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Does Denial Drive Distrust?

--An Analysis of Responses to Product-harm Crises in New Zealand

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Abstract

Product-harm crises are well-publicized events wherein products are found to be defective or even dangerous. These crises can strike any company at any time, regardless of company size, where in the world they operate, or even how careful the company is in trying to manage risk. Therefore, it is important for organizations to understand how to withstand such crises. Effective crisis management can control negative publicity and protect the company's image.

The main aim of this study is to investigate whether and how different response strategies work on the recovery of consumers' brand trust after a product harm crisis. More precisely, the central goal of the study is to test how a response of initially denying responsibility in a crisis affects how effective other strategies (such as recalls) are in aiding organizational success in handling a product-harm crisis.

A mailed questionnaire was designed to test consumers' response to different crisis management strategies. Results indicate that, after the product-harm crisis happens, troubled companies should avoid denying their responsibility for the incident. When the denial strategy is adopted as the troubled company's first reaction, the effect of other strategies (involuntary recall, voluntary recall and super effort) would likely be sharply devalued.

Key Words: Product-harm Crises, Brand Trust, Denial

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Chapter 1 Introduction

1.1 Overview

“When a product-harm crisis happens, will different combinations of crisis management strategies have different levels of impact on the recovery of brand trust?”

In this chapter, an overview of the research relevant to answering this guiding question is provided. At first, background information about Product-harm crises is described. Then follows an outline of the research focus and design of this study, with a synopsis of results also being presented.

1.2 Problem Orientation

People cannot be prevented from making mistakes; the same can be said for businesses. A crisis can strike any company at any time, whether the company is small or big. Ford's Pinto car accidents in 1977, the 1982 Johnson & Johnson Tylenol poisoning crisis, Coca-Cola's 30 million cans and bottles recall campaign in 1999, and the Chinese dairy company San Lu's melamine crisis in 2008 are all recent examples of crises effecting businesses. Most recently, a major crisis happened to the world's largest automobile maker, Toyota Motor Corporation (The Washington Post, 2009). Faulty floormat mounting led to interference with the operation of several cars of differing models at the end of 2009 and into 2010. The worldwide total number of cars recalled by Toyota stood at 9 Million (The Christian Science Monitor, 2010). As of January 2010, 21 deaths were alleged due to the problem since 2000, but after a

recall announcement in January 2010, the numbers of reported problems and alleged victims sharply increased to 37 (USAToday, 2010).

A crisis such as that confronting Toyota, is a critical situation which, if mishandled, can inflict serious damage on the organization (Arpan and Pompper, 2003). If the company does not respond to the crisis immediately, the crisis may escalate into a catastrophe (Davies and Walters, 1998). By definition, a crisis poses a serious threat to companies. The factor that determines how well a company will withstand a crisis is its ability to respond to that crisis. Effective crisis management can control negative publicity and protect the company's image (Stafford and Armoo, 2002). Johnson & Johnson (J&J) successfully survived the crisis with their Tylenol brand because appropriate marketing and crisis management strategies were used in a timely manner. Therefore, it is critical for an organization to understand what kind of strategies can be used, and how to use them.

A crisis has its roots in an organization's external and internal environment (Perrow, 1984). It can be any unexpected event, such as a fire, a storm, a security breach, a labour strike, a failure in technology, or food poisoning. However, it is too complicated to test all these crises in the model for a master thesis. Therefore, the product-harm crisis was chosen as the target of this research. This can be defined as "a complex situation wherein products are found to be defective, unsafe, or even dangerous" (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008).

1.3 Research Focus

According to Chong's (2009) research, effective crisis management requires a systematic and disciplined approach based on vigilance, managerial sensitivity, and a good understanding of the importance of careful planning and organizational readiness. Except "doing nothing" in response to the product failure, previous studies on crisis management strategies have identified four basic strategies: denial, involuntary product recall, voluntary product recall, and super effort, which exhibits primary concerns for customers' welfare (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008).

