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Individual firm and market dynamics of CSR activities

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ABSTRACT

This paper investigates how firms should plan *corporate social responsibility* (short CSR). This dynamic analysis starts with a firm's intertemporal optimization problem, and proceeds to analyze interactions with other firms, which are crucial: if CSR is profitable for firm A then it is most likely also profitable for competitors B and C, and these simultaneous decisions affect the gain each would achieve from trying to advance its own position. We find that multiple equilibria exist, irrespective of whether interactions with other firms are taken into account. Interactions can eliminate or create additional steady states and can lead to a situation in which history is insufficient to determine the long run outcome among multiple steady states, so that coordination is beneficial.

1. Introduction

The term *Corporate Social Responsibility* (CSR) came into common use in the early 1970s and it refers to a form of corporate self-regulation. This approach accounts for stakeholders' interests (advanced in a book by Freeman, 1984) in addition to the shareholders' focus on profits and includes thus a number of ethical, social, and environmental targets, where the green aspect is the most visible one currently. Michael Porter has for some time praised the profitability (win-win) of socially and, in particular, environmentally responsible behavior, e.g., in Porter and van der Linde (1995a,b), in the annual *global competitiveness reports* des *World Economic Forum*, and most recently in Porter and Kramer (2011). In the last paper, it is argued that taking a broad view on societal needs is nothing less than a means to 'reinvent capitalism and unleash a wave of innovation and growth'. Another broader view is given in Aoki (2011) that mentions CSR as a part in the role of organizations, which is to cognitively mediate agents' strategic interactions. Lyon and Maxwell (2008) and Reinhardt et al. (2008) are part of a recent debate about the pros and cons (in that order). The importance of CSR is also documented by its appearance in many articles in the public press. We only mention here the surveys in *The Economist*, first in 2005 ("The good company", January

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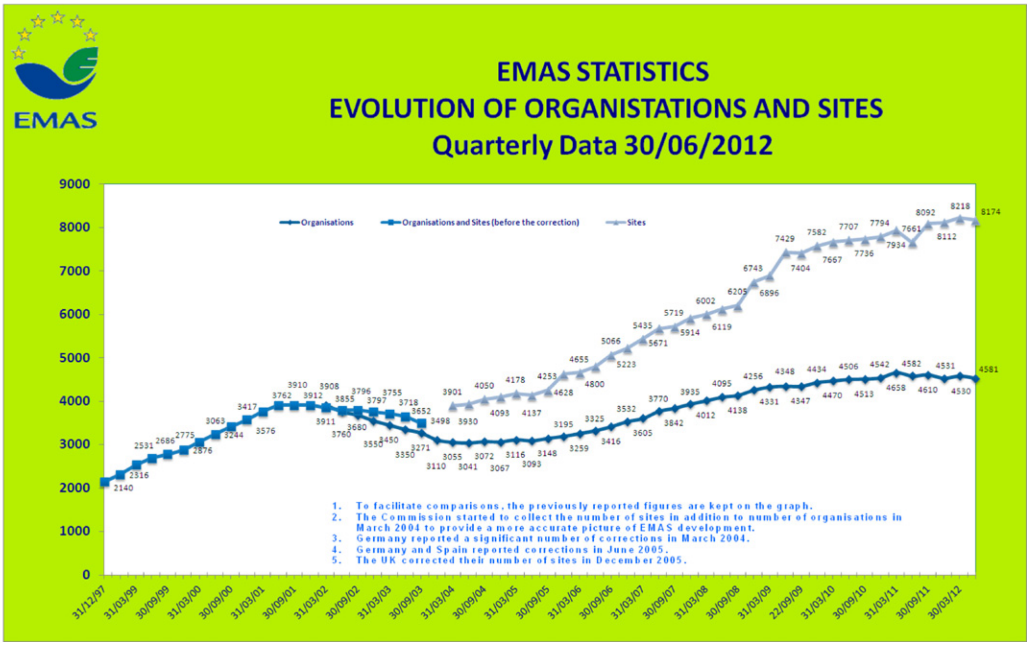

Fig. 1. Evolution of EMAS certifications over time. Permission granted. Copyright with: EMAS.

20) followed in 2008 (in "Just good business", January 19) and a very recent and more optimistic article ("Schumpeter: Good business; nice beaches", May 17, 2012).

The evolution, one can even speak of a wave, of CSR activities can be seen, e.g., by considering how many firms subjected themselves voluntarily over time to (environmental and social) standards like EMAS ("eco-management and audit scheme" within the European Union) and ISO14001 (the same objective of good environmental management), as shown in Fig. 1. Fig. 2 shows the composition by countries. A survey of attitudes to business turns up some intriguing differences about CSR: first across nations, where Friedman's view ('the business of business is business') dominates in developing and emerging economies according to *The Economist* (Jan 27th 2011), whereas Germany and other northern and western European companies are much more concerned about CSR. Second, CSR activities differ not only across nations but also widely across industries. For example, all major oil companies are very CSR conscious (if not always successful, as BP's failures document) while much less is heard of other mining industries. Understanding an evolution as the one shown in Fig. 1 requires an explicit dynamic analysis of CSR activities complementary to the many static investigations. In particular, a dynamic analysis is needed that allows for a dynamic pattern compatible with Figs. 1 and 2, implying different evolutions and long run outcomes across countries, regions and industries.

The aim of our model is to address these aspects. In general and more formal terms, two things will be shown: first, positive interactions between a firm's current investment and its stock, which seems to be of particular importance for CSR. For the reasons given, it can make a firm's long run choice dependent on initial conditions even if the environment remains constant and the firm operates under diminishing returns. Second, the interactions among firms, which all invest in CSR, can lead to history dependent, and to even more complex, market outcomes.

The starting point is by and large the optimistic management literature that encourages firms to pick up this win-win situation associated with CSR. Unruh and Ettenson (2010) even warn managers: "Don't let your competitors control what "sustainable" means in your industry." What this quote and many other management proposals often ignore, however, is that one must take the reactions of other firms into account, because they face similar incentives. Therefore, this paper investigates also how such interactions among firms affect outcomes. This integration allows us to address the following questions: can we explain a CSR-wave? Is it a transient phenomenon or is it sustainable in the long run? Can multiple equilibria arise such that an individual firm's activities depend on its history? Does this history dependence extend to entire industries? Does a history dependent outcome for the firm's isolated profit maximization problem vanish if we include the interaction with the other firms in our analysis? Or is the converse possible: where a firm's decision to fix the other firms' CSR activities leads to a unique and stable outcome? Does including interactions with other firms yield a history dependent, maybe even expectation driven, outcome?

The paper is organized as follows: the model is introduced in Sections 3 and 4, after a brief literature review (Section 2). Section 5 derives the necessary optimality conditions for the optimal expansion of a firm's CSR activities. Section 6 characterizes a single firm's optimal expansion strategy holding the other firms' activities constant. Section 7 integrates the decisions of the other firms within a competitive setting in order to address the above raised questions. Section 8 concludes.