

# MANAGING AND MEASURING THE BUSINESS CASE FOR SUSTAINABILITY

*Capturing the Relationship between Sustainability Performance, Business Competitiveness and Economic Performance*

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**Abstract:** This introduction provides an overview of the subject of this book, namely how to manage the business case of sustainability. After providing a basic structure of how environmental and social management link to economic success through a number of pathways, various theoretical, empirical and normative approaches to analyse the subject are introduced. Subsequently, the basic link between sustainability performance, competitiveness and economic success is discussed, introducing an inversely U-shaped relationship as a generic case. The chapter then presents the logical corollary of how to measure sustainability performance, business competitiveness and economic success conceptually and empirically, before introducing a framework for the interaction of factors explaining the relationship of sustainability performance and competitiveness. The chapter ends with an overview of the chapters and contributions in this book.

## 1. INTRODUCTION

This book deals with the often mentioned—but rarely thoroughly dealt with—‘business case of sustainability’. The term ‘business case of sustainability’ covers the broad area of questions dealing with relevance of voluntary social and environmental activities to the business effects and business success of a company. Or stated differently: how can the competitiveness and business success of a company be improved with voluntarily created outstanding environmental and social performance?

Any attempt to measure and manage sustainability issues in a way such that they have a positive effect on corporate success must take a closer look at the relationship between a company's sustainability performance, its competitiveness and economic performance. Over the last decade, the relationship between environmental and economic performance and, more recently, the interaction between sustainability performance and business competitiveness have received considerable attention—in theory, as well as in management board rooms and on the political stage.

There is no doubt; non-market issues such as environmental and social issues can have a substantial impact on the competitiveness and economic performance of a company. This has been documented in various widely reported cases such as when Shell wanted to sink the Brent Spar oil platform in 1995 or when Nike's sales fell because of NGO pressures accusing the company of purchasing from suppliers involving childwork. There is, furthermore, no dispute that the activities of many companies in actual business practice exceed what can be considered economic in a purely financial sense.

Interestingly enough there is, however, substantial disagreement still about whether management is obliged to focus on business in a more narrow sense relating all activities directly to financial performance or whether management has a social responsibility that requires voluntary social and environmental activities exceeding the compliance with regulations (e.g. Crook 2005; Freeman 1984; Friedman 1997). This dispute is strongly coloured by different ideologies and by perceptions of the social embeddedness and role of a company, ethical perspectives of leadership and the role of stakeholders in a business setting. Apart from different value positions, this dispute is influenced by differing views of how the management of non-market issues and the resulting social and environmental performance of a company relate to business success, i.e. secured existence of the organisation, improved competitiveness and increased economic success. In any case, the two views meet where management can show how voluntary social and environmental management contributes to the competitiveness and economic success of the company.

Managers who are able to systematically analyse how the economic success of a company can be increased through social and environmental activities and who can manage this relationship effectively are still a minority. This is somewhat astonishing because the ability to manage non-market issues can obviously be crucial to the existence and economic success of a company. The economic success and brand value of certain products (e.g. in the sports, textile, food, energy or automotive industries) rely on non-material values communicated and sold to customers. Dealing with business-relevant non-market issues is not the same as replying to each non-market demand of any stakeholder, but a routine managerial task (e.g. Reinhardt

1999, Schaltegger *et al.* 2003) to identify which social and environmental issues influence competitiveness and economic success and how they do so. This is furthermore not a job to be delegated to engineers and scientists in a 'remote' department or shared service unit, but a core strategic management task. If the owners and management do not intend to change it into a non-profit organisation, the integration and management of non-market issues in line with the economic purpose of the company is a constitutional requirement of the management of any profit-oriented company.

An improved understanding of the link between sustainability performance, competitiveness and business success does not just contribute to a less emotional debate about the social role of a company, but also enables management to realise the 'triple win' potentials that are the basis of any kind of sustainability management of profit-oriented organisations in a market system. The knowledge of corporate sustainability management can thus be an asset and basis for a competitive advantage of a company. It is, in any case, a prerequisite for the sustainable development of companies and the economy.

The basis of a structured discussion of the link between sustainability performance, competitiveness and economic success is a clear understanding of sustainability performance. The general scientific debate on sustainability, however, is more confusing than enlightening. It mostly circles around the three pillar concept of sustainability that aims at a parallel improvement of social, environmental and economic performance (van Dieren *et al.* 1995). The corporate sustainability and sustainability performance of a company (e.g. Schaltegger and Burritt 2005) would thus be defined by the integrated achievement of social, environmental and economic performance measures (Schaltegger and Wagner 2005). Sustainability performance is, however, often understood as performance in environmental and social terms, thus excluding economic performance. Sustainability performance is thus mostly understood as performance concerning non-market issues and measured in non-economic terms. Hence our suggested structure of the discussion as outlined in Figure 1.