Although product-harm crisis management incidents now seem to occur frequently (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008), not many research studies have taken a marketing point of view in analyzing them. Many research studies have focused on the impact of product harm crisis on brand equity and consumer reactions to product failure. To date, there do not appear to be previous studies that have examined the impact of crisis management strategies on brand trust in a product-harm crisis situation, even though trust is the most important attribute any brand can own (Smith 2001) Moreover, numerous researchers have examined the effects of single recovery strategies, as will be introduced in the literature review below. However, there was no research found in the literature about the effect of using a combination of strategies. Such a combined approach might be, for example, that the troubled company may first deny its responsibility, but then voluntary recall the defective products. Based on these considerations, the main aim of this research is to investigate how combination strategies affect brand trust. More precisely, the central

goal of the study is to test if first using a response of denial will affect the brand trust recovery more negatively than not using this response but applying a different strategy.

New Zealanders have increasingly become interested in businesses' ethical behaviour (NZCBESD, 2009) in both the domestic and international markets. Fonterra, the biggest dairy company in NZ, was recently involved in a Chinese infant milk powder poisoning incident, which resulted in the deaths of several children and injury to many others. These tragedies may have increased New Zealanders' interest in the topic of product-harm crises and brand trust, whilst demonstrating its level of internationalisation.

1.4 Research Design Overview

This study begins by reviewing the literature on corporate reputation, social responsibility, product-harm crises, crisis recovery strategies, time delay in response, and brand trust from other researchers, as these concepts contribute the foundation for forming the research model. Then, hypotheses are developed based on this research framework.

Quantitative analysis is used to test the hypotheses, with data collected by a mailed questionnaire. The questionnaire is designed to test consumers' response to different crisis management strategies. Previous researchers have well-defined the importance of corporate reputation, social responsibility, and time delay in response in crisis management. Therefore, it is of lesser importance to examine these three factors in this current research, again. The questionnaire was sent out to participants who were

selected from the Christchurch Telephone Book, 2009 Edition. The Statistical Package for the Social Sciences (SPSS) was used for data entry as well for examining the data and the testing of hypotheses. Lastly, conclusions drawn from this study, managerial implications, and research limitations are outlined, and future research opportunities are recommended.

Chapter 2: Literature Review

2.1 Product-harm Crisis

A crisis is a critical situation which can cause serious damage to the organization (Arpan and Pompper, 2003). Crises threaten the organization's systems and cause sudden changes in the ways that these systems operate, since they have disruptive effects on organizational, societal, and environmental systems (Kabak and Siomkos, 1990). Pauchant and Mitroff (1992) provide the most comprehensive definition of crisis. They defined a crisis as "*a disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, and its existential core.*" The extensive damage that crises lead to and the substantial costs they impose on organizations, individuals and society as a whole, render them an important phenomenon to be studied (Kabak and Siomkos, 1990).

From a management perspective, crises are lower probability and higher consequence events that jeopardize the most fundamental goals of an organization (Weick, 1988). A crisis can pose a serious threat to companies at any time. The factor that determines how well a company will withstand a crisis is its ability to manage the crisis (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008). The initial activity of the crisis management system is to assess the effects of the crisis (Kabak and Siomkos, 1990). Effective crisis management can control negative publicity and protect the company's image (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008).

Most market-oriented companies invest huge resources to build brands, with enhanced brand equity one potential outcome. However, brand equity, which Richard and Jones (2006) defined as the added value endowed by the brand to the product can, be very fragile. Among its biggest threats are product-harm crises (Van Heerde, Helsen and Dekimpe, 2005), which can be defined as: “*well-publicized events wherein products are found to be defective or even dangerous*” (Dawar and Pillutla, 2000; Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008). Product-harm crises can distort long-standing favourable perceptions of quality, tarnish a company’s reputation, cause major revenue and market share losses, lead to costly product recalls, and devastate carefully-nurtured brand equity (Van Heerde, Helsen and Dekimpe, 2005).

