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# Consumer perceptions of company environmental requests : an experimental examination of hotel reuse programs

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**CONSUMER PERCEPTIONS OF COMPANY ENVIRONMENTAL REQUESTS:  
AN EXPERIMENTAL EXAMINATION OF HOTEL REUSE PROGRAMS**

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## **Abstract**

Consumer response toward companies' corporate social responsibility (CSR) efforts has received much attention in the consumption context. However, little is known in the anti-consumption context. The present research studies one anti-consumption CSR program – reusing, which suggests that customers in a hotel use towels and linens more than once in order to reduce the use of fresh water and the generation of waste water. The impact of source credibility, argument strength, and fit on consumer response was assessed. It was found that a high credibility source (i.e., the hotel source) generated less egoistic attributions than a low credibility source (i.e., the Project Planet source). Regardless of the charity type, making a charitable donation can positively influence subjects' attitudes toward the hotel and value-driven attributions, while negatively influenced egoistic attributions. Moreover, subjects' perceived strong arguments positively influenced attitude, behavior intention, value-driven, strategic, and stakeholder-driven attributions, while negatively influenced counterarguments.

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## **1. Introduction**

Today, people not only view companies as organizations which provide products and/or services to consumers and make profits, but also emphasize companies' social role. This means companies are expected to be much more socially responsible than before. Mohr, Webb, and Harris (2001) found that a strong majority of respondents expressed positive or extremely positive attitudes toward socially responsible firms, while only less than one-tenth were more negative. Consistent with consumer expectations, more companies focus on corporate social responsibility (CSR) activities than before (e.g., Esrock & Leichty, 1998).

CSR takes many forms, including philanthropy, cause-related marketing (CRM), environmentalism, humane employee treatment, sponsoring charitable events, charitable donations, product improvement, and community involvement, among others (Ellen, Webb, & Mohr, 2006; Maignan & Ralston, 2002; Teoh & Shiu, 1990). Recently, companies' environmental responsibility has matured into a significant social issue as a result of the increasing global environmental crisis. However, most research has studied CSR in a consumption context – how CSR influences consumers' purchase intent. Reusing, an anti-consumption CSR program, has not been studied yet. Reusing, one type of corporate environmentalism program employed by many hotels, suggests that customers use the towels and linens more than once in order to reduce the use of fresh water and the generation of detergent waste water. Hotels promote this program by placing notice cards in the rooms. Reusing has great significance – every 100 guests participating in the reuse program can save 450 gallons of water and 3 gallons of detergent daily (Project Planet, n.d.). Moreover, reusing can help hotels to build a good

CSR reputation and also provide customers with an opportunity to be socially responsible. Therefore, understanding customers' responses to this suggestion and studying how to increase customers' acceptance are crucial to both hotels and the environment. Furthermore, this research can extend the study of the form of CSR and provide deeper understanding of CSR in an anti-consumption context, which has not been extensively studied yet.

A research question will guide this study: in the anti-consumption context, how do we increase the likelihood that consumers will support companies' CSR efforts? The framework of this research is: (1) research on consumer response to CSR efforts is reviewed, (2) related variables are identified, and hypotheses are built, (3) an experiment is designed to test the hypotheses, (3) data are analyzed, and results are given, (4) practical and theoretical implications of the study's results are discussed, and (5) limitations and future research directions are listed.

## 2. Literature Review

### 2.1. Corporate social responsibility (CSR) definition

Corporate social responsibility (CSR) is a broad concept; therefore there have been a large number of researchers trying to conceptualize it since the 1950s.

Bowen (1953), who was regarded as the “Father of Corporate Social Responsibility” by Carroll, defined the social responsibilities of businessmen as the obligations of business “to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society” (1999, p. 6). Also from the businessmen’s perspective, Davis built his definition as “decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest” (1960, p. 70). However, this definition does not clarify what business should pursue beyond economic and technical interests. “The idea of social responsibilities supposes that the corporation has not only economic and legal obligations, but also certain responsibilities to society which extend beyond these obligations” (McGuire, 1963, p. 144) is a more precise definition which emphasizes the obligation dimensions. Walton (1967) emphasized that top managers must keep the relationships between the corporation and society in mind as respective goals.

During the 1970s, there were numerous researchers working on CSR definitions. Different from traditional definitions, the Committee for Economic Development (CED) used three circles to depict CSR.

The inner circle includes the clear-cut basic responsibilities for the efficient execution of the economic functions – products, jobs, and economic growth. The intermediate circle encompasses the responsibility to exercise this economic function with a sensitive awareness of changing social values and priorities.

The outer circle outlines newly emerging and still amorphous responsibilities that business should assume to become more broadly involved in actively improving the social environment. (1971, p. 15)

In 1973, Davis studied the definition of CSR again and argued that CSR refers to “the firm’s consideration of, and response to, issues beyond the narrow economic, technical, and legal requirements of the firm” (1973, p. 312). This definition is much more specific than the previous one. Later, Davis and Blomstrom defined this concept more broadly as an obligation “to take actions which protect and improve both the welfare of society as a whole along with their own interests” (1975, p. 6). Carroll’s study, which can be viewed as an extension of the definition of McGuire (1963), suggests that “the social responsibility of business encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time” (1979, p. 500).

During the 1980s, fewer definitions were developed than in the 1970s. Carroll elaborated his definition in 1979 and suggested that “CSR involves the conduct of a business so that it is economically profitable, law abiding, ethical, and socially supportive” (1983, p. 604). Epstein stated that “CSR relates primarily to achieving outcomes from organizational decisions concerning specific issues or problems which (by some normative standard) have beneficial rather than adverse effects on pertinent corporate stakeholders. The normative correctness of the products of corporate action has been the main focus of corporate social responsibility” (1987, p. 104).

In the 1990s, definitions of CSR became more specific than before. Based on his previous definitions, Carroll (1991) argued that the four responsibilities of CSR constitute a pyramid with “economic” at the bottom, followed by “legal” and “ethical”, while

“philanthropic” is on the top. Moreover, Carroll proposed a conceptual framework to assist the manager in integrating the four CSR components with organizational stakeholders. Mohr (as cited in Mohr et al., 2001) divided previous researchers’ definitions of CSR into two groups: multidimensional definitions and definitions based on the concept of social marketing. Multidimensional definitions intend to include all the responsibilities of a company, and Carroll is the representative of this group. Kotler defined the societal marketing concept as the organization’s task which “is to determine the needs, wants, and interests of target markets and to deliver the desired satisfactions more effectively and efficiently than competitors in a way that preserves or enhances the consumer’s and the society’s well-being” (1984, p. 29). On the basis of Kotler’s concept, Petkus and Woodruff (as cited in Mohr et al., 2001) defined CSR simply as doing good while avoiding harm. After Mohr, Brown and Dacin gave a broad, society-view definition: “CSR associations reflect the company’s status and activities with respect to its perceived societal obligations” (1997, p. 68). This definition, which seems to be the most popular one, has been widely adopted by many researchers (e.g., Bhattacharya & Sen, 2004; Ellen et al., 2006; Pirsch, Gupta, & Grau, 2007; Sen & Bhattacharya, 2001).

After 2000, some researchers still tried to develop new definitions of CSR. Mohr et al. extended Petkus and Woodruff’s (1992) definition: “CSR is a company’s commitment to minimizing or eliminating any harmful effects and maximizing its long-run beneficial impact on society” (2001, p. 47). Maignan and Ralston limited the scope of CSR into selected stakeholder issues and regarded CSR as a company’s “principles and processes in place to minimize its negative impacts and maximize its positive impacts on selected stakeholder issues” (2002, p. 498). Basil and Weber thought that socially

responsible companies are “expected to behave in a manner that is beneficial, or at least not detrimental, to a larger group of stakeholders beyond those immediately impacted by their products or services” (2006, p. 61).

In the present research, the definition from Mohr et al. that “CSR is a company’s commitment to minimizing or eliminating any harmful effects and maximizing its long-run beneficial impact on society” (2001, p. 47) will be used because of its consistency with the reuse program and its popularity among CSR researchers. The reuse program can not only minimize the harmful effects of water and energy consumption and the detergent waste water generation but maximize the long-term benefits of society (the environment).

## *2.2. Companies’ CSR*

During the early postwar years, the Economist Intelligence Unit studied British firms’ business philanthropy and found that although 90% of businessmen had an interest in corporate philanthropy; most firms did not set up any policy about their charitable donations (Marinetto, 1999). The evidence shows that during the 1960s some American companies were preparing to become involved in some social problems, such as housing development and educational schemes (Marinetto, 1999).

However, it was not until the 1970s that some companies actually became involved in CSR because of the impetus from economic recession and the pressure from the government. During this time, environment, employees, and consumers had been viewed as the most important and legitimate stakeholders of business by some new governmental organizations such as the Environmental Protection Agency (EPA), the



Equal Employment Opportunity Commission (EEOC), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC) (Carroll, 1991). In Britain, IBM established two projects to help local education and urban regeneration, while British Steel, Pilkingtons, Shell UK, and Midland Bank tried to deal with the unemployment problem (Marinetto, 1999).

In the 1980s, many surveys used charitable and community contributions as standards to measure a company's social involvement (Marinetto, 1999). The data show that the top 200 London companies donated £42 million in 1980 compared to £63.3 million in 1987, a 51% increase (Marinetto, 1999). An important landmark in the 1980s was the introduction of cause-related marketing (CRM) programs. Trimble and Rifon explained CRM very clearly: "cause-related marketing joins a corporation together with a specific cause, or a not-for-profit organization (NPO) that is affiliated with that cause. The link is established and communicated to consumers through a marketing campaign intended to raise awareness and funds for the cause (or NPO) while simultaneously benefiting the corporation" (2006, p. 30). More briefly, CRM is a connection between the fund raising for a social cause and the firm's products and/or services promotion (Varadarajan & Menon, 1988). American Express, which has been viewed as the CRM pioneer, incorporated the arts into its cause-related marketing program in 1981 (Business Committee for the Arts, Inc., n.d.). However, its most influential CRM campaign is the one conducted in 1983 to raise money for the restoration of the Statue of Liberty. That campaign helped CRM gain its significant place in CSR because of its prevalence and the benefits it brought to companies, nonprofit organizations, and consumers.

Entering the 1990s, the development of the Internet provides a new opportunity for companies to show their CSR performance. In 1997, 90% of the Fortune 500 companies had a corporate web page, and 85% of the companies which had a web page supported at least one social issue such as community/civic involvement, ecology/environment, education, charity/foundations and so forth (Esrock & Leichty, 1998). The following table indicates that companies spent \$423 million in 1995 on social causes, while in 1999 this amount added to \$630, representing a 50% increase rate. Thus, charitable donation was still acting as the most important CSR tool during the 1990s.

CSR research has become more precise. Researchers are not only interested in how much money companies spend on CSR but also in understanding where the money goes. Kinder, Lydenberg, Domini, and Co. Inc.'s work (as cited in Sen & Bhattacharya 2001) summarized six broad domains of CSR (see Table 2.1). Researchers also studied the motivations for companies to engage in CSR. For example, Swanson (1995) proposed three principal motivations, which are economic, positive duty, and negative duty (stakeholder expectations).

**Table 2.1 Six CSR Domains**

<b>Domain</b>	<b>Example</b>
Community Support	Support of arts and health programs / Educational and housing initiatives for the economically disadvantaged / Generous or innovative giving
Diversity	Gender / Race / Family / Sexual orientation / Disability
Employee Support	Concern for safety / Job security / Profit-sharing / Union relations / Employee involvement
Environment	Environment friendly products / Hazardous waste management / Use of ozone-depleting chemicals / Animal testing / Pollution control / Recycling
Product	Product safety / R&G / Innovation / Marketing / Contracting controversies / Antitrust disputes
Non U. S. Operations	Overseas labor practices / Operations in countries with human rights violations

In the 21<sup>st</sup> century, CSR programs are continually showing their importance: U.S. companies spent \$9 billion supporting social issues in 2001 (Cone, Feldman, & Dasilva, 2003). Maignan and Ralston (2002) thought that companies' motivations may come from profitability, social pressures, and stakeholders, which are consistent with the conclusion of Swanson (1995). Pirsch et al. (2007) thought this trend was derived from three pressures: public standards for corporate social performance (e.g., the United Nations Global Compact), independent evaluations and rankings (e.g., Fortune's Most Admired Companies), and the recent scandals from famous companies (e.g., Enron, Worldcom). Moreover, the purposes of companies' CSR programs are not only to satisfy society but to differentiate themselves from their competitors and to build good reputations. For example, against animal testing has become another attribute of The Body Shop.

### *2.3. Corporate environmentalism*

Banerjee, Iyer, and Kashyap (2003) proposed that corporate environmentalism includes two dimensions: environmental orientation, which is managers' perceptions of the importance of their firms' environmental issues, and environmental strategy, which means how environmental issues are integrated into a company's strategic plan.

Corporate environmentalism is then defined as "the recognition of the importance of environmental issues facing the firm and the integration of those issues into the firm's strategic plans" (Banerjee et al., 2003, p. 106). Hoffman (2001) divided the development of corporate environmentalism into four periods including industrial environmentalism (1960-1970), regulatory environmentalism (1970-1982), environmentalism as social responsibility (1982-1988), and strategic environmentalism (1988-1993).

The environment was first regarded as one of the most important and legitimated stakeholders in the 1970s (Carroll, 1991). However, it was not until the 1990s that environmental issues became an integral aspect of managers' concerns (Osterhus, 1997). Environmental Management Systems (EMSs), integrate environmental issues into companies' daily business practices by management tools and principles (Gibson, 2005). Such systems have existed since the 1980s. Nevertheless, it was not until the 1990s that EMSs began to be widely used and became the core of corporate environmentalism. ISO 14001 standard, which was published in 1996, and Integrated Environmental Management Systems (IEMS), which began in 1992 and were published in 2000, are the two most important international EMSs standards. The growing importance of environmental issues can be shown by companies' contributions. U.S. environment/wildlife organizations received \$5.25 billion in 1998, a 28.3% increase rate

over 1997 (\$4.09 billion) (“Charitable Contributions Rose 10.7% in 1998, to \$ 174.52 Billion”, 1999).

Entering the 21<sup>st</sup> century, the global environmental crisis is growing to be one of the biggest crises that humans face. Serious environmental problems include climate change, destruction of ecosystems, water pollution, overpopulation, toxic waste, ozone depletion, urban sprawl, smog, endangered species, and acid rain (Stauffer, 2006). As a result, consumer awareness of environmental issues is increasing. When asked about the most important issue facing Canadians, 13% of the respondents selected environment/pollution, which ranks as second, just 3% lower than health care (CBC, 2006). In the United States, 80% of Americans viewed environmental issues as one of the critical needs for companies to support (Cone, 2004). Just one year later, 67% of the respondents thought the environment in the United States was getting worse in 2006, while in 2001 this number was 57% (PollingReport, n.d.). The contributions are also growing. In 2002, \$6.59 billion dollars were donated to the United States environment/animals organizations (“Giving USA’ highlights tenacity”, 2003).

BSR (Business for Social Responsibility) Staff (2003a) summarized the environmental protection pressures companies have in the 2000s: sustainable development pressure from companies themselves, environmental policies, international organization efforts, stakeholder groups (i.e., environmental organizations, nonwestern environmental groups, environmental justice groups, and animal rights groups), shareholder groups, mainstream investors and insurers, religious organization, and consumers.

Water problems, as one of the new and emerging environmental issues, has received much more attention than before. In a 2006 nationwide poll, about 76%~84% of Americans personally worried about a water crisis a great deal or a fair amount (PollingReport, n.d.). The United Nations estimated that about one-third of the population had water stress, and there would be two-thirds in 2025 (BSR Staff, 2003b). Industry, which accounts for about 23% of all fresh water use worldwide, aggravates the water problem by using fresh water and generating waste water (BSR Staff, 2003b).

Fortunately, more companies have been aware of this crisis. The Water Sustainability Work Group (a business group chaired by ConAgra Foods and Coca-Cola) reported in 2002 “The business case is building for companies to develop more coordinated and forward-looking water strategies. Water costs are increasing, business disruption risks are growing, and stakeholders are becoming more concerned about companies’ water-related performance” (BSR staff, 2003b, ¶1). Hotels also participate in this campaign expecting that they can conserve water and use less detergent by suggesting that customers reuse towels and linens. The data show that every 100 guests that participate in the reuse program can save 450 gallons of water and 3 gallons of detergent daily (Project Planet, n.d.). The way hotels communicate with customers is to place a small notice, which contains persuasive information, in the rooms. This reuse program has great significance: to hotels, it can help to build good CSR reputation; to customers, it provides them an opportunity to be socially responsible; to the environment, it can address the water crisis. Therefore, it is necessary to study consumer response toward this suggestion and to find a way to make this persuasion more effective.

#### *2.4. Consumer response toward companies' CSR efforts*

After 1990, researchers and organizations became interested in studying consumer response toward companies' efforts to be socially responsible, but at a very general level. They found that consumers not only expected companies to be socially responsible but expected a high level of CSR (e.g., Creyer & Ross, 1996; Mohr et al., 2001). CSR programs have been shown to have a positive impact on consumer attitude and behavior intention (e.g., Brown & Dacin, 1997; Mohr & Webb, 2005; Murray & Vogel, 1997; Ross, Patterson, & Stutts, 1992; Smith & Alcorn, 1991), whereas companies' negative CSR reports will cause consumers' negative responses (Barrett, 1996). Moreover, because of companies' CSR programs, consumers will evaluate products positively (Brown & Dacin, 1997). The impact of CSR on product price has also been examined. Auger, Burke, Devinney, and Louviere (2003) found that respondents were willing to accept a higher price from an ethical company. However, their conclusion is not quite consistent with that from Creyer and Ross (1996), who found that respondents would not pay more for products from an ethical company, but they would pay less for products from an unethical company.

Canadian Democracy and Corporate Accountability Commission (Zwelling, n.d.), which aims to study public concern for CSR, conducted a public opinion poll in Canada in 2001. The report shows that 72% of Canadians (74% shareholders) expected companies to be socially responsible when pursuing profits. Most Canadians (75%~80%) also expected that the government can play an important role in promoting companies to be socially responsible by establishing standards or restricting purchase. When being asked if they would like to invest in a company with a good CSR reputation even if it

brings lower benefits, 51% of Canadians (54% of shareholders) agreed. These results suggest that some respondents were hesitant when CSR programs conflicted with their own benefits. The data also indicate that companies' CSR efforts have received some effectiveness. There were about 51% of Canadians thought that in recent years Canadian companies were more socially responsible than before, but 30% did not agree.

Later, especially after 2000, researchers were not satisfied with simple data collection. They not only tried to deeply understand consumer response but also began to find out the factors influencing consumer response.

Some researchers intended to understand consumer response by typology. Webb and Mohr (1998) measured respondents' knowledge of CRM, attitude and attribution toward firms and NPOs, and the influence of CRM and then divided consumers into skeptics, balancers, attribution-oriented, and socially concerned based on their responses toward CSR. Mohr et al. (2001) extended their research to a more general CSR context and argued that consumers can be divided into four groups (i.e., precontemplators, contemplators, maintainers, and the action group) by their purchase intention. Ellen et al. (2006) regarded attribution as another important factor which can help to explain consumer attitude and behavior intention. They thought that consumers' attributions of companies' motives to be socially responsible are more complicated than just self-motivation and others-motivation. Using open-ended responses, they coded subjects' statements and developed four types of attribution: self-centered motives (strategic and egoistic) and other-centered motives (value-driven and stakeholder-driven). The results indicate that consumers respond positively to CSR efforts when they hold value-driven or



strategic attributions while they respond negatively if they have stakeholder-driven or egoistic attributions.

Models and frameworks have also been developed to assess consumer response. Follows and Jobber (2000) built a consumer model of environmentally responsible purchase behavior to show the value-attitude-purchase intention relationships. This model confirms that attitude toward the environmental (individual) consequences can increase (decrease) environmentally responsible purchase intention, and self-transcendence (conservation) values can positively (negatively) influence attitude toward environmental consequences, while self-enhancement values positively influencing attitude toward the individual consequences (Follows & Jobber, 2000). Bhattacharya and Sen (2004) built a contingent framework to understand CSR initiatives. Their framework indicates that consumer reaction to CSR initiatives can be divided into internal (e.g., awareness, attitudes, and attributions) and external (e.g., purchase behavior, word-of-mouth). Furthermore, the impact of CSR initiatives on internal outcomes is more evident, and internal outcomes are much easier to measure than external outcomes (Bhattacharya & Sen, 2004).

Folks and Kamins (1999) and Handelman and Arnold (1999), who examined the interactive relationship between level of CSR (ethical or unethical) and other factors (e.g., product quality, store image), got the same results. Under low CSR conditions, product quality and store image cannot influence consumer response, but can have a positive impact under high CSR condition. Mohr and Webb (2005) examined the influence of level of CSR and price in two domains (environment and philanthropy). The

results indicate that CSR can have a greater impact on purchase intention than price in the environmental domain.

Some researchers studied the impact of consumer perception elements. In the environmentalism context, Osterhus (1997) found that normative influences (i.e., social norm, personal norm, aware of consequences, attribution of responsibility, and trust in source) and economic influences (i.e., personal cost, personal reward) can act together to influence consumer behavior intention. Speed and Thompson (2000) stated that consumers' perceptions of sponsor-event fit, perceived sincerity of the sponsor, perceived ubiquity of the sponsor, and attitude toward the sponsor are key factors which can influence the generation of favorable response toward sponsorship. Forehand and Grier (2003) measured situational skepticism and dispositional skepticism separately and found they had different impacts on consumer response. Basil and Weber (2006) viewed personality traits as a crucial factor. They found that consumers support CSR because of their values and because of a concern for appearances; if their motivation is a concern for appearances they do not necessarily feel CSR is important, and if their motivation is values CSR is important to them.

After 2000, more researchers focused on CSR offer elements, such as fit, timing, commitment, and program types. Menon and Kahn (2003) found that types of philanthropic activities can influence consumer perceptions of CSR, and cause promotions are more effective than advocacy advertising. Moreover, they found that congruence between the sponsor and social issues acts as a moderator. Swaen and Vanhamme (2005) argued that consumer attitude can be affected by source credibility and companies' accusations of irresponsible acts. Ellen et al. (2006) studied whether

high/low fit or commitment will generate different attributions. Becker-Olsen, Cudmore, and Hill (2006) examined the interactive relationship of fit and motivation. Moreover, they found timing also serves as an important factor and found that only high-fit, proactive programs lead to positive responses. Simmons and Becker-Olsen (2006) studied the impact of fit and message source on clarity of positioning, attitude toward the sponsorship, and firm equity. Pirsh et al. (2007) tried to understand the impact of different CSR programs on consumer response. The results show that institutionalized CSR programs are most effective at increasing customer internal outcomes (i.e., loyalty, enhancing attitude toward the company, and decreasing consumer skepticism), while promotional CSR programs increase external outcomes (i.e., purchase intention).

Sen and Bhattacharya (2001) included both CSR offer elements -- company-specific factors (e.g., CSR domains, new product quality information) and consumer perception elements -- individual-specific factors (e.g., CSR support, CSR-Corporate Ability beliefs) in their conceptual framework. They found that all of them act as key moderators of consumer response to CSR. Consumers' perceived congruence between their own characters and those of the company is found to act as a mediator between CSR information and company evaluation. More specifically, "high-CSR support consumers' purchase intentions are distorted away from their CSR-based evaluative context by a perceptual contrast effect, which results in a CSR-induced reduction in such consumers' intentions to purchase a high-quality product" (Sen & Bhattacharya, 2001, p. 238), which means the positive CSR record can decrease the high-support subjects' purchase intentions of a high-quality new product. Such situations may happen when consumers

generally know about a company before they get information about the products (Sen & Bhattacharya, 2001).

In summary, although researchers have examined the impacts of some CSR offer elements and consumer perception elements on consumers' responses, some limitations still exist because of the broadness of CSR and the complication of the situation condition. Such limitations come from the following aspects: (a) Some research was only conducted in a specific context; (b) the causal relationships between these independent variables and some specific dependent variables have not been studied yet; (c) there are new variables which still need to be identified. Specifically, lacking is an examination of anti-consumption as a response to CSR, which is the focus of this study.

When compared to the widely known domain of consumption, anti-consumption (or against consumption) is a nascent counterpart that has not received adequate attention from either academics or practitioners. As a broad domain, anti-consumption can be studied from many aspects such as the rejection of mediated images of beauty ideals, the rejection of material consumption, voluntary simplicity, ethical consumption, and anti-globalization (Zavestoski, 2002a). In spite of the relative newness of this domain, some specific topics of anti-consumption have already been studied by researchers. Zavestoski (2002b) studied voluntary simplicity and identified three primary motivational bases (i.e., self-esteem, self-efficacy, and self-authenticity) which determine individuals who participate in the voluntary simplicity movement. Kozinets and Handelman (2004) investigated anti-advertising, anti-Nike, and anti-GE goods activists and found a great impact from spiritual and religious identities. Other researchers like Rumbo (2002) and Duke (2002) also had contributions to anti-consumption studies. Social marketing to

promote responsible consumption and behavior is another form of anti-consumption. Social marketing is often used to encourage anti-consumption (or discourage consumption) of harmful products such as cigarettes, alcohol, and high-fat foods. In the present research, we examine the anti-consumption of towels for the purpose of benefiting the environment.

### 3. Dependent Variables

#### 3.1. Attribution

Understanding consumers' perceptions of the relationship between causes and effects is crucial to consumer behavior studies. Attribution theory provides researchers such an approach because it is concerned with all aspects of causal inferences: "how people arrive at causal inferences, what sort of inferences they make, and what the consequences of these inferences are" (Folkes, 1988, p. 548). The assumption of this theory is that people's attributions determine their future behaviors. Attribution theory was developed by many people such as Heider (1958), Bem (1972), Kelley (1972), Jones and Nisbett (1972), and Weiner (1985). Heider, who is regarded as the pioneer in this area, built the original definition of attribution theory in his book, *The Psychology of Interpersonal Relationships* (1958). Moreover, he distinguished two types of causes: personal causes and environmental (or situational) causes. On the basis of Heider's study, Kelley elaborated on how individuals infer causes. More specifically, Jones and Nisbett studied the differences between actors' and observers' perceptions of the causes of behavior, while Bem examined the similarities between them. Later, Weiner extended the dimensions of the perceived causes of success and failure into locus, stability, controllability, intentionality, and globality. The definition given by Forehand and Grier accurately describes the nature of attribution theory: it "addresses the processes by which individuals evaluate the motives of others and explains how these perceived motives influence subsequent attitudes and behavior" (2003, p. 350).

In spite of its importance, it was not until the 1970s that attribution theory was introduced into consumer research. During the 1970s, some researchers began to use

attribution approaches to explain the impacts of some variables (e.g., source credibility, promotional incentives) on consumer attitude and persuasion effectiveness (Folkes, 1988). In the 1980s, attribution theory was used to study consumers' causal inferences about, for example, consumers' own behaviors and the use of endorser in a product advertisement (Folkes, 1988). Folkes found that people's attributions can be understood from three aspects based on the antecedents of causal inferences: (a) motivation (i.e., people make causal inferences because of hedonic or esteem needs), (b) information (i.e., attributions are formed based on people's information about an action), and (c) prior beliefs (i.e., people's prior beliefs determine their inferences).

Entering the 1990s, attribution theory was employed to study consumers' perceptions of companies' reasons or motives (or motivations) for performing socially responsible behaviors. Specifically, in the CSR context, attribution is defined as "causal reasoning consumers engage in when trying to understand a company's CSR activities" (Bhattacharya & Sen, 2004, p. 14). At first, both managers and some researchers believed that consumers viewed companies' CSR efforts very simply. They assumed that consumers can identify only two basic types of motives: altruistic versus egoistic, exogenous versus endogenous, other-centered versus self-centered, public-serving versus firm-serving. For example, the 4-item scale developed by Webb and Mohr (1998) includes (a) rewards sought for the firm itself (e.g., boosting sales, making more profits, publicity, goodwill in the community), (b) rewards sought mostly for the firm but partly for others (such as the community, society, or the environment), (c) rewards sought mostly for others but partly for the firm, and (d) rewards sought solely for others. They found that about half of the subjects viewed firms' motives as helping themselves; 34%

of the subjects viewed firms' motives as mostly for themselves and only partly for others. Later, Mohr et al. (2001) extended their previous research to a more general CSR context and got similar results. The data indicate that 29% of the subjects thought the firm's motive was to help itself and 51% of the subjects regarded it as mostly helping itself and partly helping others.

