

**CONSUMERS' GREEN ORIENTATION: CONCEPTUALIZING AND MEASURING
THE EFFECTS OF GREEN MARKETING STRATEGIES**

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ABSTRACT

The focus of the research is largely on the question of whether organizations pursuing sustainable marketing strategies are best served encouraging consumers to self-identify themselves as sustainable or endeavoring to increase consumers' belief that the organization pursuing sustainable marketing strategies is itself sustainable. In large measure, the intent of the research presented is to assess whether the marketing efforts of organizations pursuing sustainable marketing strategies should be internal or external. That is, how do organizations successfully enact strategies that result in positive attitudes towards sustainable products and greater intentions to purchase?

The results of two studies suggest that consumers in large numbers self-identify as being green yet fail to reflect that identity in their attitudes towards sustainable products. In contrast, perceived firm greenness exhibits a significant and substantial influence on those attitudes. The effects of three moderators are considered whereby each strengthens the influence of perceived firm greenness on sustainable product attitudes. A follow up qualitative study confirms that consumers largely identify themselves as sustainable, that they rely heavily on the internet for information, want information as to how a product is sustainable, yet still are price sensitive when evaluating sustainable products. The managerial and research implications of the findings are identified and discussed, as are the limitations imposed on the study.

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Academics, practitioners, and public officials face a dilemma as they consider the relevance of strategies designed to encourage consumers to purchase sustainable products and engage in activities that promote and preserve the environment's increasingly scarce resources. The underlying cause of the consternation faced by organizations is the inconsistency between what consumers are purported to believe and the manner in which they behave. Specifically, it is suggested that consumers exhibit serious environmental concern as more than 75 percent of U.S. adults consider themselves "environmentalists" (Osterhus 1997). However, in the most recent year, it is also estimated that 160 million US consumers failed to purchase a sustainable product (Stengel 2009). Thus, for those responsible for identifying and enacting marketing strategies, as well as those responsible for public policy, consumers' attitudes towards the environment seemingly do not translate into sustainable purchasing behavior and other sustainable activities (Kaiser 1998; Kaiser, Wölfing, and Fuhrer 1999). The attitude-behavior gap evident in consumers' sustainable¹ behaviors is of great importance to organizations as they endeavor to develop strategies that maintain, and even enhance, organizational performance while also answering the calls of multiple parties for products that protect and preserve the environment. The gap is also important to public officials whose responsibility it is to identify and enact strategies that ensure that organizations make an effort to sustain the environment.

The current study addresses this gap in the marketing literature by providing an insightful assessment of consumers' beliefs about the environment (consumers' green orientation), and the

¹ The terms sustainable, green, and environmentally friendly are used interchangeably in the paper.

effect of consumers' perceptions of the sustainable products and activities of a firm (perceived firm greenness) on their attitude towards sustainable products (green product attitude) and, in turn, the effect of green product attitude on their intention to purchase sustainable goods and services (green purchase intentions (see Figure 1).

The objective of this study is to develop a more complete understanding of how consumers' attitudes towards the sustainable products and activities of firms impact the success of sustainable marketing strategies. A revised conceptualization of how consumers' beliefs about the environment and attitudes towards sustainable organizations influence attitudes towards sustainable products is developed. In addition, it is suggested that consumers' attitude towards sustainable products are moderated by the sustainable actions in which they participate, consumers' self-perceived level of sustainable innovativeness, and social influences (e.g. interpersonal influences such as opinions of family, friends, and others).

The paper contributes to theory and practice by offering an initial consideration of a subset of the multiple influences considered in the evaluation of sustainable marketing strategies. For organizations to dismiss sustainable marketing strategies as ineffectual based on the fact that sustainable product sales appear to lag behind consumers' attitudes towards sustainable products and practices would be a mistake. Theory suggests that consumers' green orientation is an important consideration in marketplace decisions, but not the sole criteria for determining whether consumers intend to purchase sustainable goods and services. The research presented suggests that marketers need to also consider the direct effects of consumers' perceptions of the sustainable products and activities of organizations, as well as the moderating influence of social factors (e.g. interpersonal influences), self-identity (e.g. self-perceived green innovativeness), and consumers' sustainable activities.

The paper is presented in multiple sections. First, the conceptual framework is identified and discussed. Each of the constructs investigated, as well as the moderators, are considered in the discussion of the Conceptual Framework section. Next, the Research Methodology is described, followed by the presentation of the results. The General Discussion is then presented including the Implications for Organizations and Managers, Theory and Research Implications, and the Conclusions and Limitations.

Insert Figure 1 About Here

Conceptual Framework

The intent of the research presented is to enhance academics, practitioners, and public policy makers understanding of how consumers' attitudes towards sustainable products and the sustainable products and activities of firms impact the success of sustainable marketing strategies. The current study expands on existing marketing theory in that the conceptualization identified (1) focuses on the role of consumers' attitude and (2) expands the domain of attitudes considered from simply attitude toward sustainable products and practices to also include attitudes towards sustainable organizations, as well as a set of moderating influences. The research reflects the growing concern related to the documented disconnect between consumers' general support of "sustainable" marketing efforts and their purchasing behavior. Specifically, the primary alternative explanation considered is that consumers' evaluation of firms offering sustainable products is also an important driver of consumers' attitudes toward sustainable products, as well as their purchase intentions. In addition, a set of possible moderators of the effects on consumers' green product attitude is also considered. The conceptualization developed is rooted in theory as is detailed below.

Consumers' Green Orientation

The model identified (see Figure 1) is intended to assist in better understanding why a consumer's attitude towards the environment (i.e. a consumer's green orientation) does not necessarily lead consumers to embrace sustainable products and practices (i.e. to have a positive affect on consumers' attitudes towards sustainable products). Thus, our consideration begins with the consumer green orientation scale. Although a universally agreed upon definition of a "green consumer" has yet to be borne out of a vast and fragmented literature, most researchers consider a green consumer to have a strong positive attitude toward preserving the environment. More specifically, general positive feelings or beliefs about different sustainability issues are considered the essence of environmental concern (Crosby and Gill 1981, Gill, Crosby, and Taylor 1986; Minton and Rose 1997; Van Liere and Dunlap 1981; Zimmer, Stafford and Stafford 1994). It is this general positive feeling, or set of beliefs, about the environment that is used in the current research to define what is meant by a consumer's green orientation.

Traditionally, sustainability research relies on demographic and lifestyle variables to conclude that consumers with a greater propensity toward sustainable behaviors (i.e. purchasers of sustainable products, those that support sustainable activities such as recycling and energy consumption, and individuals that deem themselves to be socially responsible) are younger, more educated, white, liberal, and female (Diamantopolous, Schlegelmilch, Sincovics, and Bohlen 2003; Zimmer, Stafford, and Stafford 1994). While categorizing consumers based on demographic and lifestyle measures may be useful, marketers have little ability to affect change in such characteristics. Thus, it is logical to suggest that those responsible for enacting sustainable, or green, marketing strategies look to the attitudes that underlie consumers' intentions to support and/or engage in sustainable behaviors and activities. In fact, research

indicates that attitude variables are more strongly linked to environmental consciousness than demographic measures (Kinnear, Taylor, and Ahmed 1974; Schwepker and Cornwell 1991).

