Are all Cause-Fit the Same for Green Products?

A Study using Discrete Choice Experiments

By

Sara Shamsollahi

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Abstract

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Sara Shamsollahi  Advisor:  Dr. Tirtha Dhar
University of Guelph, 2017  Co-Advisor:  Dr. Vinay Kanetkar

Consumers are increasingly more attentive to the ethical and social consequences of their purchases. This has resulted in greater conversation surrounding the consumption of green products, and consequently, more companies are now choosing to engage in Cause Related Marketing (CRM) in order to be perceived as socially responsible market players. Despite this trend, the question remains as to whether CRM can be effective in the case of green products. This study posits that an effective CRM strategy can significantly increase the brand share for green products. If, however, the CRM is not properly designed, it can backfire and result in a significant decrease in brand share compare to green products that are not backed by any CRM. Testing for the effect of cause fit and cause type on the effectiveness of CRM for green products, the findings of this study suggest that regardless of cause context, a cause with high relatedness to a green product will result in a more effective CRM compared to a cause with low relatedness. Moreover, a highly related cause in non environmental context will result in a more effective CRM compared to all other CRM campaigns, as well as no CRM offer. These findings provide novel insights on the impact of CRM on environmentally friendly products.
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Chapter 1: Introduction

The remarkable growth in demand for organic and green products in the global market is a sign that consumers are becoming increasingly mindful to ethical and social concerns (Hunt & Dorfman, 2009). Based on global consumer surveys, consumers are gradually caring more about the ethical outcomes of their purchases, and as the results showed in 2014, 55% of online consumers worldwide were willing to pay a premium price for environmentally sustainable products, which is a 10% increase from 2011. 52% of consumers also reported that they had purchased at least one sustainable product within the previous six months (Nielsen, 2014). In addition, a study by The Nielsen Company confirmed that the number of millennials that are willing to pay more for environmentally and socially responsible products or services significantly increased just over the span of one year from 55% in 2014 to 72% in 2015, (Neilsen, 2015).

Consumers have also realized that they can use their purchasing power as a means to punish or reward companies based on how well each company is paying attention to its social responsibilities (Lii & Lee, 2012; Sen & Bhattacharya, 2001) Hence, as consumers are paying increased attention to ethical concerns when making purchase decisions, companies are now more frequently engaging in Corporate Social Responsibility (CSR) in order to be perceived as fair market players (Campbell, 2007). Cause Related Marketing (CRM) is one of the most prevalent Corporate Social Responsibilities strategies, and the fact that so many companies are now employing CRM can be taken as a sign that this strategy is rather effective for companies. An example of a successful employment of CRM
is found in Giving Works, a CRM campaign founded by eBay that successfully raised more than $500 million for selected charities (Andrews et al., 2014). In North America, the amount spent by companies on social cause sponsorship is projected to increase 3.6% in 2017 to $2.06 billion, from the $1.99 billion spent in 2016. (IEG Sponsorship Report, 2017)

Overall, previous research has shown that cause marketing can positively impact customers’ attitudes and purchase behavior (e.g., Chang, 2008; Henderson & Arora, 2010; Krishna & Rajan 2009; Nan & Heo 2007; Popkowski & Wong, 2010). However, the effects of cause related marketing are significantly influenced by implementation-related factors, such as “cause type” (Minton & Cornwell, 2016) and “cause fit” (Koschate-Fischer et al., 2012). The perceived congruity between a company/brand and the social cause it supports is called “cause fit” (Simmons & Becker-Olsen, 2006), and cause type can be defined as the category or context that the cause is related with. These two factors can determine “how” and “to what extent” a selected cause aligns with a particular company, brand or product, and how CRM can be effectively used to make consumers feel good about using said company’s products.

Cause-fit is important because there is a tendency for consumers to draw inferences regarding the motives of a brand when the brand decides to create an association with a particular cause (Gooding & Kinicki, 1995). In the same direction as research conducted in CSR, consumers react more positively to a company with a high-fit cause, and for this reason, the possibility of choosing the company is increased. A majority of previous research on the impact of cause fit for CRM effectiveness examined cause only in one context and hence did not compare the effectiveness of CRM with high versus low fit
causes across different contexts (e.g. Koschate-Fischer et al., 2012; Nan & Heo, 2007; Gupta & Pirsch, 2006). These studies mostly reported that a high-fit cause has a more positive impact on consumers’ decisions compared to a low-fit cause, mainly due to the fact that a high-fit cause is more consistent with consumers’ expectations regarding CRM, resulting in a more positive response to the CRM strategy. Concerning “cause type”, some studies have shown that various types of causes can affect consumers’ decision making differently. A study by Minton and Cornwell (2016) showed that using a health cause type for CRM campaigns can lead consumers to evaluate an unhealthy product (cookies) more favorably (as less unhealthy). A non-health oriented cause was not found to have the same effect. However, this study did not compare how different health causes affected product evaluations. A possible question then is which between the following two causes, for example, would have more effectively impacted consumers’ evaluation of the product: if the company had backed the cause to help children with obesity (a health cause related to the negative consequences of consuming cookies; hence, high fit) or if the company had backed HIV vaccine research (a health cause unrelated to the product; hence, low fit). A recent study by Muller and colleagues (2016) compared high and low fit causes in different contexts. The results of this study showed that in the case of a regular product that is inherently harmful to the environment, a highly related environmental significantly decreased sales of the product. On the other hand, a highly unrelated and non-environmental cause significantly increased the demand for the product. According to the authors, the reason for this finding was that the CRM strategy directly addressed the negative externalities of using the product and therefore increased the saliency of the
product’s harmfulness, resulting in an increase in consumers’ guilt associated with purchasing the product.

A question that can be raised in light of the aforementioned studies is whether or not these findings will differ for green products, and specifically, what CRM strategy would work best for such products. Will environmental causes result in a more effective CRM strategy for green products, given that the consumption of these products do not have any negative consequences for the environment, or will non-environmental causes be more effective? Moreover, to what extent should the cause be related to the green product? Can a low-fit cause be just as effective as or even more effective than a high-fit cause, and will this vary depending on whether the cause is environmental or non-environmental? These are the questions this study aimed to answer.

This study contributes to the literature by 1) comparing the effectiveness of different types of causes across different contexts, and 2) investigating the potential moderating role of cause fit on the impact of cause type on effectiveness of CRM for green products. It was predicted that regardless of cause fit, non-environmental causes would have a more positive impact on brand share for green products compared to environmental causes. In addition, an interaction effect of cause fit and cause type was predicted, such that a high fit non-environmental cause was expected to be more effective than a low fit environmental cause, while a low fit environmental cause was expected to be more effective than a high fit environmental cause. Specifically, this study proposes that a highly related (high fit) cause can be beneficial for green products when the cause is a non-environmental cause, but not when the cause is an environment-related cause.
Data was collected through a laboratory experiment and analyzed with a Discrete Choice Model. Results showed that cause fit in fact did have a significant influence on the impact of cause type on brand share for green products. However, consistent with prior research, high fit causes were more effective than low fit causes in both contexts. Specifically, the results did not support the prediction that non-environmental causes could be more effective than environmental causes, regardless of cause fit. These findings were mostly similar across two product categories tested (green bottled water and green packaged pasta). The implications of these findings on CRM strategy for green products are discussed at length.
Chapter 2: Literature review

This section covers current literature on ethical consumption, green consumption, Corporate Social Responsibility, and Cause Related Marketing. It also covers some factors influencing consumers’ purchasing behavior, as well as the rationale behind the proposition that non-environmental causes may work better than environmental causes in certain green product-related contexts.

2-1. Ethical consumption

Corporations not only have important duties to their stakeholders (making/increasing profit), but also have certain duties to society as well, especially with regard to maximizing the long-term benefits to society’s members (Mohr et al., 2001). A wide range of contexts can be considered as ethical consumption; from a “fair trade” labeled coffee or “responsibly managed wood” certified furniture to “organic” certified foods and products (Nielsen, 2014). Relatively, socially conscious consumers can be defined as those who consider social benefits when making purchase decisions (Mohr et al., 2001). Based on Webster’s (1975) definition, a socially conscious consumer is “a consumer who takes into account the public consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about social change” (Webster, 1975, p. 188).

The definition for ethical consumption and green consumption sometimes overlap and hence can be sometimes ambiguous. Balderjahn et al. (2011) divided ethical consumption
in three main categories: social consumption (consumption in order to reduce poverty, oppression and exploitation), ecological consumption (consumption of a product related to natural environment protection), and animal protection consumption. Note that this definition differentiates environment protection consumption from animal protection consumption. The authors also divided social consumption into three sub-categories: fair consumption (promoting fair working condition and business practices), philanthropic consumption (consumption for a good cause, helping others), and political consumption (a democratic voting with purchase to support a political issue) (Balderjahn et al., 2011).

Based on Connolly and Shaw (2006) definition, ethical consumers are more concerned about social issues such as child labor, safe work condition, and animal welfare, whereas green consumers are mostly concerned with the environmental consequences of the products and services that they use. Taking all of this into account, green purchase behavior represents a type of socially responsible behavior that is considered as a complex form of ethical decision making behavior (Joshi & Rahman, 2015).

Due to the fact that consumers are paying increased attention to ethical concerns when making purchasing decisions, companies are now choosing to more frequently engage in corporate social responsibility (CSR) activities in order to be perceived as fair market players (Campbell, 2007). In a way more compatible with corporate social responsibility, an ethical consumer can be defined as “a person basing his or her acquisition, usage, and disposition of products on a desire to minimize or eliminate any harmful effects and maximize the long-run beneficial impact on society” (Mohr et al, 2001, p. 47). Based on this definition, the socially conscious consumers fulfill their responsibilities to society by
taking into consideration the societal consequences of their purchases. These consumers not only avoid harmful products, but also tend to buy their products from companies that are socially beneficial. Hence, based on all these definitions, green a

**2-1-1. Green Consumption and green products**

Nowadays consumers are becoming increasingly mindful of ethical and social concerns. A simple evidence for that is the remarkable growth in demand for organic and green products in the global market (Hunt & Dorfman, 2009). Consumers that direct a high level of attention to environmentally friendly products are considered “green consumers” (Pedersen & Neergaard, 2006).