Forehand and Grier (2003) studied attributions in a multifaceted manner and found that when the public knows the strategic benefits of the CRM program, firm-serving attributions will not negatively influence consumer response a lot. Moreover, they found that consumer attributions can be affected by situational manipulations.

Klein and Dawar (2004) considered attribution in a different way. They found that consumers' attributions of blame about product-harm crises are influenced by CSR. Moreover, they examined three causal dimensions of attribution and stated that consumer perception of CSR before crises can strongly influence locus (i.e., the event that causes the crisis) and stability (the crisis can be unchanging or temporary) but weakly influence controllability (i.e., whether actor can control the crisis).

In the context of CRM, Ellen et al. (2006), who argued that consumers' attributions of motives may be more complicated, used an open-ended questionnaire to collect people's thoughts about a CRM program. After coding the answers, they identified four types of attributions (strategic, egoistic, values driven, and stakeholder driven) and found that consumers may have one or more attributions at the same time. In a second study, they found that attributions can act as a mediator between offer elements (e.g., fit and commitment) and purchase intention.



Therefore, consumers' attributions of companies' CSR efforts will be examined because this examination can help us better understand consumers' thoughts and behavior. Ellen et al.'s (2006) attribution scale will be employed since their four types of attributions may bring some new findings to this area. In the present research, attribution will be measured both through the use of open-ended thought listing and through Ellen et al.'s (2006) scales.

### *3.2. Attitudes and behavior intention*

Attitudes, which can evaluate products, advertising effectiveness, and political and social issues (Bagozzi, Tybout, Craig, & Sternthal, 1979), have been extensively used by researchers to measure consumer response. Attitudes have a variety of definitions, but the essence is the notion of evaluation (Petty, Wegener, & Fabrigar, 1997). Attitude can refer to "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993, p. 1). Petty et al. defined attitudes as "summary evaluations of objects (e.g., oneself, other people, issues, etc) along a dimension ranging from positive to negative" (1997, p. 611). Attitudes also can be viewed as "beliefs that transcend specific situations and are used to resolve conflicts or make decisions" (Follows & Jobber, 2000, p. 727).

In the present research, consumers' attitudes toward the hotel will be measured. The results will clarify whether the reuse program can influence consumer attitude toward the hotel. Therefore, the definition developed by Petty et al. (1997) will be used here.

Because of the limited conditions, sometimes it is impossible for researchers to measure consumer behavior so behavior intention has been widely used as an alternative. Behavior intention is typically measured by “the subject’s indication of his or her intention or willingness to engage in various behaviors with respect to a given person or object” (Kim & Hunter, 1993, p. 332). Behavior intention has been viewed as a mediator in attitude-behavior relationships by most theorists. Later, this view was confirmed again by Kim and Hunter, who found that behavior intention worked better than attitude when used to predict behavior. Their results indicate that attitude-behavior intention correlation is higher than behavior intention – behavior correlation, while behavior intention – behavior correlation is higher than attitude-behavior correlation. For this reason, subjects’ self-reported behavior intentions will be measured as well instead of attitude alone.

## 4. Independent Variables

### 4.1. Source credibility

The process and outcomes of persuasive communication are greatly dependent on the characteristics of the message source (Buda & Zhang, 2000; Homer & Kahle, 1990; Lafferty & Goldsmith, 1999). Kelman (1961) proposed three psychological modes under which the characteristics of message source can influence attitudes: (a) internalization, (b) identification, and (c) compliance. Previous research has generally classified the operationalization of message source characteristics into credible versus not-credible, physically attractive versus unattractive, and ideologically similar versus dissimilar (Wilson & Sherrell, 1993). This classification fits Kelman's proposition well because credibility represents "internalization", while physical attractiveness and ideological similarity are two types of source effects of "identification" (Wilson & Sherrell, 1993). Credibility was defined as "how expert the communicator is perceived to be in the area of concern, and also as how trusted by the individual receiving the communication" (Freedman, Sears, & Carlsmith; as cited in Buda & Zhang, 2000, p. 233) or generally refers to "a global evaluation of the believability of the message source" (Wilson & Sherrell, 1993, p. 102). Physical attractiveness represents physical attributes of the source (Wilson & Sherrell, 1993), and ideological similarity refers to the experience, attitude, or value similarity between a communicator and a recipient (Brock, 1965; Busch & Wilson, 1976; Chaiken, 1980). In the context of the present study, hotel customers are asked to reuse their towels. The hotel itself is generally the source of this message. However, this is not always the case. In some cases, the notice cards used show that Project Planet is another source. Project Planet, a private corporation endorsed by the American Hotel &

Lodging Association, has focused on the lodging industry promoting the program of reusing towels and linens, conducting studies, performing extensive guest surveys, and developing training materials for several years. According to previous definitions, credibility and ideological similarity are applicable, but physical attractiveness is not since the source is not an individual but rather a hotel. Although consumers may perceive more ideological similarity with Project Planet because of the similarity between its values and the purpose of the reuse program, that is not the focus of the present study. The present research focuses on examining source credibility.

The dimensions of source credibility have been identified in many ways. It once included “expertise, reliability, goodwill, dynamism, and likeability”, “safety, qualification, and dynamism” (Wilson & Sherrell, 1993), or “expertise, objectivity, and trustworthiness” (Homer & Kahle, 1990). Dholakia and Sternthal (1977) found three dimensions of credibility – trustworthiness, expertise, and attractiveness. Some researchers concentrated on specific dimensions of credibility. For example, Hovland, Janis, and Kelley (1953) pointed out that people’s perceived weight of the communicator’s assertions depends on both expertise and trustworthiness. Wilson and Sherrell (1993) found that they got similar results regardless of whether the source was studied generally as credible or specifically as expert or trustworthy. Expertise means “the extent to which a communicator is perceived to be a source of valid assertions”, and trustworthiness means “the degree of confidence in the communicator’s intent to communicate the assertions he considers most valid” (Hovland, Janis, & Kelley, 1953, p. 21). The present research will consider source credibility from these two dimensions because they are relevant to the source situation. The hotel and Project Planet are experts

in different domains so that when they make the same request for reusing towels and linens, the audience may generate different perceptions of trustworthiness.

The manipulation of message source credibility can be realized in many ways. Lord (1994) examined three kinds of message sources – advertising appeals (a municipal government could advertise itself or environmentally responsible firms within its jurisdiction to incorporate such messages into their ads), publicity-generated news items (generated by some public-relations efforts on the part of municipal governments or other entities wanting to encourage recycling), and personal-influence appeals (people introduce their experience), in which publicity-generated news items have an advantage in the area of source credibility (Lord, 1994). On environmental issues, business and industry received the greatest level of complaints from consumers and then were perceived as having less credibility when they served as the sources of information (Stisser, 1994). Becker-Olsen and Simmons (2002) believed that sponsorships are more effective when they are communicated by the sponsored organization instead of the company. Swaen and Vanhamme (2005) claimed that company-controlled sources are more likely to be perceived as less credible. Wang and Nelson (2006) argued that credible third party endorsement has higher source expertise in advertisements. Although Simmons and Becker-Olsen (2006) did not indicate that a nonprofit message source has high credibility and a company message source has low credibility, their results can confirm this statement. Szykman et al. (2004) did a similar manipulation on sponsor identity.

Generally, previous researchers believed that high credibility messages come from publicity, credible third party endorsement, or nonprofit organizations, whereas low

credibility messages are from advertising appeals, business, industry, and company-controlled sources. Although Project Planet is a for-profit private organization, it does similar things as a nonprofit organization and has the same purpose – protecting the environment. Therefore, it is expected that Project Planet will be perceived as a high credibility message source, while hotels will be regarded as a low credibility source.

The reason why people would perceive these two message sources like this can be explained from two aspects. One reason comes from people's middle childhood recognition that advertisers are self-interested (Lord, 1994). This recognition makes people distrust and disbelieve businesses and then doubt their purpose of persuasion. Although Project Planet and hotels are both for-profit companies, they do business in different areas. When promoting the reuse program, hotels can get more benefits (i.e., good CSR reputation and/or money saved by reusing) than Project Planet (i.e., money that hotels have paid for the notice cards). Thus, people are more likely to criticize the hotel's persuasion intent.

The other reason is that Project Planet, which has focused on promoting reuse programs for several years, is an expert in this area, while hotels' business is to provide accommodation and the reuse program is just its environmental request. Therefore, a reuse suggestion coming from an expert (Project Planet) is much more trustworthy than that from a nonexpert (hotel).

Many researchers have repeatedly shown that sources high in credibility (expertise and/or truthworthiness) are more persuasive than those with low credibility (expertise and/or truthworthiness) (Homer & Kahle, 1990; Lafferty & Goldsmith, 1999). Finch (1997) concluded that the use of a high credibility source will generate more

positive attitude toward the advertising claims across all subjects and treatment conditions. Wang and Nelson (2006) found that consumers are in fact more likely to choose a product whose ad is linked to a credible third party endorsement. Lafferty and Goldsmith introduced another type of source credibility, corporate credibility, which means consumers' perceptions of the company's reputation. Their results indicate that both endorser credibility and corporate credibility positively influence consumer response, but the former has a greater impact on attitude toward the ad, while the later has a greater impact on attitude toward the brand and purchase intention. However, some researchers got inconsistent results: the low expert source also has a positive impact on attitude or there is no systematic relationship between source expertise and persuasion. For example, Buda and Zhang (2000) found that an expert source and a nonexpert source had no significantly different impact on product attitude. Despite these different findings, the majority still believe that high source credibility has more advantages.

Recently, several researchers began to examine the impact of source credibility in the CSR context. Simmons and Becker-Olsen (2006) found that compared with a company message source, a nonprofit message source leads to greater clarity, a more favorable attitude toward the sponsorship, and higher firm equity. Similarly Swaen and Vanhamme (2005) found that consumer-controlled sources of information are more likely to generate a positive impact on consumer attitude than company-controlled sources. Szykman, Bloom, and Blazing (2004) examined sponsor identity and found that subjects thought that the nonprofit organization sponsor had more positive, society-serving motivations, while they viewed a corporation sponsor as having more negative, self-

serving (ulterior) motivations. However, they did not find that the sponsor identity can influenced subjects' attitudes toward the sponsor.

The impact of source credibility on persuasion effectiveness can be explained by attribution theory, which suggests that consumers will try to evaluate the credibility and accuracy of the message in the reading process (Kelley, 1972). Therefore, a low credibility source makes consumers discount the claims or arguments in the message, while a high credibility source makes consumers more likely to accept message claims or arguments (Grewal, Gotlieb, & Marmorstein, 1994). Lafferty and Goldsmith used the internalization process to explain such an impact: "internalization occurs when the receiver is motivated to have an objectively correct position on an issue" (1999, p. 110). For this reason, the receivers are more likely to accept the opinion of credible spokespersons because they represent an objectively correct position (Lafferty & Goldsmith, 1999).

According to Becker-Olsen and Simmons (2002), announcing the reuse program through Project Planet can induce customers to think about the hotel's CSR efforts from the perspective of the cause. Thus customers will be more likely to perceive that the hotel's motivation is to protect the environment and to help society (i.e., value-driven attribution). When the hotel uses a notice card with its own logo rather than that of Project Planet to promote the reuse program, it will induce customers to consider the request from the hotel's perspective – the motivations of the hotel are, for example, to satisfy stakeholders (stakeholder-driven attribution), to save money (egoistic attribution), or to keep customers (strategic attribution). Therefore, it is expected that high source credibility will generate value-driven attributions, positive attitude and behavior



intention, while low source credibility will generate strategic, stakeholder-driven, and egoistic attributions, negative attitude and behavior intention. Moreover, when consumers think of the sponsorship from the hotel's perspective, which should happen when the hotel's logo is used, they will generate more counterarguments. Counterargument is defined as a "thought process that can inhibit agreement with an advocated position" (Rucker & Petty, 2004, p. 219).

H1: Source credibility will positively influence (a) attitude toward the hotel (b) behavior intention, and (c) value-driven attributions, while negatively influencing (d) strategic, (e) stakeholder-driven, (f) egoistic attributions, and (g) counterarguments.

#### *4.2. Argument strength (x source credibility)*

The quality of an argument is an important element which determines the message effectiveness. Although there is some disagreements on the definition of argument quality, it is generally accepted that strong arguments can generate more favorable cognitive and affective thoughts and weak arguments can generate less favorable thoughts (e.g., Batra & Stayman, 1990; Darke & Chaiken, 2005; Petty & Cacioppo, 1981).

Petty and Cacioppo (1981) discussed argument quality as the individuals' self-perception of the persuasiveness of the argument. Specifically, strong arguments are "logically sound, defensible, and compelling" and weak arguments are "open to skepticism and easy refutation" (Petty, Cacioppo, & Heesacker, 1981, p. 435). In an experiment, Petty, Cacioppo, and Schumann (1983) created two groups of arguments based on subjects' ratings: strong arguments contained product attributes which were

perceived as more persuasive, while weak arguments consisted of less persuasive product attributes. This manipulation method has been employed in later studies as well (e.g., Moore & Reardon, 1987; Munch & Swasy, 1988; Sanbonmatsu & Kardes, 1988).

Borrowing from two models, Areni and Lutz (1988) developed a conceptual definition of argument quality and argued that argument quality has two distinct components: argument strength and argument valence. Within the McGuire model, argument strength was defined as the likelihood that people accept the conclusion of a logical syllogism which is created by supporting beliefs (beliefs formed by supporting evidence) (Areni & Lutz, 1988; Boller, Swasy, & Munch, 1990). Argument valence was defined as people's evaluation of the conclusion. This definition is consistent with that from Kisielius and Sternthal, who regarded valence as "one piece of information that is viewed as being more or less favorable in the rendering of a particular attitudinal judgment than some other information" (1984, p. 55). Combining these two concepts, a persuasive message can be viewed as "a set of arguments concerning beliefs that link the object with positive and negative consequences and evidence in support of those arguments" (Areni & Lutz, 1988, p. 198). Therefore, argument strength should be manipulated by altering the nature of the supporting evidence in the communication while holding the intent of the persuasive message constant (Areni & Lutz, 1988). Petty et al.'s (1983) manipulation of argument quality was examined and it was found that only argument valence instead of argument strength was manipulated. Moreover, in order to clearly distinguish these two components, Areni and Lutz gave an example of the manipulation of argument strength in their study.

Later, Boller et al. (1990) discussed the concept of argument quality based on Toulmin's (1958) model of argument structure, which pointed out that there are six crucial elements in an argument: claim (or conclusion), data, warrants, backing, qualifiers, and rebuttals. These six elements were divided into four groups by Boller et al.: claim assertions (claims or conclusions), evidence (data), authority (warrants and backing), and probability (qualifiers and rebuttals). Claim assertions refer to the conclusion, consequence, or the intent of the persuasive message; evidence means "the specific facts that a communicator produces to support a claim" (Boller et al., 1990, p. 322); authority is used to build the logical connection between evidence and claims; probability serves as information which acknowledges that the claims are not "absolute" (Boller et al., 1990). From Areni and Lutz's (1988) perspective, the manipulation of argument valence can be realized by manipulating claim valence, and the argument strength can be manipulated by altering the evidence, authority, and/or probability.

The conceptual studies of Areni and Lutz (1988) and Boller et al. (1990) provide an opportunity to clearly understand researchers' manipulation of argument quality. For example, Batra and Stayman, who followed Petty et al. (1983), manipulated "the audience's evaluation of the desirability of the consequence associated with the attribute (argument valence)" (1990, p. 203). Some other researchers (e.g., Andrews & Shimp, 1990; Coulter & Punj, 2004; Darke & Chaiken, 2005; Gammoh, Voss, & Chakraborty, 2006; Martin, Lang, & Wong, 2004; White, 1997) manipulated argument valence in a similar way. Argument strength was also manipulated in some experiments. Wiener, LaForge, and Goolsby (1990) created strong arguments by simply adding supporting arguments to weak arguments. Hallahan (1999) manipulated argument strength by

altering the data in the messages. Chebat, Gelinias-Chebat, Hombourger, and Woodside (2003) utilized adverbs and adjectives to differentiate strong arguments from weak arguments. Escalas and Luce (2004) used some specific words and provided some supporting information to make the strong arguments more credible and scientific.

Areni (2003) extended previous research and tried to develop a conceptual definition of argument quality from structural and grammatical perspectives. He argued that strong arguments can be created by using true premises or including qualifiers and/or rebuttals. Grammatically, connectives, statement order, and grammatical forms can also be used to manipulate argument quality.

Most studies on argument quality have focused on its role in the elaboration likelihood model (ELM), which hypothesizes that information is processed through two ways. When individuals have more motivation and ability to process the information, they are more likely to be influenced by central cues – the content of the information; however, when individuals have less motivation and ability, they are more likely to be influenced by peripheral cues – the executional aspects of the communication (Areni, 2003; Gammoh et al., 2006; Petty et al., 1983). The findings indicate that argument quality serves as a central cue in this model.

Argument quality is also studied as a cause of counterarguments. Researchers in this field have identified several elements which can influence counterarguments, such as inoculation, reactance, message repetition, and distraction (Rucker & Petty, 2004). Argument quality serves as another important cause, because compared with strong arguments, weak arguments will evoke a higher ratio of counterarguments (Batra & Stayman, 1990; Coulter & Punj, 2004). Rucker and Petty explained that “the most

obvious reason a nondistracted person might fail in counterarguing is that the message contains compelling reasons for the advocated position that it is very difficult or impossible to find genuine faults in the arguments” (2004, p. 219).

A non-scientific examination of towel and linen reuse notice cards used by actual hotels shows that the hotels’ notice cards all have the same claim assertion (i.e., please reuse the towels) but different supporting evidence. Some of them indicate only that reuse can help to protect the environment; others also indicate that the savings the hotel realizes from reduced laundering will be donated to a third party. This additional charitable donation claim can serve to reduce counterarguing by dispelling the suspicion that the hotel’s motivation is simply to save money. Therefore, based on the studies of Areni and Lutz (1988) and Boller et al. (1990), these cards can be viewed as having the same argument valence but different argument strength.

The question here is which arguments will be perceived as strong arguments. Because these two types of arguments both point out that reuse can protect the environment and it is generally believed that people have positive attitudes toward environmental protection, the additional evidence that reuse will also results in donations to charity will act as a crucial element on determining the argument strength. Smith and Alcorn (1991) found that more than half (56.6%) of subjects thought it was very or somewhat important for them to make charitable donations; 57.9% of subjects believed that it was important to support companies that support charitable causes; and 45.6% of subjects were likely to switch brands to support a company having donation to a charitable cause. Another survey shows that more than 85% of Canadians donated a total amount of \$8.9 million to causes in 2004 (Giving and Volunteering, n.d.). Some research

on cause-related marketing also indicated that consumers are willing to purchase products because the company donates money to a credible third party (e.g., Webb & Mohr, 1998). It is very evident that donation is an important issue to most individuals and most individuals have a positive attitude toward such behavior. Therefore, it is expected that charitable donation will be a compelling reason and arguments which contain this evidence will be viewed as much stronger.

The impact of argument strength on consumer attitude and behavior intention has been studied by many researchers in different contexts. However, how argument strength influences consumers' attributions is not yet clearly understood. The discounting principle hypothesizes that "the role of a given cause in producing a given effect is discounted if other plausible causes are also present" (Kelley, 1972, p. 8). This principle indicates that "in the absence of obvious external reasons for a given behavior, an observer is likely to deduce that the behavior was internally driven. However, when external reasons for behavior are introduced, the observer is less likely to conclude that the behavior was internally motivated" (Forehand & Grier, 2003, p. 350). Applied to the domain at hand, saving money would be an external reason for the hotel to participate in the program. This means that consumers will consider the egoistic motivation of the hotel. When this possibility is eliminated by using the strong argument that savings will be donated to charity, consumers are likely to see the hotel as internally motivated. This means that the hotel would be perceived to truly desire to help the environment, not just participating to save money. This is consistent with Ellen et al.'s (2006) value-driven attribution and should reduce egoistic attributions.

Argument strength can determine the generation of counterarguments to some extent. Counterarguments can inhibit agreement while strong arguments can generate more favorable cognitive and affective thoughts. Therefore, in order to make strong arguments, it is crucial to reduce people's counterarguments.

H2: Argument strength will positively influence (a) attitude toward the hotel, (b) behavior intention, and (c) value-driven attributions, while negatively influencing (d) egoistic attributions and (e) counterarguments.

When a strong argument is used on the notice card, consumers no longer perceive that the hotel is participating in the program for egoistic reasons. Then it is likely that the source will not have a large impact on consumers. Therefore, whether the message comes from the hotel source or Project Planet source probably will not make a significant difference when the savings are going to be donated to charity (strong argument). This point of view was confirmed in a study by Pornpitakpan and Francis (2001), who found that the levels of argument strength determine the effect of source expertise.

H3: Under strong argument conditions, source credibility will have less impact on (a) attitudes toward the hotel and (b) behavior intention.

#### *4.3. Fit*

Consumers' perceptions of congruence or fit have been extensively studied, and researchers have found that fit has a direct impact on consumer response. Although fit has been given different definitions in a variety of contexts, generally, fit means the relatedness between two or more objects. The management literature shows that researchers have examined the impact of fit in the domains of brand extension, brand

alliances, endorsement, and sponsorship. In the cause-related marketing context, fit was defined as “the perceived link between a cause and the firm’s product line, brand image, position, and/or target market” (Varadarajan & Menon; as cited in Becker-Olsen et al., 2006, p. 47).

Sponsorship researchers have highlighted the importance of the fit between the sponsor and the sponsored event. Speed and Thompson (2000) found that the fit between a company and its sponsored event is a key factor in generating favorable response toward the sponsorship. Becker-Olsen et al.’s (2006) results show that compared with high fit, low fit between firms and social initiatives will make consumers consider more about this sponsorship and the firms’ motivations, lead to less favorable thoughts, more negative attitudes toward the firm, less beliefs about the firm as less credible, and lower likelihood of purchase intention. Simmons and Becker-Olsen (2006) got the same results that high fit can generate more positive attitude toward the sponsorship and more positive firm equity, and make the company’s position more clear, while low fit will have the opposite effect. Moreover, Becker-Olsen et al. (2006) suggested that fit can influence people’s perceptions of companies’ motivations. Basil and Herr (2003, 2006) found that high fit in a cause-related marketing alliance (CRM) led to more positive consumer attitudes toward the company and charity. Ellen et al. (2006) studied the impact of fit on consumers’ attributions in the CRM context. They found that high (low) fit can increase (decrease) values-driven and strategic attributions while decreasing (increasing) egoistic attributions.

Moderators have also been identified such as consumer elaboration level (Menon & Kahn, 2003), type of philanthropic activities (Menon & Kahn, 2003), consumer



knowledge (Roy & Cornwell, 2004), source credibility (Simmons & Becker-Olsen, 2006), and motivation (Becker-Olsen et al., 2006).

If a hotel promises to donate potential savings from a reuse program to a charity, they must consider which charity to choose. Currently Project Planet's program sends these donations to an organization benefiting children in the third world. Would it be better if the hotel donates the money to an environmental protection organization because the purpose of the reuse program is to protect the environment? Will these two sponsorships have different impact on consumers?

Becker-Olsen and Simmons (2002) thought that the reason why low fit is more likely to have an unfavorable impact on responses is because incongruity (a) is negatively evaluated; (b) generates a variety of unfavorable thoughts; and (c) makes people not certain of the firm's positioning (i.e., what they can expect from the firm). Some other researchers also confirmed such explanations that high fit makes people view the actions of the firm as appropriate (Becker-Olsen et al., 2006). Becker-Olsen et al. (2006) manipulated company's motivation and found that a high-fit CSR program could not necessarily offset the negative response people have toward a profit-motivated company.

As discussed above, Ellen et al. (2006) found that fit positively influenced value-driven and strategic attributions, while negatively influenced egoistic attributions. Because the present research employed the attribution scale from Ellen et al., their conclusions are used as the evidence of the Hypothesis 4.

H4: Fit will positively influence (a) attitude toward the hotel, (b) behavior intention, and (c) value-driven and (d) strategic attributions, while negatively influencing (e) egoistic attributions and (f) counterarguments.

## 5. Methodology (Pretest)

### 5.1. Experimental design, subjects, and procedure

The experimental design was 3 (source credibility: no identified source, hotel source, Project Planet source) X 2 (argument strength: charitable donation argument, no charitable donation argument) X 2 (fit: fit charitable donation, no fit charitable donation) (see Figure 5.1). Because the fit variable was only considered under the charitable donation argument condition, this pretest experiment was a nested design and thus had nine experimental conditions.

Source Credibility \ Argument Strength	Weak Argument (No Charitable Donation Argument)	Strong Argument (Charitable Donation Argument)	
		Fit	No Fit
Project Planet Source	1	4	7
Hotel Source	2	5	8
No Identified Source	3	6	9

**Figure 5.1 Experimental Design of the Pretest**

A control cell, Cell 10, was designed to measure the likelihood that subjects reuse towels and linens when staying in a hotel without notice cards and to examine subjects' pre-existing attitudes toward the two sources and the two charities. The selected sources were Marriott Hotel and Project Planet. Two charities were Friends of the Earth (an environmental charity) and Child Reach (a Children sponsoring charity).

An electronic questionnaire was placed on University of Lethbridge's web site. Anyone could participate in the survey. Subjects were told that by participating in this

research they would have an opportunity to win \$50 in a draw. The first page of the questionnaire introduced the purpose of this research and ethical issues. After that, a cover story asked subjects to imagine that they are staying in a hotel and find a notice card in the room. Following the cover story, the notice card was shown, on which the three independent variables were manipulated. Then, subjects were asked to answer questions based on the provided information.

## *5.2. Independent variables*

### *5.2.1. Source credibility.*

Source credibility was manipulated by placing different logos on the notice card (see Appendix A and Appendix B). The logo of Marriott Hotel served as the low credibility source, while the logo of Project Planet represented the high credibility source. The no identified source condition served as a control condition. Source credibility was measured on six 7-point scales: 1 = unfamiliar/7 = familiar, 1 = unbelievable/7 = believable, 1 = not trustworthy/7 = trustworthy, 1 = no expertise/7 = expertise, 1 = unlikeable/7 = likeable, 1 = not certain/7 = subjects' own opinions with respect to their certainty of their evaluations (Finch, 1997).

### *5.2.2. Argument strength.*

The manipulation of argument strength is shown in Appendix A and Appendix C. Strong arguments gave additional information that the hotel would donate the money saved from reusing to a charity, while weak arguments did not state that the hotel had such a charitable donation. Previous studies have employed many scales to measure

argument strength. For example, Wiener, LaForge, and Goolsby (1990) used 7-point items anchored by no sense/good sense, very unreasonable/very reasonable, very illogical/very logical, only one-sided/cover all aspects; Hallahan (1999) employed three 7-point items anchored by strong/weak, powerful/not powerful, convincing/ not convincing; Chebat et al. (2003) asked subjects whether the arguments are convincing or not and well conceived or not. In the present research, items developed by Wiener, LaForge, and Goolsby (1990) and Hallahan (1999) were combined: 1 = weak/7 = strong, 1 = not powerful/7 = powerful, 1 = not convincing/7 = convincing, 1 = does not make sense/7 = makes good sense, 1 = very unreasonable/7 = very reasonable, 1 = very illogical/7 = very logical.

### *5.2.3 Fit.*

Under strong argument conditions, subjects were told that the money saved from reusing would be donated to Friends of the Earth to protect the environment (high fit) or to Child Reach to sponsor a child (low fit) (see Appendix A and Appendix C). To assess fit, a 7-point Likert scale adapted from Becker-Olsen et al. (2006) was used: 1 = low fit/7 = strong fit, 1 = dissimilar/7 = similar, 1 = inconsistent/7 = consistent, 1 = not complementary/7 = complementary.