Voluntary environmental and social activities performed with the intention of improving the environmental and social performance of a company constitute corporate social responsibility performance. Environmental and social management applies management methods in a different way to, for example, purely environmental protection or social charity activities. Non-market activities and performance—together with the core business activities and external and other factors—influence company competitiveness. Non-market performance can also have direct influence (e.g. via production costs) on economic success. Competitiveness—describing the relative market position and the ability of the company to meet customer needs better than its competitors—is an important driver of its economic success. Economic

success, especially when positively influenced or created through outstanding social and environmental performance can furthermore be linked to corporate environmental and social management.

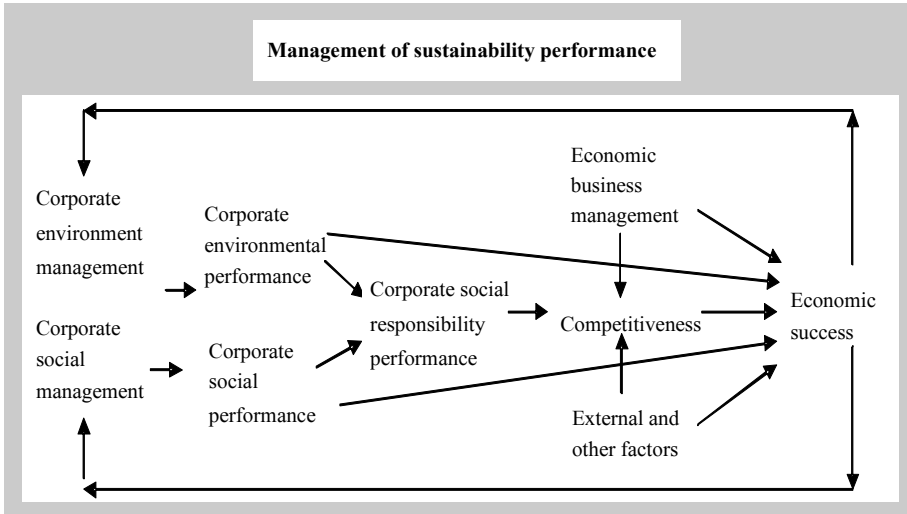


Figure 1. Management of sustainability performance by linking environmental and social management with competitiveness and economic success

In summary, sustainability performance can be interpreted very broadly as the overall performance in managing the links and causal relations illustrated in Figure 1. In a business company, successful management of sustainability performance is achieved only if the management of environmental and social issues is in line with increased competitiveness and economic performance. As a consequence, sustainability management requires an integration of environmental, social and economic management and thus covers all the links between non-market and economic issues. It deals with both the analysis and management of the effects of environmental and social activities on the competitiveness and economic success of a company, as well as with the analysis and management of the social and environmental effects of business activities.

Although many studies (mostly correlation-based) have been performed on the relationship between environmental and economic performance, only a few take a closer look at the links described in Figure 1. When correlating selected social or environmental indicators with economic performance indicators, the management process generally remains a black box. To date, only some partial aspects of the relationship between sustainability performance, competitiveness and economic performance (e.g. the link between the environmental and economic performance of companies or the effect of

corporate social responsibility on their financial performance) have been studied from a theoretical as well as an empirical perspective (e.g. Lankoski 2000; Margolis and Walsh 2003; Pearce 2003; Porter 1991; Reinhardt 1999a, 1999b; Schaltegger and Burritt 2005; Schaltegger and Synnestvedt 2002; Wagner and Schaltegger 2003, 2004; Wagner *et al.* 2002, Walsh *et al.* 2003; Ziegler *et al.* 2002). So far, no unique relationship has prevailed in empirical studies. A number of explanations have been put forward for this observation. These include methodological reasons such as the lack or low quality of statistical data or the fact that environmental and sustainability data are often available for short time periods only. Furthermore, some theoretical explanations have been developed (e.g. the influence of different corporate strategies or, on average, a relatively small influence of environmental or sustainability issues in industry) as one factor among many on corporate economic or financial performance. This is the starting point of this book, which aims to compile different insights on various aspects of the link between sustainability performance, business competitiveness and economic success in attempt to provide a comprehensive and structured view of the state-of-the-art in investigating this relationship.