Green consumers generally have a significant preference for purchasing environmental friendly products (Pedersen & Neergaard, 2006) and are likely to incorporate environment-related knowledge and information when they seek to make a consumption decision (Bhate, 2002). In a research conducted by Laroche et al. (2001), 80% percent of participants expressed that they refuse to buy products from companies that have been accused of being environmental polluters. In addition, respondents with higher levels of concern regarding environmental issues expressed that they are willing to pay a premium price for environmentally friendly products when making purchasing decisions.

A green product is one which contributes toward a sustainable world by satisfying consumers’ need without damaging the environment. These products have low or no negative environmental impact and are superior in the environment-friendly sense. These
products are generally recyclable and much safer for the environment (Chan & Chai, 2010). Some examples of green products are products from recycled materials, eco-friendly soaps and detergents, organic products, and energy efficient light-bulbs, to mention but a few.

2-1-2. Corporate Social Responsibility (CSR)

Recent research suggests that consumers are becoming more careful in regard to the type of companies whose brands and products they decide to purchase, as consumers now realize that they can utilize their purchasing power as a tool for punishing or rewarding companies based on how well the companies are paying attention to their social responsibilities. (Lii & Lee, 2012; Sen & Bhattacharya, 2001). For this reason, companies are nowadays paying more attention to CSR-related strategies and are making attempts to implement these strategies more frequently (Maignan & Ralston, 2002; Qamar, 2013). Therefore, an increasing number of firms are partnering with nonprofit organizations as a means of showing their commitment to corporate social responsibility while at the same time accomplishing their marketing and communication goals (Nan & Heo, 2007; Papasolomou & Kitchen, 2011; Westberg & Pope, 2014).

Corporate social responsibility (CSR) can generally be defined as a form of social marketing that connects the non-profit sector with a for-profit company for mutual benefit (Ross et al., 1991; Chernev & Blair 2015). CSR is now considered to be one of the chief features of sustainability and growth, as corporate spending in social causes has doubled in the last 10 years and is projected to reach $2 billion in North America in 2016 (IEG, 2016).
2-2. Cause-Related Marketing: Its importance and effects

Cause-Related Marketing represents a special form of CSR (Chang, 2008). With an annual growth rate of more than 12%, cause marketing has become the fastest growing US sponsorship category in the past decade. Even in 2009, and despite the harsh economical climate, CRM expenditure was still around $1.55 billion, which was an increase of 2.2% from 2008 (Koschate-Fischer et al., 2012).

A typical transaction based definition for cause-related marketing connects the consumers’ purchase behavior to the donation of a company, as seen, for example, in the definition proposed by Varadarajan & Menon (1988, p. 60), which defines CRM as “an offer from the firm to contribute a specified amount to a designated cause when customers engage in revenue-providing exchanges that satisfy organizational and individual objectives”. In the past, using a form of price percentage was more common (x% of the price will be donated), but in recent times, a specific amount of money for each sale has risen to be more dominant (e.g., “x cents donated for every unit sold”) (Chang, 2008).

The transactional element of CRM is its key feature: that is, each time a consumer buys a specific product, the company donates money to a specific cause. (Varadarajan & Menon 1988). Therefore, in order to trigger the donation, the consumer must make a purchase. This nature of CRM gives feelings of power and responsibility to consumers (Krishna & Rajan 2009). Other positive feelings, such as “warm-glow” feelings, for example, can also be induced by the transaction. These positive feelings associated with CRM can go on to positively influence consumers’ brand attitudes as well as purchase intentions and behavior,
as reported by numerous studies (Arora & Henderson, 2007; Chang, 2008; Henderson &
Arora, 2010; Krishna & Rajan 2009; Nan & Heo 2007; Popkowski Leszczyc & Wong,
2010).

Many studies have been conducted in order to illustrate the various features of a successful
CRM strategy. Each of these studies focus on one or more attributes of CRM. These
attributes can be divided into three main categories: 1) consumer variables, such as
familiarity with the cause (Lafferty et al., 2004) or attitude toward helping others
(Koschate- Fischer et al., 2012); 2) company variables, such as brand image (Henderson &
Arora, 2010) and company/product-cause variables, such as cause fit (e.g., Pracejus &
Olsen, 2004); and 3) cause and charity-related variables, such as donation amount (Subrah-
manyan, 2004) and cause or charity context (type) (Minton and Cornwell, 2016).

The current study focuses on two critical aspect of a successful CRM strategy: the cause fit
or relatedness that is perceived to exist between the cause and the product; and the cause
type, in other words, the context in which the cause will be beneficial to society.

2-2-1. Cause fit

The perceived congruity between a company/product and the social cause it supports is
called “company-cause fit”. Prior research addressed several baselines for congruity
between company and cause. In this regard, the relevant attributes for cause-fit would be,
for a company: products, markets, core business, technologies, values, attributes, and
mission; and for the brand: brand concepts, brand features, or other key brand associations (Simmons & Becker-Olsen, 2006). For example, previous research has defined fit as a congruency between the company’s core business and the particular cause, as when a brand related to pet products donates to charities for homeless pets (Menon & Kahn, 2003); a joint target market, as when a brand related to women’s fashion products donates to a nonprofit organization that helps women with breast cancer; and even geographic adaptability between the two, as when a national brand supports a national cause (Simmons & Becker-Olsen, 2006; Zdravkovic et al., 2010).

Basil and Herr (2006) defined fit as the balance between a consumer’s pre-existing attitudes for the charity, pre-existing attitudes for the firm, as well as the perceived alliance between these two. Hence, they proposed that a relationship that supports a higher level of fit between the organization and the charity will have a more positive effect on consumers when compared to a relationship that displays lower or no fit (Koschate-Fischer et al., 2012). In addition, the results of Pracejus & Olsen (2004) illustrated that a higher company-cause fit translated to higher value for consumers compared to a low-fit cause. In sum, a company donating to a high-fit cause can evoke positive reactions from consumers toward the company, such as increasing consumers’ choice probability for the company’s products/brands (Lichtenstein et al., 2004).

Overall, the effect of fit is threefold: how much thought consumers give to the relationship between the company and cause; the valence of these thoughts generated (positive/negative); and the evaluation of two objects (Becker-Olsen et al., 2006). Attribution theory is usually used to explain these effects.
2-2-1-1. Attribution Theory and Cause Fit

Broadly speaking, attribution theory is concerned with how and why people interpret and explain events the way they do. According to Fiske & Taylor (1991), “Attribution theory deals with how the social perceiver uses information to arrive at causal explanations for events. It examines what information is gathered and how it is combined to form a causal judgment”. Based on this theory, when a behavior is not consistent with the prior expectations of an individual, this behavior stimulates a motive attribution (Newtson 1974).

Extending this theory to the CRM context, in high-fit CRM alliances between company and cause, because these alliances are consistent with consumers’ prior expectations, knowledge, and associations with the company and a given cause, this relationship can be more easily integrated into consumers’ cognitive structures, resulting in a strengthening of the connection between the company and the cause/charity. However, in low-fit alliances, due to the fact that these alliances are inconsistent with consumers’ prior expectations or knowledge, consumers find it more difficult to integrate them into their existing cognitive structures, resulting in a difficulty in connecting the company with the cause/charity in question. For this reason, consumers are more likely to generate attributions and to focus on the company’s motives regarding a particular alliance. Hence, negative attributions related to cause-exploitation are more likely to be formed about a company in the case of a low-fit CRM alliance (Becker-Olsen et al., 2006; Koschate-Fischer et al., 2012).
2-2-2. Cause Type (Cause Context)

Cause marketing has recently become more interesting and yet also more complicated. In order to enhance desired responses from their target population, marketers try to find new ways to increase the effectiveness of their campaigns, such as by identifying the most crucial attributes of their campaigns. One of these attributes is the context or category that a cause falls under, and previous research has in fact sought to identify and categorize the most appealing causes for consumers. In 2003, the results of a survey revealed that 87 percent of Dutch households had made a donation to an active health-oriented charity. Public and social benefits sector was the second most appealing sector, receiving donations from 53 percent of households. The environmental sector received a close percentage of contributions at 52 percent. Education and research sector was found to be the least appealing sector, with only 8 percent of Dutch households having made a donation to this sector (Meijer and Schuyt, 2005). The results of another study by Khan (1998) indicated that 60 percent of people selected cancer-related causes as their choice when making donations to charities. Children-related causes were the second most appealing category, with 54 percent of respondents indicating these charities as their choice (Doherty, 2010).

The different definitions and classifications provided for cause type/context can be generally ambiguous. In a comprehensive report, National Center for Charitable Statistics (NCCS) provided a definitive classification system for non-profit organizations, titled “The National Taxonomy of Exempt Entities” (NTEE). All of the listed entities are tax-exempt due to their benevolent activities. The report divided causes into eight main sectors: 1) Art, culture and humanities; 2) Education; 3) Environment and animal; 4) Health; 5) Human
services; 6) International and foreign affairs; 7) Public and social benefit; and 8) Religion-related.

Based on the latest report in 2015, organizations that performed work regarding environmental and animal-related causes had the second largest growth rates for the number of charities active in the sector, increasing 18.2 percent from 2003 to 2013. The first spot was coveted by international and foreign affairs organizations, with a 19.3 percent increase in the same period of time. (McKeever, 2015)

To assess the impact of cause context on CRM effectiveness, some studies have investigated the effects of different types of causes on consumers’ attitude and decisions. In one of the latest studies, Minton and Cornwell (2016) examined how causes from different contexts can impact health perceptions regarding food products. Their study was based on the results of prior research that showed that food-related cues can result in consumer misperceptions. They used health related (American Heart Association) and non-health related (Environment: World Wildlife Fund, Social: Goodwill) charities as cause proxies in a CRM strategy placed on the package of an unhealthy food choice (cookies and crackers). The results showed that the health related cause led consumers to perceive those products as more healthy, which resulted in more positive attitudes and higher purchase intentions for those products.
2-3. Summary of key findings and literature gap

Most of the previous studies that assessed CRM effectiveness examined cause fit or cause type separately and did not consider the possible interaction effect between the two variables. Some of these studies only compared a high fit versus a low fit cause, without considering cause context/type. For example, Pracejus and Olsen (2006) used an entertainment park for children as their product/service and examined the effect of cause fit on CRM effectiveness (willingness to pay) using two charities: 1) high fit: Children’s Miracle Network and 2) low fit: Kennedy Center for the Performing Arts. The results of a Discrete Choice experiment confirmed that with a high-fit cause, the amusement park could charge an additional $3.01 compared to when there was no CRM, relative to the low fit alternative of $2.39. The researchers also repeated the study with another product/service category (Luxury Hotels in Washington) for which the Kennedy Center for the Performing Arts was considered the high fit cause and Children’s Miracle Network the low fit cause. The results showed that the high fit cause significantly increased consumers’ willingness to pay when compared to the low fit cause ($3.50 more). However, in both studies, the researchers used the same cause context (social/welfare context) and did not take into account how causes of different contexts can impact CRM effectiveness.