Usually, a product-harm crisis relates to a particular brand (Siomkos and Shrivastava, 1993). Among the most famous cases of crises caused by product-harm is the J&J Tylenol poisoning in 1982, Ford’s 1977 Pinto car accidents, and the discovery of benzene in Perrier mineral water (Siomkos and Shrivastava, 1993). Moreover, in 1999 Coca-Cola was forced to withdraw 30 million cans and bottles in Northern Europe following a tainting scare in Belgium. In 2000, Bridgestone/Firestone recalled 6.5 million tyres after news broke that more than a hundred people had died in accidents involving defective tires manufactured by the company (Van Heerde, Helsen and Dekimpe, 2005). A very recent incident was the Chinese dairy company San Lu’s melamine crisis, which left four children dead, 104 seriously affected, 12,892 admitted to hospital, and 39,965 being treated without being admitted to hospital (Manna, 2009).

There can be several causes of product-harm crises, such as “manufacturer’s negligence, product misuse, or sabotage” (Siomkos and Malliaris, 1992). Moreover, the increasing complexity of products, more demanding customers, and vigilant media are making product harm-crises more visible (Klein and Dawar, 2004). Regardless of the cause, product-harm crises can result in great damage to consumers’ health and have vast financial costs for the troubled company. In the United States, business firms have faced premium increases of 25% to 1000% for property and liability insurance. In early 1990s, product liability claims cost U.S. companies over \$5.5 billion annually. One study documented that about 20 million injury cases, 110,000 permanent disabilities, and 30,000 deaths were caused by product harm annually (Siomkos and Shrivastava, 1993).

However, "the implications of a brand-specific product-harm crisis often go beyond the 'obvious' short-run sales or market-share loss" (Van Heerde, Helsen and Dekimpe, 2005, p. 2). Research has found that product-harm crises not only have negative effects on sales, but also can damage or destroy corporate image (Siomkos, 1999). During a product-harm crisis, customers often receive negative information about the product and the company. As a result, after the crisis, customers’ attitudes might have changed negatively (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008). Furthermore, the brand’s own marketing-mix effectiveness also can be reduced. Because consumers’ trust might have been breached, promotion strategies may be less effective than before. Lastly, the brand may now have less power, thus stimulating brand switching among consumers, and may become more vulnerable to competitive actions (Van Heerde, Helsen and Dekimpe, 2005).

2.2. Reputation

In the modern marketplace, consumers have become more sophisticated, and the value of intangible factors (such as corporate reputation) in consumers' purchasing decisions has increased (Tucker and Melewar, 2005). To have a more distinct understanding of the importance of corporation reputation, this section will review the literature emphasising the concept.

In its simplest definition, Weiss (1999) describes corporate reputation as "the extent to which an organization is held in high esteem or regard". This definition is perhaps the least problematic and therefore the easiest to base decisions on (Tucker and Melewar, 2005). To explain at a deeper level, corporate reputation is defined by Bishop (2000) as a "cognitive representation of a company's ability to meet stakeholders' needs." However, Croft (2003) argues against this stakeholder-centred definition. She thinks corporate reputation should be considered in term of its "historical context", and should represent the long-term collective assessment of a corporation's integrity.

In order to give consideration to both "stakeholder" and "historical context", a satisfactory definition of corporate reputation is necessary. Tucker and Melewar (2005) offer that

Corporate reputation is the perception of an organization based on its stakeholders' interpretation of that organization's past, present and future activities and the way in which these are communicated.

Over the last several decades, consumers have been becoming more civic-minded, politically correct, and environmentally aware; therefore, it is more important for corporations to focus on their reputation strategies than ever before (Tucker and Melewar, 2005). To understand the importance of reputation to an organization, one must consider what damage a poor reputation can do. The brand is arguably one of the most important assets for a corporation, and the risks to brands are great. Croft (2003) noted that “the loss of shareholder value, the potential boycott of goods/service, and the long term damage to a brand’s strength” are just some of the more immediate effects. In the long term, the loss of competitive advantage is one thing that a brand simply cannot afford.