## *5.3. Dependent variables*

### *5.3.1. Attribution.*

Items developed by Ellen et al. (2006) were employed and measured on 7-point Likert scales: 1 = totally disagree/7 = totally agree. Because these scales were generated

from a study of cause-related marketing, some items had been changed on the basis of the present research (see Appendix D).

### *5.3.2. Attitude and behavior intention.*

Attitude toward the hotel can be measured on a 7- point scale ranging from “very unfavorable” (1 point), “neutral” (4 point), to “very favorable” (7 point) (e.g., Pirsch et al., 2007). A 4-point ordinal scale ranging from extremely positive, positive, qualified positive and qualified negative is also used by some researchers (e.g., Mohr et al., 2001). Furthermore, it has been measured on three 7-point semantic differential items (using the mean of these three) anchored by 1 = unfavorable/7 = favorable, 1 = bad/7 = good, and 1 = harm/7 = beneficial (e.g., Mohr & Webb, 2005). In the present research, Mohr and Webb’s scale was used.

There are also several ways to measure behavior intention: 7-point scale (1 = not at all likely to accept/7 = very likely to accept) (e.g., Finch, 1997) or three 7-point semantic differential items anchored by very 1 = unlikely/7 = very likely, 1 = impossible/7 = very possible, 1 = no chance/7 = certain (e.g., Mohr & Webb, 2005). Here, Mohr and Webb’s 3-item scale was used.

### *5.3.3. Counterarguments.*

One open-ended question, which asked subjects to list their thoughts regarding the notice cards, was used to measure subjects’ counterarguments. Subjects’ thoughts were coded into categories. Answers which questioned the reuse program or showed negative intention were counterarguments and were coded as 1. Answers indicating that subjects

were willing to support the reuse suggestion or were thinking about positive aspects of the reuse program were no counterarguments and were coded as 0.

#### *5.4. Control variables*

Although the present research focused on examining the impact of three independent variables (i.e., source credibility, fit, and argument strength) on three dependent variables (i.e., attribution, attitude, and behavior intention), control variables (i.e., demographic factors and environmentalist) could moderate the causal relationships.

##### *5.4.1. Demographics.*

Previous research has confirmed that consumer response is influenced by demographic factors. For example, Basil and Weber (2006) found that age and gender can influence people's support of companies' charitable works. Age and gender also can exert an influence on ethical perceptions (Arlow, 1991; Lopez, Rechner, & Olsen-Buchanan, 2005). Moreover, education, income, age, gender, race, and political ideology have impacts on people's evaluations of CSR (Mercer, 2003). Although there are many other demographic factors which have been identified, in the present research, age, gender, income, and education were measured because these have been shown to have the greatest impact in past research.

##### *5.4.2. Environmentalism.*

In consumers, some of them may be environmentalists, who not only are concerned for environmental issues but actually do something to protect the environment in their daily life. Therefore, consumer's environmental awareness was another control

variable. Items developed by Pickett, Kangun, and Grove (1993) were adapted (see Appendix E). Moreover, four additional items were created and added to the original scale. They were (a) Do you accept other people's environmental suggestions (e.g. will you recycle if someone asks you to recycle)? (b) Do you give donations to environmental charities? (c) Do you persuade others to protect the environment? (d) Do you think you are an environmental activist? Subjects were asked to identify the frequency of their behavior by a 7-point Likert scale (1 = never and 7 = always).

## 6. Results (Pretest)

### 6.1. General information

The sample size of the pretest was 139. Subjects were 26.6% male and 72.7% female. The mean age for participants was 28.9, ranging from 18 to 61. The mean education level was college diploma. The mean income of participants was between \$25,000 and \$49,999.

### 6.2. Reliability test

Test results of scale reliability are listed in Table 6.1. As shown, all scales were deemed reliable (see questions in Appendix E and Appendix F).

**Table 6.1 Test Results of Scale Reliability (Pretest)**

<b>Variables</b>	<b>Items Number</b>	<b>Cronbach's alpha</b>
Attitude toward the hotel	3	.94
Behavior intention	3	.98
Source credibility	6	.77
Argument strength	6	.91
Fit	4	.94
Environmentalism	9	.80
Pre-existing attitude toward Marriott Hotel	6	.90
Pre-existing attitude toward Project Planet	4	.96
Pre-existing attitude toward Child Reach	4	.96
Pre-existing attitude toward Friends of the Earth	4	.99

### 6.3. Common factor analysis

To examine the attribution scale, principle axis factor analysis with varimax rotation was conducted, and four factors were requested. The minimum cutoff was a traditional factor weight of .40, and the criterion for cross-loading items was that the



minimum difference between weights must be greater than .10 (Edwards & Karau, 2007).

Table 6.2 is the rotated factor matrix of the attribution scale. Five items loaded on value-driven attributions as intended. Four items loaded on egoistic attributions. Two items loaded on stakeholder-driven attributions. Two items loaded on strategic attributions. Stake 2 was dropped because it did not meet the criteria. Stake 1 was dropped because it loaded in the strategic scale and Stra 3 was dropped because it loaded in the egoistic scale. Table 6.3 shows the new attribution scale.

**Table 6.2 Rotated Factor Matrix<sup>a</sup> of the Attribution Scale (Pretest)**

	Factor			
	1	2	3	4
<i>Value 3</i>	.77			
<i>Value 5</i>	.77			
<i>Value 1</i>	.75			
<i>Value 4</i>	.73			
<i>Value 2</i>	.72			
<i>Ego 2</i>		.80		
<i>Ego 1</i>		.74		
Stra 3		.69		
<i>Ego 4</i>		.63		
<i>Ego 3</i>		.56	.36	
<i>Stra 1</i>			.88	
<i>Stra 2</i>			.70	
Stake 1			.61	.45
Stake 2			.53	.51
<i>Stake 4</i>	.31			.77
<i>Stake 3</i>				.75

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Note: Loadings < .30 are omitted.

**Table 6.3 Consumer Attribution About Hotel Reuse Program (Pretest)**

<b>The Hotel Promotes Reuse Program Because</b>	<b>Value-driven</b>	<b>Stakeholder-driven</b>	<b>Egoistic</b>	<b>Strategic</b>
Value 3: The hotel's owners or employees believe in this cause.	.77			
Value 5: The hotel is trying to give something back to the community.	.77			
Value 1: The hotel feels morally obligated to help.	.75			
Value 4: The hotel wants to make it easier for consumers who care about the cause to support it.	.73			
Value 2: The hotel has a long-term interest in the community.	.72			
Stake 4: The hotel feels their employees expect it.		.77		
Stake 3: The hotel feels their stockholders expect it.		.75		
Ego 2: The hotel wants to save money in laundry expense.			.80	
Ego 1: The hotel wants to reduce its workload.			.74	
Ego 4: The hotel is taking advantage of the cause to help its own business.			.63	
Ego 3: The hotel wants to get publicity.			.56	
Stra 1: The hotel will get more customers by making this offer.				.88
Stra 2: The hotel will keep more of its customers by making this offer.				.70
Eigenvalue	3.10	1.83	2.63	2.35
% of variance	19.34	11.45	16.46	14.67
Cronbach's alpha	.88	.85	.81	.88

Extraction Method: principal axis factoring

Rotation Method: Varimax with Kaiser Normalization

#### 6.4. Manipulation check

##### 6.4.1. Pre-existing attitude.

Subjects' pre-existing attitudes toward Marriott Hotel ( $M = 5.18$ ) and Project Planet ( $M = 5.25$ ) were not significantly different ( $t = .18, p < .9$ ) but subjects were more familiar with Marriott Hotel ( $M = 5.00$ ) than with Project Planet ( $M = 1.50, t = 7.62, p < .001$ ). Mean differences were not significant for subjects' familiarity with the two charities (i.e., Child Reach and Friends of the Earth) ( $M_{\text{Child Reach}} = 1.18$  vs.  $M_{\text{Friends of the Earth}} = 1.71, t = 1.57, p < .2$ ). Subjects' pre-existing attitudes toward the two charities were similar ( $M_{\text{Child Reach}} = 5.27$  vs.  $M_{\text{Friends of the Earth}} = 5.47, t = .40, p < .7$ ).

##### 6.4.2. Independent variables.

Independent-samples  $t$ -test was conducted to check the manipulations of argument strength and fit. The mean of fit charitable donation ( $M = 5.06$ ) was significantly higher than the mean of no fit charitable donation ( $M = 3.43, t = 5.56, p < .001$ ). Thus, the manipulation of fit was successful. Mean differences were significant for argument strength ( $t = 2.83, p < .005$ ) as well. However, subjects felt that the no charitable donation argument ( $M = 5.74$ ) was stronger than the charitable donation argument ( $M = 5.25$ ). The manipulation of argument strength was successful but the results were reversed. Thus, all analyses reported subsequently will use the no charitable donation argument as the strong argument condition, while using the charitable donation argument as the weak argument condition.

According to subjects' answers to the open-ended questions, three reasons can explain why charitable donation arguments were stronger than no charitable donation

arguments. First, the notice cards did not provide enough information about the two charities such that subjects felt these two charities were not credible. Second, how hotels estimate the reduction of laundry expense is not clearly stated. Thus, subjects doubted the amount of money donated to charities. Third, charitable donation arguments did not explain who would check the donation amount. This information was used to adjust the manipulations for the main study (see Appendix G).

One-way ANOVA test results were insignificant indicating that the manipulation of source credibility was unsuccessful ( $F(2,135) = 2.36, p < .1$ ). When evaluating source credibility, many subjects pointed out in the open-ended response question that (a) the no source condition was difficult to evaluate; (b) the question about no expertise / expertise was ambiguous; (c) it was difficult to evaluate the Project Planet source because they were unfamiliar with it and the notice cards provided no information about this source. These answers may explain why subjects viewed Project Planet as having low source credibility. Thus, in the main study, the two sources were introduced briefly to subjects (see Appendix G). Since the source credibility manipulation failed, a source credibility variable was created based on the measured responses to source credibility, rather than the manipulation. The new variable called source credibility 2 was treated as a dummy variable, which was dichotomized into low source credibility (coded as -1) and high source credibility (coded as 1) based on a mean-split of subjects' responses to the six source credibility questions.

### 6.5. Normality of dependent variables

The following table shows that the six dependent variables were not normally distributed. Several data transformations were applied in an effort to transform the data into normal distributions like square root transformation, logarithmic transformation, inverse transformation, and Box-Cox transformation but no method was successful. Because the parametric statistics used herein (e.g., MANOVA, ANOVA, independent-samples *t*-test) are robust to the assumption of normality, the violation should not greatly damage the validity of the statistical tests (Leech, 2005). Scales with greater range were adopted for the main study in an effort to attain a normal distribution.

**Table 6.4 Test of Normality of Dependent Variables (Pretest)**

<b>Dependent variables</b>	<i>M</i>	<i>SD</i>	<b>Skewness</b>	<b>Kurtosis</b>	<b>Kolmogorov-Smirnov</b>	<b>Shapiro-Wilk</b>
Attitude toward the hotel	5.21	1.07	-.04	-.59	.000	.000
Behavior intention	5.99	1.47	-1.70	2.10	.000	.000
Value-driven attribution	4.35	1.23	-.28	-.59	.002	.014
Egoistic attribution	5.33	1.32	-1.07	1.08	.000	.000
Strategic attribution	3.76	1.51	-.24	-.49	.000	.001
Stakeholder-driven attribution	3.62	1.51	.07	-.70	.021	.004

### 6.6. Hypotheses testing I

The manipulation of source credibility was unsuccessful, while argument strength and fit were manipulated successfully. To compensate for the failure of the source credibility variable, two sets of analyses were performed. The first set (Hypotheses Testing I) omitted source credibility altogether and the second set (Hypotheses Testing II) used the measured source credibility variable (i.e., source credibility 2) rather than the manipulation of source credibility.

In SPSS, General Linear Model uses listwise deletion of cases with missing data on any of the analysis variables. The pretest experiment was a nested design and the fit variable was only considered under the charitable donation argument condition so all of the cases with the no charitable donation argument would be omitted. In order to estimate main effects or interaction effects properly with fit serving as one of the independent variables, a new variable called fit 3 with a third category (labeled 'No') was created for these cases. In fact, the third category of fit was the no charitable donation argument (i.e., strong argument) and the other two categories were the charitable donation argument (i.e., weak argument, fit and no fit charities).

**Table 6.5 Categories and Descriptions of Argument Strength and Fit 3**

<b>Variable</b>	<b>Category</b>	<b>Description</b>
Argument Strength	Strong argument	No charitable donation argument
	Weak argument	Charitable donation argument
Fit 3	Fit	Fit charitable donation
	No fit	No fit charitable donation
	No	No charitable donation

In Hypotheses Testing I, MANCOVA and ANCOVA were conducted to test Hypotheses 2 and 4 with argument strength and fit 3 serving as two independent variables. Environmentalism, age, gender, education, and income were used as five control variables.

#### *6.6.1. Attitude, behavior intention, and value-driven attributions.*

According to the hypotheses, the independent variables should positively influence attitude toward the hotel, behavior intention, and value-driven attributions such that these three dependent variables were analyzed together by MANCOVA.

Argument strength had significant influences on attitude ( $F(1,126) = 4.15$ ,  $\text{Eta} = .18$ ,  $p < .05$ ) and behavior intention ( $F(1,126) = 9.86$ ,  $\text{Eta} = .27$ ,  $p < .005$ ). The strong argument was more likely to generate positive attitudes ( $M_{\text{strong}} = 5.43$  vs.  $M_{\text{weak}} = 5.07$ ) and behavior intention ( $M_{\text{strong}} = 6.43$  vs.  $M_{\text{weak}} = 5.71$ ) than the weak argument. In other words, subjects were more willing to see and support the reuse suggestion if the hotel did not mention making a charitable donation. Hypotheses 2a and 2b were supported, in that the strong argument was more successful. However this is because the no charitable donation argument was re-classified as the strong argument. The original hypothesis that a charitable donation would be viewed more favorably than no donation was not supported.

Fit significantly predicted attitude toward the hotel ( $F(1,126) = 5.82$ ,  $\text{Eta} = .21$ ,  $p < .05$ ), while marginally impacted behavior intention ( $F(1,126) = 2.77$ ,  $\text{Eta} = .14$ ,  $p < .1$ ). Different from the hypothesis, the no fit charitable donation generated more positive attitudes than the fit charitable donation ( $M_{\text{no fit}} = 5.33$  vs.  $M_{\text{fit}} = 4.80$ ). Thus, Hypothesis

4a was violated but the opposite result was found. Subjects generated more positive attitudes toward the hotel with the children sponsoring charity and the children sponsoring charity marginally increased behavior intention ( $M_{no\ fit} = 5.95$  vs.  $M_{fit} = 5.47$ ,  $F(1,126) = 2.77$ ,  $Eta = .15$ ,  $p < .1$ ).

Argument strength ( $F(1,126) = .00$ ,  $Eta = .03$ ,  $p < 1.0$ ) and fit ( $F(1,126) = .34$ ,  $Eta = .17$ ,  $p < .6$ ) had no significant influences on the generation of value-driven attributions. Subjects with higher environmental concern were more likely to have positive attitudes, behavior intention, and value-driven attributions, as did those with lower income. Older subjects were more likely to reuse their towels and linens.

**Table 6.6 MANCOVA: Attitude, Behavior Intention, Value-driven Attribution (Pretest Hypotheses Testing I)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude	35.12(a)	7	5.02	5.46	.000	.23
	Behavior Intention	94.84(b)	7	13.55	8.67	.000	.33
	Value-driven Attribution	33.81(c)	7	4.83	3.47	.002	.16
Intercept	Attitude	22.49	1	22.49	24.48	.000	.16
	Behavior Intention	25.74	1	25.74	16.46	.000	.12
	Value-driven Attribution	14.32	1	14.32	10.29	.002	.08
Environmentalism	Attitude	13.69	1	13.69	14.91	<b>.000</b>	.11
	Behavior Intention	38.94	1	38.94	24.91	<b>.000</b>	.17
	Value-driven Attribution	13.07	1	13.07	9.40	<b>.003</b>	.07
Education	Attitude	2.32	1	2.32	2.53	.114	.02
	Behavior Intention	.08	1	.08	.05	.819	.00
	Value-driven Attribution	4.04	1	4.04	2.90	.091	.02
Age	Attitude	1.24	1	1.24	1.35	.247	.01
	Behavior Intention	10.25	1	10.25	6.56	<b>.012</b>	.05
	Value-driven Attribution	.42	1	.42	.30	.582	.00
Income	Attitude	7.24	1	7.24	7.88	<b>.006</b>	.06
	Behavior Intention	20.72	1	20.72	13.25	<b>.000</b>	.10
	Value-driven Attribution	11.54	1	11.54	8.30	<b>.005</b>	.06



Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	Attitude	.68	1	.68	.74	.391	.01
	Behavior Intention	.00	1	.00	.00	.972	.00
	Value-driven Attribution	.21	1	.21	.15	.699	.00
Argument Strength	Attitude	3.81	1	3.81	4.15	<b>.044</b>	.03
	Behavior Intention	15.42	1	15.42	9.86	<b>.002</b>	.07
	Value-driven Attribution	.00	1	.00	.00	.983	.00
Fit 3	Attitude	5.35	1	5.35	5.82	<b>.017</b>	.04
	Behavior Intention	4.33	1	4.33	2.77	.099	.02
	Value-driven Attribution	.47	1	.47	.34	.564	.00
Error	Attitude	115.73	126	.92			
	Behavior Intention	197.00	126	1.56			
	Value-driven Attribution	175.25	126	1.39			
Total	Attitude	3783.22	134				
	Behavior Intention	5077.92	134				
	Value-driven Attribution	2736.41	134				
Corrected Total	Attitude	150.84	133				
	Behavior Intention	291.84	133				
	Value-driven Attribution	209.06	133				

a R Squared = .23 (Adjusted R Squared = .19)

b R Squared = .33 (Adjusted R Squared = .29)

c R Squared = .16 (Adjusted R Squared = .12)

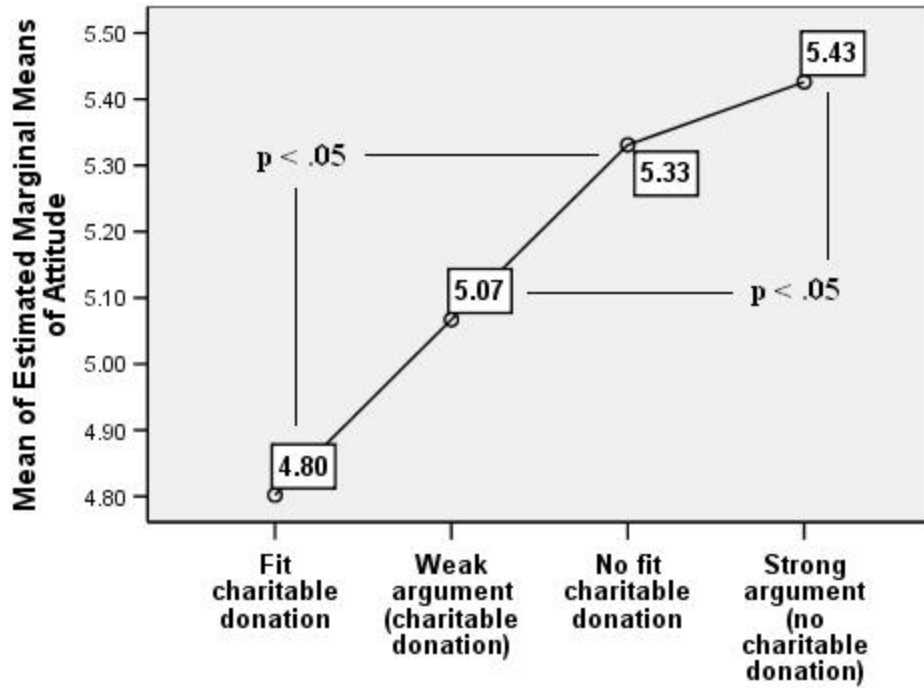


Figure 6.1 Estimated Marginal Means of Attitude (Fit, Argument Strength) (Pretest Hypotheses Testing I)

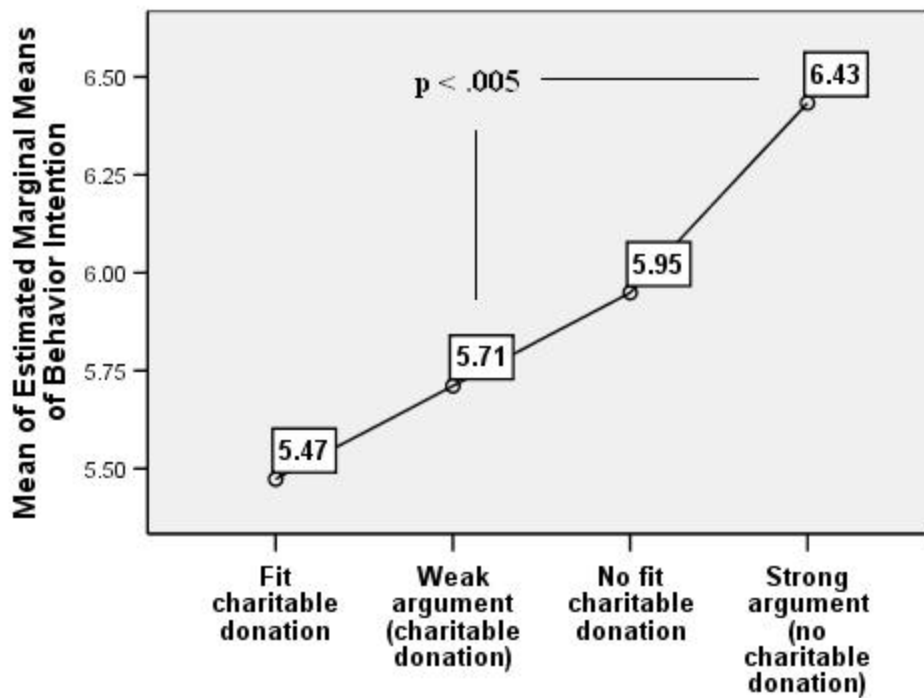


Figure 6.2 Estimated Marginal Means of Behavior Intention (Fit, Argument Strength) (Pretest Hypotheses Testing I)

### 6.6.2. Egoistic attribution and counterargument.

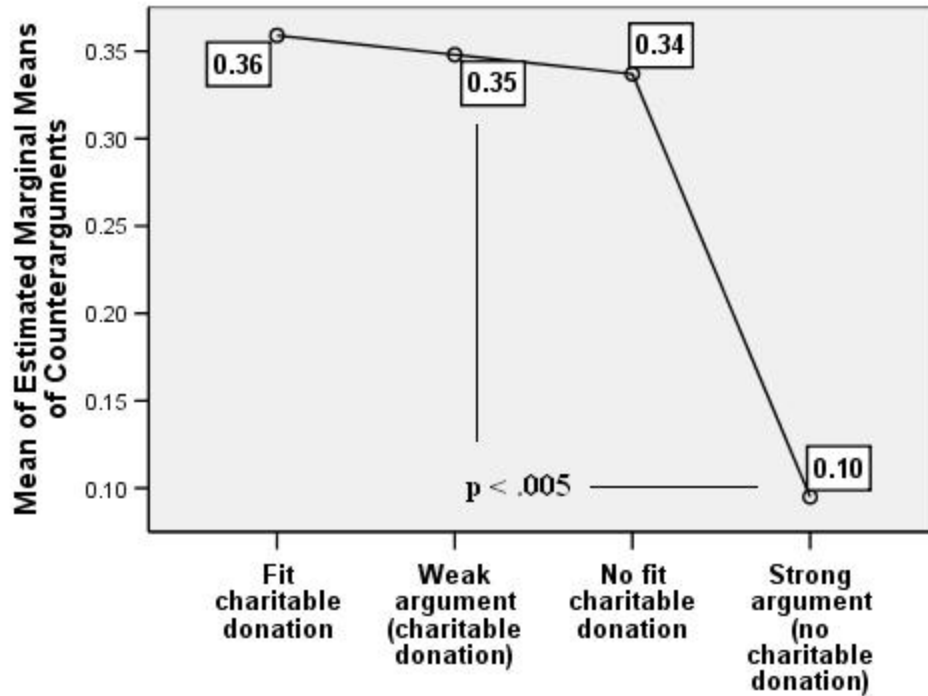
Hypotheses indicate that egoistic attributions and counterarguments should be negatively influenced by the independent variables so MANCOVA was employed to examine these two dependent variables together. Argument strength and fit served as the independent variables. It was found that argument strength had a significant influence on counterarguments ( $F(1,122) = 10.18$ ,  $\text{Eta} = .28$ ,  $p < .005$ ). The strong argument (no mention of a charitable donation) generated fewer counterarguments than the weak argument ( $M_{\text{strong}} = .10$  vs.  $M_{\text{weak}} = .35$  respectively). Thus, Hypothesis 2d was supported according to the re-classification of strong argument. Fit did not significantly influence counterarguments ( $F(1,122) = .05$ ,  $\text{Eta} = .03$ ,  $p < .9$ ). When predicting egoistic attributions, both argument strength ( $F(1,122) = .81$ ,  $\text{Eta} = .26$ ,  $p < .4$ ) and fit ( $F(1,122) = .06$ ,  $\text{Eta} = .03$ ,  $p < .9$ ) were insignificant factors. Thus, when the hotel chose to donate the savings to a charity, subjects responded with counterarguments, suggesting that the mention of making a charitable donation with the savings may prime negative issues that subjects might otherwise not consider. Negative counterarguments were consistent regardless of which charity was supported.

**Table 6.7 MANCOVA: Egoistic Attributions, Counterarguments (Pretest Hypotheses Testing I)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Egoistic Attribution	12.79(a)	7	1.83	1.21	.303	.07
	Counterargument	3.56(b)	7	.51	2.88	.008	.14
Intercept	Egoistic Attribution	57.11	1	57.11	37.77	.000	.24
	Counterargument	.82	1	.82	4.66	.033	.04
Environmentalism	Egoistic Attribution	1.53	1	1.53	1.01	.317	.01
	Counterargument	.37	1	.37	2.08	.152	.02
Education	Egoistic Attribution	.48	1	.48	.31	.576	.00
	Counterargument	.08	1	.08	.43	.512	.00
Age	Egoistic Attribution	.14	1	.14	.09	.762	.00
	Counterargument	1.03	1	1.03	5.85	<b>.017</b>	.05
Income	Egoistic Attribution	3.64	1	3.64	2.41	.123	.02
	Counterargument	.57	1	.57	3.24	.074	.03
Gender	Egoistic Attribution	3.07	1	3.07	2.03	.157	.02
	Counterargument	.00	1	.00	.02	.882	.00
Argument Strength	Egoistic Attribution	1.22	1	1.22	.81	.370	.01
	Counterargument	1.80	1	1.80	10.18	<b>.002</b>	.08
Fit 3	Egoistic Attribution	.09	1	.09	.06	.811	.00
	Counterargument	.01	1	.01	.05	.825	.00
Error	Egoistic Attribution	184.44	122	1.51			
	Counterargument	21.54	122	.18			
Total	Egoistic Attribution	3979.94	130				
	Counterargument	34.00	130				
Corrected Total	Egoistic Attribution	197.23	129				
	Counterargument	25.11	129				

a R Squared = .07 (Adjusted R Squared = .01)

b R Squared = .14 (Adjusted R Squared = .09)



**Figure 6.3 Estimated Marginal Means of Counterarguments (Fit, Argument Strength) (Pretest Hypotheses Testing I)**

### 6.6.3. Stakeholder-driven and strategic attributions.

It was proposed that the independent variables would have difference impacts on stakeholder-driven and strategic attributions. Therefore, these two dependent variables were analyzed separately by ANCOVA. It was found that both argument strength ( $F(1,126) = .62$ ,  $\text{Eta} = .07$ ,  $p < .5$ ) and fit ( $F(1,126) = 1.15$ ,  $\text{Eta} = .09$ ,  $p < .3$ ) did not significantly predict strategic attributions. Argument strength ( $F(1,126) = 2.22$ ,  $\text{Eta} = .13$ ,  $p < .2$ ) and fit ( $F(1,126) = .08$ ,  $\text{Eta} = .03$ ,  $p < .8$ ) were insignificant predictors of stakeholder-driven attributions as well. However, subjects' environmental concern positively influenced the generation of strategic attributions ( $F(1,126) = 4.95$ ,  $\text{Eta} = .19$ ,  $p < .05$ ).