The first step in developing a conceptual framework for the study is the identification of definitions and measures of the constructs considered in the research. Given the increased public focus on sustaining the environment and conserving natural resources, the abundance of research over the last two decades attempting to profile the “sustainable consumer” is no surprise. What is surprising is the absence of a reliable and valid measurement scale to assess consumers’ attitudes towards sustainable products and practices, or what is referred to in the current research as consumers’ green orientation. Researchers in disciplines from psychology (Maloney, Ward and Braucht 1975; Stern and Oskamp 1987), environmental studies (Dunlap and VanLiere 1978; Norlund and Garvill 2002; Vining and Ebreo 1990), business research (Balderjahn 1988), and marketing (Drumwright 1994; McCarty and Shrum 1994; Schwepker and Cornwell 1991) attempt to conceptualize green consumer orientation. However, the majority of the studies rely upon demographics as the independent variable (e.g. Diamantopolous, Schlegelmilch, Sinovics and Bohlen 2003). Using demographic variables to describe a consumer’s green orientation, however, leads to inconsistent links between pro-environmental concern and dependent variables of interest, such pro-environmental attitudes and behaviors (e.g. Diamantopoulous, Schlegelmilch, Sinovics and Bohlen 2003; Kinnear et al. 1974; Schwepker and Cornwell 1991). Moreover, demographic variables provide meager insight relative to the development of sustainable marketing strategies.

The use of attitude scales as a measure of consumer greenness is not entirely new (e.g. Benton and Funkhouser 1994; Shrum, McCarty and Lowry 1995; Synodinos 1990). In fact, research has attempted to link a consumer’s green orientation with knowledge of the

consequences of being green (Bohlen, Schlegelmilch and Diamantopoulos 1993; Schahn 1990; Synodinos 1990). Much of this research concerns the perceived efficacy of environmental behaviors. Unfortunately, even highly positive attitudes towards the environment do not equate to consumer's following through on those attitudes to actually purchase green products and engage in green activities. For example, consumers who subscribe to and participate in blogs and forums to promote the environment have not been found to necessarily lead to pro-environmental (i.e. sustainable) behaviors, likely due to unknown antecedents to perceived consumer efficacy that have yet to be successfully identified (e.g. Bagozzi, Baumgartner, and Yi 1992, Choi and Kim 2005).

The importance of understanding what drives a consumer's attitudes towards sustainable products is underscored by the importance of the construct in determining whether an individual intends to, and actually, purchases environmentally sensitive goods and services. A consumer's green orientation, as defined by the current study, is the degree to which an individual identifies himself or herself as being a sustainable consumer whose decisions are considered sustainable and environmentally conscious. Specifically, social-identity theory acts as the basis for conceptualizing the consumer green orientation construct identified in the research model. Social-identity theory posits that people develop several "identities" in their daily lives depending upon the social structure under examination. In particular, it is suggested that consumers have a self-perceived, or self-referent, identity (Bagozzi 1992; Sirgy 1982; Sparks and Sheperd 1992; Tajfel 1982; Tajfel and Turner 1986). Research indicates that self-referent identification labeling (i.e. "I am an environmentalist") has a greater affect on behavior than does the effect of individual preferences. The literature also suggests that self-identification is a predictor of behavior towards an object or activity (i.e. towards sustainable products or

sustainable activities) (Bagozzi 1992; Biddle, Bank, and Slavings 1987; Charng, Pilavan, and Callero 1988; Sparks and Sheperd 1992; Webster 1975).

Thus, it appears that social-identity is a powerful theoretical construct that has utility in efforts to measure a consumer's green orientation. Consumers' identities are formed through self-referent identification labeling and arranged hierarchically in a consumer's mind depending upon the level of importance held by the respective identities. In other words, sustainable issues are more salient or important to a consumer that places great value on his/her identity as an environmentalist than a consumer whose identity as an environmentalist is lower in the hierarchy. Thus, the literature suggests that social-identity, or the strength of one's sustainable self-designation, provides unique insight into the definition of a consumer's green orientation and one that assists researchers and managers alike in identifying consumers that exhibit a positive attitude towards sustainable products and sustainable purchase intentions.

A measure of green orientation that is based on a consumer's self-identity as to their level of greenness provides a starting point from which the effect of other influences on green product attitude and other responses can be compared. This logically leads to the first hypothesis to be investigated as depicted in Figure 1. However, because of the inability of researchers to identify a significant association between consumers' attitude toward the environment (i.e. consumers' green orientation) and any number of outcomes, the direction of the relationship is not specified.

H₁: A consumer's green orientation is significantly related to his/her attitude towards sustainable products

Perceived Firm Greenness

Corporate Social Responsibility (CSR) is a form of self-regulation on the part of organizations wherein policies are developed and incorporated into an organization's practices to ensure ethical, legal, and/or environmental compliance (Drumwright 1994; Murray and Vogel 1997; Turban and Greening 1997). CSR is a strategy that firms make well known to the public in order to promote the firm as having employee and public interests at heart (Turban and Greening 1997). Being viewed as environmentally responsible is a major tenet of CSR efforts.

Corporate Social Responsibility is a broad concept that includes facets of organizational behavior that are beyond the scope of this study. In measuring consumer perceptions as they affect attitudes, intentions and behaviors, the current research includes only one facet of CSR, organizational environmental concern. According to Sen and Bhattacharya (2001), environmental CSR is defined as offering environment-friendly products and acting in an environmentally conscious manner. The Perceived Firm Greenness (PFG) measure investigated in the current research represents consumers' evaluation of the degree of environmental concern expressed by an organization.

Numerous studies suggest that firms that implement CSR programs enjoy benefits in the way of enhanced attitudes toward the company and its products, as well as increased sales and profits. These results indicate a link between positive attitude toward the firm and the purchase of a firm's products (Brown and Dacin 1997, Ellen, Mohr and Webb 2000). This outcome is not the same with all consumers, however, because a consumer's evaluation of an organization is said to depend on the degree of congruence between the firm's character and the consumer's personal values and beliefs (Sen and Bhattacharya 2001).

The results of empirical studies indicate only a weak link between pro-environmental attitudes (as conceptualized in past research as a consumer's attitude towards environmental issues) and sustainable behavior (Dunlap and Van Liere 1978; Gill, Crosby and Taylor 1986; Kaiser 1998; Kaiser, Wolfing and Fuhrer 1999). Thus, focusing on an individual's self-identity as a green consumer without consideration of other factors that might also influence or moderate the effect of enacted marketing strategies fails to adequately explain the success or failure of such efforts. Unfortunately, this approach (i.e. focusing on consumers' sustainable orientation) is still prevalent in research relative to the evaluation of sustainable products and behaviors. The current research conceptualizes consumers' attitudes towards sustainable products as being influenced not only by a consumer's general attitude toward sustainability (i.e. consumer's green orientation), but also by the attitude of consumers towards firms producing or offering sustainable goods and services (i.e. perceived firm greenness).

Thus, the second part of the conceptualization of the drivers of consumers' attitudes towards sustainable products focuses on individuals' beliefs about organizations offering sustainable goods and services. The research presented suggests that a more positive attitude towards sustainable products is likely if consumers believe the organization offering the green good or service is also perceived of as being green oriented. That is, the current research conceptualizes sustainable product attitudes as also being driven by perceived firm greenness, which is defined as consumers' perception of an organization as pro-sustainable or committed to acting in ways that protect and sustain the environment. Many literatures might be accessed to offer theoretical support for suggesting that consumers' feelings or beliefs about an organization determine their attitude towards that firm's products (e.g. trust or authenticity). However, the current study specifically focuses on consumers' attitude towards the organization as a producer

of sustainable products. To date, the importance of perceptions of a firm's greenness have not been investigated in the marketing literature. Thus, the second hypothesis investigated is identified below.

H₂: Perceived firm greenness is positively related to consumers' attitude towards sustainable products

The two constructs developed to assess the influence that marketing strategies have on consumers' attitudes towards sustainable products are intended to assist in explaining situations where, even though individuals have a positive attitude towards the environment (i.e. have a green oriented self-identity), they fail to act in a manner consistent with their attitude. In essence, the theory suggests one explanation for why consumers' attitudes towards the environment (i.e. consumers' green orientation) may not predict green product attitude is because the organization offering the sustainable product, or associated with the sustainable activity, may not be perceived favorably (i.e. perceived firm greenness). For example, not all green consumers are likely to have a positive attitude towards a firm perceived as not being environmentally friendly. Thus, when Clorox offers an environmentally friendly cleaning product (i.e. Greenworks cleaners), even consumers with a highly positive green orientation, may resist purchasing the product if they perceive the firm to have a history of non-green products or behaviors.

