Market for Green Signaling

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ABSTRACT

This paper describes the returns from "environmental goodness signaling" or "green signaling" as a major factor in environmentalism. The goodness returns from green signaling consists of a warm glow or a good reputation in society, material benefits, or a combination of the two. Some examples of green signaling are consumers purchasing green products, producers adopting environmentally friendly manufacturing techniques, and politicians supporting and working for environmental causes. A market for green signals is formed by the interaction between the suppliers and demanders of green signals. "Good" praise in society is a simple incentive that can make the market for green signaling work. This market can be an efficient and cost-effective way of managing our natural resources and the environment.

INTRODUCTION

The market for environmental services such as wetland conservation, water purification, carbon sequestration, and biodiversity is becoming popular. Interest from business, government agencies, landowners and conservation organizations is supplying new impetus for developing market-based mechanisms for ecosystem services. Another important market associated with environmental services that has not been explicitly addressed in literature is the market for "Environmental goodness signaling" or "green signaling," which can internalize externalities. Such markets include not only green labeling of forest and other products but also individual donations and business contributions to environmental causes.

Nelson and Greene (2003) introduced a concept of goodness signaling by individuals, arguing that people intend to express their support for "good" causes by showing more care for an amenity than its use value. Based on evolutionary theory, the reward for signaling goodness to others is higher survival probability because of group affiliation. In this paper we use the term "environmental goodness signaling" or "green signaling" to describe the phenomenon of individuals demonstrating concern for the environment. The payoff for signaling environmental goodness can be monetary, a special recognition in the society, or both. Of course, green signaling is not free. Therefore, the individuals or firms who signal green calculate the benefits and costs or economise green signaling: how much green they need to signal and how cost effective it is. They can produce the green signals themselves or use the market. Usually this issue is examined from the perspective of corporate social responsibility and marketing strategy. In this paper we intend to show, from an economic perspective, that there is a demand for and supply of environmental goodness signals. The interaction between demand and supply creates a market for green signaling in the society. We describe this market using the examples of three social agents: consumers, producers and politicians. This discussion can, however, be extended to anyone.

GREEN SIGNALING: DEMAND AND SUPPLY

Individual Consumers

Embracing a concern for the environment is often called "green orientation" (Vlosky, Ozanne, & Fontenot, 1999). Individual agents in the society signal their environmental goodness by adopting a green orientation. Much of the research on environmental behavior has used altruism to explain environmental behavior (Schultz & Zelezny, 2003). Etzioni (1986), however, asserts that people search for two irreducible sources of well-being: morality and pleasure. Andreoni's (1989) model of giving differentiates "pure" from "impure" altruism. He defines impure altruistic action as partially motivated by "warm glow" or pride in the altruistic act; it is not entirely motivated by concern for the beneficiary's welfare. Merchant (1992), Stern, Dietz, and Kalof (1993), and Stern and Dietz (1994) argue that there are at least three reasons for environmental concern: self-interest, humanistic altruism, and biospheric altruism. Self-interest emerges from the fact that environmental concern influences individuals and those they care about. The other two reasons refer to altruism directed toward other people and an altruism directed toward other species or ecosystems. In this paper we argue that a major driving force behind environmentalism is the socio-economic returns from environmental goodness signaling. The goodness returns from green signaling consists of a warm glow or a good reputation, material benefits, or a combination.

Consumers signal environmental goodness by purchasing green products. According to a Gallup survey in 1991, as many as 90% of US consumers considered themselves environmentalists (McDaniel & Rylander, 1993). Freeman (1989) reported that a majority of consumers claimed that environmental concerns affected their consumption behavior, even with a higher price. In the case of green certified products, returns to a consumer's goodness signal consist only of a good reputation or warm glow. Satisfaction comes from the fact that other people consider a green consumer a "good" person. By buying green certified products the consumer derives utility both from the product and from the certification. The utility derived from certification is actually the utility from altruism and/or from good reputation. The price of certification is the extra amount that the consumer pays for a green certified product. The consumer maximizes this utility subject to his or her budget and the equilibrium is given by the equality of the ratio of marginal utilities and the ratio of prices. Thus the consumers signal goodness by demanding green signal (green certification) from the manufacturers.

Another example of green signaling can be found in recycling behavior. Several factors, such as attitude towards the environment, demographic features, personal and social norms, self-identity, and neighborhood identification (Schultz, Oskamp, & Mainieri 1995; Nigbur, Lyons, & Uzzell 2009), have been used to explain individual recycling behavior. We argue that signaling goodness is a major factor in recycling behavior. If a person's recycling behavior is not visible to others, he or she may be less interested in recycling. The appreciation from others in the society that he or she is environmental friendly motivates a person to participate in recycling.