**Table 6.8 MANCOVA: Strategic Attributions (Pretest Hypotheses Testing I)**

Dependent Variable: Strategic Attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	23.87(a)	7	3.41	1.58	.148	.01
Intercept	8.31	1	8.31	3.84	.052	.03
Environmentalism	10.70	1	10.70	4.95	<b>.028</b>	.04
Education	3.91	1	3.91	1.81	.181	.01
Age	.23	1	.23	.11	.745	.00
Income	4.03	1	4.03	1.86	.175	.02
Gender	.06	1	.06	.03	.869	.00
Argument Strength	1.33	1	1.33	.62	.435	.01
Fit 3	2.49	1	2.49	1.15	.286	.01
Error	272.5	126	2.16			
Total	2173.25	134				
Corrected Total	296.37	133				

a R Squared = .08 (Adjusted R Squared = .03)

**Table 6.9 MANCOVA: Stakeholder-driven Attributions (Pretest Hypotheses Testing I)**

Dependent Variable: Stakeholder-driven Attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	30.83(a)	7	4.41	2.00	.060	.10
Intercept	9.82	1	9.82	4.46	.037	.03
Environmentalism	8.42	1	8.42	3.82	.053	.03
Education	6.20	1	6.20	2.81	.096	.02
Age	4.52	1	4.52	2.05	.155	.02
Income	4.08	1	4.08	1.85	.176	.01
Gender	4.03	1	4.03	1.83	.179	.01
Argument Strength	4.90	1	4.90	2.22	.139	.02
Fit 3	.17	1	.17	.08	.779	.00
Error	277.74	126	2.20			
Total	2017.25	134				
Corrected Total	308.58	133				

a R Squared = .10 (Adjusted R Squared = .05)

### 6.7. Hypotheses testing II

For the second stage of hypotheses testing, the measured source credibility variable (i.e., source credibility 2) was used. Because fit was one of the independent variables, Hypothesis Testing II was a nested design analysis. To deal with this problem, fit 3 was used here to replace the fit variable just like in Hypotheses Testing I (see Section 6.6). Therefore, source credibility 2, fit 3, and argument strength were three independent variables. Environmentalism, age, gender, education, and income served as five control variables.

**Table 6.10 Categories and Descriptions of Source Credibility 2, Argument Strength, and Fit 3**

Variable	Category	Description
Source Credibility 2	High source credibility	Subjects' perceptions of high source credibility
	Low source credibility	Subjects' perceptions of low source credibility
Argument Strength	Strong argument	No charitable donation argument
	Weak argument	Charitable donation argument
Fit 3	Fit	Fit charitable donation
	No fit	No fit charitable donation
	No	No charitable donation

#### 6.7.1. Attitude, behavior intention, and value-driven attributions.

MANCOVA was performed with attitude, behavior intention, and value-driven attributions serving as three dependent variables.

Source credibility had a positive influence on value-driven attributions ( $M_{\text{high}} = 4.59$  vs.  $M_{\text{low}} = 4.11$ ,  $F(1,122) = 4.19$ ,  $\text{Eta} = .18$ ,  $p < .05$ ) and had a marginal impact on behavior intention ( $M_{\text{high}} = 5.76$  vs.  $M_{\text{low}} = 6.12$ ,  $F(1,122) = 3.04$ ,  $\text{Eta} = .15$ ,  $p < .09$ ).

Source credibility did not significantly predict attitude ( $F(1,122) = 1.87$ ,  $\text{Eta} = .12$ ,  $p < .2$ ). Hypothesis 1c was supported. Note that this represents the re-classification of subjects' responses to the six source credibility questions. This was not the originally hypothesized classification.

Argument strength significantly predicted attitude ( $F(1,122) = 4.33$ ,  $\text{Eta} = .18$ ,  $p < .05$ ). The strong argument ( $M = 5.43$ ) was more likely to generate positive attitudes than the weak argument ( $M = 5.06$ ). Argument strength also had a significant influence on behavior intention ( $F(1,122) = 8.91$ ,  $\text{Eta} = .26$ ,  $p < .005$ ). The strong argument ( $M = 6.41$ ) made subjects more likely to support the reuse suggestion than the weak argument ( $M = 5.72$ ). Argument strength did not predict value-driven attributions successfully ( $F(1,122) = .01$ ,  $\text{Eta} = .03$ ,  $p < 1.0$ ). Thus, Hypotheses 2a and 2b were supported based on the re-classification of argument strength.

Fit significantly predicted attitude toward the hotel ( $F(1,122) = 5.93$ ,  $\text{Eta} = .21$ ,  $p < .05$ ). The fit charitable donation ( $M = 4.80$ ) was less likely to generate positive attitudes than the no fit charitable donation ( $M = 5.33$ ). Hypothesis 4a was violated but reversed results were found. Fit was not a significant predictor when predicting behavior intention ( $F(1,122) = 2.74$ ,  $\text{Eta} = .15$ ,  $p < .1$ ) and value-driven attributions ( $F(1,122) = .20$ ,  $\text{Eta} = .04$ ,  $p < .7$ ).

Hypothesis 3 proposed an interactive relationship that under the strong argument condition, source credibility had less impact on attitude and behavior intention. however, the test results did not support this hypothesis (attitude:  $F(1,122) = .77$ ,  $\text{Eta} = .08$ ,  $p < .4$ ; behavior intention:  $F(1,122) = .50$ ,  $\text{Eta} = .06$ ,  $p < .5$ ).



In summary, the charitable donation program was less effective in generating positive attitude and behavior intention than the no charitable donation reuse program. The type of the charity only had an impact on subjects' attitudes toward the hotel. Subjects were more willing to see a children sponsoring charity. The source of the notice cards influenced subjects' thoughts of the hotel motivations but had no significant impact on subjects' attitudes and behavior intention. Moreover, higher environmental concern and lower income positively predicted attitude, behavior intention, and value-driven attributions. Age only positively influenced behavior intention.

**Table 6.11 MANCOVA: Attitude, Behavior Intention, Value-driven Attribution (Pretest Hypotheses Testing II)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude	42.05(a)	10	4.21	4.72	.000	.28
	Behavior Intention	103.58(b)	10	10.36	6.71	.000	.36
	Value-driven Attribution	46.86(c)	10	4.69	3.53	.000	.22
Intercept	Attitude	21.87	1	21.87	24.530	.000	.17
	Behavior Intention	21.73	1	21.73	14.083	.000	.10
	Value-driven Attribution	15.87	1	15.87	11.958	.001	.09
Environmentalism	Attitude	12.83	1	12.83	14.390	<b>.000</b>	.11
	Behavior Intention	39.31	1	39.31	25.475	<b>.000</b>	.17
	Value-driven Attribution	11.08	1	11.08	8.350	<b>.005</b>	.06
Education	Attitude	2.29	1	2.29	2.574	.111	.02
	Behavior Intention	.04	1	.04	.024	.876	.00
	Value-driven Attribution	3.99	1	3.99	3.009	.085	.02
Age	Attitude	1.32	1	1.32	1.476	.227	.01
	Behavior Intention	8.88	1	8.88	5.751	<b>.018</b>	.05
	Value-driven Attribution	.35	1	.35	.264	.608	.00
Income	Attitude	7.59	1	7.59	8.520	<b>.004</b>	.07
	Behavior Intention	21.96	1	21.96	14.228	<b>.000</b>	.10
	Value-driven Attribution	12.03	1	12.03	9.063	<b>.003</b>	.07

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	Attitude	.33	1	.33	.367	.546	.00
	Behavior Intention	.09	1	.09	.061	.806	.00
	Value-driven Attribution	.02	1	.02	.012	.914	.00
Source Credibility 2	Attitude	1.67	1	1.67	1.871	.174	.02
	Behavior Intention	4.69	1	4.69	3.039	.084	.02
	Value-driven Attribution	5.56	1	5.56	4.193	<b>.043</b>	.03
Argument Strength	Attitude	3.86	1	3.86	4.326	<b>.040</b>	.03
	Behavior Intention	13.75	1	13.75	8.909	<b>.003</b>	.07
	Value-driven Attribution	.00	1	.00	.001	.981	.00
Fit 3	Attitude	5.29	1	5.29	5.929	<b>.016</b>	.05
	Behavior Intention	4.23	1	4.23	2.742	.100	.02
	Value-driven Attribution	.27	1	.27	.204	.652	.00
Source Credibility 2 * Argument Strength	Attitude	.69	1	.69	.771	.382	.01
	Behavior Intention	.77	1	.77	.499	.481	.00
	Value-driven Attribution	1.68	1	1.68	1.264	.263	.01
Source Credibility 2 * Fit 3	Attitude	3.26	1	3.26	3.66	.058	.03
	Behavior Intention	2.78	1	2.78	1.80	.182	.02
	Value-driven Attribution	3.06	1	3.06	2.31	.132	.02
Error	Attitude	108.75	122	.89			
	Behavior Intention	188.26	122	1.54			
	Value-driven Attribution	161.90	122	1.33			
Total	Attitude	3758.22	133				
	Behavior Intention	5041.92	133				
	Value-driven Attribution	2721.97	133				
Corrected Total	Attitude	150.80	132				
	Behavior Intention	291.84	132				
	Value-driven Attribution	208.76	132				

a R Squared = .28 (Adjusted R Squared = .22)

b R Squared = .36 (Adjusted R Squared = .30)

c R Squared = .22 (Adjusted R Squared = .16)

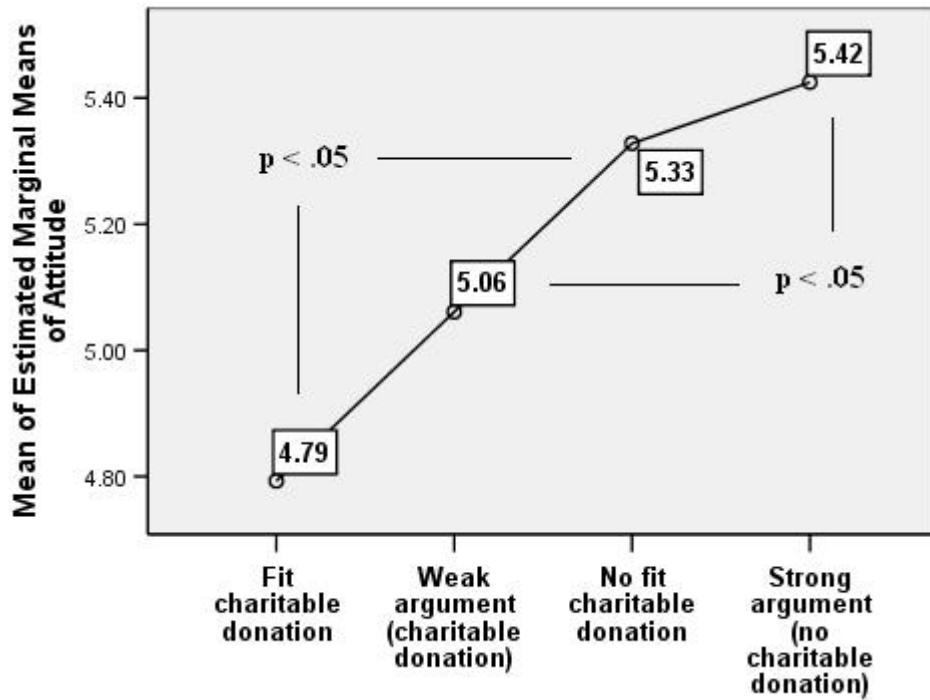


Figure 6.4 Estimated Marginal Means of Attitude (Fit, Argument Strength) (Pretest Hypotheses Testing II)

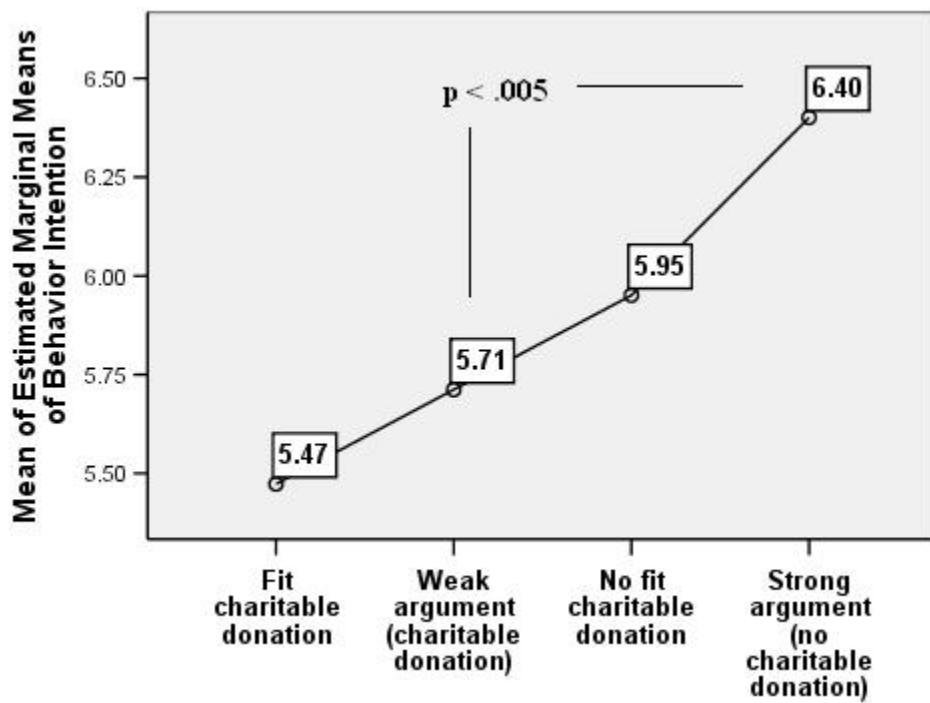
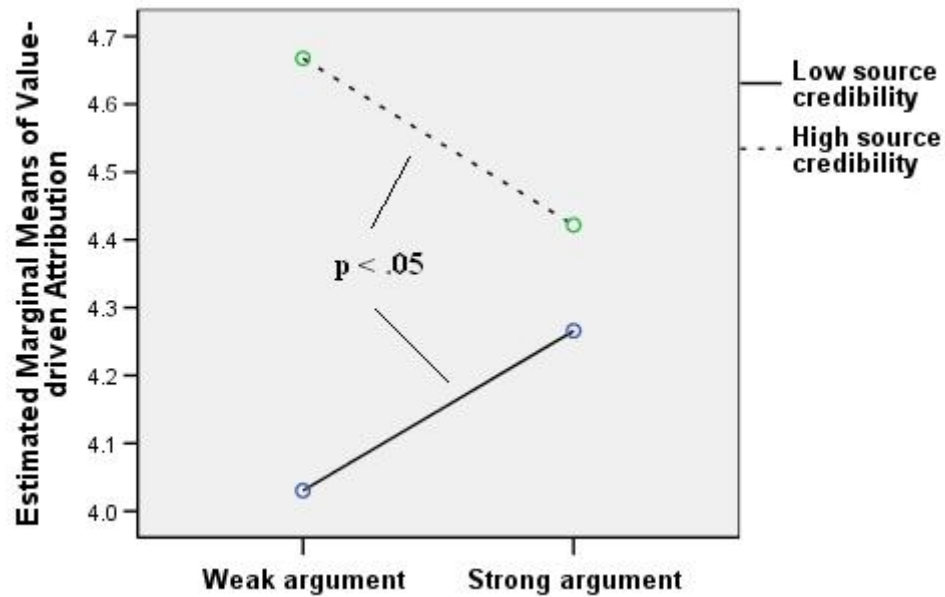


Figure 6.5 Estimated Marginal Means of Behavior Intention (Fit, Argument Strength) (Pretest Hypotheses Testing II)



**Figure 6.6 Estimated Marginal Means of Value-driven Attribution (Source Credibility 2) (Pretest Hypotheses Testing II)**

*6.7.2. Egoistic attributions and counterarguments.*

MANCOVA was applied with egoistic attributions and counterarguments serving as dependent variables, while argument strength, fit, and source credibility (the dichotomized, measured variable) serving as independent variables. This model indicates that argument strength was a significant predictor of predicting counterarguments ( $F(1,118) = 9.81, \text{Eta} = .28, p < .005$ ). The strong argument ( $M = .10$ ) generated fewer counterarguments than the weak argument ( $M = .35$ ). Thus, Hypothesis 2e was supported using the re-classification of argument strength. Argument strength had no influence on egoistic attributions ( $F(1,118) = 1.10, \text{Eta} = .09, p < .3$ ). Source credibility, fit, and their two interactions (i.e., source credibility \* fit and source credibility \* argument strength)

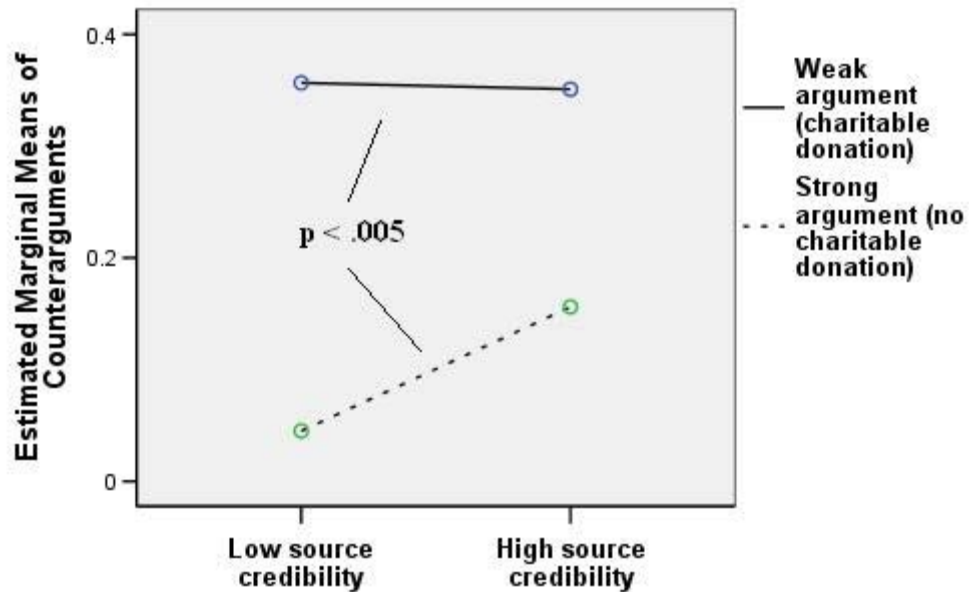
did not predict egoistic attributions and counterarguments significantly. Age was negatively related to subjects' counterarguments ( $F(1,121) = 5.58$ .  $\text{Eta} = .21$ ,  $p < .05$ ). Younger subjects were more likely to think about the negative aspects of the reuse program.

**Table 6.12 MANCOVA: Egoistic Attributions, Counterarguments (Pretest Hypotheses Testing II)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Egoistic Attribution	15.49(a)	10	1.55	1.01	.443	.08
	Counterargument	3.76(b)	10	.38	2.08	.031	.15
Intercept	Egoistic Attribution	54.47	1	54.47	35.37	.000	.23
	Counterargument	.77	1	.77	4.28	.041	.04
Environmentalism	Egoistic Attribution	1.05	1	1.05	.68	.411	.01
	Counterargument	.39	1	.39	2.17	.144	.02
Education	Egoistic Attribution	.50	1	.50	.33	.568	.00
	Counterargument	.07	1	.07	.37	.544	.00
Age	Egoistic Attribution	.02	1	.02	.02	.902	.00
	Counterargument	.98	1	.98	5.44	<b>.021</b>	.04
Income	Egoistic Attribution	2.98	1	2.98	1.93	.167	.02
	Counterargument	.66	1	.66	3.64	.059	.03
Gender	Egoistic Attribution	2.65	1	2.65	1.72	.192	.01
	Counterargument	.01	1	.01	.03	.863	.00
Source Credibility 2	Egoistic Attribution	.00	1	.00	.00	.977	.00
	Counterargument	.06	1	.06	.31	.577	.00
Argument Strength	Egoistic Attribution	1.70	1	1.70	1.10	.296	.01
	Counterargument	1.77	1	1.77	9.81	<b>.002</b>	.08
Fit 3	Egoistic Attribution	.25	1	.25	.16	.687	.00
	Counterargument	.01	1	.01	.11	.743	.00
Source Credibility 2 * Argument Strength	Egoistic Attribution	1.49	1	1.49	.97	.327	.01
	Counterargument	.09	1	.09	.52	.473	.00
Source Credibility 2 * Fit 3	Egoistic Attribution	1.28	1	1.28	.83	.364	.01
	Counterargument	.06	1	.06	.35	.556	.00
Error	Egoistic Attribution	181.74	118	1.54			
	Counterargument	21.28	118	.18			
Total	Egoistic Attribution	3949.69	129				
	Counterargument	34.00	129				
Corrected Total	Egoistic Attribution	197.22	128				
	Counterargument	25.04	128				

a R Squared = .08 (Adjusted R Squared = .00)

b R Squared = .15 (Adjusted R Squared = .08)



**Figure 6.7 Estimated Marginal Means of Counterarguments (Argument Strength) (Pretest Hypotheses Testing II)**

*6.7.3. Stakeholder-driven and strategic attributions.*

Table 6.20 and Table 6.21 show that the impact of the independent variables on stakeholder-driven and strategic attributions was insignificant. Only environmentalism predicted strategic attributions ( $F(1,122) = 5.22$ ,  $\text{Eta} = .20$ ,  $p < .05$ ). Subjects with higher environmental concern were more likely to consider the strategic motives of the hotel.

**Table 6.13 MANCOVA: Strategic Attributions (Pretest Hypotheses Testing II)**

Dependent Variable: Strategic Attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	35.88(a)	10	3.59	1.68	.093	.12
Intercept	6.46	1	6.46	3.02	.085	.02
Environmentalism	11.14	1	11.14	5.22	<b>.024</b>	.04
Education	4.74	1	4.74	2.22	.139	.02
Age	.64	1	.64	.30	.586	.00
Income	5.76	1	5.76	2.70	.103	.02
Gender	.01	1	.01	.01	.930	.00
Source Credibility 2	.61	1	.61	.28	.595	.00
Argument Strength	1.52	1	1.52	.71	.400	.01
Fit 3	3.11	1	3.11	1.46	.230	.01
Source Credibility 2 * Argument Strength	5.82	1	5.82	2.73	.101	.02
Source Credibility 2 * Fit 3	5.26	1	5.26	2.46	.119	.02
Error	260.42	122	2.14			
Total	2157.25	133				
Corrected Total	296.30	132				

a R Squared = .12 (Adjusted R Squared = .05)

**Table 6.14 MANCOVA: Stakeholder-driven Attributions (Pretest Hypotheses Testing II)**

Dependent Variable: Stakeholder-driven Attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	40.85(a)	10	4.09	1.88	.055	.13
Intercept	13.67	1	13.67	6.28	.014	.05
Environmentalism	6.68	1	6.68	3.07	.082	.03
Education	5.42	1	5.42	2.49	.117	.02
Age	2.43	1	2.43	1.12	.293	.01
Income	5.15	1	5.15	2.37	.127	.02
Gender	5.40	1	5.40	2.48	.118	.02
Source Credibility 2	3.45	1	3.45	1.59	.210	.01
Argument Strength	4.12	1	4.12	1.89	.172	.02
Fit 3	.04	1	.04	.02	.889	.00
Source Credibility 2 * Argument Strength	5.34	1	5.34	2.45	.120	.02
Source Credibility 2 * Fit 3	.22	1	.22	.10	.751	.00
Error	265.67	122	2.19			
Total	1992.25	133				
Corrected Total	306.52	132				

a R Squared = .13 (Adjusted R Squared = .06)



### 6.8. Other findings

One-sample  $t$ -test was conducted to further examine attitude change. The mean of attitude change was compared with the scale mid-point of 4 (no change). Subjects indicated that notice cards positively changed their attitudes toward the hotel ( $M = 5.12$ ,  $t = 9.90$ ,  $p < .001$ ). Independent-sample  $t$ -test was conducted to test the effectiveness of notice cards. This was done by comparing the mean of subjects' responses in the experimental conditions with the mean of subjects' responses in the control condition, wherein subjects were asked about their likelihood of reusing hotel towels and linens without being exposed to notice cards. Subjects' behavior intention after seeing notice cards was compared with subjects' behavior intention without notice cards. It was found that notice cards increased the likelihood of reusing towels and linens ( $M_{\text{with notice cards}} = 5.99$  vs.  $M_{\text{without notice cards}} = 4.59$ ,  $t = 3.77$ ,  $p < .05$ ).

The impact of counterarguments was also assessed by independent-samples  $t$ -test. Subjects with no counterarguments were more likely to have a positive attitude toward the hotel ( $t = 3.27$ ,  $p < .001$ ), higher behavior intention ( $t = 3.99$ ,  $p < .001$ ), and more value-driven attributions ( $t = 2.92$ ,  $p < .005$ ), while less likely to have egoistic attributions ( $t = 4.03$ ,  $p < .001$ ).

In order to explore the possible reasons that caused the unsuccessful manipulation of argument strength, subjects' evaluations of argument strength were regressed on environmentalism ( $F(1,136) = 16.08$ ,  $p < .001$ ). Subjects with higher environmental concern were more likely to perceive arguments as strong arguments than those with lower environmental concern.

The impact of the four types of attributions on attitude and behavior intention was assessed by linear regression. Value-driven and strategic attributions positively influenced attitude toward the hotel and behavior intention. Stakeholder-driven attributions positively influenced attitude toward the hotel. Test results are listed in Table 6.15.

**Table 6.15 Regression: The Impact of Attribution on Attitude and Behavior Intention (Pretest)**

<b>Variable</b>	<b>F</b>	<b>Adjusted R<sup>2</sup></b>
Attitude toward the hotel		
Value-driven attribution	<b>39.90<sup>***</sup></b>	.22
Egoistic attribution	.58	-.00
Strategic Attribution	<b>16.53<sup>***</sup></b>	.10
Stakeholder-driven Attribution	<b>9.83<sup>**</sup></b>	.06
Behavior intention		
Value-driven attribution	<b>16.46<sup>***</sup></b>	.10
Egoistic attribution	1.54	.00
Strategic Attribution	<b>7.33<sup>*</sup></b>	.04
Stakeholder-driven Attribution	2.21	.01

\*  $p < .01$ , \*\*  $p < .005$ , \*\*\*  $p < .001$

### 6.9. Summary

Because the manipulation of source credibility was unsuccessful, two sets of analyses were performed. In Hypotheses Testing I, source credibility was omitted such that argument strength and fit served as the two independent variables. In Hypotheses Testing II, source credibility 2 was created as a new variable by using the measured source credibility rather than the manipulation. Subjects' responses to the six source credibility questions were dichotomized into the low source credibility group and the high source credibility group based on the mean. Thus, source credibility 2, argument

strength, and fit served were the independent variables. It was found that source credibility significantly predicted value-driven attributions, while having no impact on other dependent variables. A high credibility source made subjects think more about the value-driven motives of the hotel, while having no influence on subjects' attitudes and behavior intention. Hypothesis 1c was supported. Note that the source credibility classification used here was no longer the hotel source and the Project Planet source.

The manipulation of argument strength was significant but reversed. Thus, in the pretest, the charitable donation argument was the weak argument and the no charitable donation argument was the strong argument. Argument strength had the same impact on subjects' responses in the two sets of analyses. The strong argument generated more positive attitudes, higher behavior intention, and fewer counterarguments than the weak argument. Because the charitable donation argument did not explain the donation clearly, subjects generated more counterarguments and thus had negative responses. It suggested that the no charitable donation was a better choice for hotels to increase their CSR reputations and the likelihood that customers reuse towels and linens. Hypotheses 1a, 1b, and 1e were supported but the argument strength classification was not the original one.

