An Analysis of the Wealth Effects of Green Marketing Strategies

Lynette Knowles Mathur
SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE

Ike Mathur
SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE

Event study methodology is used to examine the wealth effects, or stock price reactions, to corporate announcements of green marketing activities. Two procedures for measuring stock price reactions and two different tests of significance are used in the study. The results for the sample of 73 firms show that the market value for the average firm in the sample declines by 3.14% during the period from 10 days prior to 10 days after the news is announced. Announcements related to green products, recycling efforts, and appointments of environmental policy managers result in insignificant stock price reactions. However, announcements for green promotional efforts produce significantly negative stock price reactions. Sampling by financial and operational characteristics shows that firms with higher growth in earnings, larger firms, and firms with higher advertising-to-sales ratios experience relatively less negative stock price reactions. Managerial implications of the results and directions for future research are also presented. J BUSN RES 2000. 50.193–200. *© 2000 Elsevier Science Inc. All rights reserved.*

In recent years, environmentalism, or the green movement, in the United States has grown in relative strength as a mainstream concern (Ottman, 1993). The green movement has been viewed as a significant social movement in recent years (Banerjee, Gulas, and Iyer, 1995). Numerous aspects of everyday life, such as politics, consumerism, technology, product purchases and consumption, marketing, manufacturing, and resources (Zinkhan and Carlson, 1995; Zimmer, Stafford, and Stafford, 1994), are affected by the movement. The effects on everyday life are also widespread, because in a global economy, changes contributing to development of environmental policies and strategies are not limited to national boundaries. Some of the changes in the United States result from Americans' increasing perceptions of themselves as environmentalists (Carlson, Grove, and Kangun, 1993; Shrum, McCarty, and Lowrey, 1995). As these perceptions have increased, the green movement has received a great degree of attention by the public in such areas as the media, the political arena, special interest groups, and consumers (Vandermerwe and Oliff, 1990; Zimmer, Stafford, and Stafford, 1994).

The movement has also begun to receive more attention by managers who are increasingly moving from defensive and reactive responses to the concern toward pro-active actions (Vandermerwe and Oliff, 1990). Pro-active actions related to environmental issues is a subset of the well-documented area of environmental management (see Clark, Varadarajan, and Pride, 1994), which has been successfully applied to marketing (e.g., the seminal article by Zeithaml and Zeithaml, 1984). Environmental management assumes that firms can, to a degree, create, shape, or manage, operating environments. It attempts to control, change, influence, or adapt firm inputs over which external groups have some amount of control.

Firms' actions relative to environmental issues should consider the firms' relationships to numerous stakeholder groups, such as stockholders, employees, customers, suppliers, financial institutions, governments, interest groups, and the general public. Stakeholders may feel that management actions, such as those related to the green movement, reflect the perceptions of various stakeholders (Zinkhan and Carlson, 1995). However, as Zinkhan and Carlson (1995) point out, not all stakeholder groups will concurrently be pleased with management actions. Also, as Clark, Varadarajan, and Pride (1994, p. 35) state, "[t]he extent to which the interests of businesses are compatible with, or opposed to, the interests of other individuals, groups, and organizations is a point of much controversy."

To ensure that they are not being mislead by firms, stakeholders may use different methods with which to oversee management actions regarding the environment (Coddington, 1993). Government, at all levels, impose new laws, regulations, and proposals on firms in response to increasing environmental concern, and may suggest possibly greater controls

Address correspondence to: Lynette Knowles Mathur, Department of Marketing, Southern Illinois University, Carbondale, IL 62901-4629.

Journal of Business Research 50, 193–200 (2000)

655 Avenue of the Americas, New York, NY 10010

ISSN 0148-2963/00/$–see front matter
PII S0148-2963(99)00032-6

should firms not modify behaviors. Consumers tend to respond more favorably to firms with environmentally conscious images (Carlson, Grove, and Kangun, 1993), yet an overwhelming percent of the public feels that firms are not sufficiently concerned about important environmental issues (Davis, 1994). Capital markets often demand "green audits" of firms; firms that do not have environmentally sound programs in place may be denied funds.