Although an intangible asset (Tucker and Melewar, 2005), reputation still produces a significant long term competitive advantage (Bishop, 2000). It can help build brand equity, and contribute to a corporation’s overall financial value (Croft, 2003). The concept of reputation can also be thought of as resource in a crisis (Ihlen, 2002). For example, a good corporate reputation provides a “reservoir of good-will”, which can be drawn upon by the firm in times of crisis (Morley, 1998). If a corporation has a poor reputation, “it will be assumed guilty of harmful allegations regardless of the legitimacy of its response” (Tucker and Melewar, 2005). Relevant literature supports the contention that well-known companies with good reputations could more effectively overcome product-harm crises if they occur (Mak, 2005). In a similar way, Siomkos and Kurzbard (1994) found that a highly respected company is regarded more favourably in the case of product-harm crises.

Reputation management is about building a sound corporate reputation and maintaining its strength (Miller, 2003). Thus, corporate reputation is both a contributing factor to and a consequence of crisis management: successful reputation management can lead to successful crisis management, and successful crisis management can lead to an improved reputation (Tucker and Melewar, 2005).

Corporate reputation might be also influenced by other uncontrollable factors, such as Country-of -Origin (COO) effects, which cannot be easily managed by a single corporation. These are usually communicated by the phrase “Made in (country)” (Bilkey and Nes, 1982). The image of COO is:

the reputation, the picture, the stereotype that businessmen and consumers attach to products of a specific country. This image is created by such variables as representative products, national characteristics, economic and political background, history, and traditions. (Nagashima, 1970)

Both empirical observations and experiments indicate that the COO has a considerable impact on consumers’ evaluation of product quality (Piron, 2000; Han, 1989; Bilkey and Nes, 1982). When consumers are not familiar with a brand or company, they intend to use COO as a “halo” in product evaluation (Han, 1989). Consumers’ attitudes to product quality can be changed as the COO for that product changes. For example, in 1950s and 1960s, products “Made in Japan” were regarded as unreliable. However, this negative image was significantly altered in the 1970s. Many products “Made in Japan” have become as expensive as U.S. products, and the quality is now considered by many as reliable as German products (Bilkey and Nes, 1982).

As companies continue to pursue global market expansion strategies (Chao, 1998), the product-harm crisis is thus more likely to become a global phenomena. Previous research has suggested that a company from a COO with a highly positive image will suffer less blame than a company from a COO with a lesser image (Laufer, Gillespie and Silvera, 2009). Good COO may not shield the troubled company from consumer backlash, but it can provide a window of opportunity in which to better assess the situation and make an appropriate response (Laufer, Gillespie and Silvera, 2009).

2.3 Social Responsibility

Linked to reputation, this study's attention has also focused on Corporate Social Responsibility (CSR), which has been discussed for many years as both an important academic construct and a pressing corporate agenda item (Colvin, 2001). The pressure on corporations to practice CSR has gained momentum in recent times as a means of sustaining competitive advantage in business (Cheah, Chan and Chieng, 2007). Many corporations have found that engaging in socially responsible behaviours not only fulfils external obligations such as stakeholder demands, but also "enlightened-self-interest considerations", such as improved stock market performance and increased competitiveness (Bansal and Roth, 2000).

CSR is a multi-dimensional concept surrounding a wide range of business practices and activities that go beyond the corporation's control (Cheah, Chan and Chieng, 2007). Therefore CSR efforts can be viewed in many different ways, mainly due to conflicting goals and pressures from various stakeholders of the firm, such as employees, stockholders and governments (Cheah, Chan and Chieng, 2007). The

concept of CSR was first formalized by Bowen (1953): “it refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of society.”

