

# **ECOLOGICAL SUSTAINABILITY AND MARKETING STRATEGY: REVIEW AND IMPLICATIONS**

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## **ABSTRACT**

Present-day environmentalism tends to focus on a philosophy of sustainability aiming at combining ecological and economic concerns, and is having significant impacts on key organizational processes. This paper reviews how environmental concerns may be spawning alternative approaches to marketing strategy to deliver value-added and to potentially establish a source of competitive advantage.

## **INTRODUCTION**

Since the early 1990s, a renewed interest of the marketplace on ecological concerns surfaced. Not only is the relationship between humans, organizations, and the natural environment being redefined, but the implications thereof are being reinterpreted. Because of this, perceptions are either being formed or reevaluated on issues such as the environmental friendliness of products, recyclability, waste reduction, the costs associated with pollution, and the price-value relationship of environmentalism (*Consumer Reports* 1991; Lozada & Mintu-Wimsatt 1998; Magraw 1994; Ottman 1998; Schmidheiny 1992). Pressure from various stakeholders - government, special interest groups, consumers - is placed on businesses, which in turn keeps them under constant and unrelenting watch in their daily operations. A direct result can be seen in the stricter regulations imposed by federal and local governments. Additionally, consumers are also becoming more outspoken regarding their needs for environmentally friendly products, even though questions remain on their willingness to pay a higher premium for such products (see Ottman & Terry 1998).

Although environmentalism poses many challenges to American businesses, it also presents opportunities to capitalize on the demand for greener products (Ottman & Terry 1998). Thus, the main focus of this article is to explore the impact(s) that present day environmentalism is having on the marketing function. Particularly, we survey how contemporary ecological tenets may be reshaping traditional marketing tactics or even triggering alternative approaches. We first contextualize marketing within current environmental views. Then, we proceed to explore some specific issues that have been levied in the literature regarding a key marketing function: product development and management. We then examine the strategic repercussions of contemporary marketing approaches to ecological concerns.

## **ECOLOGY AND SUSTAINABLE DEVELOPMENT**

Sustainable development, a concept originally popularized by the 1987 report titled *Our Common Future*, proposes that future prosperity depends on preserving "natural capital" - air, water, and other ecological treasures - and that doing so will require balancing human activity with nature's ability to renew itself (WCED 1987). Within the realm of business, this idea refers to development that meets the needs of business organizations without compromising the ability of future generations to meet their own needs. The goals of economic and social development must, therefore, be defined in terms of sustainability. In this context, development is taken to mean a progressive transformation of economy and society which is sustainable in a physical sense.

Mintu & Lozada (1993) defined *green marketing* as "the application of marketing tools to facilitate exchanges that satisfy organizational and individual goals in such a way that the preservation, protection, and conservation of the physical environment is upheld" (p. 17). Green or ecological marketing activities entail much more than image building (Henion & Kinneer 1976; Lozada & Mintu-Wimsatt 1998). The ecological concerns of Henion & Kinneer (1976) would be integrated into the strategies, policies and processes critical to the organization. Green marketing imparts an ecologically proactive role on marketing organizations. It fosters not only sensitivity to the impact that marketing activities may have on the natural environment, but also encourages practices that reduce or minimize any detrimental impact. The philosophy of sustainable development provides additional impetus to green marketing by emphasizing that environmental protection does not necessarily negate economic prosperity, but encourages a rethinking of how we engage in marketing activities.

## **PRODUCT MANAGEMENT AND GREEN STRATEGIES**

A green marketing approach in the product area promotes the integration of environmental issues into all aspects of the corporation's activities, from strategy formulation, planning, construction through production and into dealings with consumers. Czinkota and Ronkainen (1992) propose that "corporations will have to find solutions to environmental challenges through marketing strategies, products, and services in order to remain competitive" (p. 39). These include: (1) new technologies for handling waste, sewage and air pollution; (2) product standardization to ensure environmentally safe products; (3) providing "truly" natural products; and, (4) products oriented toward resource conservation and greater occupant health (Czinkota and Ronkainen 1992). These solutions assure the company of a legitimate role in providing society's needs as well as the opportunity to achieve industry preeminence (Murray and Montanari 1986). They also underscore potential opportunities for the development of products/services. For example, refurbished office equipment has entered the market with the backing of a powerful name (Xerox's Eco-series and Renaissance copiers). Although some would look at these changes as threats and/or added expense, visionaries within business firms are realizing that there also are real opportunities in environmental developments for those ready to recognize and capitalize on them.