A significant stakeholder in the publicly-held corporation is the stockholder. Azzone and Bertele (1994) note that stockholders, either directly or through "ethical" funds, may limit their investments to firms with environmental performance. Anecdotal evidence by Ottman (1993) suggests that, by greening their operations, involving their employees, and communicating their goals to all corporate stakeholders, companies may be able to achieve cost savings, gains in employee morale, and happier shareholders.

Of special interest is green marketing, or marketing strategies that "appeal to the needs and desires of environmentally concerned consumers" (Zinkhan and Carlson, 1995, p. 1). This article extends the literature to date on green marketing [see, e.g., the articles in the special issue of *Journal of Advertising* 24(2)(1995)]. The literature on this topic has sought to extend the conceptual and ethical dimensions of environmental marketing, has identified corporate strategies for green marketing, has analyzed environmental advertising claims, and has tried to identify consumer responses to corporate green marketing. While much of this research casts green marketing in a positive light, some researchers have adopted a more cautionary approach. For example, Casey (1992) points out that consumers are unwilling to pay more for green products. Similarly, Easterling, Miller, and Weinberger (1995) point out that, regarding green marketing, there is a gap between consumer intent and consumer action.

The above discussion suggests that there is no clear evidence regarding the effectiveness of corporate green marketing strategies. This article seeks to fill this void in the literature by examining the stock price reactions to corporate announcements related to green marketing, a topic that has not been empirically researched previously. Four categories of green marketing—green products, recycling, green promotions, and appointments of environmental policy managers—are analyzed in detail. The analysis is conducted through the use of event study methodology, which is a causal analytical procedure (see, e.g., Brown and Warner, 1985).

Research Issues

Environmental issues had previously been primarily viewed by managers as constraints or operating problems and, thus, managers' approaches in dealing with them had usually been reactive (Azzone and Bertele, 1994). More recently, pro-active changes in management attitudes toward the issues have been taking place with individual firms (Ottman, 1993). Only the strong commitment of senior management, through pro-active changes, can cause the firm's stakeholders to realize that the firm has sincerely made the green movement a priority (Ottman, 1993). Based on this discussion, the null hypothesis can be stated as:

H1: Announcements of green marketing activities will not result in stock price reactions. The alternative hypothesis is that announcements of green marketing strategies will not be viewed favorably by investors.

Within functional areas a firm may approach the green movement at differing degrees, perhaps depending on management's strength of commitment to the green movement and its dedication of sufficient resources to the relevant activities. For example, Mendleson and Polonsky (1995, p. 4) indicate that green marketing initiatives may range from "repositioning existing products without changing product composition" to "modifying existing products to be less environmentally harmful" to "modifying the entire corporate culture to ensure that environmental issues are integrated into all operational aspects" to "the formation of new companies that target green consumers and only produce green products." Bhat (1993, p. 26) indicates that a green product can seldom withstand public scrutiny unless green design was involved, which would affect input materials, manufacturing processes, packaging, and disposal methods. The null hypothesis can be stated as:

H2: No stock price reaction will be observed for announcements related to green products.

Consumers may well provide not only opportunities, but also challenges, for firms concerned with environmentalism. While environmental compatibility of products may be a factor in consumer buying behavior (Azzone and Bertele, 1994), consumer interest in "green" products has not strongly and successfully translated into actual purchases of green products (Easterling, Miller, and Weinberger, 1995). Some studies indicate consumers are willing to pay more for environmentally friendly products (Mendleson and Polonsky, 1995), while others report that consumers are unwilling to pay a premium for green products or green packaging (Kangun, Carlson, and Grove, 1991). The discussion here suggests:

H3: Significant stock price reactions will not be observed for announcements related to recycling efforts.

Stakeholder interest in firms claiming to be environmentally responsive is affected by information they receive about green products or other business aspects related to the green movement. Complete, balanced, objective, and truthful information on environmental issues is strongly valued by stakeholders (Bennet, Freierman, and George, 1993). Information about firms' activities related to the movement is sometimes provided by one stakeholder group, such as environmental activists (Gillespie, 1992), to another, such as consumers.