Koschate-Fischer et al. (2012), using undergraduate students from German universities as participants, examined the interaction effect of cause fit and donation amount on CRM effectiveness for a bottled water with two causes: 1) high fit cause: donation to revitalization of a German river; 2) low-fit cause: donation to society for the prevention of animal cruelty. The results showed that the effect of donation amount was more important
in the case of the low fit cause compared to the high fit cause. As was the case with Pracejus and Olsen (2006), however, the researchers only examined the cause in one context (environmental type) and did not compare causes across contexts.

The study of Minton and Cornwell (2016) compared causes from different context (health, environment, welfare), but did not take cause fit into account. Results of their study showed that using a health-related cause for a CRM campaign could sometimes lead consumers to evaluate an unhealthy product (cookies) as more healthy, while a non-health related cause (either environment or social/welfare) did not have the same effect.

Recently, a study by Muller and colleagues (2016) compared high and low fit causes in different contexts. The results of this study showed that for a regular product that is inherently harmful to the environment (coffee), a highly related environmental cause (fighting water pollution) significantly decreased sales due to the fact that the CRM strategy directly addressed a negative externality of the product, resulting in an increased salience of the product’s harmfulness and, consequently, increased feelings of guilt in consumers. On the other hand, a highly unrelated and non-environmental cause (fighting illiteracy) significantly increased sales for the product. Although this research used two different contexts for its study, it did not fully compare the effect of low and high fit causes in at least two different contexts. Also, while the study used a regular product (regular coffee), the current research examines the interaction effect of cause fit and cause type in the case of green products.
Chapter 3: Conceptual framework and Hypotheses

In this section, the conceptual framework for the current study will be developed.

As was discussed in the previous section, many companies engage in cause-related marketing campaigns in order to be perceived by consumers as “fair players” in the market (Campbell, 2007). Previous research has also shown that cause marketing can positively impact customers’ choice and purchase behavior (e.g., Chang, 2008; Henderson & Arora, 2010; Krishna & Rajan 2009; Nan & Heo 2007; Popkowski Leszczyc & Wong, 2010).

Moreover, the success of a cause-related marketing campaign is significantly influenced by implementation-related factors such as “cause fit” (Koschate-Fischer et al., 2012) and cause type (Minton & Cornwell, 2016). Based on attribution theory, prior research suggests that a high-fit cause will be more effective in CRM compared to a low-fit cause. However, those studies did not compare high versus low fit causes across different contexts. A recent study by Muller et al. (2016) found that using a high-fit environmental cause (fighting water pollution) for an inherently nature-harmful product (coffee) increased the feeling of guilt in consumers, resulting in them shying away from purchase. In this case, using a non-environmental cause (fighting illiteracy) resulted in higher sales of the product. In another study, Minton and Cornwell (2016) showed that for food products, a health-oriented cause significantly improved consumers’ evaluation of an unhealthy product, while a non-health oriented cause did not have the same effect.

Given that the purchase of green products is considered to be an aspect of ethical consumption, consumers feel that they are doing good by purchasing these products.
Likewise, findings from previous research on CRM suggest that consumers may perceive an added value when they engage in CRM and support good causes. Hence:

**Hypothesis 1:** CRM has a significant positive impact on consumers’ choice in the case of green products

In the case of green products, consumers usually pay a premium price when purchasing these products, as a means of displaying their support for the environment. Therefore, when combining a CRM with green products, a non-environmental cause may elicit in consumers the feeling of doing good for the environment on one hand, and doing good by supporting a worthy non-environmental cause on the other hand. Therefore, we hypothesize that non-environmental causes will be more effective for CRM campaigns with green products compared to environmental causes.

**Hypothesis 2:** Non-environmental cause has a more positive impact on consumers’ choice compared to environmental cause in the case of green products.

Based on attribution theory and consistent with prior research findings, we hypothesize that for non-environmental causes, a high-fit cause will be more consistent with consumers’ expectations regarding the CRM strategy of the company. Therefore, a highly-fit non-environmental cause will be more effective than a low-fit non-environmental cause.

However, for environmental causes, it is predicted that because consumers are already supporting a particular environmental cause by paying a premium price for green products (for example, helping to reduce plastic in the environment by purchasing green bottled
water), a low-fit environmental cause will give consumers the feeling that they are doing more for the environment by engaging in two separate environmental causes, as opposed to one in the case of a high-fit environmental cause. Therefore, we predict that in the case of environmental causes, a low-fit cause will be more effective than a high-fit cause.

Hence:

**Hypothesis 3a:** A high-fit non environmental cause has a more positive impact on consumers’ choice compared to a low-fit non-environmental cause.

**Hypothesis 3b:** A low-fit non-environmental cause has a more positive impact on consumers’ choice compared to a high-fit environmental cause.

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**Figure 1. Conceptual model**
Chapter 4: Research Methodology

This chapter outlines the research methodology that was used to test the research hypotheses. First, the pretest will be described, and then the Discrete Choice Experiment (DCE) model will be explained in detail. Next, the participants and sample size will be discussed, and the section will conclude with a description of the data collection procedure.

4-1. Pretest

A pretest was conducted prior to the designing of the main study in order to achieve the following three main goals: 1) to identify two products that are familiar to students, given that participants of the main study will fully comprise of students; 2) to identify causes that are high-fit and low-fit in relation to the selected products; 3) to identify both environmental and non-environmental causes that have the same level of importance in the eye of consumers. Seemingly the high-fit donation has a nature fit because of the congruency between the cause and product. Therefore, in order to perform a meaningful comparison of effectiveness between high- and low-fit causes, causes with an equal level of importance had to be selected (Muller et al., 2016). Hence, the main purpose of the pre-test was to identify causes of low and high relatedness to the selected products, in both the environmental and non-environmental categories, that have the same level of importance.
Two different environmentally-friendly products were tested: 1) **green bottled water**, of which the bottle is 100% made from recycled plastic; 2) **green packaged pasta**, a 454g packaged pasta of which the package is 100% made from recycled paper.

The pre-test therefore comprised of two parts, with each part designated to one of the two selected products. For each product, participants read a description about the product as well as the company that produced it. Participants were then asked to rate 12 causes for each product based on the perceived fit between the cause and the product. Participants were also asked to rate the perceived importance of each cause. The scale for cause fit ranged from 1 (very low fit) to 5 (very high fit), while the scale for cause importance ranged from 1 (not at all important) to 5 (very important).

54 undergraduate students from the Marketing and Consumer Studies Department at the University of Guelph participated in the pre-test. The test was an online survey that took about 10-15 minutes to complete. Of the participants, 16.67% (9 out of 54) identified themselves as female and 81.48% (44 out of 54) as male. A majority of participants (96.3%) were between 18 to 24 years old.

In answering the question “How often did you buy bottled water within the last six months? 38.9% (21 out of 54) participants indicated that they purchased that product at least once a week (or more), while 44.44% (24 out of 54) of participants indicated that they purchased the product occasionally.

In response to the same question with regard to packaged pasta, 51.85% (28 out of 54) of participants indicated that they had purchased a package of pasta at least once a month in
the past year, while 24.07% of participants indicated that they purchased the product occasionally. These results confirmed that the average student is familiar enough with the two product categories selected for the main study, and that the average student is willing to spend money for these products.

**Results for green bottled water:** After ranking both environmental and non-environmental categories of causes based on their perceived fit, two causes from each category, both of low and high fit, were selected. The importance of the selected causes was compared using a paired-T test. As was previously mentioned, cause importance needed to be controlled in order for it not to muddy or confound the impact of cause fit and cause type. For environmental causes, the selected low-fit causes were: “Saving endangered species” (fit: 3.13, importance: 4.35) and “Encouraging the recycling of paper” (fit: 3.50, importance: 4.04); and the selected high-fit causes were: “Identifying better ways to recycle plastic” (fit: 4.24, importance: 4.28) and “Removing plastic from oceans” (fit: 3.98, importance: 4.31). Based on the results of a paired T-test (p-value: 0.485, t: -0.704), the null hypothesis was not rejected. Therefore, the importance of the selected low- and high-fit environmental causes was not significantly different at a 95% level of confidence.

For non-environmental causes, both social and health cause types were selected. However, these causes were grouped to represent the non-environmental cause category for the purpose of this research. The non-environmental causes selected as low-fit were: “Help HIV vaccine research” (fit: 2.43, importance: 4.11) and “Fight against obesity in children” (fit: 2.56, importance: 4.00). The selected high-fit causes were: “Finding better ways to refine water” (fit: 3.74, importance: 4.06) and “Providing food for Africa” (fit: 3.80,
importance: 4:37). Based on the results of a paired T-test (p-value: 0.700, t: -0.387), the null hypothesis was not rejected. Therefore, the importance of the low- and high-fit non-environmental causes was not significantly different at a 95% level of confidence.

**Results for green packaged pasta:** The procedure for selecting causes for the pasta product was the same as that described above for bottled water. For environmental causes, the selected low-fit causes were “Saving endangered species” (fit: 3.00, importance: 4.22) and “Finding better ways to recycle plastic” (fit: 3.31, importance: 4:13), and the selected high-fit causes were “Encouraging the recycling of paper” (fit: 4.31, importance: 4:13) and “Planting of more trees” (fit: 3.85, importance: 4.24). The results of a paired T-test (p-value: 0.520, t: -0.647) showed that the importance of the selected low- and high-fit environmental causes was not significantly different at a 95% level of confidence.