## The Greening of Product Life Stages

Green marketing forwards the notion that companies should be concerned with what happens to a product during and after its useful life. Companies may manifest this concern through experimentation with ways to reassess and redesign the product life stages. Life cycle reassessment focuses on environmental considerations in product development and design, including energy and material inputs and outputs in production, consumption, and disposal of products (*Corporate Environmental Practices* 1994). We would then manage the life stages of a product in an environment friendly and eco-efficient manner. *Eco-efficiency* refers to the proper timing for the use or consumption of natural (and oftentimes scarce) resources so that nature is afforded an opportunity to renew itself. The life stages of products would include the following:

Stage 1:	Development stage. Traditionally characterized as the acquisition of raw materials, component parts, and subassemblies. The alternative approach advocated here encourages manufacturers 1) to check the environmental programs of suppliers, 2) to require minimal packaging of inputs, and 3) to consider sources of materials that could be easily replenished or that are recyclable.
Stage 2:	Production stage. Manufacturing companies are encouraged to reduce emissions, toxicity, and waste, and to conserve water and energy. Companies are also encouraged to seek and develop alternative uses for waste products (i.e., waste recovery process), to revise the manufacturing process(es) to minimize waste generation, to minimize energy use, and/or to attempt to find alternative sources of energy.
Stage 3:	Consumption/Usage stage. Minimization of packaging, conservation of energy, and minimization of waste from product maintenance and service are strongly urged. Additionally, companies should promote energy conservation and should provide information on recyclability or reuse of the package or "dead" product.
Stage 4:	The final stage of a product is its disposal, Green marketing introduces the concepts of reuse and recyclability, in addition to the concept of waste reduction (cf. , <i>Corporate Environmental Practices</i> 1994).

## Design for the Environment

Coddington (1993) asserts that *Design for the Environment* (DFE) has emerged as a philosophy of integrating environmental considerations into the design process of both product and packaging. There are two basic tenets: (1) the firm engaged in DFE must internalize environmental considerations and constraints, and (2) the firm must evaluate environmental issues systemically, in conjunction with associated manufacturing, economic, regulatory, social, and political factors (Allenby 1991). Additional considerations inherent in DFE as applied to product and package design are designing for disposal, designing for nondisposal (recycling), designing for pollution prevention,

and designing for resource conservation. DFE strongly encourages the development of ideas that would incorporate waste reduction into production processes, recycling of products and/or packaging, that would make products compostable, or that would help facilitate changes in the process of design while adding more benefits than costs to the organization.

### **Total Quality Management for the Environment**

Friedman (1992) advocates that Total Quality Management (TQM), an increasingly popular concept related to the management of both the product and the production processes, needs to integrate environmental management issues. Commitment to quality now refers not only to the traditional production concept, but to environmental quality as well. Currently, our concern is with the total yield of the production and product marketing processes, including waste and pollution.

*Recycling.* Regulatory pressures may account for some of the most creative ideas that have been brought to market. For example, batteries of all kinds contain hazardous heavy metals such as silver, mercury, nickel, cadmium and lead that can threaten underground water supplies. The potential for increased regulatory pressures always faces these manufacturers, including legal requirements to reformulate products or setting up collection programs for the "dead" product. In 1990, Eveready reformulated their batteries to reduce mercury content, meeting regulatory standards two years ahead of schedule and stealing an edge on competitors through trade advertising (Ottman 1994). In 1991 Sanyo introduced rechargeable batteries packed in a container that doubled as a mail-back pack for recycling. When consumers return the batteries, they receive a \$3 coupon good on their next purchase. This action came as a result of focus groups in which they found that consumers consistently told the company that it should recycle, and that their efforts would be rewarded (Lipton 1992).

*Waste Reduction, Pollution Prevention.* In addition to the concept of eco-efficiency mentioned previously, *manufacturing for disassembly* has also gained momentum as the recycling of materials and energy and resource conservation are more plausible thanks to technological change. Additionally, since all natural and industrial processes generate waste, and waste becomes pollution when it exceeds the carrying capacity of the environment (Schmidheiny, 1992), finding ways to prevent pollution before it happens has become critical. To a large extent, companies are realizing that pollution is a sign of inefficiency and added cost, and that waste represents raw materials not sold in final products. Schmidheiny (1992) contends that the combination of the above with mounting public expectations, increasing regulatory pressures, and the tightening of competitive conditions may account for the adoption of the logic of pollution prevention by a significant number of companies worldwide. For 3M, the Pollution Prevention Pays (3P) program, in place since 1975, is being hailed for having saved over \$500 million by eliminating or reducing capital expenditures and operational expenses (Frause & Colehour 1994). Oftentimes, an implication inherent in pollution reduction programs is restructuring in the form of materials substitution. The search for substitutes is acting as a trigger for innovative solutions (e.g., Volkswagen's switch to water-based paints for their

automobiles and IBM's phase out of CFCs in electronic production. The *zero pollution* targets (i.e., no emission of pollutants into the ecosystem) set by many U.S. companies (e.g., Monsanto, General Dynamics) approximates the zero defects pledge brought about by total quality management. Additionally, regulatory actions like the 45 product disposal bans enacted in 1991 by 12 states have persuaded manufacturers to design their products for remanufacture, recycling, and repair (Ottman 1994). New designs that would allow for easier disassembly and recycling of parts, and minimization or elimination of non recyclable parts/materials have already entered the market.