Firstly, the main approaches and questions asked in the context of the link between sustainability performance, competitiveness and economic success are structured. Secondly, we present a basic model for the phenomenological (i.e. observed) relationship between sustainability performance and economic success. Thirdly, the measurement of the link in question is addressed. Fourthly, the phenomenological link is related to a conceptual framework of the interaction of various parameters in bringing about the observed link. Finally, the contributions collected in this book are briefly introduced and related to conceptual considerations.

## **2. THEORETICAL, EMPIRICAL AND NORMATIVE APPROACHES**

A review of the literature on the link between sustainability performance, competitiveness and economic success shows that the current work can be structured according to:

- The theoretical questions analysed
- The empirical research approaches taken
- The normative conclusions drawn on how the relationship could be managed successfully

Theoretical questions include the analysis of whether, under which circumstances and how environmental and sustainability issues and company activities are related to competitiveness and economic success:

- The proponents asking whether environmental and social issues influence competitiveness and economic success at all, however, seem to have fallen silent after some obvious cases that attracted mass media interest showed that strong links can exist at least in the short term. The accidents involving the oil tankers *Exxon Valdez* in Alaska and, more recently, the *Prestige* in Spain, the media spectacle of Brent Spar or the reported environmentally driven losses of large re-insurance companies are the obvious tips of an iceberg of links between sustainability issues and a company's competitiveness and economic performance.
- A frequently analysed question has been to what extent situational factors and external conditions have an influence on the relationship between environmental and social performance of a company and its economic results. Under what circumstances can a strong or weak relationship be identified? This question is fairly common among economists and political scientists but, despite its close connection, is often not put into the context of the 'what and how' question.
- Interestingly enough, the question of how environmental and social issues relate to competitiveness has been tackled mostly by investigating specific sustainability issues that may be influencing or be influenced by a company's competitiveness. Thus, the question is mainly approached by asking: what environmental and social issues or company activities (such as issuing a sustainability report) relate to competitiveness? The cause and effect chain or process linking sustainability with economic performance and competitiveness, however, has so far rarely been analysed. To avoid confusion, the clear distinction must be made as to which direction a causal link is expected: Is the company improving its competitiveness through more (or outstanding) sustainability performance? Or: is being very competitive and increasing the company's competitiveness a precondition to improve the sustainability of business operations and products?

Empirical research helps to validate or falsify theoretical considerations and is thus a necessary part of understanding the reality of which environmental and social issues are related, in which way and under what circumstances to economic performance:

- Most empirical research in this field is based on more or less sophisticated *regression analyses* searching for correlations (e.g. Ziegler *et al.* 2002). The findings are very mixed, which is not surprising given that the databases are mostly limited in the number of companies and issues

considered as well as in the time period considered. Furthermore, it is rarely clarified what kind of causal link is expected and there is no overarching theoretical framework to structure the analysis provided.

Regression analyses have generally not provided the clear proof or sufficiently significant and generalisable results that the researchers were seeking. For instance, research on the influence of EMAS and ISO 14000 certified environmental management systems has not been able to demonstrate a clear link to the companies' economic performance in terms of their industry average, although many company examples have been analysed and described.

- An increasingly popular empirical approach is to work with case studies (e.g. Holme and Watts 2000). Case studies allow specific causal links and circumstances to be investigated in more depth, but they remain limited in their generalisation for other companies and industries.
- Portfolio studies analyse real or model portfolios of environmentally proactive and environmentally reactive companies, and compare their respective returns (e.g. Edwards 1998). They have however been criticised as only focusing on average performance (Wagner and Wehrmeyer 2002).
- Finally, event studies assess market responses after a positive or negative environmental event and are part of a broader strand of research which assesses the response of capital markets on events related to specific companies or industrial sectors (Blacconiere and Northcut 1996; Jones and Rubin 1999; Hamilton 1995). They also provide mixed results, which have been shown to depend on methodological choices.

To draw normative conclusions is, after all, the reason for analysing the link between sustainability performance, business competitiveness and economic performance. This branch of research will only prove to be valuable if it leads to concepts and methods of how environmental and social management can be better integrated with economic business goals.

Companies do not act 'automatically'—after all, they are neither machines nor do they obey physical laws. Companies are social organisations, characterised by multiple processes based on explicit and implicit decisions of actors. Management and other company actors can only take decisions that improve environmental, social and economic performance simultaneously if they have a clear idea of how these issues are linked and how they can be managed in a mutually beneficial way:

One branch of normative research focuses on how environmental and social issues can be integrated into conventional management methods and tools. This leads to adapted methods such as environmental accounting, environmental audit, eco control and sustainability balanced scorecard (e.g.