The fit variable was manipulated successfully. However, because the fit variable was only considered under the charitable donation condition, the pretest experiment was a nested design. Thus, the fit 3 variable was created by adding a third category (i.e., no charitable donation) on fit variable in order to run General Linear Model properly. The test results of the Hypotheses Testing I and the Hypotheses Testing II indicate that fit negatively influenced attitude toward the hotel. The no fit charitable donation generated more positive attitude than the fit charitable donation. However, as discussed above,

making no donation was a better choice for hotels such that the type of charity was not an important issue in this case. Hypothesis 4a was not supported but reversed results were found.

It was also found that the notice cards were quite effective in generating positive attitudes and behavior intention. The impact of counterarguments on consumer response and the influences of attribution on attitude and behavior intention were assessed as well. Moreover, environmentalism was found to have an impact on subjects' perceptions of argument strength. These findings are discussed in the Discussion section.

Control variables had the same impact on subjects' responses in the two sets of analyses. Subjects with higher environmentalism had more positive hotel attitudes, higher behavior intention, and more value-driven and strategic attributions. Subjects with lower income were more likely to have positive hotel attitudes, higher behavior intention, and more value-driven attributions. Older subjects had fewer counterarguments and were more likely to support the reuse program.

The impact of the notice cards was assessed as well. The results suggested that using notice cards positively changed subjects' attitudes toward the hotel and made them more likely to reuse their towels and linens.

In summary, the test results of the pretest told us that the notice cards were effective in positively changing subjects' attitudes and in persuading subjects' to reuse their towels and linens. Donating all the savings to a charity was not an attractive reuse program to subjects. Unclear explanation of the charitable donation reuse program generated more counterarguments. Thus, making no donation was better for hotels. The

source of the notice cards did not have a great impact. If a source was perceived as having high credibility, it made subjects have more value-driven attributions.

**Table 6.16 Hypotheses Testing Results of Independent Variables (Pretest)**

Independent Variables	Dependent Variables						
	Attitude toward the hotel	Behavior intention	Value-driven attribution	Egoistic attribution	Strategic attribution	Stakeholder-driven attribution	Counterargument
	<b>Hypotheses Testing I (without source credibility)</b>						
<b>Argument Strength</b>	<b>4.15*</b>	<b>9.86***</b>	.98	.81	.62	2.22	<b>10.18***</b>
<b>Fit 3</b>	<b>5.82*</b>	2.77	.34	.06	1.15	.08	.05
	<b>Hypotheses Testing II (using measured source credibility)</b>						
<b>Source Credibility 2</b>	1.87	3.04	<b>4.19*</b>	.00	.28	1.59	.31
<b>Argument Strength</b>	<b>4.33*</b>	<b>8.91***</b>	.00	1.10	.71	1.89	<b>9.81***</b>
<b>Fit 3</b>	<b>5.93*</b>	2.74	.20	.16	1.46	.02	.11
<b>Source * Argument</b>	.77	.50	1.26	.97	2.77	2.45	.52
<b>Source * Fit 3</b>	3.66	1.80	2.31	.83	2.47	.10	.35

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .005$ , \*\*\*\*  $p < .001$

**Table 6.17 Hypotheses Testing Results of Control Variables (Pretest)**

Control Variables	Dependent Variables						
	Attitude toward the hotel	Behavior intention	Value-driven attribution	Egoistic attribution	Strategic attribution	Stakeholder-driven attribution	Counterargument
	<b>Hypotheses Testing I (without source credibility)</b>						
<b>Environmentalism</b>	<b>14.91<sup>****</sup> (+)</b>	<b>24.91<sup>****</sup> (+)</b>	<b>9.40<sup>***</sup> (+)</b>	1.01	<b>4.95<sup>*</sup> (+)</b>	3.82	2.08
<b>Age</b>	1.35	<b>6.56<sup>*</sup> (+)</b>	.30	.09	.11	2.05	<b>5.85<sup>*</sup> (-)</b>
<b>Gender</b>	.74	.00	.15	2.03	.03	1.83	.02
<b>Education</b>	2.53	.05	2.90	.31	1.81	2.81	.43
<b>Income</b>	<b>7.88<sup>**</sup> (-)</b>	<b>13.25<sup>****</sup> (-)</b>	<b>8.30<sup>***</sup> (-)</b>	2.41	1.86	1.85	3.24
	<b>Hypotheses Testing II (using measured source credibility)</b>						
<b>Environmentalism</b>	<b>14.39<sup>****</sup> (+)</b>	<b>25.48<sup>****</sup> (+)</b>	<b>8.35<sup>***</sup> (+)</b>	.68	<b>5.22<sup>*</sup> (+)</b>	3.07	2.17
<b>Age</b>	1.48	<b>5.75<sup>*</sup> (+)</b>	.26	.02	.30	1.12	<b>5.44<sup>*</sup> (-)</b>
<b>Gender</b>	.37	.06	.01	1.72	.01	2.48	.03
<b>Education</b>	2.57	.02	3.01	.33	2.22	2.49	.37
<b>Income</b>	<b>8.52<sup>***</sup> (-)</b>	<b>14.23<sup>****</sup> (-)</b>	<b>9.06<sup>***</sup> (-)</b>	1.93	2.70	2.37	3.64

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .005$ , \*\*\*\*  $p < .001$

(+): Positive relationship

(-): Negative relationship

## 7. Methodology (Main Study)

### 7.1. Manipulation changes made on the main study

As a result of the pretest, several changes were made to the main study manipulations. The main study deleted the no source condition. The two charities and the two sources were introduced briefly to subjects (see Appendix G). The manipulation of argument strength was changed by adding more detailed information of the charitable donation on the notice cards (see Appendix G). Moreover, the main study increased scales from 7-point to 9-point.

### 7.2. Experimental design, subjects, and procedure

The experimental design was 2 (source credibility: hotel source, Project Planet source) X 2 (argument strength: no charitable donation argument, charitable donation argument) X 2 (fit: fit charitable donation, no fit charitable donation) (see Figure 7.1). Because fit was a variable under the strong argument condition, the experiment was a nested design so the main study had six experimental conditions. A control condition – Cell 7, which was the same as Cell 10 in the pretest, was also included.

Source Credibility \ Argument Strength	Weak Argument (No Charitable Donation Argument)	Strong Argument (Charitable Donation Argument)	
		Fit	No Fit
Project Planet Source	1	3	5
Hotel Source	2	4	6

**Figure 7.1 Experimental Design of the Main Study (Cell 1~6)**



Subjects were recruited from Zoomerang, which is an on-line survey provider owned by MarketTools, Inc. Subjects were invited via email to participate in an on-line study. Responses were received from 401 subjects. These subjects were offered “Zoomerang points”, which are credits toward prizes.

The first page of the questionnaire introduced the purpose of this research and ethical issues. After that, a cover story asked subjects to imagine that they are staying in a hotel and find a notice card in the room. Following the cover story, the notice cards were shown, on which the independent variables were manipulated. Then, subjects were asked to answer questions based on the provided information.

### *7.3. Independent variables, dependent variables, and control variables*

In the main study, all 7-point scales were changed into 9-point scales. Besides demographic questions and environmentalism, two additional control variables, need for cognition and involvement (enduring), were also considered. Involvement (enduring) scale measures the enduring and intrinsic (rather than situational) relevance of issues regarding the environment to a subject. According to Bruner, Hensel, and James (2005), three items were chosen: 1 = unimportant/9 = important, 1 = of no concern/9 = of concern to me, 1 = trivial/9 = fundamental. Need for cognition means a subject’s tendency to effortfully process information. Four items were selected and measured by Likert scale (1 = strongly disagree/9 = strongly agree): (a) I only think as hard as I have to; (b) I like tasks that require little thought once I have learned them; (c) It's enough for me that

something gets the job done: I don't care how or why it works; (d) I usually end up deliberating about issues even when they do not affect me personally.\*

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\* Items a, b, and c are reversed items.

## 8. Results (Main Study)

### 8.1. General information

The sample size of the main study was 401 North American subjects. Subjects were 53% male and 47% female. The average age was 52 (Min = 17, Max = 79).

Subjects' general education level was college diploma. The average annual income was between \$75,000 and \$99,999.

### 8.2. Reliability test

Test results of scale reliability are listed in Table 8.1. As can be seen, except for need for cognition (alpha = .60), all scales were deemed reliable (see questions in Appendix H and Appendix I). In spite of the relatively low Cronbach's alpha, need for cognition was still used because it is a previously validated scale, the alpha was above .6, and this variable was merely a control variable in the general linear model.

**Table 8.1 Test Results of Scale Reliability (Main Study)**

Variables	Items Number	Cronbach's alpha
Attitude toward the hotel	3	.99
Behavior intention	3	.99
Source credibility	6	.88
Argument strength	6	.96
Fit	4	.96
Environmentalism	9	.83
<b><i>Need for Cognition</i></b>	<b>4</b>	<b>.60</b>
Involvement (enduring)	3	.98
Pre-existing attitude toward the hotel	6	.91
Pre-existing attitude toward Project Planet	4	.99
Pre-existing attitude toward Child Reach	4	.98
Pre-existing attitude toward Friends of the Earth	4	.99

### 8.3. Common factor analysis

To examine the attribution scale, Principle axis factor analysis with varimax rotation was conducted and four factors were requested. According to the criteria used in the pretest (see Section 6.3), four factors were extracted. Five items loaded on value-driven attributions as intended. Three items loaded on egoistic attributions. Ego 3 item was dropped because it violated the criteria. Two items loaded on strategic attributions. Stra 3 was dropped because it loaded in the egoistic scale. Two items loaded on stakeholder-driven attributions. Stake 1, Stake 2, and Stake 3 were dropped because they did not meet the criteria. Table 8.3 shows the new attribution scales.

**Table 8.2 Rotated Factor Matrix of the Attribution Scale (Main Study)**

	Factor			
	1	2	3	4
<b>Value 2</b>	<b>.90</b>			
<b>Value 5</b>	<b>.89</b>			
<b>Value 3</b>	<b>.84</b>			
<b>Value 1</b>	<b>.78</b>			
<b>Value 4</b>	<b>.74</b>		.33	
Stra 3		.81		
<b>Ego 4</b>		<b>.78</b>		
<b>Ego 2</b>		<b>.73</b>		
<b>Ego 1</b>		<b>.70</b>		
Ego 3		.46	.39	
<b>Stra 2</b>	.33		<b>.84</b>	
<b>Stra 1</b>			<b>.81</b>	
Stake 2	.37		.56	.53
<b>Stake 4</b>	.45			<b>.64</b>
Stake 1	.36		.56	.62
Stake 3		.32		.38

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 6 iterations.

Note: Loadings < .30 are omitted.

**Table 8.3 Consumer Attribution About Hotel Reuse Program (Main Study)**

<b>The Hotel Promotes Reuse Program Because</b>	<b>Value-driven</b>	<b>Egoistic</b>	<b>Strategic</b>	<b>Stakeholder-driven</b>
Value 2: The hotel has a long-term interest in the community.	.90			
Value 5: The hotel is trying to give something back to the community.	.89			
Value 3: The hotel's owners or employees believe in this cause.	.84			
Value 1: The hotel feels morally obligated to help.	.78			
Value 4: The hotel wants to make it easier for consumers who care about the cause to support it.	.74			
Ego 4: The hotel is taking advantage of the cause to help its own business.		.74		
Ego 2: The hotel wants to save money in laundry expense.		.73		
Ego 1: The hotel wants to reduce its workload.		.70		
Stra 2: The hotel will keep more of its customers by making this offer.			.84	
Stra 1: The hotel will get more customers by making this offer.			.81	
Stake 4: The hotel feels their employees expect it.				.64
Eigenvalue	4.26	2.70	2.55	1.54
% of variance	26.60	16.87	15.93	9.61
Cronbach's alpha	.95	.79	.93	----

Method: principal axis factoring

#### 8.4. Manipulation check

##### 8.4.1. Pre-existing attitude.

Subjects' pre-existing attitudes toward Marriott Hotel ( $M = 6.94$ ) and Project Planet ( $M = 6.65$ ) were not significantly different ( $t = .78, p < .5$ ) but subjects were more familiar with Marriott Hotel ( $M = 7.27$ ) than with Project Planet ( $M = 2.94, t = 9.46, p < .001$ ). Mean differences were not significant for subjects' familiarity with Child Reach and Friends of the Earth ( $M = 1.69$  vs.  $2.51, t = 1.89, p > .05$ ) as well as subjects' pre-existing attitudes toward these two charities ( $M = 5.93$  vs.  $5.93, t = .02, p < 1.0$ ). Therefore, the selection of the two charities' names was successful but subjects' unfamiliarity with Project Planet may still be a problem for the manipulation of source credibility.

##### 8.4.2. Independent variables.

Independent-samples  $t$ -test was conducted to check the manipulations of the three independent variables. Mean differences were significant for source credibility ( $t = 4.34, p < .001$ ). However, different from the expectation, subjects viewed the hotel source ( $M = 6.48$ ) as having high source credibility and the Project Planet source ( $M = 5.66$ ) as having low source credibility. As mentioned above, it may be due to lack of familiarity with Project Planet. Therefore, for all subsequent analyses, high source credibility will indicate the hotel source, while low source credibility will refer to the Project Planet source. The manipulation of fit was successful. The mean of the fit charitable donation ( $M = 6.44$ ) was significantly higher than the mean of the no fit charitable donation ( $M = 5.70, t = 2.72, p < .01$ ). The manipulation of argument strength was not successful. Although the

mean of the charitable donation argument ( $M = 6.66$ ) was slightly higher than that of the no charitable donation argument ( $M = 6.52$ ), their mean differences were insignificant ( $t = .65, p > .50$ ). Because the manipulation of argument strength was not successful, a new argument strength variable called argument strength 2 was created based on the measured responses to argument strength rather than the manipulation. Values above the average were in the strong argument group, while values below the average were in the weak argument group.

#### *8.5. Normality of dependent variables*

The following table shows that the six dependent variables were not normally distributed. Square root, logarithmic, inverse, and Box-Cox transformations had been applied to transform these dependent variables into normal distributions but none of them were successful. However, because the parametric statistics used herein (e.g., MANOVA, ANOVA, independent-samples  $t$ -test) are robust to the assumption of normality, the violation should not damage the validity of the statistical tests (Leech, 2005).

**Table 8.4 Test of Normality of Dependent Variables (Main Study)**

<b>Dependent variables</b>	<i>M</i>	<i>SD</i>	<b>Skewness</b>	<b>Kurtosis</b>	<b>Kolmogorov-Smirnov</b>	<b>Shapiro-Wilk</b>
Attitude toward the hotel	6.44	2.00	-.81	.48	.000	.000
Behavior intention	6.65	2.60	-1.02	-.18	.000	.000
Value-driven attribution	5.79	2.09	-.46	-.43	.001	.000
Stakeholder-driven attribution	4.87	1.99	-.22	-.47	.000	.000
Egoistic attribution	7.00	1.69	-.92	.62	.000	.000
Strategic attribution	4.79	2.07	-.12	-.50	.000	.000

*8.6. Hypotheses testing I*

Because the manipulation of argument strength was not successful and fit was only considered under the charitable donation argument condition, a new variable called charitable donation was created, which compares (a) no charitable donation with (b) fit charitable donation and (c) no fit charitable donation. In this section, source credibility and charitable donation were the only two independent variables. The impact of source credibility, charitable donation, and fit was examined so only Hypotheses 1 and 4 were tested. Need for cognition, environmentalism, involvement, age, gender, education, and income served as seven control variables.



**Table 8.5 Categories and Descriptions of Source Credibility and Charitable Donation**

<b>Variable</b>	<b>Category</b>	<b>Description</b>
Source Credibility	High source credibility	Hotel
	Low source credibility	Project Planet
Charitable Donation	Charitable donation	Fit charitable donation No fit charitable donation
	No charitable donation	No charitable donation

*8.6.1. Attitude, behavior intention, and value-driven attribution.*

MANCOVA was performed with attitude, behavior intention, and value-driven attributions serving as dependent variables.

Source credibility did not have a significant influence on attitude ( $F(1,323) = 1.18$ ,  $\text{Eta} = .06$ ,  $p < .3$ ), behavior intention ( $F(1,323) = .01$ ,  $\text{Eta} = .03$ ,  $p < 1.0$ ), and value-driven attribution ( $F(1,323) = 1.06$ ,  $\text{Eta} = .05$ ,  $p < .4$ ).

Charitable donation significantly predicted attitude toward the hotel ( $F(2,323) = 5.11$ ,  $\text{Eta} = .18$ ,  $p < .01$ ) and value-driven attributions ( $F(2,323) = 5.25$ ,  $\text{Eta} = .18$ ,  $p < .01$ ) but had a marginally significant impact on behavior intention ( $F(2,323) = 2.37$ ,  $\text{Eta} = .12$ ,  $p < .095$ ). The average of the fit and no fit charitable donations was compared with the no charitable donation. It was found that the charitable donation positively influenced attitude ( $M = 6.63$  vs.  $M = 6.09$ ,  $t = 2.48$ ,  $p < .05$ ) and value-driven attributions ( $M = 6.07$  vs.  $M = 5.39$ ,  $t = 2.97$ ,  $p < .005$ ) and marginally impacted behavior intention ( $M = 6.86$  vs.  $M = 6.38$ ,  $t = 1.70$ ,  $p < .1$ ). However, the fit variable was insignificant when predicting attitude ( $M = 6.54$  vs.  $M = 6.78$ ,  $p < .4$ ), behavior intention ( $M = 6.89$  vs.  $M = 6.88$ ,  $p < 1.0$ ), and value-driven attributions ( $M = 6.02$  vs.  $M = 6.11$ ,  $p < .8$ ).

Thus, making a charitable donation was beneficial in that it made subjects generate more positive attitudes toward the hotel, made them consider value-driven motives of the hotel, and marginally increased behavior intention. However, the type of the charity and the source of the notice cards did not significantly influence subjects.

Subjects being younger and having higher environmentalism and involvement were more likely to have positive hotel attitudes, behavior intention, and value-driven attributions. Need for cognition was negatively related to value-driven attributions.

**Table 8.6 MANCOVA: Attitude, Behavior Intention, Value-driven Attribution (Main Study Hypotheses Testing I)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude	290.06(a)	12	24.17	7.29	.000	.21
	Behavior Intention	557.37(b)	12	46.45	8.92	.000	.25
	Value-driven attribution	312.41(c)	12	26.03	7.46	.000	.22
Intercept	Attitude	51.10	1	51.10	15.42	.000	.05
	Behavior Intention	27.56	1	27.56	5.29	.022	.02
	Value-driven attribution	56.59	1	56.59	16.22	.000	.05
Need for Cognition	Attitude	3.64	1	3.64	1.10	.296	.00
	Behavior Intention	.78	1	.78	.15	.698	.00
	Value-driven attribution	17.22	1	17.22	4.94	<b>.027</b>	.02
Environmentalism	Attitude	17.22	1	17.22	5.20	<b>.023</b>	.02
	Behavior Intention	52.75	1	52.75	10.13	<b>.002</b>	.03
	Value-driven attribution	34.91	1	34.91	10.00	<b>.002</b>	.03
Involvement	Attitude	69.87	1	69.87	21.08	<b>.000</b>	.06
	Behavior Intention	130.43	1	130.43	25.06	<b>.000</b>	.07
	Value-driven attribution	41.73	1	41.73	11.96	<b>.001</b>	.04
Age	Attitude	14.77	1	14.77	4.46	<b>.036</b>	.01
	Behavior Intention	51.50	1	51.50	9.89	<b>.002</b>	.03
	Value-driven attribution	16.97	1	16.97	4.86	<b>.028</b>	.02
Education	Attitude	.02	1	.02	.01	.933	.00
	Behavior Intention	4.33	1	4.33	.83	.362	.00
	Value-driven attribution	4.77	1	4.77	1.37	.243	.00

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Income	Attitude	7.08	1	7.08	2.14	.145	.01
	Behavior Intention	8.16	1	8.16	1.57	.212	.01
	Value-driven attribution	.10	1	.10	.03	.863	.00
Gender	Attitude	1.76	1	1.76	.53	.467	.00
	Behavior Intention	1.23	1	1.23	.24	.628	.00
	Value-driven attribution	7.39	1	7.39	2.12	.147	.01
Source Credibility	Attitude	3.92	1	3.92	1.18	.278	.00
	Behavior Intention	.02	1	.02	.01	.946	.00
	Value-driven attribution	3.69	1	3.69	1.06	.304	.00
Charitable donation	Attitude	33.89	2	16.95	5.11	<b>.007</b>	.03
	Behavior Intention	24.64	2	12.32	2.37	.095	.01
	Value-driven attribution	36.63	2	18.31	5.25	<b>.006</b>	.03
Source Credibility * Charitable donation	Attitude	14.15	2	7.07	2.13	.120	.01
	Behavior Intention	11.30	2	5.65	1.09	.339	.01
	Value-driven attribution	4.55	2	2.28	.65	.522	.00
Error	Attitude	1070.43	323	3.31			
	Behavior Intention	1681.38	323	5.21			
	Value-driven attribution	1127.01	323	3.49			
Total	Attitude	15081.69	336				
	Behavior Intention	17072.25	336				
	Value-driven attribution	12625.03	336				
Corrected Total	Attitude	1360.49	335				
	Behavior Intention	2238.75	335				
	Value-driven attribution	1439.42	335				

a R Squared = .21 (Adjusted R Squared = .18)

b R Squared = .25 (Adjusted R Squared = .22)

c R Squared = .22 (Adjusted R Squared = .19)

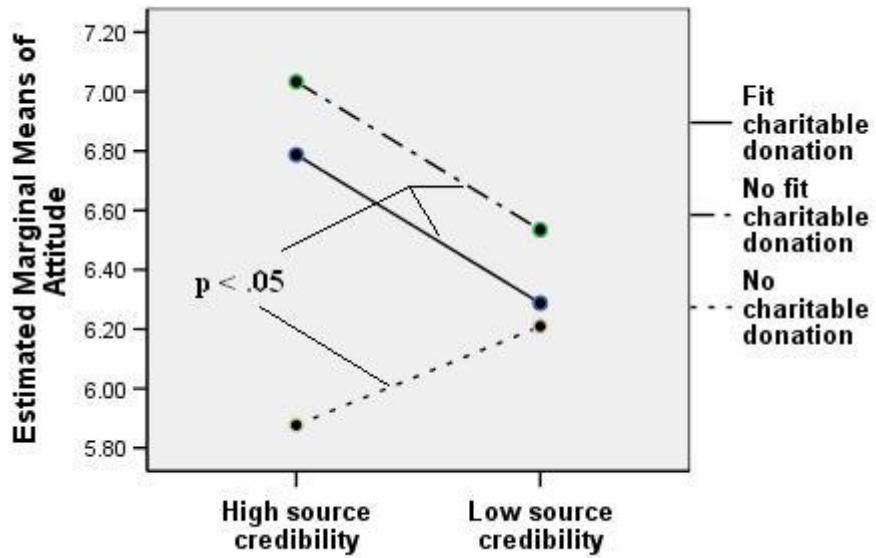


Figure 8.1 Estimated Marginal Means of Attitude (Charitable Donation) (Main Study Hypotheses Testing I)

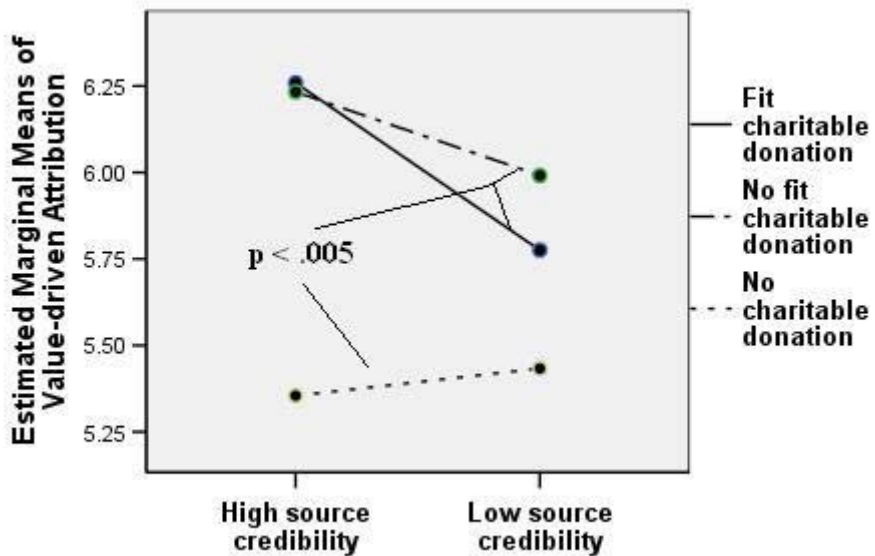


Figure 8.2 Estimated Marginal Means of Value-driven Attribution (Charitable Donation) (Main Study Hypotheses Testing I)

### 8.6.2. Egoistic attributions and counterarguments.

MANCOVA was conducted with egoistic attributions and counterarguments acting as dependent variables.

Source credibility was a significant predictor of egoistic attributions ( $F(1,312) = 6.71$ ,  $\text{Eta} = .14$ ,  $p < .01$ ). A low credibility (Project Planet) source ( $M = 7.21$ ) was more likely to generate egoistic attributions than a high credibility (hotel) source ( $M = 6.74$ ). Thus, Hypothesis 1f was supported according to the re-classification of credibility, which places the hotel as the high credibility source. Originally Project Planet was expected to serve as the high credibility source.

The charitable donation variable significantly influenced egoistic attributions ( $F(2,312) = 4.19$ ,  $\text{Eta} = .16$ ,  $p < .05$ ) and counterarguments ( $F(2,312) = 4.37$ ,  $\text{Eta} = .16$ ,  $p < .05$ ). The no charitable donation condition generated more egoistic attributions ( $M = 6.79$  vs.  $M = 6.38$ ,  $t = 3.01$ ,  $p < .005$ ) and counterarguments ( $M = .29$  vs.  $M = .20$ ,  $t = 2.00$ ,  $p < .05$ ) than the charitable donation condition. However, mean differences between the fit charitable donation and the no fit charitable donation were insignificant when predicting egoistic attributions ( $M = 6.98$  vs.  $M = 6.65$ ,  $p < .2$ ) and counterarguments ( $M = .26$  vs.  $M = .14$ ,  $p < .06$ ).

These results suggest that in order to reduce subjects' egoistic attributions and negative thoughts of the reuse program, the hotel can use its own logo on the notice cards and make a charitable donation. Charity type does not matter.

Subjects having higher need for cognition ( $F(1,312) = 5.15$ ,  $\text{Eta} = .13$ ,  $p < .05$ ), lower environmentalism ( $F(1,312) = 5.93$ ,  $\text{Eta} = .12$ ,  $p < .05$ ), and lower involvement ( $F(1,312) = 10.81$ ,  $\text{Eta} = .18$ ,  $p < .001$ ) had fewer counterarguments. Subjects with lower

environmentalism ( $F(1,312) = 3.92$ ,  $\text{Eta} = .22$ ,  $p < .05$ ) and higher involvement ( $F(1,312) = 8.40$ ,  $\text{Eta} = .16$ ,  $p < .005$ ) were less likely to generate egoistic attributions.