The rationale for the extended conceptualization of how consumers' attitudes drive pro-environmental behavior is rooted in the notion that such behaviors appear most commonly in individuals that exhibit a strong identification with an object (such as the environment) (Guagnano, Stern, and Dietz 1995; Schwartz 1994). Logically, pro-environmental behaviors can be encouraged or attenuated by strong consumer attitudes relative to the organizations associated with sustainable products or activities. That is, the current research presupposes that green

oriented consumers that perceive that an organization offering sustainable products does not share their views on the environment are likely to exhibit attenuated green purchasing intentions. This supports the second hypothesis as it was identified above.

The focus of the research is thus largely on the question of whether organizations pursuing sustainable marketing strategies are best served encouraging consumers to self-identify themselves as green, or endeavoring to increase consumers' belief that an organization enacting sustainable marketing strategies is, itself, sustainable. In large measure, the intent of the research presented is to assess whether the marketing efforts of organizations pursuing sustainable marketing strategies should be internal or external. That is, are organizations best served enacting strategies that result in increases in consumers' green orientation or in the perceived greenness of the firm? Because the intent of both of these alternative marketing strategies is to enhance consumers' green attitudes, one additional hypothesis is included to complete the testing of the research model depicted in Figure 1.

H₃: Green product attitudes are positively related to consumers' purchase intentions

Moderating Influences

Are firms better advised to concentrate their efforts on changing consumers' attitudes towards sustainability (i.e. enhancing consumers' beliefs that being green is the right thing to do and that it is good for them) or individuals' attitudes towards organizations producing sustainable products (i.e. this organization is doing what is right, not just what makes the firm more money)? The conceptualization of each of these two focal constructs (i.e. consumer green orientation and perceived firm greenness) is detailed above. Next, three variables hypothesized to moderate the

effects of the two focal variables (consumers' green orientation and perceived firm greenness) are discussed.

Interpersonal Influence

Consumer confidence is defined as the level of felt capability and assuredness a consumer experiences with respect to marketplace decisions (Bearden, Hardesty, and Rose 2001). Consumers gain confidence in their decisions based on several factors, such as information acquisition and processing and consideration set formation (Bearden, Hardesty and Rose 2001). In other words, the set of alternatives considered by a consumer, and the information that a consumer gathers about those goods or services, confirm that the consumer has made a logical and thoughtful decision, thereby allowing that consumer the confidence to continue with his/her purchase or action. While the confirmatory feedback can be internal (i.e. post-consumption satisfaction), social implications (external) are a powerful determinant of consumer confidence (Bearden, Hardesty and Rose 2001; Wright 1975). Consumers judge the potential of a positive outcome from the reactions of others (family, friends, and peers) and by seeking advice and/or information from individuals or groups with whom they identify (Bearden, Nettemeyer and Teel 1989; Petty and Cacioppo 1981; Wright 1975). The degree to which an individual is sensitive to social influence, or the opinions of others (external influence), defines that consumer's "susceptibility" to interpersonal influence and is defined by Bearden, Nettemeyer and Teel (1989) as follows:

"the need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others"(p. 474).

The need for consumers to feel confidence in their marketplace decisions likely stems from normative expectations (Park, Mothersbaugh and Feick 1994). More specifically, normative social influence is a vehicle through which consumers become members of social groups by identifying and complying with others' expectations with regard to the "right" behaviors (Asch 1956). For example, social influence describes the situation in which consumers adopt sustainable behaviors because family, friends or other important people expect such behaviors. Injunctive norms are those behaviors which are perceived to be approved of by other people. Failure to conform to those expected behaviors can result in social punishment, such as exclusion from the group (Deutch and Gerard 1955; Bearden, Hardesty and Rose 2001). Thus, consumers may choose to be sustainable in order to retain standing with individuals whose influence or approval is sought.

The role of interpersonal influence and social comparison is pervasive. People rely on friends, relatives, and peers for many reasons, one of which is for reassurance in everyday decisions. Green purchase decisions are no different from any other decision in daily life. That is, consumers construct reference groups through which social norms are communicated (Bearden and Etzel 1982; Escalas and Bettman 2005). Reference groups, individuals with similar interests and values, not only serve as a source of information, but also as a guide for behavior. A comparison of sorts occurs when a person identifies himself or herself as an environmentalist or green consumer. This comparison against referent others is how consumers validate their behaviors, both in the marketplace and in society in general (Bearden and Rose 1990; Calder and Burnkrant 1977; Festinger 1954; Moschis 1976). When sustainable behaviors are consistent with the interests and values of the referent group members, theory suggests that positive attitudes toward green products and sustainable behavioral intentions are more likely.

In the context of pro-environmental behavior, whether the goal is self-preservation or preservation of others, another species, or future generations, a person's predisposition to purchase a product is a direct function of the sensitivity to, or need for, social comparison (Bearden and Rose 1990). Recall that interpersonal influence is the "power" that a referent other has on an individual and the need for social comparison is the cause of that influence. The explanation behind the effectiveness of interpersonal influence lies in social comparison. Individuals have a need to compare themselves with others in order to determine how their behavior measures up to the expectations of a group to which they belong, or to which they perceive themselves to belong, or to which they aspire to belong. The desire to be accepted into a group with similar values, beliefs, and desires is a trait shared by all of humanity, albeit to varying degrees (Calder and Burnkrant 1977; Festinger 1954; Moschis 1976). Since it can be said that the need for social comparison is directly related to interpersonal influence (Bearden and Rose 1990), these constructs marry well with the current research.

The current study proposes that social comparison leading to interpersonal influence moderates the likelihood of a consumer purchasing green goods and services. That is, consumers considering the purchase of a green product compare their actions against what others in their referent group do when facing the same decision. Through interaction with others in the reference group, a consumer learns what is expected of people in the category and how they can demonstrate their values. Once a consumer knows what is expected, that individual is more likely to follow through with behaviors that are congruent with normative expectations in order to maintain their status as a group member. If values of the group embrace environmentalism, the consumer is motivated to have a favorable attitude to being green (i.e. to have a green orientation) and to green firms (i.e. perceived firm greenness) to prevent being ostracized from

that group. That is, an individual is more likely to routinely have a more positive attitude towards sustainable products, to buy sustainable products, or to engage in sustainable activities, if such actions confirm their membership in the group. A consumer is also most likely to perceive a firm as green if that perception is congruent with the perceptions of individuals and groups with whom s/he identifies.

Although people do feel a moral obligation to behave responsibly (Hines, Hungerford and Tomera 1986, 1987; Schwartz 1994), as proposed by research in altruism and personal normative behavior (Black, Stern and Elworth 1985; Guagnano, Stern and Dietz 1995; Hunecke, Blohbaum, Matthies and Hoyer 2001; Thorgersen 2006), interpersonal (group) influence is a strong catalyst for normative expectations (Asch 1956) regarding environmental concern (i.e. to moderate the influence of a sustainable personal (consumer) orientation on sustainable behaviors. In fact, when it comes to transforming environmental concern into behavior, interpersonal intervention (i.e. group influence) is found to explain significant variance not accounted for by other sources (Abrahamse and Steg 2009). This suggests the fourth research hypothesis investigated and identified in the research model (see Figure 1).

H₄: Susceptibility to Interpersonal Influence moderates the strength of the relationship between consumers' green orientation and green product attitude (H_{4a}) and between perceived firm greenness and green product attitude (H_{4b}).

Consumers' Green Innovativeness

The effect of innovativeness on the behavior of consumers has a long history in the marketing literature (e.g. Rogers 1962) and the construct has been referred to as "central" to explaining how new products achieve success in the marketplace (Midgley and Dowling 1993). Not only is innovation important as a theoretical explanation of the behavior of consumers, it is also a key consideration in identifying and enacting marketing strategies. For example, it has

been suggested that Gillette has a goal of generating at least 40 percent of its sales from products introduced in the most recent five years and Hewlett-Packard endeavors to generate 50 percent of its revenues from products no more than two years old.