Schaltegger and Burritt 2000; Schaltegger and Figge 2000; Strack and Villis 2001) and sometimes feeds back to conventional management research and the improvement of core business management tools.

Other researchers focus on company internal sustainability processes, organisation development and culture (e.g. Martin 2002). Among the main topics are the qualitative analysis and development of environmental learning processes, green organisation development, capacity building for sustainability and green corporate culture development.

Related to the tools-oriented approach as well as to the organisation and culture development approach are the issues of knowledge management and creation, institutional perceptions as a result of organisational or industry culture, and path dependency (e.g. Williander in Chapter 8). The automotive industry, for instance, can be characterised by high entry barriers (high entry costs) creating path-dependent lock-in situations and maintaining an engineering culture that ignores sustainability innovations. This, in turn, influences the mindsets of product developers, marketers and other market actors, making the internal development of sustainable solutions unlikely because of the high entry barriers. As a consequence, managing the link between sustainable product solutions and business success requires the management of new industry and company external knowledge through co-operation and its introduction to the company.

The identification and analysis of causal or other relationships is an important step in most normative approaches. This can be done on the basis of the balanced scorecard (BSC) method (for a general discussion of the BSC, see Kaplan and Norton 1992, 1996) which provides a management method as well as a measurement tool. According to the sustainability balanced scorecard approach (see Figge *et al.* 2002; Schaltegger and Dyllick 2002; Chapter 3 in this book), environmental and social issues can influence five different basic business perspectives that relate to market competitiveness and economic performance:

- Direct financial effects (e.g. fines, penalties, charities, etc.)
- Market effects (effects on the competitiveness of the company in the market such as higher willingness to pay, increased market share, stronger customer binding, etc.)
- Effects on business and production processes (e.g. lower production costs, decreased purchasing costs because of material and resource savings, etc.)
- Effects on learning and organisational development (in this perspective, successful sustainability management creates an organisational culture of sustainability processes, which improve social, environmental and economic performance simultaneously, and is expressed in, for example, more motivated staff, increased innovation rate, less fluctuations, etc.)

- Non-market effects on business performance (e.g. less resistance from neighbours to production sites, strikes, administrative resistance to receive allowances, political resistance, etc.)

Any normative approach of sustainability management will be accepted widely and applied in the majority of companies only if it is based on sound theory and if it proves to be empirically founded. Nevertheless, as with most complex issues in a constantly changing social environment, final proof will not be achieved. This justifies the development and pilot testing of normative approaches of sustainability management and challenges management to obtain an overview of the current state of theory and empirical research.

### **3. THE BASIC LINK BETWEEN SUSTAINABILITY PERFORMANCE, COMPETITIVENESS AND ECONOMIC SUCCESS**

Economic theory provides different perspectives on the relationship between sustainability performance and economic performance from which different predictions about the relationship can be derived. This will be illustrated for the case of environmental performance, but similar lines of argument apply to social performance.

Concerning environmental performance, there is the commonly held ‘traditionalist’ view of neoclassical environmental economics, which argues that the purpose of environmental regulation is to correct for negative externalities (which diminish social welfare) and that, consequently, environmental regulation (in internalising the costs of the negative externality) corrects a market failure while imposing additional costs on companies. At the level of a specific industry, for example, this is because the share of environmental costs in the total manufacturing costs might be considerably higher than the average (Luken 1997). Furthermore, some industries upstream in the production chain give rise to environmental impacts that are relatively higher than the value added associated with their production activities (Clift and Wright 2000). Based on these considerations, the argument was brought forward that companies in industries with higher environmental impacts face a competitive disadvantage if stringent environmental regulation burdens them with higher environmental compliance costs (relative to total manufacturing or production costs) than other industries. This neoclassical perspective considered market or regulatory failures (in the case that regulation did not take place) as causes of negative (environmental) externalities and developed a set of public policy instruments (e.g. tradable pollution permits, marketable quotas, assigning complete property rights,

environmental taxes, corporate liability standards for companies or command-and-control systems) to address them (for details, see for example, Endres 1994).