**Table 8.7 MANCOVA: Egoistic Attributions, Counterarguments (Main Study Hypotheses Testing I)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Counterargument	10.02(a)	12	.84	5.34	.000	.17
	Egoistic attribution	94.67(b)	12	7.89	3.01	.001	.10
Intercept	Counterargument	1.47	1	1.47	9.39	.002	.03
	Egoistic attribution	270.29	1	270.29	103.08	.000	.25
Need for Cognition	Counterargument	.80	1	.80	5.15	<b>.024</b>	.02
	Egoistic attribution	.15	1	.15	.06	.808	.00
Environmentalism	Counterargument	.93	1	.93	5.93	<b>.015</b>	.02
	Egoistic attribution	10.29	1	10.29	3.92	<b>.049</b>	.01
Involvement	Counterargument	1.69	1	1.69	10.81	<b>.001</b>	.03
	Egoistic attribution	22.02	1	22.02	8.40	<b>.004</b>	.03
Age	Counterargument	.23	1	.23	1.46	.228	.01
	Egoistic attribution	8.81	1	8.81	3.36	.068	.01
Education	Counterargument	.22	1	.22	1.39	.239	.00
	Egoistic attribution	4.78	1	4.78	1.82	.178	.01
Income	Counterargument	.10	1	.10	.66	.416	.00
	Egoistic attribution	.28	1	.28	.11	.743	.00
Gender	Counterargument	.30	1	.30	1.94	.165	.01
	Egoistic attribution	6.91	1	6.91	2.64	.105	.01
Charitable Donation	Counterargument	1.37	2	1.37	4.37	<b>.013</b>	.03
	Egoistic attribution	21.99	2	21.99	4.19	<b>.016</b>	.03
Source Credibility	Counterargument	.46	1	.46	2.95	.087	.01
	Egoistic attribution	17.61	1	17.61	6.71	<b>.010</b>	.02
Charitable Donation * Source Credibility	Counterargument	.00	2	.000	.00	.997	.00
	Egoistic attribution	4.20	2	2.100	.80	.450	.01
Error	Counterargument	48.74	312	.156			
	Egoistic attribution	818.13	312	2.622			
Total	Counterargument	77.00	325				
	Egoistic attribution	16912.56	325				
Corrected Total	Counterargument	58.76	324				
	Egoistic attribution	912.80	324				

a R Squared = .17 (Adjusted R Squared = .14)

b R Squared = .10 (Adjusted R Squared = .07)

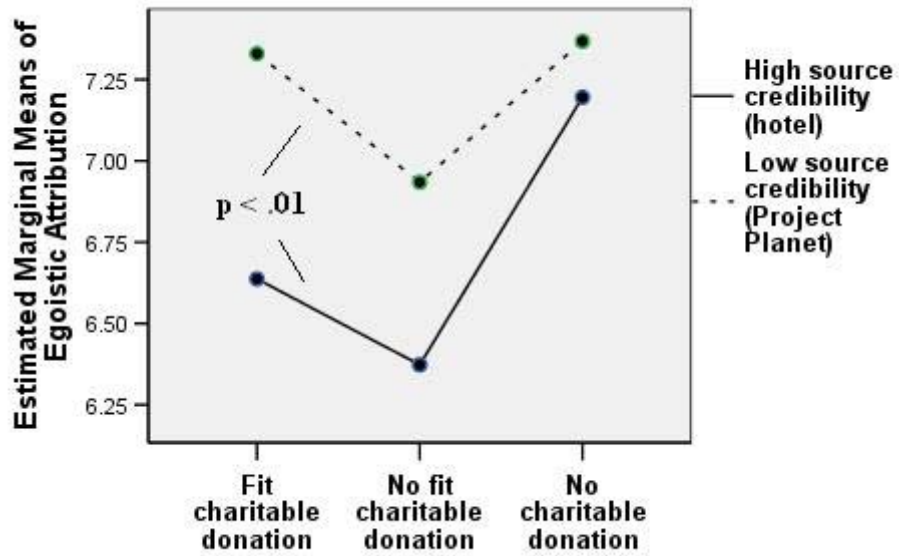


Figure 8.3 Estimated Marginal Means of Egoistic Attribution (Source Credibility) (Main Study Hypotheses Testing I)

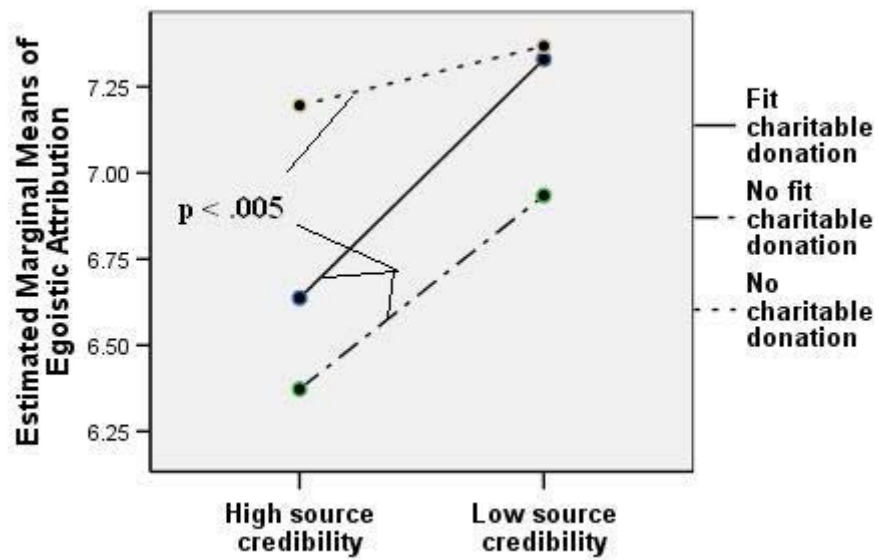
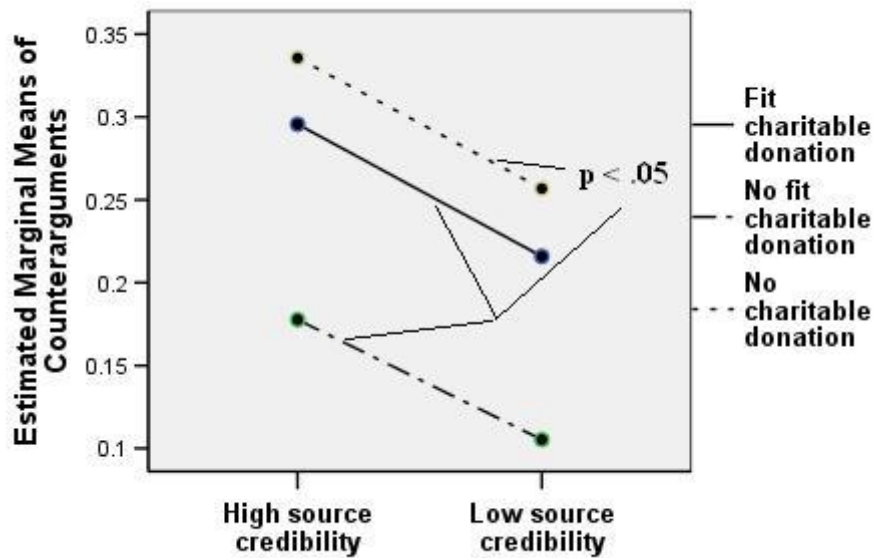


Figure 8.4 Estimated Marginal Means of Egoistic Attribution (Charitable Donation) (Main Study Hypotheses Testing I)





**Figure 8.5 Estimated Marginal Means of Counterarguments (Charitable Donation) (Main Study Hypotheses Testing I)**

*8.6.3. Stakeholder-driven and strategic attributions.*

The impacts of the two independent variables on stakeholder-driven and strategic attributions were examined in separate ANCOVAs which included the seven control variables. Table 8.8 and Table 8.9 demonstrate that stakeholder-driven and strategic attributions were not significantly predicted by source credibility and charitable donation. Subjects with higher environmentalism were more likely to have stakeholder-driven ( $F(1,321) = 9.06$ ,  $\text{Eta} = .16$ ,  $p < .005$ ) and strategic attributions ( $F(1,323) = 16.51$ ,  $\text{Eta} = .22$ ,  $p < .001$ ). Younger subjects were more likely to have stakeholder-driven ( $F(1,321) = 4.38$ ,  $\text{Eta} = .11$ ,  $p < .05$ ) and strategic attributions ( $F(1,323) = 14.71$ ,  $\text{Eta} = .21$ ,  $p < .001$ ) as well.

**Table 8.8 MANCOVA: Stakeholder-driven Attributions (Main Study Hypotheses Testing I)**

Dependent Variable: Stakeholder-driven attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	126.21(a)	12	10.52	2.32	.007	.08
Intercept	108.65	1	108.65	24.00	.000	.07
Need for Cognition	9.38	1	9.38	2.07	.151	.01
Environmentalism	41.02	1	41.02	9.06	<b>.003</b>	.03
Involvement	.08	1	.08	.02	.897	.00
Age	19.82	1	19.82	4.38	<b>.037</b>	.01
Education	1.29	1	1.29	.28	.594	.00
Income	14.26	1	14.26	3.15	.077	.01
Gender	.18	1	.18	.04	.841	.00
Source Credibility	.97	1	.97	.22	.643	.00
Charitable Donation	2.16	2	1.08	.24	.788	.00
Source Credibility* Charitable Donation	.58	2	.29	.06	.938	.00
Error	1453.39	321	4.53			
Total	9206.00	334				
Corrected Total	1579.61	333				

a R Squared = .08 (Adjusted R Squared = .05)

**Table 8.9 MANCOVA: Strategic Attributions (Main Study Hypotheses Testing I)**

Dependent Variable: Strategic attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	194.34(a)	12	16.20	4.19	.000	.14
Intercept	73.19	1	73.19	18.94	.000	.06
Need for Cognition	.00	1	.00	.00	.987	.00
Environmentalism	63.78	1	63.78	16.51	<b>.000</b>	.05
Involvement	3.15	1	3.15	.82	.367	.00
Age	56.84	1	56.84	14.71	<b>.000</b>	.04
Education	.30	1	.30	.08	.780	.00
Income	.02	1	.02	.01	.941	.00
Gender	6.02	1	6.02	1.56	.213	.01
Source Credibility	.03	1	.03	.01	.927	.00
Charitable Donation	18.59	2	9.29	2.41	.092	.02
Source Credibility * Charitable Donation	1.69	2	.85	.22	.803	.00
Error	1248.07	323	3.86			
Total	9075.75	336				
Corrected Total	1442.41	335				

a R Squared = .14 (Adjusted R Squared = .10)

### 8.7. Hypotheses testing II

For the second stage of hypotheses testing, the measured argument strength variable (i.e., argument strength 2) was used. The charitable donation and the no charitable donation were no longer the classification of argument strength. Fit 3 was created as it was in the pretest for the purpose of the nested design. Source credibility was the third independent variable. The manipulation results of source credibility were reversed such that the hotel source was the high credibility source and the Project Planet source was the low credibility source. The general linear model was designed as 2 (source credibility: high, low) x 2 (argument strength 2: strong, weak) x 3 (fit 3: no charitable donation, no fit charitable donation, fit charitable donation). Need for cognition, environmentalism, involvement, age, gender, education, and income were seven control variables.

**Table 8.10 Categories and Descriptions of Source Credibility, Argument Strength 2, and Fit**

<b>Variable</b>	<b>Category</b>	<b>Description</b>
Source Credibility	High source credibility Low source credibility	Hotel Project Planet
Argument Strength 2	Strong argument Weak argument	Subjects' perceptions of strong argument Subjects' perceptions of weak argument
Fit	Fit No fit Placeholder category	Fit charitable donation No fit charitable donation No charitable donation

### 8.7.1. Attitude, behavior intention, and value-driven attribution.

MANCOVA was conducted with attitude, behavior intention, and value-driven attributions serving as dependent variables. Three independent variables and seven control variables were used as listed above.

Source credibility was not a significant predictor when predicting attitude ( $F(1,320) = 1.53$ ,  $\text{Eta} = .07$ ,  $p < .3$ ), behavior intention ( $F(1,320) = .00$ ,  $\text{Eta} = .03$ ,  $p < 1.0$ ), and value-driven attributions ( $F(1,320) = 1.11$ ,  $\text{Eta} = .07$ ,  $p < .3$ ). Thus, the source of the notice cards was not an important factor.

Argument strength had significant influences on these three dependent variables. The measured perception of a strong argument generated more positive attitudes than the weak argument ( $M_{\text{strong}} = 7.39$  vs.  $M_{\text{weak}} = 5.13$ ,  $F(1,320) = 132.61$ ,  $\text{Eta} = .54$ ,  $p < .001$ ). The strong argument made subjects more likely to reuse their towels and linens ( $M_{\text{strong}} = 7.96$  vs.  $M_{\text{weak}} = 4.93$ ,  $F(1,320) = 162.30$ ,  $\text{Eta} = .58$ ,  $p < .001$ ) and also more likely to have value-driven attributions ( $M_{\text{strong}} = 6.65$  vs.  $M_{\text{weak}} = 4.69$ ,  $F(1,320) = 84.96$ ,  $\text{Eta} = .46$ ,  $p < .001$ ) than the weak argument. Therefore, Hypotheses 2a, 2b, and 2c were supported. Note that this represents the re-classification of subjects' responses to the six argument strength questions. This was not the originally hypothesized classification of the charitable donation argument and the no charitable donation argument.

Fit 3 was a significant predictor of attitude ( $F(2,320) = 6.55$ ,  $\text{Eta} = .20$ ,  $p < .005$ ), behavior intention ( $F(2,320) = 3.30$ ,  $\text{Eta} = .14$ ,  $p < .05$ ), and value-driven attributions ( $F(2,320) = 6.14$ ,  $\text{Eta} = .19$ ,  $p < .005$ ). This effect was driven by the donation / no donation dichotomy though, not by the fit / no fit element within the donation conditions. Specifically, charitable donation positively influenced attitude ( $M = 6.63$  vs.  $M = 6.09$ ,  $t =$

2.48,  $p < .05$ ) and value-driven attributions ( $M = 6.07$  vs.  $M = 5.39$ ,  $t = 2.97$ ,  $p < .005$ ) but the fit variable was insignificant when predicting attitude ( $p < .5$ ), behavior intention ( $p < .8$ ), and value-driven attributions ( $p < .9$ ).

In other words, hotels can use a strong argument and/or a charitable donation to make customers think more about the value-driven motives of the reuse program and to generate positive attitudes toward the hotel. The likelihood of customers' behavior intention can be increased by using strong arguments. However, the source of the notice cards and the selection of charities did not have great influences here.

Moreover, subjects with lower need for cognition ( $F(1,320) = 4.38$ ,  $\text{Eta} = .11$ ,  $p < .05$ ) and higher environmentalism ( $F(1,320) = 6.02$ ,  $\text{Eta} = .13$ ,  $p < .05$ ) were more likely to have value-driven attributions. Subjects having higher environmentalism ( $F(1,320) = 5.76$ ,  $\text{Eta} = .13$ ,  $p < .05$ ) and higher involvement ( $F(1,320) = 3.91$ ,  $\text{Eta} = .11$ ,  $p < .05$ ) were more likely to support the reuse suggestion.

**Table 8.11 MANCOVA: Attitude, Behavior Intention, Value-driven Attribution (Main Study Hypotheses Testing II)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Attitude	603.09(a)	14	43.08	18.25	.000	.44
	Behavior Intention	1121.05(b)	14	80.08	23.04	.000	.50
	Value-driven Attribution	550.08(c)	14	39.29	14.14	.000	.38
Intercept	Attitude	98.66	1	98.66	41.79	.000	.12
	Behavior Intention	81.61	1	81.61	23.48	.000	.07
	Value-driven Attribution	97.13	1	97.13	34.96	.000	.10
Need for Cognition	Attitude	1.38	1	1.38	.58	.446	.00
	Behavior Intention	.01	1	.01	.00	.952	.00
	Value-driven Attribution	12.17	1	12.17	4.38	<b>.037</b>	.01

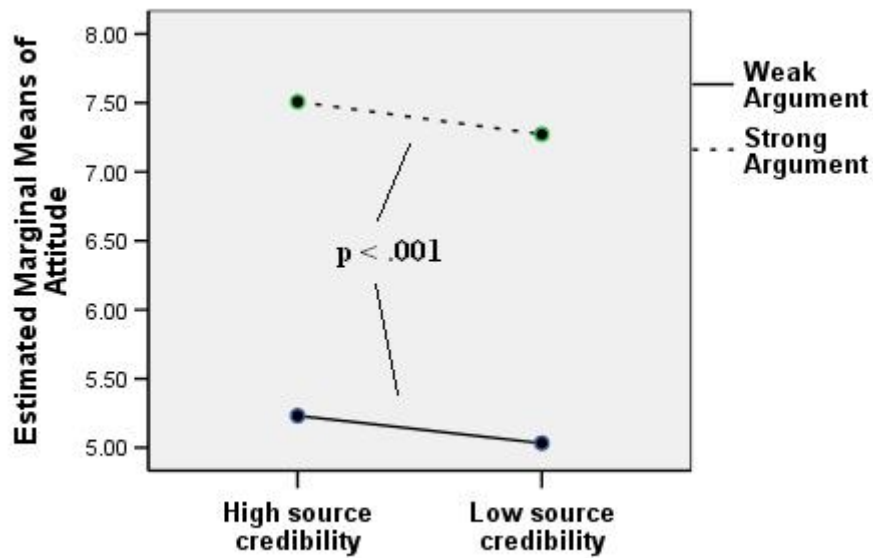
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Environmentalism	Attitude	4.31	1	4.31	1.83	.178	.01
	Behavior Intention	20.03	1	20.03	5.76	<b>.017</b>	.02
	Value-driven Attribution	16.73	1	16.73	6.02	<b>.015</b>	.02
Involvement	Attitude	6.58	1	6.58	2.79	.096	.01
	Behavior Intention	13.59	1	13.59	3.91	<b>.049</b>	.01
	Value-driven Attribution	2.34	1	2.34	.84	.359	.00
Age	Attitude	.30	1	.30	.13	.720	.00
	Behavior Intention	7.35	1	7.35	2.12	.147	.01
	Value-driven Attribution	1.62	1	1.62	.58	.445	.00
Education	Attitude	.75	1	.75	.32	.574	.00
	Behavior Intention	.53	1	.53	.15	.698	.00
	Value-driven Attribution	1.72	1	1.72	.62	.433	.00
Income	Attitude	4.34	1	4.34	1.84	.176	.01
	Behavior Intention	4.49	1	4.49	1.29	.257	.00
	Value-driven Attribution	.02	1	.02	.01	.938	.00
Gender	Attitude	.32	1	.32	.14	.712	.00
	Behavior Intention	.02	1	.02	.01	.938	.00
	Value-driven Attribution	4.25	1	4.25	1.53	.217	.01
Source Credibility	Attitude	3.61	1	3.61	1.53	.217	.01
	Behavior Intention	1.04E-006	1	1.04E-006	.00	1.000	.00
	Value-driven Attribution	3.09	1	3.09	1.11	.292	.00
Argument Strength 2	Attitude	313.06	1	313.06	132.61	<b>.000</b>	.29
	Behavior Intention	564.15	1	564.15	162.30	<b>.000</b>	.34
	Value-driven Attribution	236.08	1	236.08	84.96	<b>.000</b>	.21
Fit 3	Attitude	30.92	2	15.46	6.55	<b>.002</b>	.04
	Behavior Intention	22.95	2	11.47	3.30	<b>.038</b>	.02
	Value-driven Attribution	34.13	2	17.06	6.14	<b>.002</b>	.04
Source Credibility * Argument Strength 2	Attitude	.03	1	.03	.01	.916	.00
	Behavior Intention	.52	1	.52	.15	.700	.00
	Value-driven Attribution	.27	1	.27	.10	.758	.00
Source Credibility * Fit 3	Attitude	7.51	2	3.76	1.59	.205	.01
	Behavior Intention	2.52	2	1.26	.36	.696	.00
	Value-driven Attribution	4.85	2	2.43	.87	.419	.01
Error	Attitude	755.46	320	2.36			
	Behavior Intention	1112.35	320	3.48			
	Value-driven Attribution	889.21	320	2.78			

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Attitude	15056.69	335				
	Behavior Intention	17053.47	335				
	Value-driven Attribution	12595.87	335				
Corrected Total	Attitude	1358.55	334				
	Behavior Intention	2233.39	334				
	Value-driven Attribution	1439.28	334				

a R Squared = .44 (Adjusted R Squared = .42)

b R Squared = .50 (Adjusted R Squared = .48)

c R Squared = .38 (Adjusted R Squared = .36)



**Figure 8.6 Estimated Marginal Means of Attitude (Argument Strength 2) (Main Study Hypotheses Testing II)**

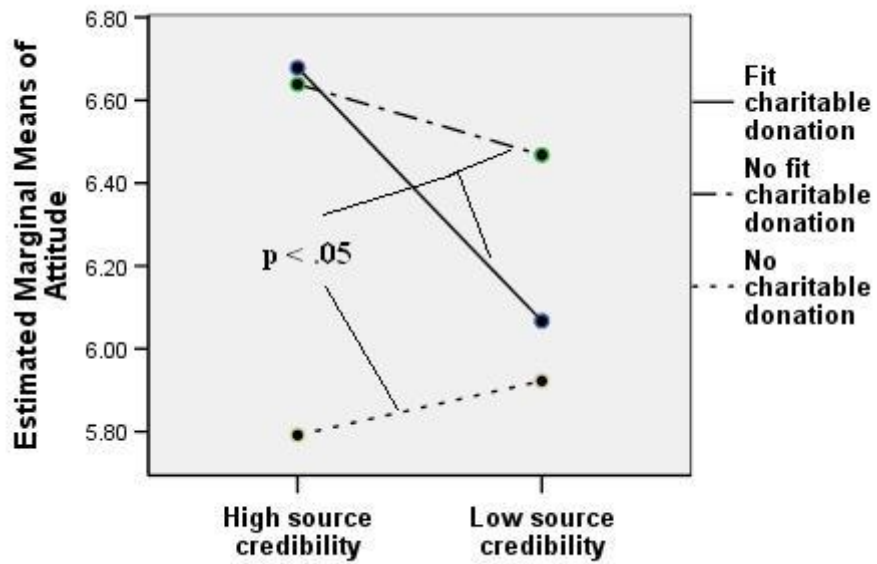


Figure 8.7 Estimated Marginal Means of Attitude (Fit 3) (Main Study Hypotheses Testing II)

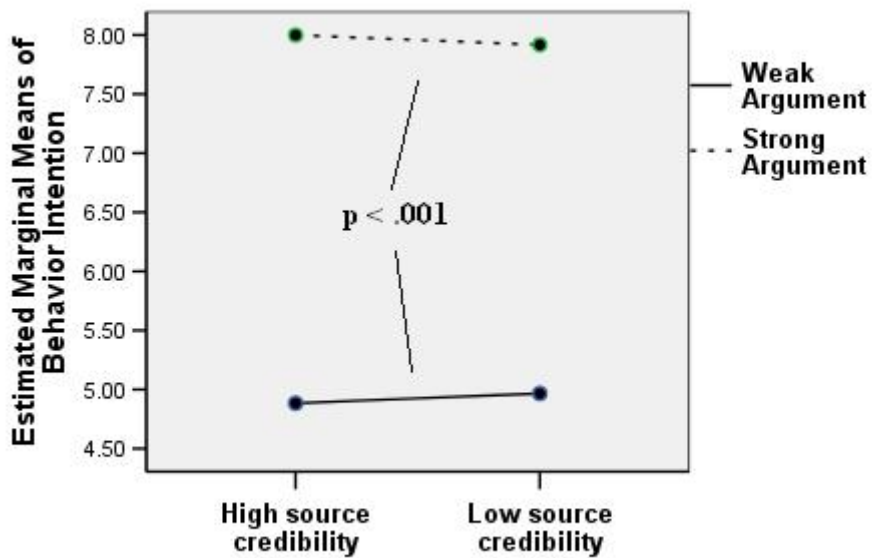


Figure 8.8 Estimated Marginal Means of Behavior Intention (Argument Strength 2) (Main Study Hypotheses Testing II)



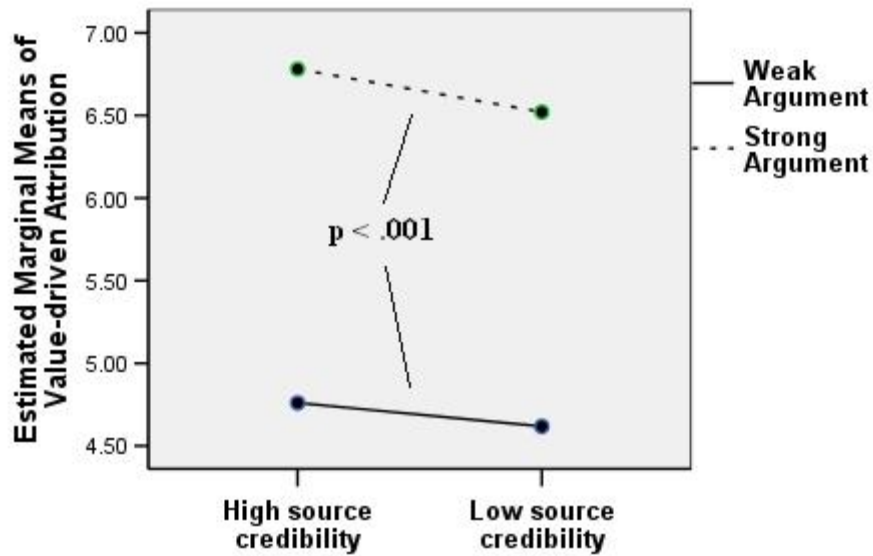


Figure 8.9 Estimated Marginal Means of Value-driven Attribution (Argument Strength 2) (Main Study Hypotheses Testing II)

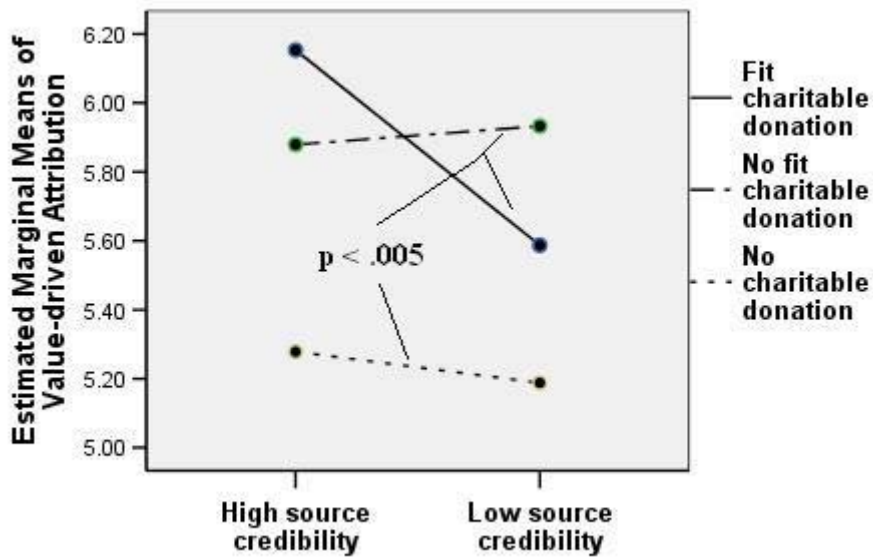


Figure 8.10 Estimated Marginal Means of Value-driven Attribution (Fit 3) (Main Study Hypotheses Testing II)

### 8.7.2. Egoistic attributions and counterarguments.

Egoistic attributions and counterarguments were examined together by MANCOVA with three independent variables and seven control variables.

Source credibility significantly predicted egoistic attributions ( $F(1,309) = 5.64$ ,  $\text{Eta} = .13$ ,  $p < .05$ ). A low credibility source was more likely to make subjects have egoistic attributions than a high credibility source ( $M_{\text{low}} = 7.23$  vs.  $M_{\text{high}} = 6.79$ ). Source credibility also had a significant influence on counterarguments ( $F(1,309) = 4.67$ ,  $\text{Eta} = .12$ ,  $p < .05$ ). Low source credibility generated fewer counterarguments than high source credibility ( $M_{\text{low}} = .22$  vs.  $M_{\text{high}} = .31$ ). Hypothesis 1f was supported, while Hypothesis 1g was not supported but reversed results were found.

Argument strength had a significant influence on counterarguments ( $F(1,309) = 37.93$ ,  $\text{Eta} = .33$ ,  $p < .001$ ). The weak argument generated more counterarguments than the strong argument ( $M_{\text{weak}} = .40$  vs.  $M_{\text{strong}} = .12$ ). Thus, Hypothesis 2e was supported using the re-defined argument strength variable.

The overall fit variable had no significant impact on egoistic attributions ( $p < .3$ ) and counterarguments ( $p < .07$ ). However, the average of the fit charitable donation and the no fit charitable donation negatively influenced egoistic attributions ( $p < .005$ ) and counterarguments ( $p < .05$ ) compared to the no charitable donation.

In other words, hotels reduce subjects' counterarguments and egoistic attributions by using its own logo on the notice cards and making a charitable donation regardless of the charity type.