For non-environmental causes, social and health cause types were also selected, but as was the case for bottled water, these causes were grouped to represent non-environmental causes. The selected low-fit non-environmental causes were: “Help HIV vaccine research” (fit: 2.43, importance: 4:04) and “Help people with cancer” (fit: 2.61, importance: 4:39) and the selected high-fit non-environmental causes were “Providing food for Africa” (fit: 3.70, importance: 4.33) and “Providing food for homeless people” (fit:3.35, importance: 4:19). Results of a paired T-test (p-value: 0.569, t: 0.574) showed that the importance of the selected low- and high-fit non-environmental causes was not significantly different at the 95% level of confidence.
4.2. Type of Study

This study used a Discrete Choice Experiment (DCE) method to examine consumers’ choice preference, with one experimental study conducted for the two different product categories. The study featured a within-subject design that utilized a number of discrete choice scenarios in order to investigate how different causes affected consumers’ choice preference.

The two products used in the current study were environmentally friendly products. For the first product, green bottled water was explained to participants as a bottle of water whose bottle was 100% made from recycled plastic. For the second product, green packaged pasta was explained to participants as packaged pasta whose package was 100% made from recycled paper. These two product categories were selected because they are familiar products for the sample that was to be used in the study, which was comprised fully of university students. The products are also low involvement and not gender-specific. The purpose and benefits of using these products was to allow for the possibility to generalize the research findings to similar products with the same characteristics.

Prices and brand names of both products were included in all choice sets. In each study, four attributes were presented to participants. Two of the attributes had two levels, one had three levels and the last had five levels. Additionally, there were two causes rather than one for each fit category (low/high fit). Therefore, we had a 3(brands) x 5(price levels) x 2(fit: high vs. low) x 2(cause type: environmental vs. non-environmental) x 2 (number of causes in each cell) within-subject design. Participants had the option to choose the product either
with or without any CRM, and to choose among different brands and price levels. Participants also had the option to choose none of the provided options if none suited them.

Among all attributes considered in this study, two were product-related (brand name and price) and two were cause-related (cause type and cause fit). For product-related attributes, three popular brands and five levels of price were chosen. For bottled water, the three popular chosen brands were Dasani, Aquafina and Nestle PureLife. As for price levels, five levels of price were selected after observation of common prices in the market, which were $0.60, $0.80, $1.00, $1.20 and $1.40. For pasta, the three popular brands selected were Unico, President’s Choice (a Canadian brand) and Barilla (an Italian brand). The five price levels selected based on common market prices for a 454g package of pasta were $1.70, $1.90, $2.10, $2.30 and $2.50.

The cause-related attributes were two levels of cause type: environmental and non-environmental causes, with the non-environmental causes comprising of social and health-related causes. For cause fit, two levels were considered: high-fit and low-fit causes. Causes were determined to be low-fit or high-fit based on results from the pre-test, as has already been described.

4.3. Sampling Plan and Sample Size

Participants for the main study were recruited through a recruitment ad on the SONA website for the University of Guelph. SONA is a web-based platform provided by the
Marketing and Consumer Studies department through which researchers can recruit participants for their studies. Hence, undergraduate students from the Marketing and Consumer Studies department at the University of Guelph were used as participants. For their compensation, participants were rewarded 2% extra credit in selected Marketing courses. There were no restrictions for participants based on gender, age or education level.

To calculate the sample size that would be adequate for the study, the following formula by Hensher et al. (2005) was adopted:

\[ n \geq \frac{z^2pq}{r\alpha^2} \]

where:

- \( n \) is the number of required participants for each condition;
- \( z \) is 1.96 (95% confidence level);
- \( p \) is the choice share of a brand, which is 0.25, as participants had four options: one of the three brands or “none of the above”;
- \( q \) is \( p-1 \), hence 0.75;
- \( r \) is the number of choice sets, which is 12; and
- \( \alpha \) is permissible margin of error, which is 0.05.

Hence,
\[ n \geq \frac{1.96^2 \times 0.25 \times 0.75}{12 \times 0.05^2} = 24.01 \]

As the actual market share for each brand was unknown, all choice shares were assumed to be equal. Therefore, based on the Discrete Choice Experiment sample size calculation mentioned above, at least 25 participants were needed for the study.

### 4.4. Data Collection Method and procedure

The Qualtrics software was used to conduct online surveys in order to collect data for the study. Undergraduate students from the Department of Marketing and Consumer Studies at the University of Guelph were recruited through the SONA system. In order to encourage students to participate in this study, each student was promised and received extra credit in assigned courses as compensation for their contribution to the study.

Participants were invited to complete the data online and were assured that their responses will remain fully anonymous and confidential. The time required to complete both parts of the experiment was approximately 20 minutes. The time each participant allocated to the completion of the experiment was recorded in order to allow for the ability to later screen out participants who spent an unusually short amount of time on the study, and whose responses hence might have created noise in the results.

In the recruitment ad, participants had been told that the purpose of the study was simply to better understand consumers’ price and brand preferences. Only one version of the study
was available. The first portion of the study concerned the green bottled water product (made from 100% recycled plastic), while the second portion of the study concerned the green packaged pasta (100% recycled paper). (See Appendix)

Upon beginning the online survey, participants were presented with a consent form which required them to confirm their agreement or refusal to proceed with the study. If the option “No, I do not agree” was selected, the participant was automatically forwarded to the end of the survey and dismissed from the experiment. Participants who consented to taking part in the study were moved to the main portion of the survey, in which they were first asked a few questions regarding the frequency of their purchase and use of bottled water, as well as their preferred brands. Participants were then exposed to three different choice sets, with each choice set having three brands and three price levels. No CRM strategy was presented in the first three choice sets. Participants were asked to select which option they preferred or “none of the above” if none of the options appealed to them. Each choice set was displayed on a separate screen. These questions were posed to participants in order to ascertain their brand preferences in the absence of any CRM campaign.

Participants were then exposed to a short description about a company who wanted to introduce a new bottled water product to the market as a green product, with the main difference between this new product and previous ones being that the new bottle is 100% made from recycled plastic. The price for this new product was set to be 15 cents more expensive than regular bottled water, in order to simulate the real market place, as green products are usually more expensive. Participants were also informed that the company was considering using CRM campaign to sell this new product.
After reading the product description, participants were exposed to 12 new different choice sets, each of them with three brands and three different price levels. In each choice set, only two brands were backed by CRM, while the third brand was free of CRM (to serve as control). Again, participants were allowed to choose their preferred option or “none of the above” if none of the provided product profiles appealed to them. In order to ensure that participants were informed of the fact that all the products they were comparing were green products, the following sentence was written above all the choice set tables: “In all cases, the bottle is 100% made from recycled plastic”. Each choice set was displayed on a separate screen.

After completing the first part of the study, participants were informed by a note presented on the screen that they were moving on to a new product category, which was the green packaged pasta. As was the procedure for the bottled water product, participants first answered a few questions on how frequently they had purchased packages of uncooked pasta from the grocery store in the past year, and what their preferred brands were. Participants had the option to select one or multiple brands from those mentioned, and were also able to add other brands which were not among the options. Participants were then asked to select their preferred option among three popular brands with three different price levels. There were three choice sets in this section, and the goal was to ascertain participants’ brand preferences in the absence of any CRM campaign.

After answering those questions, participants were exposed to a product description about a 454g package of pasta, with the main difference between this product and previous ones being that the new product’s package is 100% made from recycled paper, as opposed to the
20-30% that is usually the case for other packages. Hence, the new product was considered to be a green product (see Appendix). Similar to the first case, the new pasta packaging made the product slightly more expensive than pasta with regular packaging (20 cents). Participants were told that the company was considering implementing a CRM campaign to help sell the new product. After reading this section, participants were exposed to 12 new choice sets, each of them with three popular pasta brands and with three different price levels. Two of the brands were backed by CRM while the third was free of CRM. Participants were asked to select the option that they preferred the most or “none of the above” if they were not satisfied with any of the provided options.

At the end of this section, participants were asked to indicate to what extent they thought that each of the provided causes was important. The purpose of this question was to serve as a manipulation check to ensure that cause importance had been successfully controlled for, as its influence could potentially muddy the results of the study.

4-5. Data Analysis Plan

The data collected through the experiment was analyzed using SAS 9.4. The Discrete Choice experiment had been designed to test for two CRM attributes with one question and four possible options. The outputs of SAS were used to assess the overall fit of the model, as well as how the different causes affected the choice share of the included brands. In order to determine the overall fit, a combination of rho-square and chi-square indicator was
used. The choice shares of the included brands were also compared among each other using a Proportion Comparison calculation. The goal of this was to determine if, in the situations that a CRM campaign was present, any of the causes had significantly increased or decreased consumers’ choice compared to when no CRM campaign was present.

The Discrete Choice Experiment was based on random utility theory (RUT) of McFadden (1974). Based on this theory, utility for individuals is a latent construct. Hence, researchers can reveal this unobservable utility using a valid preference elicitation procedure. Although researchers can understand a significant proportion of the utility, some proportion of it always remains unexplained. Therefore, an individual’s utility can be categorized into two components: systematic and random components.

\[ U_{ni} = V_{ni} + \epsilon_{ni} \]

where:

- \( U_{ni} \) is the latent utility of an alternative \( i \), which is derived by consumer \( n \);
- \( V_{ni} \) is the systematic part of the utility, which can be measured; and
- \( \epsilon_{ni} \) is the random part of the utility.