In contrast, the notion (termed the ‘revisionist’ view) emerged that improved environmental performance is a potential source of competitive advantage as it can lead to more efficient processes, improvements in productivity, lower costs of compliance and new market opportunities (Gabel and Sinclair-Desgagné 1993; Porter 1991, Porter and van der Linde 1995; Schaltegger 1988; Sinclair-Desgagné 1999). In this ‘revisionist’ view, environmental regulation is mainly considered to be ‘... an industrial policy instrument aimed at increasing the competitiveness of companies, the underlying rationale for this statement being that well-designed environmental regulation could force companies to seek innovations that would turn out to be both privately and socially profitable’ (Sinclair-Desgagné 1999:2). In the ‘revisionist’ view (unlike traditional neo-classic economics), companies facing higher costs for polluting activities have an incentive to research new technologies and production approaches that can ultimately reduce the costs of compliance, since innovations can be conceived that also result in lower production costs (e.g. lower input costs) due to enhanced resource productivity (Porter and van der Linde 1995). In addition, companies can gain ‘first mover advantages’ from selling their new solutions and innovations to other companies (Esty and Porter 1998). According to the ‘revisionist’ view, at least in a dynamic, longer-term perspective (but possibly even in the short term), the ability to innovate and to develop new technologies and production approaches is therefore a greater determinant of competitiveness and economic success than traditional factors of competitive advantage (Porter and van der Linde, 1995).

The two views described above can be generalised to the case of sustainability performance. They are represented in Figure 2, which shows a monotonously decreasing curve to represent the ‘traditionalist’ view (of the relationship between sustainability performance and economic performance) and an inversely U-shaped curve to represent the ‘revisionist’ view. The longer-term dynamics are indicated by the dotted line representing the efficiency frontier development over time due to technical, regulatory and market changes.

Given the range of possible relationships, management may want to know more about the actual link with which the company is confronted. This requires the measurement of the company-, market-, industry- and country-specific relationship in question.

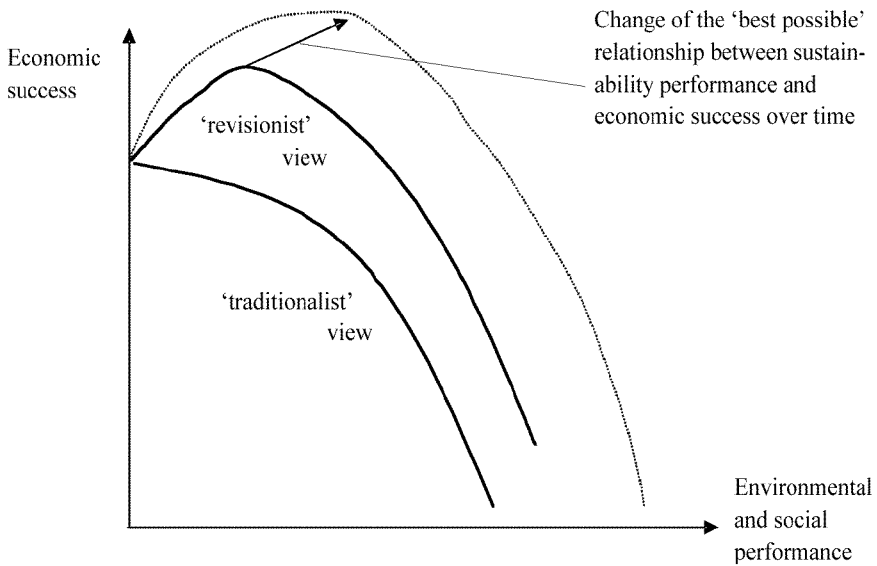


Figure 2. Phenomenological relationship between environmental and social performance and economic success (Source: similar to Schaltegger 1988; Lankoski 2000; Wagner 2000; Schaltegger and Synnstedt 2002; Wagner 2002; Wagner *et al.* 2002)

#### 4. MEASURING SUSTAINABILITY PERFORMANCE, BUSINESS COMPETITIVENESS AND THE EFFECT ON ECONOMIC SUCCESS

When discussing sustainability performance and business competitiveness measurement, it is necessary to look initially at conceptual aspects. Here, the three pillar view of sustainability perceives the latter to have three dimensions—namely an economic, a social and an ecological/environmental dimension (van Dieren *et al.* 1995). This would suggest defining one measure, which simultaneously assesses all three dimensions. Historically, however, measurement of economic performance and business competitiveness is: (i) much older than the measurement of economic and social performance; and (ii) developed much on its own, leading to a well established body of theory and practice on the measurement. Therefore, while it may seem enticing to develop one measure of sustainable performance spanning all three dimensions, in terms of practicality and also with regard to the feasibility of empirical analysis, it could be more suitable to measure the economic dimension of sustainability separately using established measures

of economic performance and business competitiveness. Based on this approach, (possibly integrated) measures for environmental and social performance and their integration with economic performance are considered in this book.