Research further suggests that innovation orientation differs among consumers and across cultures (Steenkamp, Hofstede, and Wedel 1999). Increasingly, the new products introduced by US companies are sustainable and consumers once viewed as on the fringe of society for buying sustainable goods and services (i.e. “tree huggers”) are now considered trendy. Former politicians are making movies and winning a Nobel Prize promoting energy conservation, designers are using eco-friendly materials in clothing, and celebrities endorse sustainable products and lifestyles. In addition, hybrid cars are becoming a status symbol for consumers.

It appears obvious that sustainable products are perceived as innovative by some, if not most, consumers. Thus, it might be hypothesized that consumers’ considering themselves to be innovative are more likely to respond positively to sustainable products and to have a positive response to perceptions that firms are green. More specifically, if a green oriented consumer is a self-identified green innovator, the effect on consumers’ green product beliefs is likely to be moderated. That is, the green oriented consumer that is a self-identified green innovator is expected to have a more positive green product attitude than a non-innovator. For the consumer that perceives a firm to be sustainable, self-identified green innovators are also likely to exhibit more positive green product attitudes. As stated in the literature, “the construct innovative predisposition toward the product class” leads to shorter elapsed time to product adoption (Midgley and Dowling 1993). By implication, this also suggests that attitudes towards the product class are elevated. Thus, the following hypothesis is investigated.

H₅: Consumers' Green Innovativeness moderates the strength of the relationship between consumers' green orientation and green product attitude (H_{5a}) and between perceived firm greenness and green product attitude (H_{5b}).

Consumers' Green Actions

The AIDA (Awareness-Interest-Decision-Action) Model, one of the more established theories in marketing, suggests that consumers reaching the action stage of their decision making relative to a specific product, idea, or activity are likely to exhibit a more positive attitude toward the object of the evaluation. This suggests that participation in sustainable actions (i.e. seeking out, purchasing, using, paying a price premium for, or recommending sustainable products) is likely to moderate the impact of (a) consumers' green orientation and (b) perception of a firm's green on sustainable product attitudes. Marketers have long believed that evoking action (e.g. use) of a product is the best means of changing behaviors. Thus, if changing consumers' attitudes, and ultimately their purchase behaviors, relative to sustainable products is a goal of organizations or public policy makers, engaging individuals in sustainable actions is a strategy worthy of consideration. This suggests the following hypothesis.

H₆: Consumers' Green Actions moderate the strength of the relationship between consumers' green orientation and green product attitude (H_{6a}) and between perceived firm greenness and green product attitude (H_{6b}).

Research Methodology

Sampling

The sample was drawn using a stratified random sampling procedure. Each student in a core MBA class was asked to generate ten respondents as a class assignment. Of the ten, eight had to be over the age of 30 with at least four being over the age of 45. In the survey, two quality check questions (e.g. "If you are reading this question, please answer 4") were included to ensure quality completions. In total, 512 valid surveys were returned. The sample respondents appeared

appropriately distributed across gender, ethnicity, and age. Specifically, 55 percent of the sample were female. In terms of ethnic background, the sample was 82 percent Caucasian, 10 percent Hispanic, 7 percent African-American, and 1 percent “other”. The age of respondents was gathered in categories: 18-24 (30 percent), 25-31 (15 percent), 32-38 (10 percent), 39-45 (11 percent), 46-52 (19 percent), 53-59 (9 percent), 60-66 (3 percent), 67-73 (1 percent), and 74+ (2 percent).

Measures

In total, measurement items were needed for seven constructs. This included the two exogenous and two endogenous constructs in the model, as well as the three moderators. Specifically, measurement items were identified or developed for (1) consumers’ green orientation, (2) perceived firm greenness, (3) green product attitudes, (4) green purchase intentions, (5) interpersonal influence, (6) green innovativeness, and (7) green actions. The measurement of each construct is discussed below and each measurement item for each construct is identified in the Appendix.

In addition to questions concerning their personal beliefs, attitudes, and opinions, respondents were asked to evaluate the sustainable marketing activities of one firm from a total of eight from four industries (Apparel, Hotels, Computers, and Food Services). The two firms from each industry were identified based on their “green” rating by independent sources. The sample is comprised of one widely known and highly rated sustainable firm and one also highly recognized but at the lower end of the rating for each industry. Both sustainable and non-sustainable firms² were included to control, if not eliminate, positive response bias. Publically

² The names of the eight firms is not provided to preserve the identity of the firms but can be provided if requested,

available rating services were used to identify the firms (e.g. sustainable rankings.newsweek.com).

Green Consumer Orientation

The literature traditionally has suggested that receptivity to sustainable products is largely based on consumers' attitude towards the environment (Menon and Menon 1997) and the demographic characteristics of consumers (Shrum, McCarty & Lowrey 1995; Diamantopoulous, Schlegelmilch, Sincovics & Bohlen 2003). Unfortunately, there is little marketers can do to "manage" the demographics of target markets making demographics of little use beyond profiling or targeting consumers. However, it is also suggested that a consumer's attitude towards environmental issues affects his/her willingness to purchase sustainable goods and services and to engage in sustainable activities. Unfortunately, to date, marketing researchers have had little to no success in identifying consumer attitude measures that adequately predict decision making that involves purchase of green products and pro-environmental activities.

Because neither of these sets of variables (i.e. demographic or lifestyle variables) has exhibited success in explaining the variance in consumers' attitude toward sustainable products, the willingness to purchase sustainable products, or to become engaged in pro-environmental activities, a new measure was developed to assess consumers' attitudes towards green marketing strategies.). Therefore, in order to further assess the determinants of green product attitudes and behaviors, the current research develops a theory-based explanation. Specifically, it is suggested that consumers' self-identity drives pro-environmental attitudes and behaviors since consumers whose identity is defined by their association with pro-environmental peers, family, and friends are more likely to engage in sustainable behaviors as a result of the influence of the values of the

groups to which the consumer belongs or desires to belong (Balderjahn 1988; Crosby and Gill 1981; Kinnear, Taylor, and Ahmed 1974).

Thus, a scale is constructed using existing measures of self-identity (Sparks and Shepherd 1992) to develop a new measure of consumer sustainable orientation (e.g. “I consider myself to be a green consumer”). Essentially, the four-item scale suggests that consumers whose self-identity is defined by pro-environmental concerns are more likely to have a positive attitude towards sustainable products and are therefore more likely to intend to engage in sustainable behaviors. The specific items used to measure the construct are identified in the Appendix.

Perceived Firm Greenness

The second exogenous construct identified in the model (see Figure 1), perceived firm greenness, was included to capture consumers’ perception of whether the organization the respondent was asked to evaluate (i.e. one of eight, two from each of four industries) generally pursued strategies that appeared to be in the best interests of the environment. Patterning our efforts after corporate social responsibility research (e.g. Lichtenstein, Drumwright, and Braig 2004), a four item scale (e.g. “this company is green”) was developed (see Appendix for measurement items) that specifically asked consumers whether a firm was green, sustainable, environmentally friendly, and environmentally conscious.

Green Product Attitude

The first of the two endogenous variables is included in the research model to assess how consumers feel about products that are marketed as green alternatives that purport to be better for the environment. Attitude towards a product is widely accepted to be a precursor to behavioral intentions and is modeled this way in the current research. The four measurement items used in the study (e.g. “I think buying this organization’s products is wise”) were adapted from attitude

scales previously used to measure product attitudes in other contexts (e.g. Ellen and Bone 1998; Murry, Lastovicka, Singh 1992).