Subjects with higher need for cognition had more counterarguments ( $F(1,309) = 4.20$ ,  $\text{Eta} = .11$ ,  $p < .05$ ). Moreover, subjects with higher environmentalism ( $F(1,309) =$

4.69,  $\eta^2 = .12$ ,  $p < .05$ ) and lower involvement ( $F(1,309) = 5.32$ ,  $\eta^2 = .13$ ,  $p < .05$ ) were more likely to have egoistic attributions.

**Table 8.12 MANCOVA: Egoistic Attributions, Counterarguments (Main Study Hypotheses Testing II)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Egoistic Attribution	103.97(a)	14	7.43	2.84	.001	.11
	Counterargument	15.72(b)	14	1.12	8.07	.000	.27
Intercept	Egoistic Attribution	242.94	1		92.81	.000	.23
	Counterargument	.66	1		4.73	.030	.02
Need for Cognition	Egoistic Attribution	.31	1		.12	.731	.00
	Counterargument	.59	1		4.20	<b>.041</b>	.01
Environmentalism	Egoistic Attribution	12.28	1		4.69	<b>.031</b>	.02
	Counterargument	.44	1		3.18	.075	.01
Involvement	Egoistic Attribution	13.92	1		5.32	<b>.022</b>	.02
	Counterargument	.37	1		2.65	.105	.01
Age	Egoistic Attribution	5.96	1		2.28	.133	.01
	Counterargument	.01	1		.10	.749	.00
Education	Egoistic Attribution	5.02	1		1.92	.167	.01
	Counterargument	.17	1		1.22	.270	.00
Income	Egoistic Attribution	.28	1		.11	.742	.00
	Counterargument	.10	1		.68	.409	.00
Gender	Egoistic Attribution	6.63	1		2.53	.113	.01
	Counterargument	.41	1		2.97	.086	.01
Source Credibility	Egoistic Attribution	14.77	1	14.77	5.64	<b>.018</b>	.02
	Counterargument	.65	1	.65	4.67	<b>.031</b>	.02
Argument Strength 2	Egoistic Attribution	7.64	1	7.64	2.92	.089	.01
	Counterargument	5.28	1	5.28	37.93	<b>.000</b>	.11
Fit 3	Egoistic Attribution	20.65	2	10.32	3.94	<b>.020</b>	.03
	Counterargument	1.22	2	.61	4.41	<b>.013</b>	.03
Source Credibility * Argument Strength 2	Egoistic Attribution	1.35	1	1.35	.52	.474	.00
	Counterargument	.22	1	.22	1.54	.215	.01
Source Credibility * Fit 3	Egoistic Attribution	3.65	2	1.82	.70	.499	.00
	Counterargument	.05	2	.03	.18	.833	.00
Error	Egoistic Attribution	808.83	309	2.62			
	Counterargument	42.99	309	.14			
Total	Egoistic Attribution	16863.56	324				
	Counterargument	77.00	324				
Corrected Total	Egoistic Attribution	912.80	323				
	Counterargument	58.70	323				

a R Squared = .11 (Adjusted R Squared = .07)

b R Squared = .17 (Adjusted R Squared = .24)

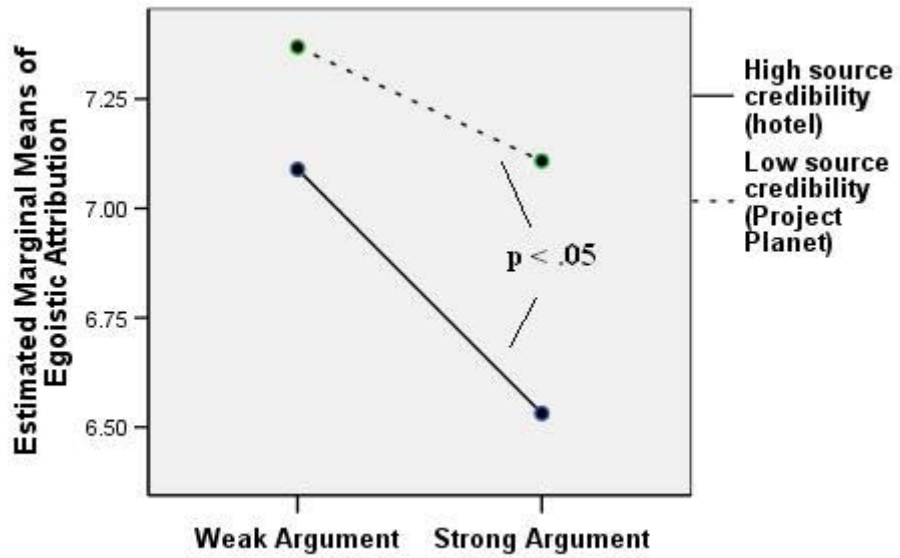


Figure 8.11 Estimated Marginal Means of Egoistic Attribution (Source Credibility) (Main Study Hypotheses Testing II)

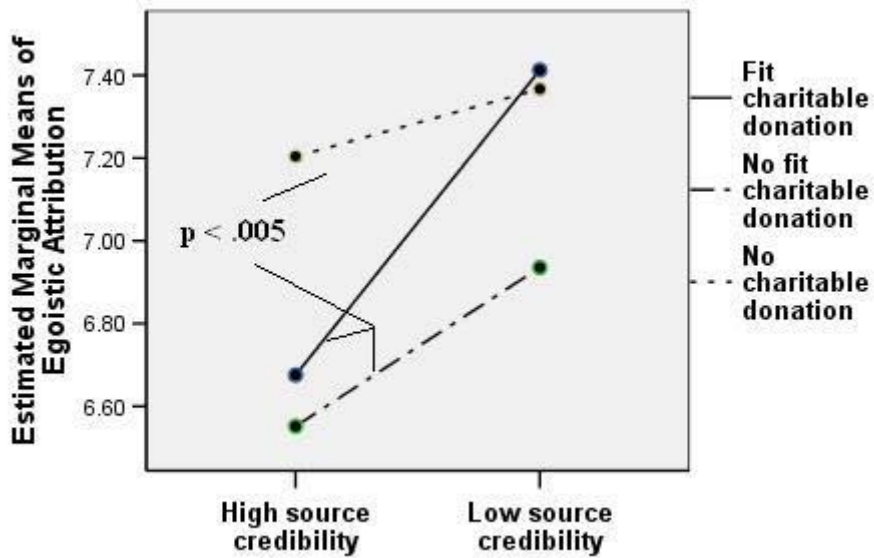


Figure 8.12 Estimated Marginal Means of Egoistic Attribution (Fit 3) (Main Study Hypotheses Testing II)

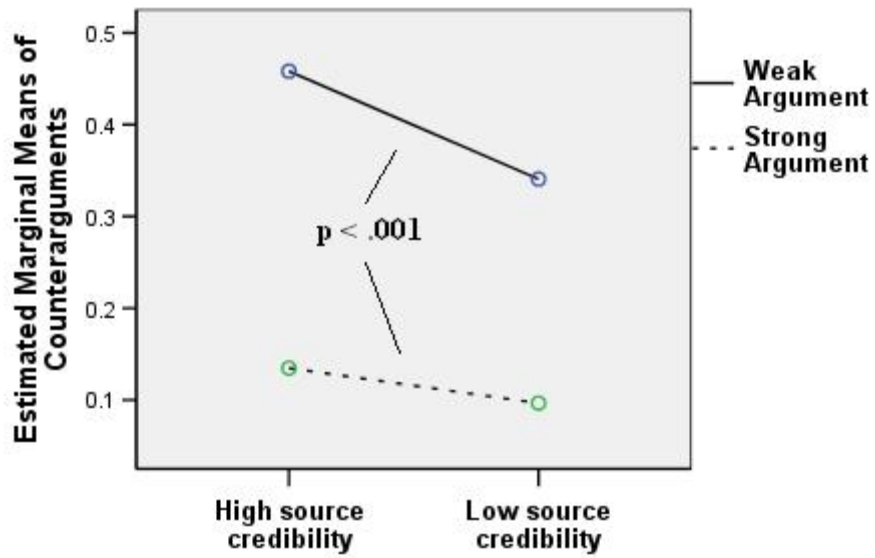


Figure 8.13 Estimated Marginal Means of Counterarguments (Argument Strength 2) (Main Study Hypotheses Testing II)

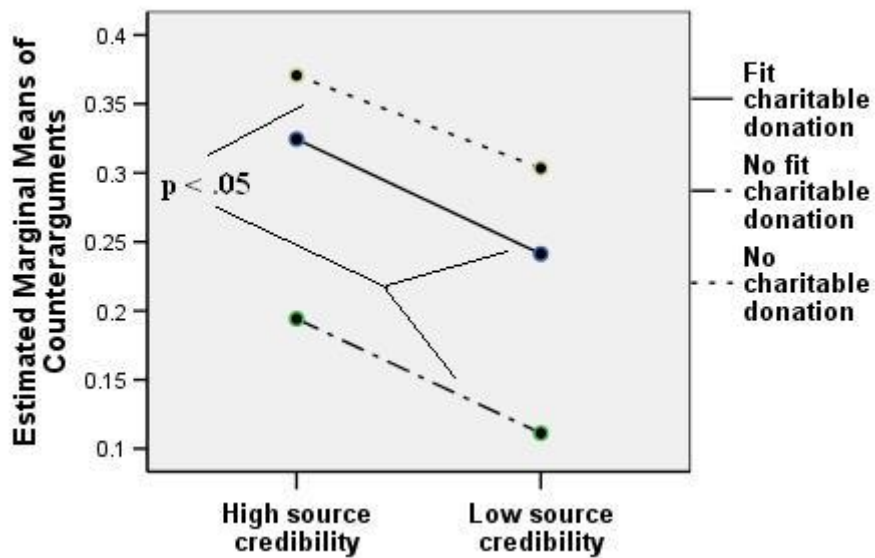


Figure 8.14 Estimated Marginal Means of Counterarguments (Fit 3) (Main Study Hypotheses Testing II)

### 8.7.3. Stakeholder-driven and strategic attributions.

Strategic and stakeholder-driven attributions were analyzed separately by ANCOVA with three independent variables and seven control variables.

Strategic attributions were predicted by argument strength. The strong argument was more likely to generate strategic attributions than the weak argument ( $M_{\text{strong}} = 5.33$  vs.  $M_{\text{weak}} = 4.07$ ,  $F(1,320) = 26.95$ ,  $\text{Eta} = .28$ ,  $p < .001$ ). Stakeholder-driven attributions were predicted by argument strength as well. The strong argument was more likely to generate stakeholder-driven attributions than the weak argument ( $M_{\text{strong}} = 5.24$  vs.  $M_{\text{weak}} = 4.17$ ,  $F(1,318) = 16.10$ ,  $\text{Eta} = .22$ ,  $p < .001$ ). Moreover, subjects having higher environmentalism ( $F(1,320) = 12.79$ ,  $\text{Eta} = .19$ ,  $p < .001$ ) and being younger ( $F(1,320) = 8.56$ ,  $\text{Eta} = .16$ ,  $p < .005$ ) were more likely to have strategic attributions. Subjects with higher environmentalism were more likely to generate stakeholder-driven attributions ( $F(1,318) = 6.74$ ,  $\text{Eta} = .14$ ,  $p < .01$ ).

**Table 8.13 MANCOVA: Strategic Attributions (Main Study Hypotheses Testing II)**

Dependent Variable: Strategic Attribution

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	289.96(a)	14	20.71	5.77	.000	.20
Intercept	103.36	1	103.36	28.78	.000	.08
Need for Cognition	.11	1	.11	.03	.859	.00
Environmentalism	45.94	1	45.94	12.79	.000	.04
Involvement	2.21	1	2.21	.62	.433	.00
Age	30.73	1	30.73	8.56	.004	.03
Education	.00	1	.00	.00	.985	.00
Income	.32	1	.32	.09	.765	.00
Gender	8.85	1	8.85	2.46	.117	.01
Source Credibility	.00	1	.00	.00	.974	.00
Argument Strength 2	96.78	1	96.78	26.95	.000	.08
Fit 3	18.99	2	9.49	2.64	.073	.02
Source Credibility * Argument Strength 2	2.49	1	2.49	.69	.406	.00
Source Credibility * Fit 3	.12	2	.06	.02	.984	.00
Error	1149.32	320	3.59			
Total	9066.75	335				
Corrected Total	1439.28	334				

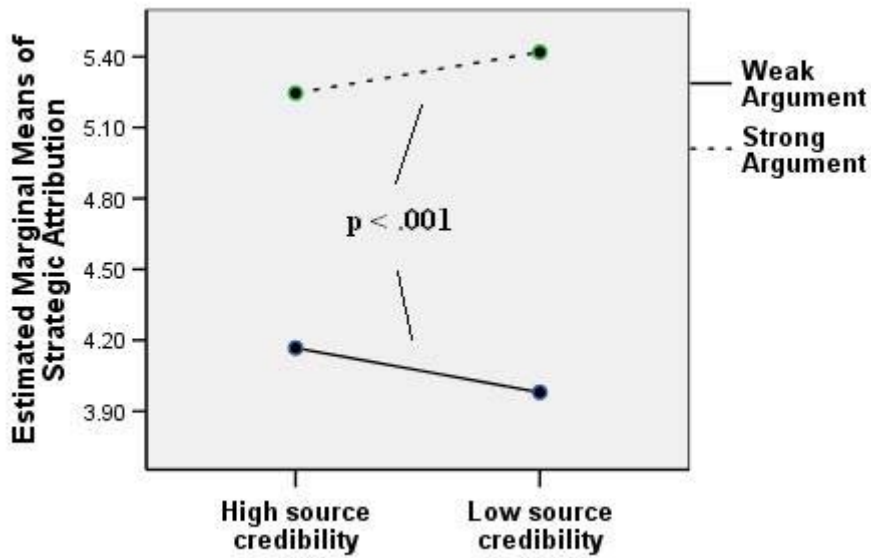
a R Squared = .20 (Adjusted R Squared = .17)

**Table 8.14 MANCOVA: Stakeholder-driven Attributions (Main Study Hypotheses Testing II)**

Dependent Variable: Stakeholder-driven Attribution

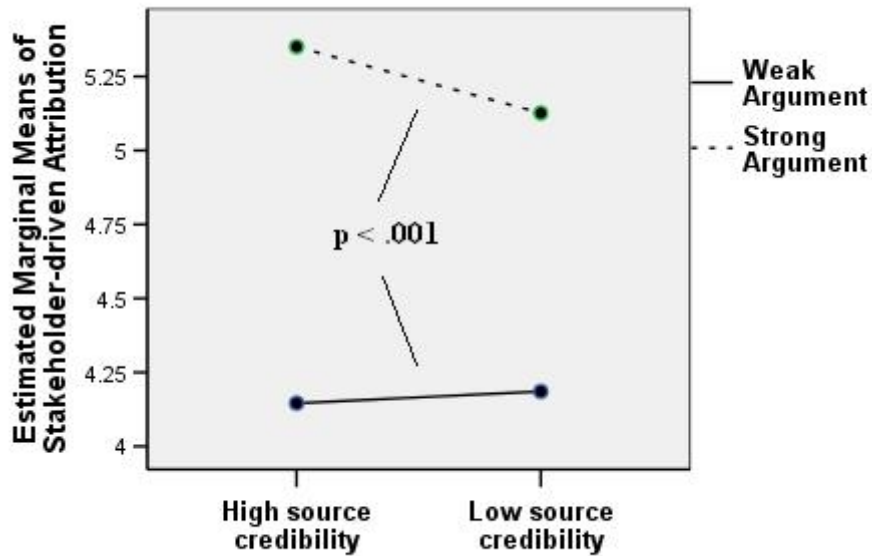
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	198.15(a)	14	14.15	3.27	.000	.13
Intercept	128.75	1	128.75	29.70	.000	.09
Need for Cognition	7.43	1	7.43	1.72	.191	.01
Environmentalism	29.22	1	29.22	6.74	<b>.010</b>	.02
Involvement	5.04	1	5.04	1.16	.282	.00
Age	7.47	1	7.47	1.72	.190	.01
Education	.45	1	.45	.10	.748	.00
Income	15.97	1	15.97	3.68	.056	.01
Gender	.11	1	.11	.03	.873	.00
Source Credibility	.65	1	.65	.15	.699	.00
Argument Strength 2	69.79	1	69.79	16.10	<b>.000</b>	.05
Fit 3	1.63	2	.81	.19	.829	.00
Source Credibility * Argument Strength 2	1.33	1	1.33	.31	.581	.00
Source Credibility * Fit 3	.68	2	.34	.08	.925	.00
Error	1378.28	318	4.33			
Total	9197.00	333				
Corrected Total	1576.43	332				

a. R Squared = .22 (Adjusted R Squared = .17)



**Figure 8.15 Estimated Marginal Means of Strategic Attribution (Argument Strength 2) (Main Study Hypotheses Testing II)**





**Figure 8.16 Estimated Marginal Means of Stakeholder-driven Attribution (Argument Strength 2) (Main Study Hypotheses Testing II)**

### 8.8. Other findings

In order to further assess subjects' responses to the notice cards, additional analyses were performed. First, a one-sample  $t$ -test was conducted by comparing mean responses to the attitude change scale to the scale midpoint of 5 (no change). Subjects indicated that they would generate more positive attitudes after seeing notice cards ( $M = 5.66$ ,  $t = 6.28$ ,  $p < .001$ ). Next, independent-sample  $t$ -test was conducted to test the effectiveness of the notice cards. The mean of the experimental conditions was compared to the mean of the control condition in which subjects did not view a notice card, as was done in the pretest. The results indicated that notice cards made subjects more likely to support the reuse suggestion ( $M_{\text{with notice cards}} = 6.65$  vs.  $M_{\text{without notice cards}} = 5.40$ ,  $t = 2.86$ ,  $p < .01$ ). Subjects' responses to the open-ended questions provided some useful information. A large amount of subjects (66%) thought that promoting the reuse program

among hotels was a great idea. Some of them even indicated that they would choose the hotel which donates the savings to a charity in their future trips.

The impact of the reuse program on subjects' attitudes toward the two charities was also examined by one-sample *t*-test. Subjects' attitudes were compared to the scale midpoint of 5. It was found that subjects had better attitudes toward Friends of the Earth ( $M = 6.189, t = 5.786, p < .001$ ) and Child Reach ( $M = 6.723, t = 10.195, p < .001$ ) after they knew about the reuse program.

Test results of independent-samples *t*-test indicate that counterarguments significantly influenced subjects' attitudes, behavior intention, and attributions. Subjects having no counterarguments were more likely to have a positive attitude ( $t = 8.79, p < .001$ ) and higher behavior intention ( $t = 11.95, p < .001$ ). Moreover, subjects with no counterarguments were more likely to have value-driven ( $t = 9.00, p < .001$ ), strategic ( $t = 7.71, p < .001$ ), and stakeholder-driven attributions ( $t = 7.62, p < .001$ ), while less likely to have egoistic attributions ( $t = 3.23, p < .001$ ).

Since the manipulation did not significantly impact perceptions of argument strength, it was reasoned post-hoc that one's pre-disposition might have an impact. Thus, subjects' evaluations of argument strength were regressed on environmentalism and involvement. It was found that environmentalism ( $F(1,345) = 55.67, p < .001$ ) and involvement ( $F(1,345) = 113.38, p < .001$ ) positively predicted subjects' evaluations of argument strength. Subjects with higher environmentalism or higher environmental involvement viewed arguments as stronger arguments than those with lower environmental concern. This information may explain the unsuccessful manipulation of argument strength.

The impact of attributions on attitude and behavior intention was also assessed by running linear regression. Value-driven, strategic, and stakeholder-driven attributions positively influenced attitude and behavior intention, while egoistic attribution had a negative impact. Test results were summarized in the following table.

**Table 8.15 Regression: The Impact of Attribution on Attitude and Behavior Intention (Main Study)**

<b>Variable</b>	<b><i>F</i></b>	<b>Adjusted <i>R</i><sup>2</sup></b>
Attitude toward the hotel		
Value-driven attribution	<b><i>345.11</i><sup>*</sup></b>	.50
Egoistic attribution	<b><i>14.95</i><sup>*</sup></b>	.04
Strategic attribution	<b><i>153.67</i><sup>*</sup></b>	.31
Stakeholder-driven attribution	<b><i>66.67</i><sup>*</sup></b>	.16
Behavior intention		
Value-driven attribution	<b><i>211.90</i><sup>*</sup></b>	.38
Egoistic attribution	<b><i>11.56</i><sup>*</sup></b>	.03
Strategic Attribution	<b><i>108.81</i><sup>*</sup></b>	.24
Stakeholder-driven attribution	<b><i>57.99</i><sup>*</sup></b>	.14

<sup>\*</sup> *p* < .001

### 8.9. Summary

In the main study, the manipulation of source credibility was successful but reversed. This means that the hotel source had high source credibility and the Project Planet source had low source credibility. Because the manipulation of argument strength was unsuccessful, two sets of analyses were conducted to deal with this problem.

In the Hypotheses Testing I, argument strength was omitted. Charitable donation was created as a new variable which included fit charitable donation, no fit charitable donation, and no charitable donation. Source credibility was the second independent variable. In the Hypotheses Testing II, argument strength 2 was created based on the

measured responses to the argument strength questions, rather than the manipulation of argument strength. Therefore, argument strength in these analyses does not represent the difference between donating to a charity and not donating. Instead it merely represents subjects' perceptions of a strong argument. Fit 3, which had three categories just like the charitable donation variable in the Hypotheses Testing I, was used to deal with the nested design analysis issue. Thus, the second set of analyses had three independent variables, which were source credibility, argument strength 2, and fit 3.

The two sets of analyses got similar testing results. A high credibility source (i.e., the hotel source) made subjects think less about the egoistic motives of the hotel (H1f) than a low credibility source (the Project Planet source). In the Hypotheses Testing II, source credibility positively influenced counterargument. Although the influence was significant, the test results were different from the hypothesis (H1g). However, this variable had no impact on attitude, behavior intention, and the other three types of attributions.

The test results of the two sets of analyses indicate that making a charitable donation made subjects have more positive attitudes and more value-driven attributions. The charitable donation also made subjects think more about the negative aspects and egoistic motives of the hotel. However, the type of charities had no impact on subjects' responses.

Argument strength was found to be an important predictor. The strong argument positively influenced attitude (H2a) and behavior intention (H2b). The strong argument increased subjects' value-driven (H2c), strategic, and stakeholder-driven attributions, while it reduced counterarguments (H2e). Note that argument strength did not use the

original classification and the strong argument here did not refer to the charitable donation argument.

Several control variables had significant influences on subjects' responses. The test results in the two sets of analyses had slight differences. The common findings are discussed below. Environmentalism was an important predictor. Subjects with higher environmentalism were more likely to reuse. Environmentalism was also positively related to the four types of attribution. Subjects' environmental involvement positively influenced subjects' behavior intention, and negatively influenced egoistic attributions. Subjects having higher need for cognition were more likely to think about the value-driven motives of the hotel, while younger subjects were more likely to consider the strategic purposes of the reuse program.

The impact of the notice cards was assessed as well. The results suggested that using notice cards positively changed subjects' attitudes toward the hotel and made them more likely to reuse their towels and linens.

In a word, making a charitable donation regardless of the charity type was a great choice for hotels to get good reputations. The charitable donation made subjects realize the value-driven motives of the hotel and made them less likely to consider egoistic motives. The hotel source was better than the Project Planet source. The former one decreased the generation of egoistic attributions. Hotels also can choose a strong argument, which had a positive impact on subjects' responses.

**Table 8.16 Hypotheses Testing Results of Independent Variables (Main Study)**

Independent Variables	Dependent Variables						
	Attitude toward the hotel	Behavior intention	Value-driven attribution	Egoistic attribution	Strategic attribution	Stakeholder-driven attribution	Counterarguments
	<b>Hypotheses Testing I</b>						
Source Credibility	1.18	.01	1.06	<b>6.71**</b>	.01	.05	2.95
Charitable Donation	<b>5.11**</b>	2.37	<b>5.25**</b>	<b>4.19*</b>	2.41	.35	<b>4.37*</b>
Source * Donation	2.13	1.09	.65	.80	.22	.50	.00
	<b>Hypotheses Testing II</b>						
Source Credibility	1.53	.00	1.11	<b>5.64*</b>	.00	.15	<b>4.67*</b>
Argument Strength 2	<b>132.61****</b>	<b>162.30****</b>	<b>84.96****</b>	2.92	<b>26.95****</b>	<b>16.10****</b>	<b>37.93****</b>
Fit 3	<b>6.55***</b>	<b>3.30*</b>	<b>6.14***</b>	<b>3.94*</b>	2.64	.19	<b>4.41***</b>
Source * Argument 2	.01	.15	.10	.52	.69	.31	1.54
Source * Fit 3	1.59	.36	.87	.70	.02	.08	.18

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .005$ , \*\*\*\*  $p < .001$

**Table 8.17 Hypotheses Testing Results of Control Variables (Main Study)**

Control Variables	Dependent Variables						
	Attitude toward the hotel	Behavior intention	Value-driven attribution	Egoistic attribution	Strategic attribution	Stakeholder-driven attribution	Counterarguments
	<b>Hypotheses Testing I</b>						
Need for Cognition	1.10	.15	<b>4.94*(-)</b>	5.15	.00	2.07	<b>.06*(-)</b>
Environmentalism	<b>5.20*(+)</b>	<b>10.13***(+)</b>	<b>10.00***(+)</b>	<b>5.93*(+)</b>	<b>16.51***(+)</b>	<b>9.06****(+)</b>	<b>3.92*(+)</b>
Involvement	<b>21.08****(+)</b>	<b>25.06****(+)</b>	<b>11.96****(+)</b>	<b>10.81****(-)</b>	.82	.02	<b>8.40***(+)</b>
Age	<b>4.46*(+)</b>	<b>9.89*(+)</b>	<b>4.86*(+)</b>	1.46	<b>14.71*(-)</b>	<b>4.38****(-)</b>	3.36
Education	.01	.83	1.37	1.39	.08	.28	1.82
Income	2.14	1.57	.03	.66	.01	3.15	.11
Gender	.53	.24	2.12	1.94	1.56	.04	2.64
	<b>Hypotheses Testing II</b>						
Need for Cognition	.58	.00	<b>4.38*(-)</b>	.12	.03	1.72	<b>4.20*(+)</b>
Environmentalism	1.83	<b>5.76*(+)</b>	<b>6.02*(+)</b>	<b>4.69*(+)</b>	<b>12.79*(+)</b>	<b>6.74**(+)</b>	3.18
Involvement	2.79	<b>3.91*(+)</b>	.84	<b>5.32*(-)</b>	.62	1.16	2.65
Age	.13	2.12	.58	2.28	<b>8.56***(-)</b>	1.72	.10
Education	.32	.15	.62	1.92	.00	.10	1.22
Income	1.84	1.29	.01	.11	.09	3.68	.68
Gender	.14	.01	1.53	2.53	2.46	.03	2.97

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .005$ , \*\*\*\*  $p < .001$

(+): Positive relationship

(-): Negative relationship

## 9. Discussion and Conclusion

Previous research has paid little attention to consumer response toward companies' CSR efforts in the anti-consumption context. The present research looked at an anti-consumption CSR program – hotels' reuse program, and studied its influences on consumers' attitudes, behavior intention, attributions, and counterarguments. Hotels promote this program by placing notice cards in customers' rooms. Source credibility, argument strength, and fit were manipulated as independent variables by changing the information on the notice cards.

In the pretest, the manipulation of argument strength got opposite results. The charitable donation argument was perceived as the weaker argument, while the no charitable donation argument was perceived as the stronger argument (see argument manipulation in Appendix A and Appendix C). Subjects' responses to the open-ended questions explained that it was weaker because mention of the charitable donation primed the issue of cost savings in the minds of subjects who otherwise might not have thought of it. Moreover, the charitable donation argument did not provide enough information to reduce subjects' counterarguments. Thus, the charitable donation process was introduced in more detail in the main study (see Appendix G). However, the manipulation results were not successful. Although the charitable donation argument was stronger than the no charitable donation argument, their mean differences were insignificant.