The environmental performance of a company can be defined by means of its physical performance with regard to environmental aspects based on physical environmental performance indicators. An environmental aspect is defined here as an element of an organisation's activities, products or services that interacts with the environment (DIN 1995; next to the term 'environmental aspect', the terms environmental pressure, stressor, environmental intervention, loading and environmental burden are also used synonymously in the literature; see Olsthoorn *et al.* 2001).

Physical environmental performance indicators (EPs) are one way to describe environmental aspects and thus physical performance. Such physical EPs can describe mass, energy or pollutant flows through the manufacturing process (e.g. the use of energy or water resources or the emissions of pollutants from processes or products), which constitute a direct relationship between companies and the environment (see e.g. Günther and Kaulich 2004). Physical EPs can be quantitative (i.e. measured on a continuous, interval or ratio scale) as discussed in the life-cycle assessment literature (e.g. Heijungs *et al.* 1992) or qualitative (i.e. measured on a nominal scale; for example, when assessing whether a company is compliant with regard to specific emissions consent conditions). A fairly popular concept for linking environmental with economic performance is the concept of eco-efficiency measuring value added in relation to environmental impact added or the environmental impact caused per monetary unit earned (Schaltegger and Sturm 1990).

Sustainability performance measures can thus embrace the dimensions of sustainability in a more or less integrative manner. The choice of measure may vary substantially depending on the exact question, industry and company considered and on what factors are part of the respective analysis.

With regard to social performance, the measurement debate is still at a more conceptual level. While there have recently been some activities to operationalise social performance (e.g. GRI 2002 as well as several private sustainability rating companies), this has not yet reached the level of formalisation and coherence found, for example, in environmental life-cycle assessment (see, for example, the various ISO and SETAC standards on this such as SETAC 1991).

With regard to the other core concept, business competitiveness, a first approximation could be to use measures of economic performance such as measures of short-term profitability operationalised in terms of common financial performance ratios. One reason for using economic performance

measures instead of indicators of competitiveness might be the difficulty of defining and measuring competitiveness in one dimension. Furthermore, factors that lead to the competitiveness of a company are usually company-internal leading indicators (and hence difficult to observe), which precede the economic outcomes of companies' operations (measured, for example, as financial ratios, profitability/returns, market position or stock market valuation) as lagging indicators (Kaplan and Norton 1992, 1996; Olve *et al.* 1999).

While economic performance in the short term can be measured approximately through profitability ratios (e.g. in terms of return on sales [ROS], return on owners' capital employed [ROCE] and return on equity [ROE])—an approach frequently used in empirical studies in the USA and Europe, e.g. Edwards 1998; Hart and Ahuja 1996) to assess the relationship between environmental and economic performance. However, this omits a number of important and more long-term aspects of business competitiveness.

Given the serious difficulties in defining competitiveness, some authors have started to measure sustainable competitiveness as that part of competitiveness that is determined or strongly influenced by the management of environmental and social issues. Lankoski (2000) applies this idea to environmental aspects and points out that economic performance is a multi-causal issue, and that therefore any causal effect on overall economic performance (or overall competitiveness) by a single explanatory factor (such as, for example, environmental performance) is likely to be small. Therefore, an operationalisation of sustainable competitiveness (as a sub-segment of overall business competitiveness) can be based on the self-assessment of companies, an approach successfully used by Sharma (2001) with US and Canadian companies to measure organisational capabilities and competitive benefits, and by Wagner (2003) to assess the influence of strategy choice on the link between environmental performance on environmental competitiveness. Such an approach requires definition of a set of items to approximate a theoretical concept of sustainability competitiveness. Such items can include different drivers that are hypothesised to increase competitiveness, as well as outcomes that are perceived to be results of high competitiveness or environmental competitiveness. The European Business Environment Barometer survey (see, for example, Baumast and Dyllick 2001; Wagner and Schaltegger 2002) uses such a collection of items to allow companies to self-assess the perceived effects of the total of their environmental management activities on a number of drivers and outcomes of competitiveness. An index composed of such items therefore defines a measure of sustainable competitiveness, i.e. the contribution of a company's sustainability management to its overall competitiveness. Sustainable competitiveness is hence defined as that part of competitiveness or economic performance, which can be