Green Purchase Intentions

Green purchase intentions, the second endogenous variable included in the research model (see Figure 1) is a construct that is frequently examined in studies published in the marketing literature. The three items used in the current study (e.g. “It is likely that I will purchase this firm’s products”) are adapted to a green context from previous marketing studies (e.g. Zeithaml, Berry, and Parasuraman 1996).

Interpersonal Influences

The first of three moderating variables investigated in the current research, interpersonal influence measures are rooted in the theory of planned behavior (TPB) that suggests consumers are significantly influenced by how their own choices affect the perceptions others important to the consumer have of them. Referred to as subjective norms, the perceptions of others have long been identified as an important determinant in consumers’ evaluation of products (e.g. Fishbein and Ajzen 1974). In the context of green consumption, the interpersonal influence construct is included to assess how the attitudes of other consumers modify the affects of (a) consumers’ green orientation and (b) perceived firm greenness on the formation of green product attitudes. The eight measurement items are adapted from previous research and designed to capture the influence of the product evaluations of others who are deemed important to a consumer (e.g. “When buying products, I generally purchase those that I think others will approve of”).

Green Innovativeness

Innovation refers to the predisposition of some individuals to adopt new products (Midgley and Dowling 1993). The second moderator considered, green innovativeness assesses

the innovativeness of consumers relative to sustainable products. In essence, the inclusion of the green innovativeness construct as a moderator reflects the proposition that some consumers are predisposed to acquire and use sustainable products. As a moderator of the effects of consumers' green orientation and perceived firm greenness, the inclusion of the green innovativeness construct in the model tests the proposition that consumers internal characteristics (i.e. their predisposition to be sustainable because it is innovative) affect the relationships between how they feel about the need to be green (i.e. consumers' green orientation), and how green a firm is (i.e. perceived firm greenness) on green product attitudes. The five measurement items used in the current research (e.g. "In general, I am the first in my circle of friends to buy a green product") are adapted from existing research (e.g. Midgley and Dowling 1993).

Green Product Actions

The third and final moderator considered in the current research, green product actions, reflects the idea that consumers engaged in pro-environmental activities or actions are likely to exhibit a stronger links between their green orientation and green product attitudes, and between the perceived greenness of a firm and their attitude toward green products. The four measurement items developed for the study (e.g. "I use recyclable products") were developed to reflect typical sustainable actions undertaken by consumers. .

Results

Measurement Model

Following Anderson and Gerbing's (1988) two-step procedure, a confirmatory factor analysis (CFA) was first run to analyze the measurement properties of the various scales with the results of the analysis shown in Table 1. The model, including the moderating variables, fit the data well as witnessed by the respective fit statistics ($\chi^2 = 1534.3$, $df = 438$ CFI = 0.93; TLI =

0.91; RMSEA = 0.07). The procedure recommended by Fornell and Larcker (1981) was used to test for validity (convergent and discriminant), as well as reliability. The construct reliabilities were all above 0.70, average variances extracted (AVE) exceeded the 0.50 threshold recommended by Fornell and Larcker (1981), and all item loadings were significant (Anderson and Gerbing 1988). This evidence demonstrates convergent validity. Finally, the AVEs also exceeded the shared variances between each construct pairing, indicating that discriminant validity was achieved for each of the constructs.

Insert Table 1 About Here

Structural Model

The proposed relationships (see Figure 1) were tested using a structural equation model with the results indicating the data fit the model ($\chi^2 = 294.1$, $df = 66$) as indicated by the associated fit statistics (CFI = 0.97; TLI = 0.96; RMSEA = 0.07). The results of the structural analysis support all the research hypotheses as indicated by the significance of each path loading (see Figure 2). Specifically, consumers' green orientation had a significant effect on the attitude towards green products ($\gamma = -0.10$, $p = 0.02$), which lends support for hypothesis 1. In contrast, the perception of a firm's greenness impacted the product attitude positively ($\gamma = 0.50$, $p < 0.001$) as predicted in hypothesis 2. Additionally, hypothesis 3 was supported as the attitude toward green products significantly affected the future purchase intentions for green products ($\beta = 0.66$, $p < 0.001$). Finally, the proposed model provides sound explanatory power of the endogenous constructs as indicated by the variance explained for the product attitude ($R^2 = 0.24$) and purchase intentions constructs ($R^2 = 0.43$).

Insert Figure 2 About Here

To show that attitude toward green products does in fact mediate the relationship between the exogenous constructs and purchase intention, mediation analysis was conducted using the Baron and Kenny (1986) four-step method. First, a model was analyzed with direct paths from perceived firm greenness and consumers' green orientation to green purchase intentions. With product attitude removed, both the orientation-to-intention ($\gamma = -0.10, p = 0.04$) and greenness-to-intention ($\gamma = 0.30, p < 0.001$) paths were significant, which establishes the first mediation requirement. The next two requirements were addressed in the original structural model where the exogenous constructs were significantly related to the mediator (product attitude) which, in turn, had a significant association with purchase intentions. The final step involved testing a variation of the original model except direct paths were also added from the exogenous variables to the dependent variable. The results indicate that the orientation-to-intention ($\gamma = -0.03, p = 0.47$) and greenness-to-intention ($\gamma = -0.05, p = 0.27$) paths both become insignificant with product attitude in the model. The results of the four-stage analysis indicate that attitude toward green products does, in fact, present a situation of full mediation.

Moderation Analysis

The moderating effects specified in hypotheses 4 – 6 were assessed to gain a deeper understanding of the relationships between attitude towards sustainable products and consumers' green orientation and perceived firm greenness. The moderation effects were analyzed using multi-group structural equation modeling. To test the effect of the three moderating variables (i.e., interpersonal influence, consumers' green innovativeness, and consumers' green actions), each construct was condensed into a single value (i.e., the value is the average of all the items that form the construct), which was then divided into two distinct groups based on a mean split for each variable. Then, a baseline model was assessed in which equality constraints were

imposed on all gamma and beta parameters across the high and low groups for each potential moderator. A second model was then tested that allowed the path of interest to freely vary across the two groups. A chi-square value was obtained for each model from which a comparison test was conducted with significance indicating the presence of a moderating effect.

The initial assessment utilized interpersonal influence as the moderating variable of interest. The results of the analysis (see Table 2) indicate that interpersonal influence has no effect on the relationship between consumers' green orientation and green product attitude (H4a). In contrast, it does significantly affect the perceived firm greenness to green product attitude path (H4b). Taken together, these results provide support for hypothesis 4b whereas hypothesis 4a was not supported. Of specific interest is the manner in which the moderating variable affects the posited path. Specifically, the impact of perceived firm greenness on the attitude toward green products is much stronger for the high interpersonal influence group, which indicates individuals who are heavily influenced by their respective peer groups tend to rely more heavily on perceptions of the greenness of an organization in determining their attitude towards green products.

Using the same procedure, the moderating effects of consumers' green innovativeness and green actions were analyzed. The results of the two tests for moderation of the path between consumers' green orientation and green product attitude indicate that both moderating variables have marginal statistical significance (H5a and H6a). In the case of consumers' green innovativeness, the path coefficient for the low group was significant while it became an insignificant path when investigating the high group (reference Table 2). This indicated that individuals who don't perceive they are a green innovator tend to rely more on their perceived green orientation in forming their attitude towards green products. In contrast, consumers

believing themselves to be green innovators tend to form attitudes independently of their perceived green orientation. This finding is consistent with social-identity theory, as less independent thinking consumers (i.e. non-innovators) tend to rely more on existing attitudes such as established perceptions of their own green orientation and the perceived greenness of a firm in forming their attitudes relative to green products.

The results of the tests for the perceived firm greenness to product attitude path indicate that both green innovativeness and green actions positively moderate the path. Essentially, this indicates that for more innovative consumers (H5b) and consumers that already are engaged in sustainable actions (H6b), perceived firm greenness has a stronger effect on their attitude towards sustainable products.