Therefore, the systematic part of utility, which can be specified as a function of variables manipulated in this study, is:

\[ V_i = \beta_1 \text{Purelife} + \beta_2 \text{Aquafina} + \beta_3 \text{Price}_i + \beta_4 \text{CRM}_i + \beta_5 \text{Purelife.CRM}_i + \beta_6 \text{Aquafina.CRM}_i + \beta_7 \text{Price}_i \cdot \text{CRM}_i + \beta_8 \text{Type}_i + \beta_9 \text{Fit}_i + \beta_{10} \text{type}_i \cdot \text{Fit}_i \]
where:

\( V_i \) is the systematic utility associated with alternative \( i \);

Purelife is 1 when brand is Purelife, 0 if brand is Aquafina and -1 if brand is Dasani;

Aquafina is 1 when brand is Aquafina, 0 if brand is Purelife and -1 if brand is Dasani;

\( \text{Price}_i \) is the price charged for alternative \( i \) in cents;

\( \text{CRM}_i \) is 1 when alternative \( i \) has a CRM, and -1 when no CRM;

Type\(_i\) is 1 when an environmental cause is included in alternative \( i \), and -1 when a non-environmental cause is included; and

\( \text{Fit}_i \) is 1 when cause is high-fit, and -1 when cause is low-fit.

Suppose that a random variable \( y_i \) is assigned to alternative \( i \), in which \( y \) takes the value of 1 (alternative is selected) or 0 (alternative is not selected). This means that within suitable assumptions of error terms, the probability that an individual chooses alternative \( i \) over all \( n \) alternatives available (four options in this study) can be written as:

\[
\text{Prob} (y_i=1) = \frac{\exp (V_i)}{\sum_{j=1}^{n} \exp (V_j)}
\]
These are specifications and estimates ($\beta_1$ to $\beta_{10}$) of a multinomial logit model, and they can be measured by using the maximum likelihood procedure. In the next chapter, by comparing the goodness of fit indicators and estimates, we assess whether the two CRM attributes we considered in this study influenced consumers’ choice of share.
Chapter 5: Research Findings

5-1. Sample Characteristics

A total of 165 undergraduate students from the Marketing and Consumers studies department at the University of Guelph were recruited as participants for this study. However, 32 participants were screened out of the study, the resulting in usable data from 133 participants. From those participants were deleted, four of them did not complete the study and 28 of them spent less than five minutes or more than 30 minutes to finish the survey. For making a rational decision, the data was analyzed with three different time cut offs based on the time that participants had spent to complete the survey. Therefore, I deleted the participants that spent: 1) less than three minutes, 2) less than five minutes and more than 30 minutes, and 3) less than seven minutes to complete the survey. The final estimates for all three data sets were similar. Therefore, based on the number of choice sets each participants should answer (15 for each product category, two products, 30 choice sets in overall), second option were the best. Participants were recruited through the SONA system and received, as compensation, 2% course credit in designated courses. 98% of participants were aged between 18 to 24 years old. 63% of participants were female and 37% were male.

5-2. Discrete Choice Analysis

The data was collected through the use of a Discrete Choice modeled experiment. The advantage of using a Discrete Choice experiment is that it “allows researchers to estimate...
the effects of different attributes on preferences, as well as test hypotheses about preference processes (Louviere et al., 2008). Data was analyzed using SAS 9.4.

5-2-1. Product category: Green bottled water

In the case of bottled water, 42% of participants indicated that they had purchased bottled water at least once within the past week; 29% indicated that they had purchased it within the past month; 15% indicated that they had purchased it within the past three months, and the rest of the participants indicated that they had purchased it within the past year. 5% of participants indicated that they purchased bottled water almost every day, 26% indicated that they purchased it at least once or twice per week, and 58% indicated that they buy it occasionally. Participants were also asked what brands they preferred, with the option to choose more than one brand. The results showed that Purelife is the most preferred brand (25%), followed by Dasani (17%), then Aquafina and Canadian Spring (each 13%), then Naya and Fiji (8%) and finally, ice mountain (4%). 13% of participants indicated that they preferred other brands (such as Kirkland and Voss) or that they did not have any brand preferences.

5-2-1-1. Overall model

In order to determine the goodness of fit of each of the proposed models, chi-square ($\chi^2$) of that model (in compare with baseline model), as well as the rho-square statistics (in compare with the latest model before that model) were looked at. According to Train (2003), the rho-square statistic measures how a model with all of its estimated parameters
performs in comparison with the null model, which represents a model in which all the parameters are left at zero (equivalent to having no model at all). The rho-square ranges from 0, which indicates the estimated parameters are not at all different from the null, to 1, which indicates that the choice of sampled decision makers can be perfectly predicted with the estimated parameters.

For this study we had five models. Model 1 considered only the brand attribute in the responses to the first three discrete choice questions to see how estimates of this one attribute can predict the choices of sampled decision makers. This model represents the baseline model used in this study; meaning that the model was expected to predict the choice of sampled decision makers no better than if there had been no model at all.

Model 2 looked at the three brands and price levels in the responses to the first three discrete choice questions to see how estimates of these attributes can predict the choices of sampled decision makers. This model performed significantly better than having no model at all (chi-square: 200.30; rho-square: 0.046).

Model 3 considered the three brands and five price levels, as well as the presence or absence of CRM strategy, in responses to the entire 15 Discrete Choice questions. The estimates of these attributes were used to predict the sampled decision makers’ choices. Based on the rho-square (.201) the fit indicates that this model predicted decision makers’ choices much better than if there had been no model at all, and based on chi-square (668.12) this model predict the choice share significantly better than model 2.
Model 4 considered all the attributes in Model 3 as well as the fit of causes in the situations where CRM was present. This model slightly better predicted decision makers’ choices compared to Model 3 (chi-square = 55.84), but significantly better compared to no model at all (rho-square = .214).

Finally, Model 5 considered all the attributes in this study, hence brands, price levels, presence of CRM, cause fit and cause type. This model was slightly better than Model 4 (chi-square = 11.27) and predicted the choices of sampled decision makers significantly better than all the other models (rho-square = .217).

### Table 1. Models predicting Most Likely Choice for green bottled water

<table>
<thead>
<tr>
<th>parameters</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purelife</td>
<td>0.016</td>
<td>0.009</td>
<td>-0.111</td>
<td>-0.136</td>
<td>-0.132</td>
</tr>
<tr>
<td>Aquafina</td>
<td>0.037</td>
<td>0.029</td>
<td>0.130</td>
<td>0.150</td>
<td>0.163</td>
</tr>
<tr>
<td>Price</td>
<td>0.004</td>
<td>0.002</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Purelife X CRM</td>
<td>0.447</td>
<td>0.464</td>
<td>0.467</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquafina X CRM</td>
<td>-0.107</td>
<td>-0.139</td>
<td>-0.112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price X CRM</td>
<td>-0.021</td>
<td>-0.021</td>
<td>-0.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRM</td>
<td>0.493</td>
<td>0.594</td>
<td>0.618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause fit</td>
<td></td>
<td>0.279</td>
<td>0.283</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause type</td>
<td></td>
<td></td>
<td>0.091</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause Type X Causefit</td>
<td></td>
<td></td>
<td>-0.078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-2160.05</td>
<td>-2059.90</td>
<td>-1725.84</td>
<td>-1697.92</td>
<td>-1692.29</td>
</tr>
<tr>
<td>Number of estimates</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>200.30</td>
<td>668.12</td>
<td>55.84</td>
<td>11.27</td>
<td></td>
</tr>
<tr>
<td>Prob (Chi-square)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>rho-square</td>
<td>0.046</td>
<td>0.201</td>
<td>0.214</td>
<td>0.217</td>
<td></td>
</tr>
</tbody>
</table>
Model 5 with all estimates can be seen in Table 2. By looking at the estimates of the model, it can be seen that the largest estimate belonged to the estimate of CRM (0.62), suggesting that it had a substantial influence on sampled decision makers’ choices. Also price had a statistically significant negative estimate (-0.021), which is consistent with economic utility theory. Therefore, higher prices negatively impacted choice share of brands in compare with lower prices. Both cause type and cause fit had statistically significant positive estimates. However, the interaction effect of cause fit and cause type was not statistically significant.

Table 2. Model with all Discrete Choice attributes included for green bottled water

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>T Value</th>
<th>Approx Pr &gt;</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purelife</td>
<td>-0.132</td>
<td>0.043</td>
<td>-3.100</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Aquafina</td>
<td>0.163</td>
<td>0.047</td>
<td>3.490</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>0.000</td>
<td>0.001</td>
<td>0.170</td>
<td>0.865</td>
<td></td>
</tr>
<tr>
<td>Purelife X CRM</td>
<td>0.467</td>
<td>0.036</td>
<td>12.820</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>Aquafina X CRM</td>
<td>-0.112</td>
<td>0.044</td>
<td>-2.560</td>
<td>0.011</td>
<td></td>
</tr>
<tr>
<td>Price X CRM</td>
<td>-0.021</td>
<td>0.001</td>
<td>-20.120</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>CRM</td>
<td>0.618</td>
<td>0.121</td>
<td>5.130</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>Cause Type</td>
<td>0.091</td>
<td>0.031</td>
<td>2.990</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>Cause Fit</td>
<td>0.283</td>
<td>0.038</td>
<td>7.410</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>Cause Type X Cause Fit</td>
<td>-0.078</td>
<td>0.049</td>
<td>-1.610</td>
<td>0.108</td>
<td></td>
</tr>
</tbody>
</table>
5-2-1-2. Choice share analysis

As Purelife was the most preferred brand for participants in the study, the choice share analysis was performed on the Purelife choice share. One of the purposes of this study was to deduce how the brand share of a green product could change based on different CRM campaigns implemented for that product.

Based on the following formula for calculating choice share of brand \( i \), Figure 2 shows the choice shares for the product when it was offered with different CRM strategies:

\[
\text{Brand } i \text{ choice share } = \frac{\exp (v_i)}{\sum_{j=1}^{n} \exp (v_j)}
\]

As can be seen in Figure 2, choice share was higher for high fit causes in compare with low fit causes in both cause contexts. Also choice share were pretty similar (56.7% and 57.3%) in situation of presence of CRM with highly related cause in both environmental and non environmental types of cause, but in the situation of highly unrelated causes, the choice share of non environmental cause (38.9%) was significantly less than environmental cause (47.16).
To compare the choice share when a product was backed by a CRM campaign relative to when not backed by any CRM, Figure 3 demonstrates the choice share for the Purelife brand when the product was offered with no CRM strategy, relative to when it was offered with different CRM campaigns.
Figure 3. Comparing brand share in all five conditions for green bottled water

As seen in Figure 3, the presence or absence of a CRM offer had a significant effect on the choice share of the brand. The largest choice share occurred when CRM was present and when the cause was a high-fit environmental cause, followed by when CRM was present and the cause was a high-fit non environmental cause. However, in the other two situations where CRM were present (with a low-fit environmental cause and with a low-fit non environmental cause), the CRM campaigns did not increase the choice share for the product compared to the situation where a CRM campaign was absent.