The manipulation of source credibility was insignificant in the pretest (see source manipulation in Appendix B). The open-ended questions suggested that subjects' unfamiliarity with Project Planet was the main reason. In order to improve the manipulation, two sources (i.e., Marriott Hotel and Project Planet) were introduced



briefly to subjects in the main study (see Appendix G). However, the manipulation results were unsuccessful. Subjects perceived the hotel as the high credibility source and Project Planet as the low credibility source.

The pretest conducted two sets of analyses in order to compensate for the unsuccessful manipulation of source credibility. The first set of analyses omitted the source credibility variable, while in the second set of analyses, source credibility 2 was created. The test results of these two sets of analyses indicate that making a charitable donation made subjects think about more negative aspects of the reuse program. Making no charitable donation helped the hotel to build a good CSR reputation, and increased the likelihood that subjects reused their towels and linens. The high credibility source was more effective in making subjects realize the value-driven motives of the hotel. Note that the high credibility source here came from the new classification of subjects' responses to the source credibility questions. Selecting the Child Reach charity was a better choice for the hotel if it made a charitable donation.

It was found that environmentalism, income, and age determined consumer response to some extent. Subjects with higher environmental concern were more likely to generate positive attitudes toward the hotel, to support the reuse suggestion, and to think about value-driven and strategic motives of the hotel. Subjects with lower income had more positive hotel attitudes, were more willing to reuse, and had more value-driven attributions. Older subjects were more willing to reuse and less likely to have counterarguments.

In the main study, the manipulation result of source credibility was reversed. Subjects perceived the Project Planet source as a low credibility source, while perceiving

the hotel source as a high credibility source. Such results tell us that what might be an expert source would be treated as a low credibility source if people have low familiarity with it.

The manipulation of argument strength was unsuccessful so two set of analyses were performed to solve this problem. The first set of analyses omitted argument strength and created a new variable called charitable donation which included no charitable donation, no fit charitable donation, and fit charitable donation. Thus, in the first set of analyses, the impact of source credibility, charitable donation, and fit were assessed. In the second set of analyses, a new argument strength variable called argument strength 2 was created based on subjects' perceptions of argument strength. Fit was transformed into fit 3 (the same as the charitable donation variable in the first analyses). Thus, in the second set of analyses, source credibility, argument strength, charitable donation, and fit were assessed.

The test results indicate that a low credibility source (i.e., Project Planet) generated egoistic attributions. Thus, a high credibility source (i.e., the hotel source) would be a better choice for hotels when promoting the reuse program. Donating the savings to a charity increased subjects' positive attitudes toward the hotel. This behavior also reminded subjects of the value-driven motives of the hotel and made less likely to consider egoistic aspects of the hotel. Although the data suggested that Child Reach was better than Friends of the Earth, the mean differences between these two charities were insignificant. Using a strong argument was a good way to promote the reuse program as well. If subjects' perceive the argument as stronger, they are more likely to accept the

reuse suggestion, generate positive attitudes, and think about positive aspects of the hotel's motives.

Need for cognition, environmentalism, involvement, and age were four control variables which influenced subjects' responses. Generally, subjects with higher environmental concern were more likely to have positive behavior intention and four types of attributions. Subjects' need for cognition was negatively related to value-driven attributions. More detailed findings of control variables were discussed in Results (Main Study) section.

In both the pretest and the main study, the effectiveness of the notice cards was also studied. It was found that subjects would generate a more positive attitude after seeing the notice cards. Moreover, placing notice cards in customers' rooms can make them more likely to support the reuse suggestion.

When examining the influence of attributions on consumer response, the pretest and the main study got similar results. In the main study, all four types of attributions were significant predictors. Subjects with value-driven, strategic, and stakeholder-driven attributions had more positive attitudes and higher behavior intention, while those with egoistic attributions had more negative attitudes and lower behavior intention.

It was also found that subjects' perceptions of argument strength were related to their environmentalism and environmental involvement. Subjects with higher environmentalism and involvement were more likely to perceive arguments as strong arguments. This relationship may have caused in the unsuccessful manipulation of argument strength. This indicates that one's disposition may overshadow the situational manipulation.

### *9.1 Contribution*

Theoretically, this research studies companies' CSR efforts in the anti-consumption context, which has received less attention than the well known consumption context. The present study filled this gap by studying an anti-consumption program – hotels' reusing program since no other research had been found in this area.

Three factors (i.e., source credibility, argument strength, and fit) were introduced into the anti-consumption domain as the independent variables. It was found that all of these variables influenced consumer response to some extent. Different from expectations, source credibility only had a significant impact on egoistic attributions, and fit was not a significant predictor. Subjects' perception of argument strength was an important factor, which had positive influences on attitude, behavior intention, and three types of attributions (except for egoistic attributions). Moreover, the manipulation of argument strength was a significant predictor as well. Making a charitable donation increased positive attitude and value-driven attributions, while it reduced egoistic attributions and counterarguments.

Factor analysis of the attribution scale in both the pretest and the main study revealed that subjects tended to perceive that Stra 3 (i.e., the hotel hopes to increase profits by making this offer) as an item of the egoistic attribution. Future research needs to consider this problem when employing this scale.

Managerially, this research shows that the reuse program is a win-win program, which brings benefits to the environment, hotels, and charities. First, reusing can help to save water and detergent. Previous research has shown that every 100 guests who participate in the reuse program can save 450 gallons of water and 3 gallons of detergent

daily (Project Planet, n.d.). Besides this, reusing can help to decrease energy consumption and to reduce the generation of detergent waste water that must be recycled within local communities.

Second, such a CSR program can help hotels to build good CSR reputations and generate more positive attitudes toward the hotel. A large amount of subjects thought that promoting a reuse program among hotels was a great idea. Some of them even indicated that they would choose the hotel which donates the savings to a charity in their future trips. Thus, promoting the reuse program would be an excellent marketing strategy which can differentiate a hotel from others.

Thirdly, the reuse program provides charities a way to raise donations and gives consumers a way to know about these charities. Moreover, subjects had better attitudes toward Friends of the Earth and Child Reach after they knew about the reuse program.

## *9.2 Implications*

This research gives hotel managers guidance on the promotion of reuse programs. Notice cards were very effective in enhancing attitudes toward the hotel and encouraging customers to reuse their towels and linens. Hotels should consider donating all the savings from the reuse program to a charity regardless of the type of this charity because such a charitable donation increased customers' positive hotel attitudes toward and made subjects' consider more value-driven motives and less egoistic motives of the hotel. The source of the notice cards being Project Planet or a hotel did not have great impact on consumers. However, a highly credible source made subjects think less about the egoistic

motives of the hotel. Hotels also can use a strong argument to promote their reuse programs.

Because strategic and stakeholder-driven attributions positively influenced consumer response, managers do not need to hide their strategic or stakeholder purposes of the CSR program. This conclusion is consistent with that of Ellen et al. (2006). Forehand and Grier (2003) also indicated that acknowledging to consumers the strategic benefits to a company can decrease consumer skepticism.

### *9.3 Limitations and future research*

The first limitation is about the incomparability between the samples in the pretest and the main study. The pretest was conducted in a Canadian university. The mean age was 28.9, which is a little bit lower, although it was not purely a student sample. Moreover, there were more females (72.7%) than males (26.6%) who participated in the pretest survey. In the main study, the participants were much older with a mean age of 52 and the gender split was close to equal. These differences may have contributed to some of the differences in test results.

The second limitation is about statistical analysis. As discussed in Section 6 and 8, the dependent variables were not normally distributed. Although several transformations were attempted, none of them was successful. However, because the statistical analysis methods used in this research are quite robust to the assumption of normality, this limitation should not influence the test results a lot. In order to remedy this problem, the main study used 9-point scales in stead of 7-point scales as in the pretest but it did not help a lot. In the future research, a larger scale can be employed.

The unsuccessful manipulations of source credibility and argument strength were the third limitation of this study. The Project Planet source, which was expected to have high source credibility, was perceived as a low credibility source, while the Marriott Hotel source was perceived as having high source credibility when it was expected to have low source credibility. One possible reason is the subjects' unfamiliarity with Project Planet and the brief introduction of it. Future research should pay attention on the selection of sources and the source introduction when manipulating source credibility.

Mean differences between the charitable donation argument and the no charitable donation argument were not significant. However, results showed that argument strength 2, which was created based on the measured responses to argument strength rather than the manipulation, was a significant predictor. Thus, simply adding charitable donation information did not impact subjects' perceptions of argument strength. The test results also indicate that charitable donation argument and no charitable donation argument actually had a significant impact when predicting consumer response. Therefore, future research can try to further examine this variable.

The notice cards from Project Planet state that Project Planet promotes the reuse program and verifies the donation to a charity. Project Planet serves as a third party which links hotels and charities together. In fact, if a charity can design such a program with a hotel directly, a third party (e.g., Project Planet) would not be necessary here. In this situation, the charity or the hotel serves as the source of the notice cards. Future research can compare the impact of the charity source and the hotel source.

The answers of the open-ended questions provided some additional directions for future research. Some subjects showed that they would like the hotel to reduce the room

rates since they pay very high room rates for the service. Because reducing the room rates is highly related to customers and may be seen as having greater fit with hotels' business compared to making a charitable donation, future research can try to compare these two types of cause-related reuse programs.

Taking a portion of the money charged for the room and donating it to a charity was also mentioned by some subjects. Future research can consider whether this strategy would be attractive to customers. The present research only examined three independent variables. However, literature shows that there exist some other variables which may influence consumer response as well. For example, Ellen et al. (2006) found that commitment is a significant factor and longer time commitments may generate positive reactions. Timing of source identification and involvement (Homer & Kahle, 1990) are worthy of future study as well.

#### *9.4 Conclusions*

The present research looked at one anti-consumption program. Specifically, this research focused on studying consumer response toward hotels' CSR efforts: persuading customers to reuse towels and linens by placing notice cards in their rooms. Results indicated that argument strength positively influenced consumer response. Making a charitable donation had an impact. Fit vs. no fit charity did not have an impact. Source credibility was also important. The relationship between attribution and consumer response was assessed. It was found value-driven, strategic, and stakeholder-driven attributions had positive impacts on attitude and behavior intention, while egoistic attributions had negative impacts.



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## Appendices

### A. A Notice Card Sample in the Pretest<sup>1</sup>



Please Reuse The Towels

Every day tons of detergent and million of gallons of water are used to wash towels that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels more than once.

The money saved by reducing laundry will be donated to Friends of the Earth to protect the environment.

Please hang towels you wish to reuse on the rack.  
Towels you leave on the floor will be changed.



Manipulation of  
Argument Strength  
and Fit

Manipulation of  
Source Credibility

<sup>1</sup> This notice card is for Condition 1 (i.e. fit charitable donation argument from Project Planet).

*B. Manipulation of Source Credibility in the Pretest*

The Project Planet Source



The Marriott Hotel Source



*C. Manipulations of Argument Strength and Fit in the Pretest*

Fit Charitable Donation Argument

Please Reuse The Towels

Every day tons of detergent and million of gallons of water are used to wash towels that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels more than once.

The money saved by reducing laundry will be donated to Friends of the Earth to protect the environment.

Please hang towels you wish to reuse on the rack.  
Towels you leave on the floor will be changed.

Not Fit Charitable Donation Argument

Please Reuse The Towels

Every day tons of detergent and million of gallons of water are used to wash towels that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels more than once.

The money saved by reducing laundry will be donated to Child Reach to sponsor a child.

Please hang towels you wish to reuse on the rack.  
Towels you leave on the floor will be changed.

No Charitable Donation Argument

Please Reuse The Towels

Every day tons of detergent and million of gallons of water are used to wash towels that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels more than once.

Please hang towels you wish to reuse on the rack.  
Towels you leave on the floor will be changed.

*D. Attribution Scale*

Attribution Type	Item	Item Description
Value-driven	Value 1	The hotel feels morally obligated to help.
	Value 2	The hotel has a long-term interest in the community.
	Value 3	The hotel's owners or employees believe in this cause.
	Value 4	The hotel wants to make it easier for consumers who care about the cause to support it.
	Value 5	The hotel is trying to give something back to the community.
Stakeholder-driven	Stake 1	The hotel feels its customers expect it.
	Stake 2	The hotel feels society in general expects it.
	Stake 3	The hotel feels their stockholders expect it.
	Stake 4	The hotel feels their employees expect it.
Egoistic	Ego 1	The hotel wants to reduce its workload.
	Ego 2	The hotel wants to save money in laundry expense.
	Ego 3	The hotel wants to get publicity.
	Ego 4	The hotel is taking advantage of the cause to help its own business.
Strategic	Stra 1	The hotel will get more customers by making this offer.
	Stra 2	The hotel will keep more of its customers by making this offer.
	Stra 3	The hotel hopes to increase profits by making this offer.



- |   |               |
|---|---------------|
| Totally disagree  | Totally agree |
| • The hotel feels its customers expect it.                                      |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel feels society in general expects it.                                |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel feels their stockholders expect it.                                 |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel feels their employees expect it.                                    |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel wants to reduce its workload.                                       |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel wants to save money in laundry expense.                             |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel wants to get positive publicity.                                    |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel is taking advantage of the cause to help its own business.          |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel will get more customers by making this offer.                       |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel will keep more of its customers by making this offer.               |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |
| • The hotel hopes to increase profits by making this offer.                     |               |
| 1            2            3            4            5            6            7 |               |
| Totally disagree  | Totally agree |

6. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---

7. Would this notice card change your attitude toward the hotel?

1	2	3	4	5	6	7
My attitude would become more negative			No change	My attitude would become more positive		

8. For the next three questions, please indicate your attitude toward this hotel after seeing this notice card.

- My attitude toward the hotel is:

1	2	3	4	5	6	7
Unfavorable						Favorable

- My attitude toward the hotel is:

1	2	3	4	5	6	7
Bad						Good

- My attitude toward the hotel is:

1	2	3	4	5	6	7
Dislike						Like

9<sup>2</sup>. For the next three questions, please indicate your attitude toward Friends of the Earth after seeing this notice card.

- My attitude toward Friends of the Earth is:

1	2	3	4	5	6	7
Unfavorable						Favorable

- My attitude toward Friends of the Earth is:

1	2	3	4	5	6	7
Bad						Good

- My attitude toward Friends of the Earth is:

1	2	3	4	5	6	7
Dislike						Like

---

<sup>2</sup> This question is for Condition 1, 2, and 3.









- The relationship between this campaign to reuse towels and the Friends of the Earth charity is:  

1	2	3	4	5	6	7
Low fit						Strong fit
- The relationship between this campaign to reuse towels and the Friends of the Earth charity is:  

1	2	3	4	5	6	7
Dissimilar						Similar
- The relationship between this campaign to reuse towels and the Friends of the Earth charity is:  

1	2	3	4	5	6	7
Inconsistent						Consistent
- The relationship between this campaign to reuse towels and the Friends of the Earth charity is:  

1	2	3	4	5	6	7
Not complementary						Complementary

18<sup>6</sup>. For the next four questions, how would you describe the relationship between this campaign to reuse towels and the Child Reach charity?

- The relationship between this campaign to reuse towels and the Child Reach charity is:  

1	2	3	4	5	6	7
Low fit						Strong fit
- The relationship between this campaign to reuse towels and the Child Reach charity is:  

1	2	3	4	5	6	7
Dissimilar						Similar
- The relationship between this campaign to reuse towels and the Child Reach charity is:  

1	2	3	4	5	6	7
Inconsistent						Consistent
- The relationship between this campaign to reuse towels and the Child Reach charity is:  

1	2	3	4	5	6	7
Not complementary						Complementary

---

<sup>6</sup> This question is for Condition 4, 5, and 6.

19. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---

20. How many times have you stayed in a hotel in the past 12 months?

---

21. When you stay in a hotel it is:

1	2	3	4	5	6	7
primarily for business						primarily for pleasure

22. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---

23. Please evaluate the following behaviors.

- How often do you separate your household garbage (i.e., aluminum, glass, newspapers, etc.) for either curbside pickup or to take to the nearest recycling centre?

1	2	3	4	5	6	7
Never						Always

- How often do you use reusable containers to store food in your refrigerator rather than wrapping food in aluminum foil or plastic wrap?

1	2	3	4	5	6	7
Never						Always

- How often do you conserve water in household tasks (e.g., dish washing, cooking, teeth brushing, showering, etc.)?

1	2	3	4	5	6	7
Never						Always

- How often do you conserve energy by turning off light switches when leaving a room, turning down temperature controls when leaving home, etc.?

1	2	3	4	5	6	7
Never						Always

- When disposing of durables like appliances, furniture, clothing, linens, etc., how often do you either give that item to someone else, sell it to someone else, or donate

- the item to a charitable organization?
- |       |   |   |   |   |   |        |
|-------|---|---|---|---|---|--------|
| 1     | 2 | 3 | 4 | 5 | 6 | 7      |
| Never |   |   |   |   |   | Always |
- Do you accept any environmental requests from others?
 

1	2	3	4	5	6	7
Never						Always
  - Do you give donations to environmental charities?
 

1	2	3	4	5	6	7
Never						Always
  - Do you persuade others to protect the environment?
 

1	2	3	4	5	6	7
Never						Always
  - Do you think you are an environmental activist?
 

1	2	3	4	5	6	7
Never						Always

24. What year were you born?

---

25. Gender

- Male
- Female

26. Education – please enter your highest level of education

- Some high school
- High school graduate
- Some college or university but no degree or diploma
- College diploma
- University degree
- Some graduate school
- Graduate degree

27. Annual estimated household income (include income from all sources that support you but not from roommates who do not help to support you)

- Under \$10,000
- \$10,000 to \$24,999
- \$25,000 to \$49,999

- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 to \$174,999
- \$175,000 to \$199,999
- \$200,000 to \$224,999
- \$225,000 to \$249,999
- \$250,000 and up

28. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---





- Project Planet is:  

1	2	3	4	5	6	7
Harmful						Helpful

6. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---

7. Are you familiar with Marriott Hotel?

1	2	3	4	5	6	7
Not at all						Very familiar

8. For the next six questions, how would you describe Marriott Hotel?

- Marriott Hotel is:  

1	2	3	4	5	6	7
Dislikable						Likeable
- Marriott Hotel is:  

1	2	3	4	5	6	7
Unappealing						Appealing
- Marriott Hotel makes me generate:  

1	2	3	4	5	6	7
Negative attitude						Positive attitude
- Marriott Hotel is:  

1	2	3	4	5	6	7
Cheap						Expensive
- Marriott Hotel has:  

1	2	3	4	5	6	7
Bad service quality						Good service quality
- Marriott Hotel is a:  

1	2	3	4	5	6	7
Bad choice						Good choice





- Male
- Female

22. Education – please enter your highest level of education

- Some high school
- High school graduate
- Some college or university but no degree or diploma
- College diploma
- University degree
- Some graduate school
- Graduate degree

23. Annual estimated household income (include income from all sources that support you but not from roommates who do not help to support you)

- Under \$10,000
- \$10,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 to \$174,999
- \$175,000 to \$199,999
- \$200,000 to \$224,999
- \$225,000 to \$249,999
- \$250,000 and up

24. Did you have any difficulty understanding any of the questions? Please explain. Be as specific as possible.

---

*G. The Six Notice Cards in The Main Study*

Fit Charitable Donation Argument from Marriott Hotel



Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

This is a towel and linen reuse plan that encourages you to conserve water and energy, while making a donation. ALL of the money saved by reducing laundry is donated to Friends of the Earth (a leading international registered charity making life better for people by inspiring solutions to environmental problems). An independent accounting firm verifies that ALL savings are donated to Friends of the Earth. On average, \$15,000 is donated for every 100 rooms per year as a result of this important program.

Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



**Caring for Travelers**  
**Member of the American Hotel & Lodging Association**

## Fit Charitable Donation Argument from Project Planet



### Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

The Project Planet Program is a towel and linen reuse plan that encourages you to conserve water and energy, while making a donation. ALL of the money saved by reducing laundry is donated to Friends of the Earth (a leading international registered charity making life better for people by inspiring solutions to environmental problems). Project Planet independently verifies that ALL savings are donated to Friends of the Earth. On average, \$15,000 is donated for every 100 rooms per year as a result of this important program.

#### Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

#### Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



**Helping hotels, Helping the environment**  
**Endorsed by the American Hotel & Lodging Association**

## Not Fit Charitable Donation Argument from Marriott Hotel



### Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

This is a towel and linen reuse plan that encourages you to conserve water and energy, while making a donation. ALL of the money saved by reducing laundry is donated to Child Reach (a leading international non-sectarian registered charity helping children through sponsorships). An independent accounting firm verifies that ALL savings are donated to Child Reach. On average, \$15,000 is donated for every 100 rooms per year as a result of this important program.

#### Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

#### Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



**Caring for Travelers**  
**Member of the American Hotel & Lodging Association**

Not Fit Charitable Donation Argument from Project Planet



Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

The Project Planet Program is a towel and linen reuse plan that encourages you to conserve water and energy, while making a donation. ALL of the money saved by reducing laundry is donated to Child Reach (a leading international non-sectarian registered charity helping children through sponsorships). Project Planet independently verifies that ALL savings are donated to Child Reach. On average, \$15,000 is donated for every 100 rooms per year as a result of this important program.

Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



**Helping hotels, Helping the environment**  
**Endorsed by the American Hotel & Lodging Association**



No Charitable Donation Argument from Marriott Hotel



Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



Caring for Travelers

Member of the American Hotel & Lodging Association

No Charitable Donation Argument from Marriott Hotel



Please Reuse Your Towels and Linens

Every day tons of detergent and million of gallons of water are used to wash towels and linens that have only been used once. We invite you to join with us to decrease energy consumption and reduce detergent waste water by using your towels and linens more than once.

Linens

We will make your bed every day. Please place this card on the bed if you wish to change your linens.

Towels

Please leave towels you wish to reuse hung up or on the rack. Towels you leave on the floor will be changed.



**Helping hotels, Helping the environment**  
**Endorsed by the American Hotel & Lodging Association**











- The statement on this notice card is:  

1	2	3	4	5	6	7	8	9
Does not make sense								Makes sense
- The statement on this notice card is:  

1	2	3	4	5	6	7	8	9
Very unreasonable								Very reasonable
- The statement on this notice card is:  

1	2	3	4	5	6	7	8	9
Very illogical								Very logical

12<sup>10</sup>. For the next four questions, how would you describe the relationship between this campaign to reuse and the Friends of the Earth charity?

- The relationship between this campaign to reuse and the Friends of the Earth charity is:  

1	2	3	4	5	6	7	8	9
Low fit								Strong fit
- The relationship between this campaign to reuse and the Friends of the Earth charity is:  

1	2	3	4	5	6	7	8	9
Dissimilar								Similar
- The relationship between this campaign to reuse and the Friends of the Earth charity is:  

1	2	3	4	5	6	7	8	9
Inconsistent								Consistent
- The relationship between this campaign to reuse towels and the Friends of the Earth charity is:  

1	2	3	4	5	6	7	8	9
Not complementary								Complementary

12<sup>11</sup>. For the next four questions, how would you describe the relationship between this campaign to reuse and the Child Reach charity?

<sup>10</sup> This question is for Condition 1 and 2.

<sup>11</sup> This question is for Condition 3 and 4.



- The relationship between this campaign to reuse and the Child Reach charity is:  

1	2	3	4	5	6	7	8	9
Low fit							Strong fit	
- The relationship between this campaign to reuse and the Child Reach charity is:  

1	2	3	4	5	6	7	8	9
Dissimilar							Similar	
- The relationship between this campaign to reuse and the Child Reach charity is:  

1	2	3	4	5	6	7	8	9
Inconsistent							Consistent	
- The relationship between this campaign to reuse and the Child Reach charity is:  

1	2	3	4	5	6	7	8	9
Not complementary							Complementary	

13. What happens to the money the hotel saves from this reuse program?

- It is donated to an environmental charity
- It is donated to a children's charity
- It is used to hold down room costs
- I don't know

14. What percentage of customers reuse their towels and linens?

- 25%
- 50%
- 75%
- 100%
- I don't know

15. When you were asked to imagine that you were staying in a hotel room, were you supposed to be on a:

- Business trip
- Personal trip
- I don't know

16. How many times have you stayed in a hotel in the past 12 months?

---

17. When you stay in a hotel it is:





21. What year were you born?

---

22. Gender

- Male
- Female

23. Education – please enter your highest level of education

- Some high school
- High school graduate
- Some college or university but no degree or diploma
- College diploma
- University degree
- Some graduate school
- Graduate degree

24. Annual estimated household income (include income from all sources that support you but not from roommates who do not help to support you)

- Under \$10,000
- \$10,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 to \$174,999
- \$175,000 to \$199,999
- \$200,000 to \$224,999
- \$225,000 to \$249,999
- \$250,000 and up

*I. Questionnaire (Main Study, Control Condition -- Cell 7)*

1. Please indicate the likelihood that you will use your towels and linens more than once (rather than changing them everyday) when you stay in a hotel.

- The likelihood that I will use my towels and linens more than once (rather than changing them everyday) is:  

1	2	3	4	5	6	7	8	9
Extremely unlikely								Extremely likely
  
- The possibility that I will use my towels and linens more than once (rather than changing them everyday) is:  

1	2	3	4	5	6	7	8	9
Extremely impossible								Extremely possible
  
- The certainty that I will use my towels and linens more than once (rather than changing them everyday) is:  

1	2	3	4	5	6	7	8	9
Absolutely no chance								Absolutely certain

[Endorsed by the American Hotel & Lodging Association, Project Planet is an organization helping the environment by promoting towels and linens reuse program in hotels.]

2. Are you familiar with the organization Project Planet?

1	2	3	4	5	6	7	8	9
Not at all								Very familiar

3. What do you believe is the purpose of the organization Project Planet?

---

4. For the next four questions, how would you describe Project Planet?

- Project Planet is:  

1	2	3	4	5	6	7	8	9
Dislikable								Likeable
  
- Project Planet is:



- Marriott Hotel is a:  

1	2	3	4	5	6	7	8	9
Bad choice								Good choice

[Child Reach is a leading international non-sectarian registered charity helping children through sponsorships.]

7. Are you familiar with Child Reach?

- |            |   |   |   |   |   |   |   |               |
|------------|---|---|---|---|---|---|---|---------------|
| 1          | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9             |
| Not at all |   |   |   |   |   |   |   | Very familiar |

8. What do you believe is the purpose of Child Reach?

---

9. For the next four questions, how would you describe Child Reach?

- Child Reach is:  

1	2	3	4	5	6	7	8	9
Dislikable								Likeable
- Child Reach is:  

1	2	3	4	5	6	7	8	9
Unappealing								Appealing
- Child Reach makes me generate:  

1	2	3	4	5	6	7	8	9
Negative attitude								Positive attitude
- Child Reach is:  

1	2	3	4	5	6	7	8	9
Harmful								Helpful

[Friends of the Earth is a leading international registered charity making life better for people by inspiring solutions to environmental problems.]

10. Are you familiar with Friends of the Earth?

- |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|

Not at all

Very familiar

11. What do you believe is the purpose of Friends of the Earth?

---

12. For the next five questions, how would you describe Friends of the Earth (environmental charity)?

- Friends of the Earth is:

1	2	3	4	5	6	7	8	9
Dislikable								Likeable

- Friends of the Earth is:

1	2	3	4	5	6	7	8	9
Unappealing								Appealing

- Friends of the Earth makes me generate:

1	2	3	4	5	6	7	8	9
Negative attitude								Positive attitude

- Friends of the Earth is:

1	2	3	4	5	6	7	8	9
Harmful								Helpful

13. How many times have you stayed in a hotel in the past 12 months?

---

14. When you stay in a hotel it is:

1	2	3	4	5	6	7	8	9
primarily for business								primarily for pleasure

15. Please evaluate the following descriptions of you.

- I only think as hard as I have to.

1	2	3	4	5	6	7	8	9
Strongly disagree								Strongly agree







- High school graduate
- Some college or university but no degree or diploma
- College diploma
- University degree
- Some graduate school
- Graduate degree

21. Annual estimated household income (include income from all sources that support you but not from roommates who do not help to support you)

- Under \$10,000
- \$10,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 to \$174,999
- \$175,000 to \$199,999
- \$200,000 to \$224,999
- \$225,000 to \$249,999
- \$250,000 and up