Insert Table 2 About Here

General Discussion

The objective of this study was to develop a more complete understanding of how consumers' attitudes towards the sustainable products and activities of firms impact the success of sustainable marketing strategies. Specifically, it was hypothesized that consumers' green orientation and the perceived greenness of firms drive consumers' attitudes towards sustainable products and, in turn, their intentions to purchase sustainable products. In addition, it was suggested that the effects of both consumers' green orientation and perceived firm greenness are moderated by interpersonal influences, consumers' green innovativeness, and by consumers' participation in sustainable actions. The goal was to further marketers understanding of why while more than 75 percent of U.S. adults consider themselves "environmentalists" (Osterhus 1997), while in 2009 it is estimated that 160 million US consumers failed to purchase a sustainable product (Stengel 2009). The results presented suggest that US consumers' that are

green are skeptical relative to the sustainable products that are available. It is also suggested that a key to overcoming this skepticism is to focus on the role of consumers' perceptions of the greenness of firms that offer sustainable goods and services.

The intent was to shed light on how organizations can reverse the disturbing trend described above whereby consumers whose positive predisposition towards sustainable products (i.e. consumers' green orientation) fails to result in their purchase. First, it is important to note that the two sets of proposed drivers of consumers' perceptions of sustainable products (consumers' green orientation and perceived firm greenness) explain 24 percent of the variation in consumers' attitudes towards sustainable products. In total, the three variables (i.e. green consumer orientation, perceived firm greenness, and green product attitude) account for 43 percent of the variation in green purchasing intentions. These results suggest that a consumer's self-identity as green and their perception of a firm's greenness are important drivers of the success of sustainable marketing strategies. Yet, the results also suggest that the effects of the two examined green consumer attitudes are asymmetrical and subject to significant moderation effects.

Specifically, whereas the effect of a consumers' green orientation on green product attitude is negative and significant, the influence of perceived firm greenness is positive and highly significant. These results represent one step in explaining why even though 70 percent of US consumers claim to be sustainable the vast majority did not purchase a green product last year. The consumers' green orientation measure is conceptualized to capture consumers' self identity as a green consumer. Given that the identified effect is negative, this suggests that green consumers are skeptical of sustainable products. That is, as consumers' green orientation

increases, green product attitudes decline. In other words, more green oriented consumers are more critical in their attitudes towards sustainable products.

In contrast, a much stronger and direct relationship is observed between perceived firm greenness and green product attitudes. This result offers an alternative explanation that those responsible for enacting strategies need to recognize. That is, it is consumers' perceptions of the greenness of firms that drive their attitudes relative to sustainable products, not consumers' self-identity as a green consumer. In addition, the analysis of the moderators shed further light on these relationships. Specifically, the three moderators of the consumers' green orientation –green product attitude path reveal an interesting pattern of results. First, interpersonal influences fail to significantly ($p=0.48$) moderate the relationship. Green innovativeness' moderation of the path is significant at $p=0.08$ and green actions at $p=0.07$. Interestingly, comparing the path coefficients of the low and high groups for each moderator suggests consumers that in the low group for that moderator exhibit a stronger negative path coefficient. That is, as interpersonal influence, green innovativeness, or participation in green actions increase, the negative effect is attenuated. In the case of participation in green actions, the path coefficient actually becomes positive. This suggests some evidence that perceiving oneself to be a green innovator and taking part in more green actions make the effects of a consumer's green orientation on their attitude towards sustainable products "more positive." While certainly is not strong evidence of a true moderating effect, the results suggest (1) that consumers whose green orientation is higher exhibit lower green product attitudes and (2) green innovativeness and green actions attenuate the negative effect of consumers' green orientation on green product attitudes.

The moderating effects on the perceived firm greenness – green product attitude are much clearer. To start, all three moderating effects are highly significant ($p\leq 0.01$). In each case,

the moderating effect enhances the strength of the influence of consumers' perception of the greenness of a firm on their attitude toward sustainable products. That is, interpersonal influences, self-perceived green innovativeness, and participation in sustainable actions all serve to increase the strength of the relationship between a consumer's perception of the greenness of a firm and his or her attitude towards that firm's products. In order to further consider the implications of these results, a follow-up study was undertaken.

Follow-Up Analysis

To provide additional insight into the results reported above, a qualitative study was undertaken subsequent to the survey results reported above. In-depth open-ended questions were considered appropriate to probe a new set of respondents relative to their thoughts about sustainable companies and the marketing of the goods and services they offer. A convenience sample was employed as the intent was to explore the implications of the findings of the empirical study reported above as opposed to undertaking a random survey of the population. Specifically, 83 students in an on-line core MBA class were sampled. None of the respondents was involved in study 1. The average age of the respondents was 33 and 61 of the respondents were male. Sixty-six (66) of the respondents were Caucasian, seven were Hispanic, six African-American, three Asian, and one classified himself as other. Of the respondents, four reported income of less than \$25,000, three between \$25,000 and \$35,000, eight between \$35,001 and \$50,000, 27 between \$50,001 and \$80,000, 30 between \$80,001 and \$150,000, and eleven reported income in excess of \$150,000.

Discussion – Follow-Up Analysis

One of the questions asked was whether the respondents believed being green adds value to a company's products and/or services. Eighty-seven percent suggested that they felt this to be

true. A second question the respondents were asked was “in a perfect world, what could a company do to convince you it is genuinely green?” Of the responses, 34.4 percent identified improving operations, 17.2 percent suggested improving products, 17.2 percent indicated that education or additional information would be helpful, 8.0 percent called for an improvement in the culture of the organization, 5.7 percent mentioned third party endorsements as a key, and 5.7 percent stated that nothing a company could do would convince them that the firm was green.

A third question inquired as to where the respondents looked for information regarding green companies or green issues. Forty-five percent of the responses centered on access via the internet, 24 percent identified a media source (e.g. television), thirteen percent suggested that product packaging is an information source, seven percent stated that they did not seek sustainable information, six percent relied on ads, and five percent use the government or experts as an information source.

Another question asked respondents what motivates them to purchase a specific green brand or from a specific green organization. The most frequent response was nothing (20 percent), as they do not intentionally seek out green products. The second most frequent response was related to price (14.4 percent), the product itself (26.6 percent), and the promotions viewed by the respondent (14.4 percent). The reputation of a company or brand accounted for 13.3 percent of the responses to the question. Packaging (4.4 percent), processes (3.3 percent), and word-of-mouth (3.3 percent) were also mentioned as something that motivated respondents to purchase a specific green brand or from a particular green organization.

A fifth question asked what a green company should emphasize in their advertising/promotions to encourage people like the respondent to purchase their products. The most frequent response was to emphasize how their products are green (41.3 percent). The next

most frequent area of emphasis identified was price (26.1 percent). Product attributes were the next most frequently identified area that respondents indicated should be emphasized in promotions for sustainable companies (12.0 percent), followed closely by the processes that make the company green (10.9 percent). Also mentioned by the respondents as potential areas of emphasis in green promotions or advertisements were packaging (3.2 percent) and product positioning versus competitors (3.2 percent). Also, 3.2 percent of the responses suggested that there was nothing that would encourage them to purchase green products.

Implications for Organizations and Managers

The implications of the results of the research reported are relatively straightforward. That is, consumers want green products from truly sustainable firms that are competitively priced. The research initially asks the question are organizations best served enacting strategies that result in increases in consumers' green orientation or in the perceived greenness of a firm. Implicit in this question is whether firms are better advised to concentrate their efforts on changing consumers' attitudes towards sustainability (i.e. enhancing consumers' beliefs that being green is the right thing to do and that it is good for them) or individuals' attitudes towards organizations producing green products (i.e. this organization is doing what is right, not just what makes the firm more money). The research presented suggests that consumers have a high level of green orientation, yet that attitude does not manifest in a corresponding high level attitude toward sustainable products. The moderators tested in study one further confirm that as consumers' green orientation increases skepticism is directed at sustainable products (i.e. green product attitude). Rather, marketers need to focus their strategic efforts on the direct effects of consumers' perceptions of the greenness of organizations, as well as the moderating influence of social influences (e.g. interpersonal influences), self-identity (e.g. self-perceived green

innovativeness), and consumers' green activities on the effects of perceived firm greenness as a driver of green product attitude.