In order to assess whether or not the differences between choice shares in the five situations was statistically significant, proportion comparison calculations were performed using the formula below:
\[ k = \frac{p - m}{s} \]

Where \( S \) can be calculated using this formula:

\[ S = \sqrt{\frac{p \times (1-p)}{N}} \]

and where:

- \( m \) is the observed proportion for the baseline situation (proportion for no CRM);
- \( p \) is the observed proportion for situation \( i \);
- \( s \) is the average standard deviation; and
- \( n \) is the number of observations; which is 1967

This formula compares the choice share of situation \( i \) with a baseline situation. Because one of the purposes of this study was comparing the impact of presence or absence of CRM on green products, the baseline in this comparison was choice share of Purelife brand with no CRM offer, and the choice share of all other four conditions were compared with this baseline.

The calculated \( K \) for all situations are listed in the table below:

**Table 3. Results of Proportion Comparison calculations for the green bottled water product**

<table>
<thead>
<tr>
<th>Cause type</th>
<th>Fit</th>
<th>Environmental</th>
<th>Non-environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High fit</td>
<td>6.60</td>
<td>6.02</td>
</tr>
<tr>
<td></td>
<td>Low fit</td>
<td>-2.53</td>
<td>-10.13</td>
</tr>
</tbody>
</table>
Because the critical value of $z$ at the probability level of 0.05 is 1.96, the $k$ values for the different CRM campaigns were compared to this number. The calculated $k$ values were positive and greater than 1.96 for the CRM campaigns with a high-fit non environmental cause and a high-fit environmental cause. Therefore, the null hypothesis was rejected, signifying that the CRM campaigns with these causes had a significant positive effect on the choice share for the Purelife green bottled water product. The calculated $k$ values for the CRM campaigns with a low-fit environmental cause and a low-fit non environmental cause were negative and higher than 1.96, hence signifying that the CRM campaigns with these causes had a significant negative effect on the choice share for the Purelife green bottled water product, decreasing the choice share comparative to when no CRM campaign was implemented.

5-2-2. Product Category: Green Packaged Pasta

The results for green packaged pasta showed that 25% of participants had bought a package of pasta within the last week, 39% had bought one within the last month, 23% had bought one within the last 6 months and the rest of participants had bought one within the past year. 5% of participants indicated that they purchase pasta from the grocery store almost every week, 50% of participants indicated that they purchased it at least once or twice per month, and 34% of participants indicated that they purchased it occasionally. In response to the question on preferred pasta brand, for which participants had the option to select more than one brand, the results indicated that Unico is the most preferred brand (23%), followed by Barilla (20%), then President’s choice and Catelli (each 16%), then Selection (6%), and
finally, Rana (4%). 4% of participants indicated that they preferred other brands not included on the list (such as Go Quinoa).

5-2-2-1. Overall model

In order to determine the goodness of fit, the same procedure as was described for the bottled water product category was used. Hence, for each of the five proposed models, the chi-square ($\chi^2$) as well as the rho-square statistics were assessed.

As was the case for the bottled water product category five models were used. Model 1 considered only the brand attribute in the responses to the first three discrete choice questions to see how estimates of this one attribute can predict the choices of sampled decision makers. This model represents the baseline model used in this study, meaning that the model was expected to predict the choice of sampled decision makers no better than if there had been no model at all.

Model 2 looked at the three brands and price levels in the responses to the first three discrete choice questions to also see how estimates of these attributes can predict the choices of sampled decision makers. This model performed significantly better than having no model at all (chi-square: 157.66, rho-square: 0.038).

Model 3 considered the three brands and five price levels, as well as the presence or absence of CRM strategy, in responses to the entire 15 Discrete Choice questions. The estimates of these attributes were used to predict the sampled decision makers’ choices. Based on the rho-square (.244), the fit indicates that this model predicted decision makers’
choices significantly better than no model at all, and based on chi-square (866.41), model 3 predicted decision makers’ choices significantly better than model 2.

Model 4 considered all the attributes in Model 3 as well as the causes in the situations where CRM was present. This model only slightly better predicted decision makers’ choices compared to Model 3 (chi-square = 1.60), but significantly better compared to no model at all (rho-square = .245).

Finally, Model 5 considered all the attributes in this study, hence brands, price levels, presence of CRM, cause fit and cause type. This model was significantly better than Model 4 (chi-square = 25.70) and predicted the choices of sampled decision makers better than all the other models (rho-square = 0.251).

### Table 4. Models predicting Most Likely Choice for green packaged pasta

<table>
<thead>
<tr>
<th></th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unico</td>
<td>-0.016</td>
<td>-0.016</td>
<td>0.025</td>
<td>0.021</td>
<td>0.018</td>
</tr>
<tr>
<td>President’s choice</td>
<td>-0.064</td>
<td>-0.055</td>
<td>-0.071</td>
<td>-0.070</td>
<td>-0.040</td>
</tr>
<tr>
<td>Price</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Unico X CRM</td>
<td>-0.055</td>
<td>-0.055</td>
<td>-0.071</td>
<td>-0.070</td>
<td>-0.040</td>
</tr>
<tr>
<td>President’s choice X CRM</td>
<td>0.055</td>
<td>0.048</td>
<td>0.057</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price X CRM</td>
<td>-0.027</td>
<td>-0.027</td>
<td>-0.027</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRM</td>
<td>0.076</td>
<td>0.097</td>
<td>0.144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause fit</td>
<td>-0.016</td>
<td>-0.016</td>
<td>0.025</td>
<td>0.021</td>
<td>0.018</td>
</tr>
<tr>
<td>Cause type</td>
<td>-0.064</td>
<td>-0.055</td>
<td>-0.071</td>
<td>-0.070</td>
<td>-0.040</td>
</tr>
<tr>
<td>Cause Type X Cause fit</td>
<td>0.055</td>
<td>0.048</td>
<td>0.057</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-2095.09</td>
<td>-2016.26</td>
<td>-1583.06</td>
<td>-1582.26</td>
<td>-1569.41</td>
</tr>
<tr>
<td>Number of estimates</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>157.66</td>
<td>866.41</td>
<td>1.60</td>
<td>25.70</td>
<td></td>
</tr>
<tr>
<td>Prob (Chi-square)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Rho-square</td>
<td>0.038</td>
<td>0.244</td>
<td>0.245</td>
<td>0.251</td>
<td></td>
</tr>
</tbody>
</table>
Model 5 with all estimates can be seen in Table 5. By looking at the estimates of model, it can be seen that the largest estimate belonged to the cause type (-0.160) which is negative and statistically significant, and after that the presence of CRM has the largest estimate (0.144) which is statistically significant as well. Same as the results for bottle water, price had a statistically significant negative estimate (-0.027), which is consistent with economic utility theory. Therefore, higher prices negatively impacted choice share of brands in compare with lower prices. However, the estimates for cause fit and interaction effect of cause fit and cause type are not statistically significant.

| Parameter                        | Estimate | Standard Error | T Value | Approx Pr>|t| |
|----------------------------------|----------|----------------|---------|-------------|
| Unico                            | 0.018    | 0.045          | 0.390   | 0.695       |
| President’s choice               | -0.040   | 0.047          | -0.850  | 0.393       |
| Price                            | 0.002    | 0.001          | 1.710   | 0.088       |
| Unico X CRM                      | -0.062   | 0.040          | -1.550  | 0.120       |
| President’s choice X CRM         | 0.057    | 0.043          | 1.320   | 0.186       |
| Price X CRM                      | -0.027   | 0.001          | -24.920 | <.0001      |
| CRM                              | 0.144    | 0.252          | 0.570   | 0.569       |
| Cause Type                       | -0.160   | 0.032          | -4.960  | <.0001      |
| Cause Fit                        | 0.039    | 0.039          | 1.000   | 0.316       |
| Cause Type X CauseFit            | -0.037   | 0.052          | -0.710  | 0.478       |
5-2-2-2. Choice Share Analysis

Among pasta brands, Unico had the largest choice share when the green packaged pasta was not backed by any CRM campaign. For this reason, the choice share analysis for green packaged pasta was performed on this brand. As has been mentioned, one of the purposes of this study was to deduce how the brand share of a green product could change based on different CRM campaigns implemented for that product.

Based on the following formula for calculating choice share of brand $i$, Figure 4 shows the choice shares for the product when it was offered with different CRM strategies:

$$\text{Brand } i \text{ choice share} = \frac{\exp (V_i)}{\sum_{j=1}^{n} \exp (V_j)}$$

As can be seen in Figure 4, cause fit did not have a significant effect on environmental type of cause, as the choice share for both high fit and low fit environmental cause were pretty similar (28.0% and 27.9%). However when the cause was non-environmental, Similar to the bottled water product category, a high-fit cause was more effective in increasing choice share compared to a low-fit cause.
As seen in Figure 5, when comparing the situations in which the product was backed by different CRM campaigns to the situation in which there was no CRM offer, the Unico brand had different choice shares based on the presence or absence of a CRM offer. The largest choice share occurred when the green packaged pasta product was offered with a high-fit non environmental cause, followed by when it was offered with a low-fit non-environmental cause. These two CRM campaigns increased the choice share of the Unico brand compared to the situation where there was no CRM campaign. However, the other two instances of CRM campaigns (with a high-fit environmental cause and with a low-fit environmental cause) did not increase the choice share for the product compared to the situation where a CRM campaign was absent.
Figure 5. Comparing brand share in all five conditions for green packaged pasta

As was the case with the bottled water product category, in order to assess whether or not the differences between choice shares in the five situations was statistically significant, proportion comparison calculations were performed using the formula below:

\[ K = \frac{p - m}{s} \]

where \( s \) can be calculated using this formula:

\[ s = \sqrt{\frac{p \times (1-p)}{N}} \]

and where:

- \( m \) is the observed proportion for the baseline situation (proportion for no CRM);
- \( p \) is the observed proportion for situation \( i \);
$s$ is the average standard deviation; and

$n$ is the number of observations; which is 1909

This formula compares the choice share of situation $i$ with a baseline situation. Because one of the purposes of this study was comparing the impact of presence or absence of CRM on green products, the baseline in this comparison was choice share of Unico brand with no CRM offer, and the choice share of all other four conditions were compared with this baseline.

