

Choice of a Strategy Tool for Eco-Efficiency

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Abstract

Eco-efficiency has been accepted as a key strategic theme for global business towards sustainable development. There exist a wide number of different methods or tools for adopting and for evaluating eco-efficiency. Common frameworks to differentiate these methods and thus promote the use of them have so far been modest. The aim of this paper is to help in identifying suitable methods for implementing eco-efficiency into strategic management and for the use of these methods in companies. In this work frameworks for promoting eco-efficiency and sustainable development as well as for fostering strategic success of enterprises are presented.

Keywords: Strategic management, sustainable development, eco-efficiency, strategy tools

Introduction

Sustainable development combines social, economic and environmental/ecological development. According to the World Business Council on Sustainable Development (WBCSD), eco-efficiency has a central part to play in promoting sustainable development. The basic contribution to sustainable development is eco-efficiency (Holliday et al. 2002). The application of eco-efficiency concentrates on integrating environmental and life cycle cost factors into core business processes. Several methods for implementing eco-efficiency as well as various evaluation models are developed to link the elements of environmental performance to business processes.

Eco-efficiency means producing goods and services with less energy and fewer raw materials, which results in less waste, less pollution and less cost (UNCTAD 2001). Eco-efficiency combines the essential components of business, monetary and ecological improvements, which are necessary from the viewpoint of economic prosperity to increase efficient use of resources and to prevent emissions (Verfaillie et al. 2000). Eco-efficiency has been accepted as a key strategic theme for global business towards sustainable development in relation to commitments and activities directed at sustainable development (Ehrenfeld 2005).

Several methods for implementing environmental management systems and the concept of eco-efficiency, as well as methods for evaluating improvements and impacts have been developed during the last fifteen years. Eco-efficiency is described as a management strategy that combines environmental and economic performance (Holliday et al. 2002).

There is a clear connection between environmental issues and strategic management. According to Michael Porter (1991) strategy is the act of bringing a company into line with its business environment to maintain a dynamic balance. Countries worldwide have formulated laws to limit companies from polluting. The ecological dimension of sustainable development has

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become an important part of the global business environment, and thus the natural environment is a strengthening theme in strategic management. Strategic environmental management in an organization entails the organization's commitment and the setting of the organization's environmental targets. Operational management includes all the practical issues, which are needed to reach the environmental targets of the organisation. Taking the environment into account in decision-making as a permanent part of doing business is obvious. Reasons for this can be e.g. customer demand, public opinion, environmental advocacy groups, environmental laws and regulations, liabilities, resources, supply chain demands etc. An enterprise management and leadership strategy can be the key tool for considering the relations between an organisation and the environment. A sustainability-promoting enterprise has to find a balance between environmental excellence and business competitiveness. Management is argued to be equivalent to decision-making (Pugh et al.1996). The most important factor when making environmental decisions is the balance between decisions concerning companies' environmental impacts and economic benefits.

Strategy tools for Eco-efficiency

Strategic management is a key activity for organisations' ability to sustain competitive advantages in the long run. In the 1990s there has been a prominent change in corporate strategy toward environmental problems; the emergence of sustainability as corporate strategy. Corporate environmental concerns resulted first in pollution control and pollution prevention-strategies in compliance with government mandates to reduce environmentally harmful outputs. The second stage resulted in Environmental Management Systems, Life-Cycle Assessment, Industrial Ecology, Design for Environment and other strategies, intended for prioritizing changes to the

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product systems with respect to environmental concern. The ongoing stage is sustainable development, which proactively attempts to go beyond resource conservation to assure the wellness of future generations.

The most important departure of the sustainability concept from orthodox management theory lies in its realisation that economic sustainability alone is not a sufficient condition for the overall sustainability of a corporation (Galdwin et al. 1995). The most broadly accepted criterion for corporate sustainability constitutes a firm's efficient use of natural capital. At present most managers have accepted corporate sustainability as a precondition for doing business (Hedstöm et al. 1998, Holiday 2001). Combined interest in competitiveness and ecological responsibility often leads to innovations that would not otherwise be realised. These innovations result in more ecologically benign products or processes for which there are gains in efficiency or marketing, or products or processes that are superior in other ways (Bansal et al. 2000). According to Bansal et al. (2000) competitiveness is the potential of ecological responsiveness to improve long-term profitability. According to the respondents in their study, ecological responses improved competitiveness. These responses included energy and waste management, source reductions resulting in a higher output for the same inputs, eco-labelling and green marketing, and the development of 'eco-products'. It is crucial for enterprises to optimise their strategies in order to build unique competencies.