The results of the research reported suggest that the focus of green marketing strategies needs to move from attempts to convince consumers that they should be green (as they already are green in some form), to efforts directed at convincing consumers that a firm is truly green. Study 1's consideration of the moderators of the perceived firm greenness – green product attitude path suggest that this is possible and should result in elevated green purchase intentions. First, interpersonal influences significantly moderate the effect of perceived firm greenness on green product attitudes. Thus, using personalities well known to consumers, or ones that represent aspirational figures (e.g. athletes), in marketing strategies whose goal is to promote firm greenness appears appropriate. Similarly, stressing the innovativeness of green consumers in sustainable marketing messages could build green self-identity. The results of study 1 indicate that self-identified green innovators exhibit a stronger relationship between perceived firm greenness and green product attitudes. In addition, offering consumers opportunities to involve themselves in green actions (e.g. recycling) can also strengthen the effects of perceptions of firm greenness on green product attitudes.

The results of the follow-up qualitative study add finer grained insight to the empirical results reported for study 1. Specifically, the results confirm that the vast majority of consumers are green as 87 percent of the respondents indicated that “being green” adds value to an organization's products. Moreover, the follow-up analysis suggests that operations and products are the appropriate focus of sustainable marketing strategies as the two areas account for more than fifty percent of the responses. The implication of the follow-up analysis is that sustainable marketing strategies must incorporate the internet (websites, blogs, and other information sites)

as nearly half of the respondents (45 percent) noted some aspect of the internet as their primary source for information on green products and organizations. About a fourth of the respondents (24 percent) rely on media sources, and thirteen percent on product packaging, for sustainable information. Only seven percent indicated that they do not seek out information about sustainable products and companies. Thus, sustainable marketing strategies would appear well served to focus their communications efforts on the internet, media, and packaging.

The motivation to purchase green products is not as clear. Product characteristics, including a product's greenness, are the most frequently cited motivator (26.6 percent). However, twenty percent of the respondents did indicate that there was nothing that drives them to purchase green products. Given that it is widely reported that over seventy percent of consumers claim to be sustainable, this finding is not surprising. In fact, it can be interpreted as supporting the notion that upwards of eighty percent of consumers are green. The other motivations for sustainable behaviors include price and promotions as each is identified as a motivator in 14.4 percent of the responses.

The theme of potential sustainable marketing strategies is confirmed in the last of the reported responses. Just as the empirical results of study 1 suggest the importance of the perceived greenness of a firm, the follow-up analysis results to the question as to what a sustainable company should emphasize in their advertising/promotions to encourage people like the respondent to purchase their products. Specifically, the most frequent response was to emphasize how their products are green (41.3 percent). Combined with responses that indicate product attributes (12.0 percent) and how processes are green (10.9 percent) are areas that should be emphasized to encourage the purchase of sustainable products, the results further support the importance of firm greenness as a motivation of sustainable purchases and behaviors. Certainly,

sustainable marketing strategies should focus on building credibility for the greenness of organizations offering sustainable goods and services. However, the strategic importance of price as a motivator of green product purchase is highlighted as price is the second most frequent response as to an area of emphasis (26.1 percent). The implications the results of both studies are now considered.

Theory and Research Implications

The focus of the research is thus largely on the question of whether organizations pursuing sustainable marketing strategies are best served encouraging consumers to self-identify themselves as sustainable or endeavoring to increase consumers' belief that the organization pursuing enacting sustainable marketing strategies is itself sustainable. The results suggest that self-identity is an important theoretical concern in sustainable marketing for two major reasons, First, overwhelmingly, the self-identity of consumers currently is that they are "green". Second, consumers that self identify themselves as green innovators exhibit an stronger relationships between their perceptions of a firm's greenness and green product attitudes.

The results suggest a number of areas of potential research. Specifically, the first need is a change in focus from the green consumer to the green firm. Research is needed to define and measure characteristics that consumers use to further clarify how consumers evaluate the greenness of firms. Trust is one construct that appears to be a potential driver of perceptions of firm greenness. Authenticity might be another. Can a firm be born, or reborn, green? Is there an optimal path for firms to follow if they are to be perceived as sustainable? How is the greenness of a firm impacted by perceptions of its employees? Previous research suggests that need for "strategic fit" between a company and its products (Vorhies and Morgan 2003). Is it possible for a former polluter to be perceived as a sustainable firm? Is there also a need for "fit" between a

sustainable firm and its employees? What can firms such as Wal-Mart, Exxon, and Clorox do to be perceived as sustainable? Can a perception of being “green” be bought? That is, when Wal-Mart acquires a firm such as Burt’s Bees, or stocks organic foods, is the effect on the perceived greenness of the acquiring firm (Wal-Mart) enhanced or that of the acquired firm (Burt’s Bees) attenuated? Obviously, the research implications of sustainable marketing strategies are numerous and engaging to both academics and practitioners.

Conclusions and Limitations

The intent of the research presented was to assess whether focus of organizations pursuing sustainable marketing strategies should be internal or external. That is, we asked the question as to whether firms are better served endeavoring to identify strategies to increase consumers’ green orientation or to build the perceived greenness of their firm. The answer clearly is that strategies need to be identified that convince consumers that a firm is truly green. The results of both studies reported indicate that consumers already largely have a self-identify best labeled as green and that the glaring need is to identify the drivers of perceived firm greenness. Green oriented consumers are looking for firms that they perceived to be truly sustainable. The objective of marketing researchers should be to address this critical gap in the literature by addressing how firms can begin to develop the sustainable strategies needed to ensure the success of green products.

Like all research, the studies reported have a number of limitations. The qualitative study (the follow-up analysis) utilizes a convenience sample. Study 1 asks consumers to evaluate one of two firms from four industries. Extensions beyond this domain may be tenuous. However, care was taken to restrict the potential problems associated with all potential limitations.

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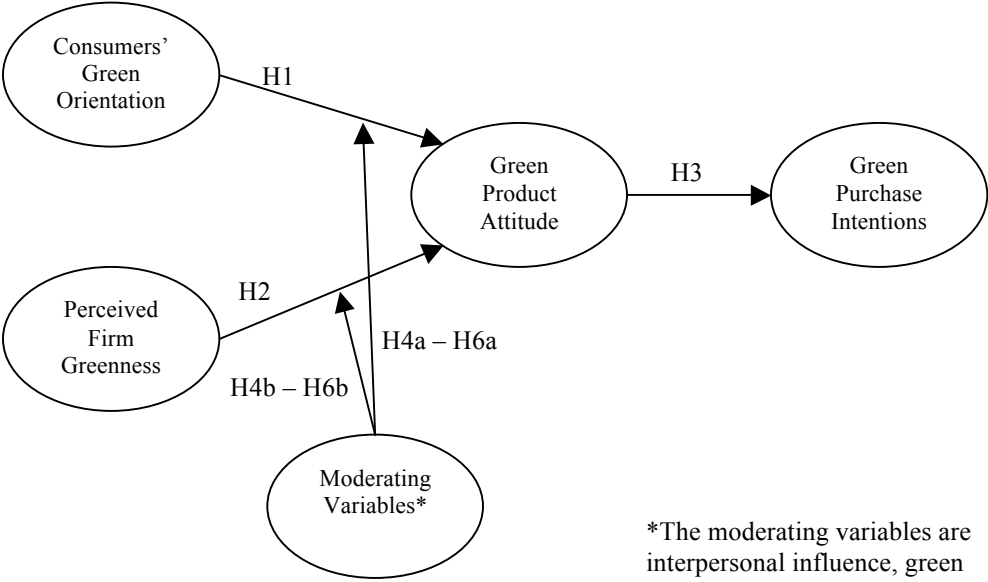
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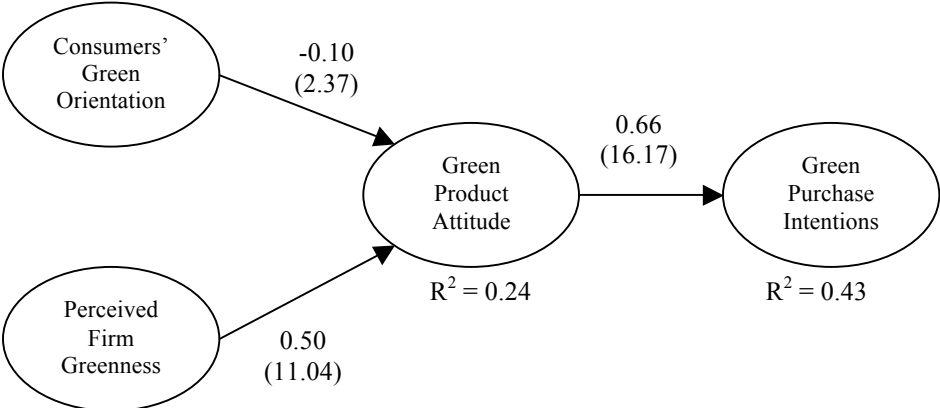
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Figure 1: Proposed Research Model