Following Nelson and Greene (2003) we suggest that the externalities generated by an individual's purchase of a green product or recycling behavior constitute a form of social goodness signal. Individuals who engage in this type of behavior convince other members of their community that they conform to its norms and, as such, are viable and valuable members. The community appreciates these people, much more than it does people who do not engage in such signaling. Since consumption of green products and recycling are highly visible in neighborhoods, individuals have both an incentive to produce the signal and a disincentive to free ride.

Producers and Entrepreneurs

Many companies today like to be seen as "green" (Saha & Darnton, 2005). Company administrators are communicating to the public the "green" characteristics of their products, services, manufacturing processes, and activities through marketing and promotion, and company policies and reports. This is evident in the leading retailer of specialty coffee in the world Starbucks' environmental efforts "from bean to cup" (Starbucks Coffee Company, 2005). Another good example is environmentally certified wood products. Environmental certification programs are becoming more important as a market-based instrument for linking production and consumer purchases (Vlosky, Ozanne, & Fontenot, 1999). In fact, a survey of non-service firms shows that environmental management, which is becoming crucial in corporate strategy, is being taken as a field of competition and no longer as a simple matter of compliance (Lent & Wells, 1994). A "green" company is likely to generate a positive public image, which can increase sales (Marshall and Mayer 1992), given the consumer demand for green products. A green image can also build brand loyalty by increasing consumer attraction to a company or a product (Ginsberg & Bloom, 2004).

Numerous other cases of green signaling are evident in today's business world. An interesting example is the clothing and fashion industry. In New York Fashion Week's "Future-Fashion" show in January, 2008 world-famous designer companies like Versace and Calvin Klein presented clothing cut from 'sasawashi' (a Japanese fabric made from paper and herbs), peace silk (a process that allows silkworms to live their full life cycle), and hemp, instead of traditional fabrics like silk and cashmere (Kuchment, 2008). This show inspired many top designers to use "sustainable fabrics" for the first time. The specialty store Barneys has decided to dedicate its Christmas windows and catalog to "green fashion." Wal-Mart is going to take a major initiative in order to help cotton farmers go organic by buying transitional cotton at higher prices. Needless to say, all these initiatives can be explained by the green signaling equilibrium.

Business schools are teaching future entrepreneurs how to make money by helping to save the environment (Brant & Ohtake, 2008). Ash Upadhyaya, a student of environmentally sustainable business at the Stanford Graduate School of Business, says, "Am I really driven to do this by my values? The honest answer is no." According to Ash, "It just makes good business sense to be sustainable." In Aspen Institute's survey, only 34% of business schools offered any green courses in 2001. That figure had risen to 63% in 2007.

Gates (2008) emphasizes the importance of publicity and social recognition for business organizations. Gates argues that businesses can benefit by acquiring public recognition and enhanced reputation by serving the

poor. By serving the poor the companies can also attract new customers that are eager to be a part of a good cause. According to Gates, the younger generation desires to work for organizations that they can feel good about, and thus by doing good work the companies would also be able to recruit and retain good employees. Gates finds that pharmaceutical companies are ready to work more for the poor if they receive credit for their work. Although Gates's discussion is on a different subject, we can use his arguments and findings to establish the value of reputation to producers as a motivation for green signaling.

The social and environmental responsibility of business seems more specious. No businesspeople would claim to be socially irresponsible, but would never take it seriously if being socially responsible would harm their profits. "A corporation is an artificial person and in this sense may have artificial responsibilities, but 'business' as a whole cannot be said to have responsibilities, even in this vague sense" (Friedman, 1970). Expressing social and environmental responsibility is a marketing strategy that creates market value.

A green producer sells a bundle of goods together: the original product and the "green" stamp on it. Let us consider, for example, a green-certified woods product manufacturer. For simplicity, let us assume that the quality of the certified wood, produced using sustainable forest management practices, is identical to that of the non-certified wood. In fact, the quality of the certified wood should at least be the same, if not better than non-certified wood. An inferior quality can reduce demand for the product and no rational producer should choose such a production process. Thus, the manufacturer previously used to sell only wood, but now he sells the wood with the certification.

Signaling goodness increases monetary profit of the manufacturer in two ways. First, it increases sales of the product, which increases the profit that he/she had earned from the non-certified wood previously. Second, the manufacturer can make additional profit from selling the green certification. Apart from the monetary gains, the manufacturer obtains a special recognition in the society as working for good causes, which ensures his long-term survival in the industry.