Strategy tools, such as Balanced Scorecard, SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis, Total Quality Management, Scenario Analysis etc. are developed to support organisations for maintaining and creating strategic advantages. Strategy tools have specific advantages and features that work best in favourable contexts and in knowledgeable hands (Brown et al. 2004). Decisions about strategy tool use are based on power Choice of a Strategy Tool for Eco-Efficiency: Ilpo Penttinen & Tuula Pohjola

discourses, underpinned by specific political and technical rationales and affected by economic, political, historical, and cultural aspects. The set of strategy tools actually employed in an organisation is not a consequence of careful planning, but the result of answering diverse needs and pressures at multiple levels. The set of tools that is appropriate for an organisation is dependent on that organisation's individual need. Strategy tools are an intrinsic part of modern strategy work and a well-balanced set of strategy tools has the capability to support strategic success.

It is also suggested (Abrahamson 1995) that relationships between the user, the tool, and the context bring an incoherent and often contradictory plurality to strategy-tool use, which makes the choice of a suitable strategy tool challenging. Overall, in a dynamic social setting with changing markets and different demands on tools, it is quite clear that no single strategy tool is adequate. The task of finding just one most-suitable strategy tool is therefore not appropriate. Rather the task is to compile a set of tools that jointly cater to different contextual needs and demands and support different forms of strategy work. Collecting a set of strategy tools, rather than just concentrating on individual tools, increases freedom of choice. It also increases the possibilities for discovering and supporting organisation's strategic advantages. The set of tools selected, should work together by complementing each other, supporting different viewpoints and facilitating work on issues that require special attention. It is not clear when to use what tools in practise (Sahlin-Andersson et al. 2002). A company can significantly increase its chances of successfully adopting the eco-efficiency approach if it cooperates with other partners (Cramer 1999).

Choice of a strategy tool

There exist a wide number of different methods or tools for adopting and for evaluating eco-efficiency. The first framework, sustainability and business strategy, connects sustainability strategy to other business strategies. As Michael Porter (1991) argues, there is a clear connection between environmental issues and strategic management. He describes that strategy is the act of bringing a company into line with its business environment to maintain a dynamic balance. The ecological dimension of sustainable development has become an important part of the global business environment, and thus the natural environment is a strengthening theme in strategic management. Sustainability strategy has become as important as other more traditional strategies, such as marketing strategy, production and technology strategy, personnel strategy and financial strategy. Sustainability and eco-efficiency considerations are connected to all other strategies in the business strategy.

Sustainability and ecological improvements can be benefited in marketing strategy. Many international programs, such as ETAP (Environmental Technology Action Plan) in EU, point out the need for sustainability considerations, e.g. best available techniques (BAT) in production and technology strategy. EU also involves business and social partners to foster cooperation and common responsibilities to achieve sustainable consumption and production. The need for sustainability and eco-efficiency expertise and knowledge is an issue of personnel strategy, and sustainability issues can have an important influence on the financial strategy. Sustainability considerations in business strategy are difficult issues for companies, but they should be taken into account, especially when companies are parts of supply chains.

Decision-making involves the analysis of different alternatives and their consequences, and the subsequent commitment to action, usually in connection with a commitment with resources (Janssen 1992, Kirkwood 1997). Necessary considerations for different process strategies in the life cycle of production, from raw material extraction to production, use, and end of life of products are illustrated in the second framework. In order to support companies in their efforts to meet international standards and improve their production processes, eco-efficiency methods and evaluation tools should assist in the development and optimisation of production processes, while considering commercial and environmental aspects at the same time. The objective of these tools should be on identifying production processes yielding the best environmental performance at the lowest possible cost. In this respect eco-efficiency methods and eco-efficiency analysis are strategic tools, which can assist companies in their selection of the most cost-effective and environmentally sound production processes. Methods for Eco-efficiency and different aspects of evaluation are illustrated in the third framework.

Conclusions

The development and use of eco-efficiency methods has a lot of limitations and challenges in companies. Understanding the terminology is difficult and the needs and benefits of incorporating eco-efficiency are not clear to most companies who don't have trained personnel. For companies, especially for small and medium size enterprises, it is not easy to modify existing information systems and management practices to incorporate these considerations. These frameworks can help companies in their considerations for a suitable strategy tool for including and implementing sustainable development and eco-efficiency in their strategies and operations.

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