*The moderating variables are interpersonal influence, green innovativeness, and green actions

Figure 2: Structural Model Results



$\chi^2 = 294.1, df = 66, CFI = 0.97; TLI = 0.96; RMSEA = 0.07$

Table 1: Construct reliability, average variance extracted (AVE), correlation, and shared variance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Construct Reliability
(1) Perceived Firm Greenness	0.75	0.04	0.23	0.08	0.00	0.01	0.02	0.93
(2) Consumers' Green Orientation	0.20	0.69	0.00	0.00	0.00	0.42	0.66	0.90
(3) Attitude Toward Green Products	0.48	-0.01	0.77	0.44	0.00	0.00	0.01	0.92
(4) Purchase Intentions	0.28	-0.04	0.66	0.93	0.00	0.01	0.01	0.90
(5) Interpersonal Influence	0.06	-0.03	0.03	0.00	0.63	0.00	0.00	0.92
(6) Consumers' Green Innovativeness	0.10	0.65	-0.06	-0.08	0.07	0.63	0.50	0.97
(7) Consumers' Green Actions	0.13	0.81	-0.09	-0.09	-0.02	0.71	0.75	0.93

Note: Items in bold on the diagonal are the average variance extracted (AVE) figures, the lower left triangle contains the construct correlations, and the upper right triangle contains the shared variance between constructs

Table 2: Moderation Testing Results**Moderator: Interpersonal Influence**

Path	Constrained	Freed	Change	p-value	Low Group Path Coefficient	High Group Path Coefficient
Green Orientation - Product Attitude	$\chi^2= 419.7$ df = 175	$\chi^2= 419.2$ df = 174	$\Delta\chi^2= 0.5$ df = 1	0.48	-0.11 (1.93)	-0.07 (1.17)
Firm Greenness - Product Attitude	$\chi^2= 419.7$ df = 175	$\chi^2= 413.6$ df = 174	$\Delta\chi^2= 6.1$ df = 1	0.01	0.39 (6.53)	0.65 (9.32)

Moderator: Green Innovativeness

Path	Constrained	Freed	Change	p-value	Low Group Path Coefficient	High Group Path Coefficient
Green Orientation - Product Attitude	$\chi^2= 412.4$ df = 175	$\chi^2= 409.3$ df = 174	$\Delta\chi^2= 3.1$ df = 1	0.08	-0.13 (2.00)	-0.02 (0.29)
Firm Greenness - Product Attitude	$\chi^2= 412.4$ df = 175	$\chi^2= 399.8$ df = 174	$\Delta\chi^2= 12.6$ df = 1	0.00	0.36 (5.46)	0.64 (10.51)

Moderator: Green Actions

Path	Constrained	Freed	Change	p-value	Low Group Path Coefficient	High Group Path Coefficient
Green Orientation - Product Attitude	$\chi^2= 422.2$ df = 175	$\chi^2= 418.9$ df = 174	$\Delta\chi^2= 3.3$ df = 1	0.07	-0.1 (1.45)	0.04 (0.67)
Firm Greenness - Product Attitude	$\chi^2= 422.2$ df = 175	$\chi^2= 413.2$ df = 174	$\Delta\chi^2= 9.0$ df = 1	0.00	0.35 (5.28)	0.62 (10.38)

Note: Numbers in parentheses are t-values

Appendix 1: Scale Items and Descriptive Statistics

Construct and Items	Standardized Path Loading	t-value	Mean	Standard Deviation
Perceived Firm Greenness				
• This company is environmentally conscious	0.93	n/a	3.65	1.10
• This company is environmentally friendly	0.95	38.27	4.23	1.15
• This company acts in a sustainable manner	0.71	20.46	3.88	1.06
• This company is “green”	0.85	29.45	3.92	1.07
Consumers' Green Orientation				
• I consider myself to be environmentally conscious	0.83	n/a	4.11	1.47
• I consider myself to be environmentally friendly	0.86	23.20	4.54	1.22
• I consider my actions to be sustainable	0.80	21.16	4.81	1.28
• I consider myself to be a “green” consumer	0.82	21.92	5.02	1.30
Attitude Toward Green Products				
• I think buying this organization’s products is beneficial	0.84	n/a	4.77	1.23
• I think buying this organization’s products is pleasant	0.84	23.53	4.94	1.16
• I think buying this organization’s products is rational	0.89	26.09	5.04	1.20
• I think buying this organization’s products is wise	0.94	28.30	4.62	1.32
Green Product Purchase Intentions				
• It is likely that I will purchase this firm’s products/services	0.97	n/a	5.96	1.38
• It is probable that I will purchase this firm’s products/services	0.98	66.75	6.07	1.09
• It is possible that I will purchase this firm’s products/services	0.94	49.43	6.12	1.01
Consumers' Green Innovativeness				
• In general, I am the first in my circle of friends to buy a green product	0.84	n/a	3.36	1.50
• Compared to my friends, I own a lot of green products	0.87	24.35	3.45	1.58
• I will consider buying a new green product even if I am not familiar with it	0.65	16.08	3.74	1.70
• If I heard that a new green product was available, I would probably buy it	0.76	19.88	3.55	1.54
• In general, I am the first in my circle of friends to know the specifics of the latest green products	0.84	22.77	3.16	1.56
Interpersonal Influence				
• I often identify with other people by purchasing the same products they purchase	0.79	n/a	2.32	1.28
• If I want to be like someone else, I often try to buy the same brands that they buy	0.75	18.39	2.48	1.43

• I achieve a sense of belonging by purchasing the same products that others purchase	0.83	20.91	2.46	1.44
• I like to know what products make good impressions on others	0.72	17.32	2.39	1.42
• If other people can see me using a product, I often purchase the brand they expect me to buy	0.85	21.70	3.09	1.72
• When buying products, I generally purchase those that I think others will approve of	0.88	22.70	4.50	1.48
• It is important that others like the products I buy	0.85	21.62	2.51	1.58
• I rarely purchase new products until I am sure my friends will approve of them	0.68	16.37	2.47	1.54
Consumers' Green Actions				
• I prefer to buy green items	0.83	n/a	4.80	1.16
• When given the choice, I buy green products	0.82	27.41	4.81	1.20
• I actually seek out green products	0.92	18.74	3.82	1.53
• I encourage others to buy green products	0.89	18.09	3.98	1.54

Notes: In order to define the measurement scales for each construct, one of the links between the construct and the indicator has to be constrained to one. Therefore, the t-values were not able to be calculated and have been marked as “n/a.”