sell to a trader or sell and buy allowances at exchanges or trading platforms. The