Politicians

Protection of the environment is now a "consensus issue" for the politicians (Schwartz, 1990). The emergence of environmental lobby groups has become a prominent feature of the U.S. politics (Wapner, 1996). Riddel (2003) finds that the environmental political action committees (E-PACs) donate to candidates that are both likely to win election and to support environmental causes once elected. According to Adler (2008), American citizens were looking for a presidential candidate for the election in 2009 who would take environmental problems "very seriously." According to him, the environment was a leading issue in the election cycle. The percentage of voters taking a candidate's green credentials into account increased from 11 in 2005 to 30 in 2007.

Politicians have responded to the demand for environmental concern by signaling environmental goodness. All the presidential candidates for the last election were trying to beat each other with their agendas of how to deal with issues like greenhouse-gas emissions, renewable energy, biofuels, coal, nuclear energy, and fuel-efficiency standards. Thus a politician supplies green signal, society demands it and pays for it in terms of giving the politician a "good" social recognition. A voter signals goodness to the rest of society by supporting a green candidate. Although the immediate return to a politician working for environmental causes is good recognition, the ultimate payoff that would satisfy the politician is winning the election.

MARKET FOR GREEN SIGNALING

In this section we describe the mechanism of the market for green signals. Since the green signaling has its socioeconomic value, demand and supply emerge. A market for green signals is formed by the interaction between the suppliers and demanders of green signals. As in the traditional economic theory of buyers and sellers, most economic agents act as both demanders and suppliers of green signals. However, for the sake of simplicity it is helpful to think of them as demanders when they demand green signals, and suppliers when they supply green signals.

The market for green signaling can function in various ways. In the simplest form of the market, the supplier of green signals supplies either only a green signal (e.g., charity for green causes) or a green signal bundled with the original good or service (e.g., certified wood products). The supplier expects to receive a return for being green. The price of green signal is the difference in the price of the green good or service and the price of the

traditional good or service. We call this price the "green price differential." The green price differential consists of the opportunity costs of pure altruistic, moral or ethical behavior, opportunity costs involved with receiving a 'warm glow' or a good reputation, direct monetary costs of being green, or any combination. The willingness to pay for the green price differential by the demanders of green signals stems either from their altruistic behavior or from their desire for warm glow or a special reputation. The interaction between the demanders and suppliers creates a market for green signaling. The suppliers can profit from green signaling only when the market price for green signals is higher than the actual green price differential.

In the case of certified wood products, for example, the manufacturer supplies goodness signals and the rest of the society demands it for their own benefit. It is not difficult to realize that the rest of the society benefits from improved forest management practices. There is, however, a cost of signaling goodness. In this case the cost is the increased cost of producing green wood products and obtaining certification. The opportunity cost of good reputation is the cost that the firm incurs for not being able to engage in other profitable activities that it would be able to profit from otherwise. The manufacturer would make his supply decisions by maximizing his profits subject to his or her cost constraint. The rest of the society demands goodness signals by maximizing their utility subject to their budget. The demand and supply would determine the optimal level of goodness signal, and thus the optimal level of green orientation.

We assume that the market for green signals is perfectly competitive and thus a single market price prevails. Different suppliers provide different forms of green signals. However, the unit value of green signals from different suppliers is the same to the demanders. The price differential for green certified wood products is perhaps much higher than the price differential for being supportive of a green politician. But a demander of green signals can be green more directly and by a larger extent by buying certified green products. In other words, the green-certified wood product contains larger quantity of green signals than support for a green politician. The unit price of green signals is the same in both cases.

Non-governmental organizations (NGO) working for environmental causes play a special role in bridging demand and supply of green signals. For example, Starbucks has collaborated with the international NGO Conservation International since 1998 in order to encourage the use of ecologically sound growing practices that protect biodiversity and to provide economic opportunities for coffee farmers (Starbucks Coffee Company, 2005). On the demand side, NGOs receive donations and other payments, then transfer them to conservation and other environmental protection causes. Simultaneously, the NGOs use media to inform society about the environmental goodwill of the donors, firms, associations and even the government. A conceptual market for environmental goodness signaling is illustrated in Figure 1. In this figure the direction of the arrows indicate the flow of green signals.