The calculated $k$ for all situations are listed in the table 6.

**Table 6. Results of Proportion Comparison calculations for the green packaged pasta**

<table>
<thead>
<tr>
<th>Cause type</th>
<th>Environmental</th>
<th>Non-environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>High fit</td>
<td>-3.20</td>
<td>4.80</td>
</tr>
<tr>
<td>Low fit</td>
<td>-3.31</td>
<td>1.71</td>
</tr>
</tbody>
</table>

Because the critical value of $z$ at the probability level of 0.05 is 1.96, the $k$ values for the different CRM campaigns were compared to this number. The calculated $k$ value is positive and greater than 1.96 for the CRM campaigns with a high-fit non-environmental cause. Therefore, the null hypothesis was rejected, signifying that the CRM campaigns with this cause had a significant positive effect on the choice share for the Unico green packaged pasta product. The $k$ value for the CRM campaign with a low-fit non-environmental cause
was 1.71; therefore, because this value is less than 1.96, the null hypothesis was not rejected, signifying that this CRM campaign did not significantly impact the choice share for the Unico brand. For the CRM campaign with both high-fit and low-fit environmental causes, the calculated $k$ values were negative and greater than 1.96, hence signifying that these campaigns had significant negative effect on the choice share for the Unico green packaged pasta product, decreasing the choice share comparative to when no CRM campaign was implemented.

5-3. Hypothesis Testing

It was predicted in Hypothesis 1 that CRM campaign has a significant positive effect on brand choice share. Also hypothesis 2 predicted that a non-environmental cause will have a more positive effect on choice share when compared to an environmental cause. It was also predicted in Hypotheses 3a and 3b that cause fit will have a moderating effect on cause type, whereby for a non-environmental cause, a high-fit cause will have a more positive effect on choice share compared to a low-fit cause, whereas for an environmental cause, a low-fit cause will have a more positive effect on choice share compared to a high-fit cause.

Based on the results in table 1 and 3, CRM has statistically significant and positive estimates in last three models. Therefore, in overall CRM has a significantly positive impact on brand choice share in case of green products. Hence, hypothesis 1 was supported.
Results indicate that Hypothesis 2 was partially supported. For the green bottled water product category, a CRM campaign with a high-fit non-environmental cause positively increased the choice share for the assessed brand more than Low fit environmental cause, as well as when the product was not backed by any CRM ($k = 6.02$), and it was not significantly different from high fit environmental cause. However, the low-fit non-environmental cause did not play the same role and failed to have a positive effect on choice share compared to when the product was not backed by any CRM ($k = -10.13$). For the green packaged pasta product category, the most positive effect on choice share was observed when the CRM campaign had a high-fit non environmental cause ($z = 4.80$), followed by low-fit non environmental cause (1.71). Although the CRM campaign with a low fit non-environmental cause did increase choice share compared to when the product was not backed by any CRM ($k = 1.71$), both CRM campaigns with high fit and low fit non environmental causes had more choice share than environmental causes. Finally, the CRM campaign with both high-fit and low-fit environmental cause had negative rather than positive effect on choice share compared to when the product was not backed by any CRM ($k = -3.20$ and -3.30). Therefore, Hypothesis 2 was partially supported.

Hypothesis 3a predicted that for a non-environmental cause, a high fit cause will be more effective in increasing choice share compared to a low-fit cause. For both product categories, the high-fit non-environmental cause significantly increased choice share compared to when the product was not offered with any CRM (for bottled water, $k = 6.02$; for pasta, $k = 4.70$), while for bottled water, the low-fit non-environmental cause significantly decreased the choice share compared to when the product was not offered with
any CRM ($k = -10.13$), and for packaged pasta, the choice share of low-fit non-environmental cause was not significantly different from choice share of product with no CRM offer ($k = 1.71$). Hence, Hypothesis 3a was supported.

Hypothesis 3b predicted that for an environmental cause, the effects of cause fit will be expressed in a direction opposite to that predicted in 2a. Hence, a low-fit environmental cause was expected to have a more positive effect on choice share compared to a high-fit environmental cause. The results confirmed that for the bottled water product category, a high-fit environmental cause significantly increased the choice share of the assessed brand compared to when the product was not offered with any CRM ($k = 6.60$), while a low-fit environmental cause significantly decreased choice share compared to when the product was not offered with any CRM ($k = -2.53$). For the packaged pasta product category, both high-fit and low-fit environmental causes significantly decreased the choice share of the assessed brand compared to when the product was not offered with any CRM ($k = 3.20$ and $3.30$), while the choice share for the assessed brand with CRM campaigns of these two causes were not significantly different from each other (28% and 27.9%). Hence, Hypothesis 3b was not supported.
Chapter 5. General Discussion

The current study investigated the effect of cause type on the impact of cause related marketing in the case of green products, and also investigated the possibility that cause fit could play a moderating role on the relationship. The dependent variable used in the study was brand choice share. It was predicted that regardless of cause type and cause fit, offering CRM with a green product will increase the choice share of the product. It was also predicted that regardless of cause fit, a non-environmental cause type (such as social or health) will have a more positive impact on choice share compared to an environmental cause type when the product was a green product. Additionally, a moderating effect of cause fit was predicted. For a non-environmental cause, a high-fit cause was expected to have a more positive effect on choice share compared to a low-fit cause, given that a high-fit cause would align better with consumers’ expectations concerning the company and the cause. However, for an environmental cause, a low-fit cause was expected to have a more positive effect on choice share compared to a high-fit cause, given that a low-fit cause would increase the sense of added value to consumers due to supporting two separate environmental causes.

Overall, it was found that backing a green product with CRM could have a positive effect on choice, although there were also cases in which CRM campaigns had a negative effect on choice share. This finding fits well with the results of the study conducted by Muller et al. (2016), in which it was reported that not every CRM offer would positively impact consumers’ purchase intentions. More precisely, they found that for a conventional product associated with adverse effects, a cause that had high relatedness to the product had a
detrimental effect on product sales, while a cause with low relatedness to the product was found to be more effective/beneficial.

For the impact of cause type on effectiveness of CRM campaigns, the findings of the results were mixed up for two product categories. For green bottled water, both high fit causes in environmental or non-environmental contexts significantly increased the assessed brand’s choice share in compare with no CRM offer, and both low fit causes whether in environmental or non-environmental contexts significantly decreased the assessed brand’s choice share in compare with no CRM offer. However, for green packaged pasta, environmental type of cause, either high fit or low fit, decreased the brand’s choice share in compare with no CRM offer, and non-environmental type of cause significantly (high fit) or not significantly (low fit) increased the choice share of assessed brand in compare with no CRM offer. Therefore, based on the results of both product categories, the results suggest that when implementing a CRM campaign for a green product, a high-fit non-environmental cause should be selected in order to achieve a positive impact on choice share, and not a low-fit non-environmental cause.

Moreover, for the moderating effect of cause fit on cause type for both product categories it was found that when the CRM for a green product involved non-environmental causes, a high-fit cause more positively influenced consumers’ decisions and increased choice share in compare with low fit cause in the same cause category. Also when the CRM involved an environmental cause, a high fit cause more positively increased choice share in compare with low fit cause (for green bottled water), or the difference between choice share of product in either high-fit or low-fit situations was not significant (for green packaged
pasta). Hence, for both product categories and either environmental or non-environmental causes, high fit causes influenced the choice share of assessed brand more positively in compare with low fit causes. Also for both product categories and both cause contexts, low fit causes either significantly decreased the choice share of assessed brand, or did not have a significant effect on choice share in compare with no CRM offer. These results are consistent with most of the previous studies suggested that a high-fit cause is better in compare with a low fit cause (e.g. Pracejus & Olsen, 2006; Koschate-Fischer et al. (2012, Nan & Heo, 2007; Gupta & Pirsch, 2006), and also with attribution theory. A it was discussed in chapter 2, in high-fit CRM alliances between company and cause, because these alliances are consistent with consumers’ prior expectations, knowledge, and associations with the company and a given cause, this relationship can be more easily integrated into consumers’ cognitive structures, resulting in a strengthening of the connection between the company and the cause/ charity. However, in low-fit alliances, due to the fact that these alliances are inconsistent with consumers’ prior expectations or knowledge, consumers find it more difficult to integrate them into their existing cognitive structures, resulting in a difficulty in connecting the company with the cause/ charity in question. For this reason, consumers are more likely to generate attributions and to focus on the company’s motives regarding a particular alliance. Hence, negative attributions related to cause-exploitation are more likely to be formed about a company in the case of a low-fit CRM alliance (Koschate-Fischer et al., 2012).
Chapter 6: Contributions, limitations and future research

The current study attempted to address some of the gaps in the literature on cause related marketing, especially in relation to green products. The findings of this study provided some insights regarding how different causes affect consumers’ decisions and brands’ choice shares. This section discusses the contributions of the study, some of its limitations, as well as possible avenues for future research.

6-1. Contributions

This study contributed to the literature on cause-related marketing, specifically in the area of green products. Previous research has mostly focused on cause-related marketing in relation to hedonic products, particularly its effects on mitigating consumer guilt associated either with the negative externalities of the product or the potentially detrimental and/or hedonic effect of using the product (e.g. Muller et al., 2016). The current study tried to address the gap in the literature that concerns whether or not cause-related marketing campaigns can be effective for green products that have no negative externalities, and if yes, the types of causes that would be most effective in convincing consumers to choose green products. The findings indicate that cause-type can influence consumers’ decisions, and that cause fit moderates this influence. Therefore, different causes indeed have different effects on consumers’ decisions, depending on the type of cause and how well the cause fits with the green features of the product.