## **STRATEGIC IMPLICATIONS**

Implementing a philosophy of sustainability in the practice of marketing would require businesses to become more sensitive to the efficient use of all resources over a longer period. In particular, the loss of natural resources may significantly affect a company's product line and overall production process(es). This change in orientation, from short- to long-term, would be part of any requisite structural changes (e.g., changes in corporate culture and communication and information systems). Perhaps the most persuasive argument is that waste represents costs to organizations, therefore waste reduction, reuse of materials, and recyclability are important cost savings activities in the long-run. Marketers should be encouraged to assess the cost of new laws and regulations, the cost of endless litigation, and the potential loss of competitive position(s) as integral and critical components of an ecological approach (Coddington 1993; Frause & Colehour 1994). Additionally, firms should thoroughly consider the implications of a potential loss of corporate and product credibility due to perceptions of inaction (i.e., totally bypassing any environmental initiative) or forced compliance (i.e., environmental actions are pursued only when mandated by regulations).

Kleiner (1990) asserts that people who try to radically change corporations from within are often stymied. "Corporate culture and political pressures provide almost insurmountable resistance against any sudden and even enlightened change" (Frause & Colehour 1994, p. 110). Frause & Colehour (1994) advocate that perhaps the solution to this dilemma lies between "saving it all" (limits to growth environmentalism) and "using it all" (unbridled capitalism). The issue then becomes one of educating managers along the lines of cost-benefit on the one hand, and along the lines of social responsibility or the role and obligations that organizations have as active participants of the social system within which they operate.

While a significant number of American consumers could be considered as potentially "green," marketers are still cautious in approaching this segment. In 1991, a *Wall Street Journal*/NBC News survey reported that 46 percent of American consumers bought products based on the manufacturer's or product's environmental reputation within the last six months (Frankel 1992). Likewise, Gallup surveys conclude that more than 75 percent of American consumers factor in environmentalism in buying decisions (Kleiner 1991). More recently, however, the 1996 Green Gauge Report released by Roper Starch Worldwide (US) showed that the percentage of Americans willing to pay more for environmental products has declined from 11% in 1986 to 5%. As Ottman & Terry

(1998) point out "marketing greener products will have to entail more than attaching a green label or featuring images of wildlife in media advertisements!" The crux lies in developing environmentally sound products for which consumers believe there is value added, and therefore, they will buy. In developing value-added on ecological bases, organizational leaders would have to establish a level of environmental commitment that is most suitable and feasible given the conditions that the organization faces.

Companies that have adopted some type of environmental accountability have found some benefits in the adoption of an ecological approach. Some of the activities that have been implemented include: (1) building consumer demand for green products (e.g., Rubbermaid's litterless lunch box); (2) spending revenues to educate buyers (e.g., First Brands' informational brochures such as "The Good Environment Guide"); and, (3) building new infrastructure to facilitate recycling (e.g., Kraft-General Foods' recycled plastic for its salad dressing) and prevent pollution (e.g., 3M's Pollution Prevention Pays program; the first eco-mall in Santa Monica). Being branded a green company can be potentially beneficial to business organizations. The green image generates a more positive public image which can, in turn, enhance sales, increase stock prices, and open access to public capital markets (Marshall & Mayer 1992). A green image may enhance the overall perception of product quality and when coupled with the environmental benefits inherent in a product and/or its use may provide the added value that consumers would favor (Ottman & Terry 1998). However, note that even seemingly "simple" things have a significant effect on the marketing of certain products. For example, product managers need to be aware that several states, including California, New York and Rhode Island, are controlling the use of environmental terms (e.g., "recyclable" and "recycled content") in product labels (Marshall & Mayer 1992). Changes in regulations will influence marketing decisions and strategies that an organization may pursue.

Consideration for the natural environment will have to be embedded in the product mix if a fully integrated green marketing strategy is to be achieved. The constraints imposed by the limited availability of natural resources will mandate a reorientation in the design, development and management of products and services. In this regard, Lozada & Mintu (1995) suggest that one of the most important impacts of environmentalism on marketing is in the management of creativity and innovation, and, particularly in the [new] product management function. Critical tasks regarding product decisions, including design and development, full commercialization (including issues of distribution, advertising and public relations, and pricing), and product or package disposal, would have to be reassessed (Lozada & Mintu 1995).

Certainly, the environment as a limited resource is forcing us to face the unique challenge as citizens of the world. A major concern stems from the accelerated way in which our planet's natural assets are being depleted. The actions of businesses, governments, and the public at large all contribute to this problem. Lozada & Mintu (1995) suggest that the actions of, and interaction between these three sectors can not only be a cause of environmental problems, but it also where creative solutions are to be found. As Ottman & Terry (1998) suggest the added values that the direct benefits of greener products have (e.g., money savings or the potential for self actualization) should not be overlooked.

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