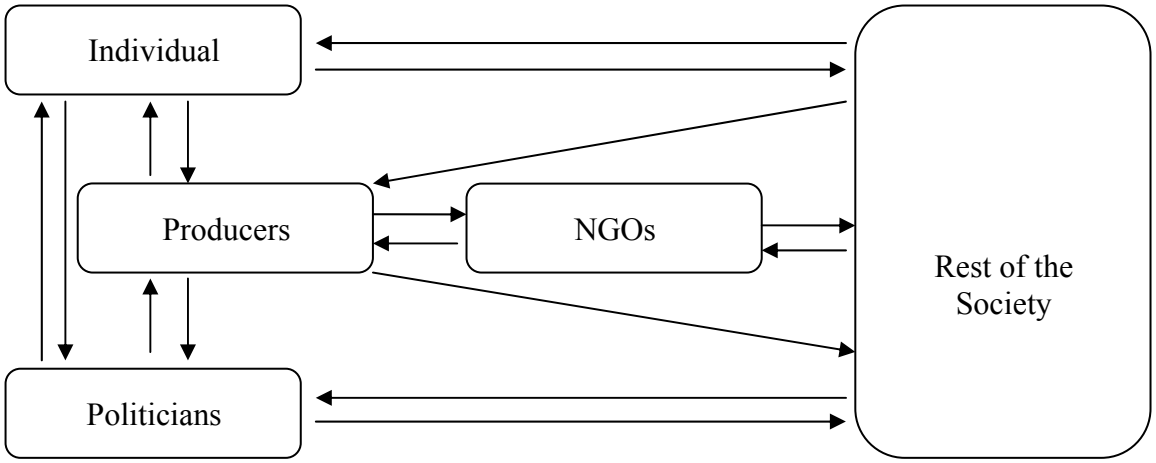

Figure 1. Flow of signals in the market for green signaling.

It should be noted here that the market for green signaling is not the same as the "green market" defined by some authors (see, Ferraro, Uchida, & Conrad 2005; Kotchen, 2006). Public goods can be privately provided by green markets. A green product is considered as an "impure" public good which consists of a private good (e.g., green certified wood product) and a jointly produced public good (e.g., environmental protection). Consumers pay a premium for green products which represents the values of the environmental services. This study analyzes the market for green signals and not the market for green products. The market for green signals is not limited to the producers and consumers; it is open to all individual agents.

CONCLUSIONS AND POLICY IMPLICATIONS

This paper conceptualizes a market for environmental goodness signaling or green signaling. To conclude, a major reason why people become 'green' is to signal environmental goodness. There is demand for and supply of environmental goodness signaling which forms a signaling market. The returns to signaling goodness can be monetary or special recognition. In any case, however, society as a whole benefits from signaling environmental goodness by individuals. The green signaling market can internalize the externalities of environmental services and thus can improve social welfare. Although we have discussed only three types of people to describe the functioning of demand and supply, these arguments can be easily generalized for any group of individuals, and any types of goods and services.

Our discussion in this paper focuses only on benefits in terms of getting socially recognized and monetary benefits of green orientation. It is not true that people care for the environment only to signal goodness. In many cases, certainly, one of the reasons behind green orientation is true love of nature and concern for future generations. However, we would like to emphasize that this reason is less significant and less immediate than the other reasons discussed in this paper. People usually make their decisions, whether it is money or time, based on the utility derived in the short-run, or at least in the predictable long-run. The returns from true love for the nature can only be realized in a very long period of time and they are very uncertain. It is very likely that the changes would not occur during the lifetime of a nature lover. We do not believe that a rational human being would make a significant investment with such uncertain benefits. Morality can be a reason for green orientation, but it cannot be main reason. Ginsberg and Bloom's (2004) arguments confirm the claim that we make here.

Ginsberg and Bloom (2004) stated that consumers almost never sacrifice their needs or desires for the sake of the environment. The authors give the example of the Ford Think, a two-seat electric car. The Think required six hours of recharging after fifty miles of driving. This would entail a major change in driving behavior. Ford decided to scrap the car in response to the lack of demand. Thus consumers were not ready to change their habits for the eco-friendly car. This example establishes the fact that green orientation is not just a mere case of altruism.

The market has been very successful in providing goods and service and improving the welfare of human beings. One important aspect that we can use is to foster and develop a market for environmental goodness signaling. In order for this market to work, the social agents need to be aware of the environmental problems and the goodness attached to caring for the environment. An individual would not signal environmental goodness if he or she is not aware of the goodness returns. Although people are more concerned about the environment, they are not yet significantly aware of green activities and goodness returns. For example, Kuchment (2008) reports that only 18% of consumers are aware of green fashion. Although numbers are increasing, 70% of U.S. voters do not take into account a candidate's green credentials yet (Adler, 2008). Increased awareness about green activities and the goodness in being concerned for the environment can enhance attitude changes which, in turn, can result in behavior changes.

Policymakers may wish to use advertising and awareness programs to educate people of environmental problems and especially the goodness and prestige associated with solving these problems. Environmentally friendly behavior for rewards (or punishment) does not last if the rewards (or punishments) are removed (De Young, 1984) and they are costly to monitor. In contrast, a social appreciation for being environmentally friendly can be more cost- effective. Gates (2008) asserts that a straightforward incentive for companies to be "good" is public praise, and the government and nonprofit organizations can create this incentive. Rather than passing more laws, a fully functioning market for green signaling can be created to save our natural resources and the environment.

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