The current study also contributes to the growing body of literature on warm glow effect or added value regarding CRM campaigns. The current study touched on this topic by
proposing a mechanism for how and why a non-environmental cause could be the most effective cause in order to increase the brand’s choice share when CRM campaign implemented for a green product. Given that the purchase of a green product inherently displays support for the welfare of the environment, using a non-environmental cause in a CRM campaign for green products may give consumers a sense of added value by supporting two separate causes, one environmental and the other non-environmental. The same applies for a low-fit environmental cause (for example, a “helping endangered species” cause for a green bottled water product), as consumers may feel a sense of added value by supporting two different aspects of the environment as opposed to one. Hence, consumers feel that added value by purchasing a green product with a highly related non-environmental cause or an unrelated environmental cause. However, the results of this study only support the first part of prediction (high fit non-environmental) and did not provide supports for low fit environmental cause.

As for managerial contributions, marketers will benefit from the findings of this study by better understanding what types of causes can be most effective in CRM campaigns involving green products. The amount spent by companies on social cause sponsorship in North America is projected to increase by 3.6% by the end of 2017, from the $1.99 billion spent in 2016 to $2.06 billion in 2017 (IEG Sponsorship Report, 2017). Hence, designing the most effective CRM campaigns can increase the profits of the company and, consequently, the charities. Additionally, although the results indicated that CRM had a significantly positive impact on brand choice share in case of green products, the finding that some causes can have a negative rather than positive impact compared to when no
CRM is implemented can serve as caution for managers who may not put a lot of thought into selecting the right causes for CRM campaigns.

6-2. Limitation and Future research

This current study had a few limitations that could not be avoided, and which can be addressed in future studies.

First, the participant sample used in the study was comprised fully of university students mostly between the ages of 18 and 24. Hence, the sample was limited and rather homogenous in nature, which limits the generalizability of the study’s findings to a larger and more heterogeneous population. Future research can thus replicate the study using a more representative sample to assess whether or not the findings of this study still hold true.

Secondly, one of the goals of this study was to investigate how CRM can increase demand and sales for green products. However, previous studies have reported a gap between consumers’ attitudes and actual purchase behaviors specifically with regard to green products. Hughner (2007) found that while a majority of consumers display positive attitudes towards purchasing organic and green products (67%), only a small number (4%) of them actually follow through and purchase these products. As a result, future research can be designed in a way that allows for actual consumer purchase behavior to be observed.
Moreover, the current study mainly focused on cause fit and cause type for CRM campaigns involving green products, without taking into consideration the impact of individual factors (e.g. attitude toward helping others) as well as other CRM attributes (e.g. donation deadline, brand image, etc.). Future research can thus design a more comprehensive model that includes more attributes as well as better observes trade-off between attributes.

Finally, the results of the study were not completely the same for both product categories. In fact, it is still ambiguous what would be the effect of a CRM campaign with highly related cause in environmental context, in compare with no CRM offer for product. For green bottled water this cause had a positive significant effect on assessed brand choice share in compare with no CRM offer. However, for green packaged pasta it had a significantly negative impact on brand’s choice share in compare with no CRM. In our discrete choice experiment we asked sampled decision makers to first answer the questions regarding green bottled water and then regarding green packaged pasta. It might influence the results of the study and the students had got tired during survey. Therefore, future research can replicate the results of this study by different product categories, or with the design of asking questions regarding bottled water first and then packaged pasta from half of the participants, and then asking questions regarding packaged pasta first and then bottle water from the other half of participants.
Reference


Appendix

Pre-test

Q7

Please read the information below regarding a specific company:

Sunshine company is an active company in the bottled water industry. This company has recently introduced a new product, and the main difference between this product and regular bottled water is that for the new product, **the bottles are produced entirely from recycled plastic**. Therefore, the new product can be considered a green product. The new bottle design also passed all food safety tests.

Sunshine company recently decided to engage in a cause-related marketing campaign for its new product, in which the company will donate 10 cents towards a socially beneficial cause for each bottled water sold.

Based on the information provided above, please indicate to what extent you think each of the following causes are related to this product.

Q3

Please indicate to what extent you think each of the following socially beneficial causes are related to the described product.

<table>
<thead>
<tr>
<th>cause</th>
<th>very low-fit</th>
<th>low-fit</th>
<th>neither low nor high fit</th>
<th>high-fit</th>
<th>very high-fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding research for identifying better ways to refine water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding the Canadian Cancer Society</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding research on finding better ways to recycle plastic</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding research on recycling paper and saving jungles</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding HIV vaccine research</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Funding the fight against obesity in children</td>
<td></td>
<td></td>
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</tr>
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<td>Funding the fight against obesity in children</td>
<td></td>
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</tr>
</tbody>
</table>
Pre test results

<table>
<thead>
<tr>
<th>Paired Samples Test</th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
</tr>
<tr>
<td>Pair 1 WEimp 3 - WEimp 12</td>
<td>-.074</td>
<td>.773</td>
<td>.105</td>
</tr>
</tbody>
</table>

Paired Samples Test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>PSimp7 - PSimp2</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.5556E-2</td>
<td>.7154</td>
</tr>
</tbody>
</table>

Paired Samples Test

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>PEimp10 - PEimp11</th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>Lower</td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.093</td>
<td>1.051</td>
<td>.143</td>
<td>-.379</td>
<td>.194</td>
<td>6.474E-1</td>
<td></td>
</tr>
</tbody>
</table>

Paired Samples Test

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>Wimp1 - Wimp5</th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
<td>Lower</td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.056</td>
<td>1.054</td>
<td>.143</td>
<td>-.343</td>
<td>.232</td>
<td>-.387</td>
<td>53</td>
</tr>
</tbody>
</table>

Main study
Have you ever purchased bottled water?
- Yes
- No

When was the last time you purchased bottled water?
- within the past week
- within the past month
- within the past 3 months
- within the past 6 months
- within the past year

How often did you buy bottled water within the last six months?
- Almost every day
- Several days per week
Please read the information below:

One of the leading companies active in bottled water industry decided to explore the option of using recycled bottle for their brand. The company (the actual brand will remain confidential) will introduce an environmentally friendly 0.5 liter purified bottled water to market.

The **main difference** between this product and regular bottled water is that in this new product, **the bottle is produced entirely from recycled plastic**. Therefore, this new product can be **considered as an environmentally friendly product**. Extensive tests conducted by independent agencies confirm that the designed bottle has passed all food safety tests.

![Recycled Plastic Bottle](image)

**Price** of this new green product will be **15 cents more** than a regular bottled water. Also the company is considering to engage in a **cause-related marketing campaign** for this new product, in which **the company will donate 10 cents** towards a socially beneficial cause for each bottled water sold.

For clarification, if one company offers regular bottled water for $1.5 in retail store, the new product is $1.65, and the company will give 10 cents to the determined charity.
### Q8

In all three cases bottles are made from 100% recycle plastic

<table>
<thead>
<tr>
<th></th>
<th>Dasani</th>
<th>Purelife</th>
<th>Aquafina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$0.80</td>
<td>$0.60</td>
<td>$1.00</td>
</tr>
<tr>
<td>Donation</td>
<td>10 cents</td>
<td>10 cents</td>
<td>No donation</td>
</tr>
<tr>
<td>Purpose</td>
<td>Access to clean water for sub-Saharan Africa</td>
<td>Removing plastics from oceans</td>
<td></td>
</tr>
</tbody>
</table>

Which of these options would you likely to choose?

- [ ] Dasani
- [ ] Purelife
- [ ] Aquafina
- [x] None of the above

---

### Q9

In all three cases bottles are made from 100% recycle plastic

<table>
<thead>
<tr>
<th></th>
<th>Dasani</th>
<th>Purelife</th>
<th>Aquafina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$1.40</td>
<td>$0.80</td>
<td>$0.80</td>
</tr>
<tr>
<td>Donation</td>
<td>10 cents</td>
<td>No donation</td>
<td>10 cents donation</td>
</tr>
<tr>
<td>Purpose</td>
<td>Finding better ways to refine water</td>
<td>Finding better ways to recycle papers</td>
<td></td>
</tr>
</tbody>
</table>

Which of these options would you likely to choose?

- [ ] Dasani
- [ ] Purelife
- [ ] Aquafina
- [x] None of the above
<table>
<thead>
<tr>
<th></th>
<th>President's Choice</th>
<th>Barilla</th>
<th>Unico</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of these options would you likely to choose?
Please read the information below:

Imagine yourself in a grocery store as you want to buy a package of pasta. One of the largest food business has introduced a new product as a 454 g pasta in a paper package.

This new product is made 100% from recycled papers (currently almost all packages are made with 20% recycled papers), so this product can be considered as a green product.

Extensive tests conducted by independent agencies confirm that the designed package is passed all Canada's food safety exams.

The company decided that this new package's price should be 20 cents more than their regular package with same weight.

Also they are considering to have a Cause Marketing Campaign for this new green product. As part of this campaign they will donate 15 cents to a worthy cause for each package sold.
Q35
In all three cases packages are made from **100% recyclable paper**

<table>
<thead>
<tr>
<th>President’s Choice</th>
<th>Barilla</th>
<th>Unico</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.90</td>
<td>$2.50</td>
<td>$1.70</td>
<td></td>
</tr>
<tr>
<td>15 cents donation</td>
<td>No donation</td>
<td>15 cents donation</td>
<td></td>
</tr>
<tr>
<td>Planting more trees</td>
<td>Helping people with cancer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of these options would you likely to choose?

- [ ]
- [ ]
- [ ]
- [ ]

Page Break

Q36
In all three cases packages are made from **100% recyclable paper**

<table>
<thead>
<tr>
<th>President’s Choice</th>
<th>Barilla</th>
<th>Unico</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.90</td>
<td>$1.70</td>
<td>$2.10</td>
<td></td>
</tr>
<tr>
<td>15 cents donation</td>
<td>15 cents donation</td>
<td>No donation</td>
<td></td>
</tr>
<tr>
<td>Providing food for people in Africa</td>
<td>Planting more trees</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of these options would you likely to choose?

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]