A decade later, Friedman (1970) rejected the idea of corporate social commitment. He pointed out that managers in a free economic system are obliged by contract to enhance shareholder value; it is their primary task to maximize the value of the corporation. Later, a stakeholder-centric theory was argued by Freeman (1984). He believed managers should strive to satisfy not only shareholders, but also stakeholders. More recently, Garriga and Mele (2004) asserted that any relationship between society and business should consist of dimensions related to long-term wealth creation, consideration of social demands, and the advocacy of ethical values.

Based on a broad conceptualization of CSR, socially responsible behaviours can be undertaken in six broad domains (Sen and Bhattacharya, 2001):

1. Community support (e.g., support of health programs)
2. Diversity (e.g., sex-, race- disability-based diversity)
3. Employee support (e.g., concern for safety, job security)
4. Environment (e.g., environment-friendly products, pollution control)
5. Location of operations (e.g., operations in countries without human rights violations)
6. Product (e.g., product safety, research and development/innovation).

Some have argued that today a corporation must maintain ethical principles in order to be legitimately successful (Kaliski, 2001). From a marketing perspective, CSR has a strong and direct impact on consumers' attributions (such as information about the company, its beliefs, and motivations), which consequently influences brand evaluations and purchase intentions, and the firm's economic benefits (Klein and Dawar, 2004, Sen and Bhattacharya, 2001). Moreover, the result of Klein and Dawar's (2003) study shows that "CSR is a significant moderator of consumer attributions in a product-harm crisis". They found that consumer' attributions about a product-harm crisis can be seen as a function of consumers' CSR associations, which contributes significantly to consumers' perceptions of blame for the crisis.

2.4 Corporation Response

A major factor that substantially influences a company's success in dealing with a product-harm crisis is the type of company response (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008). After a crisis happens, the organization has to take some sort of action in order to handle it. Responses can vary along a continuum from least-to-most favourable for the consumer (Kabak and Siomkos, 1990). There are many different potential responses that can be chosen. Siomos and Kurzbard's (1994) identified four company strategies that can be used in response to a product-harm crisis. They are:

Denial: A company may simply deny their responsibility for a defective product.

Involuntary recall: Companies can recall the product only after a government agency orders it to do so.

Voluntary recall: Companies may choose to recall the defective product prior to governmental intervention.

Super effort: Companies respond by showing great concern for customers' welfare by being honest in its communications related to the crisis. Normally they aggressively control the technical damage, immediately recall the defective product, and as a result possibly recapture their loss rapidly (including sales and credibility losses) (Kabak and Siomkos, 1990).

Clearly, product recalls play an important role in this four response strategy model, and is the most common strategy companies use in response to a product-harm crisis (Standop, 2006). The number of recalls has been increasing in recent years worldwide. In the U.S., almost 19 million automotive vehicles were recalled in 2002, and annual auto recalls have more than doubled since the early 1990s (Consumer Reports, 2004a). A product recall can be harmful if it is treated as a problem to avoid, rather than as an opportunity to take, as an effective recall can gain plaudits from both government officials and the press (Mowen and Pollman, 1981).

However, a product recall is not the only option. During the early period of the product-harm crisis, the decision to continue business as usual will often be a valid decision until the company can obtain further information via risk analyses to replace initial relatively weak evidence (Standop, 2006). Furthermore, a huge amount of money spent on a recall will not ensure that 100% of the critical product quantity with injury potential will be returned to the producer. The number of returned products and recall expenditures are two factors directly influencing product recall efficiency; with low efficiency, companies have more reason to continue as usual (Standop, 2006).

In the business world, companies always need to make a decision whether to initiate an immediate product recall or to deny a problem and continue with business as usual (Standop, 2006). Standop's (2006) model explained eight major factors which can influence the decision to either continue business-as-usual, recall the defective product, or make a super effort. This idea is presented as Figure 2.1 below.

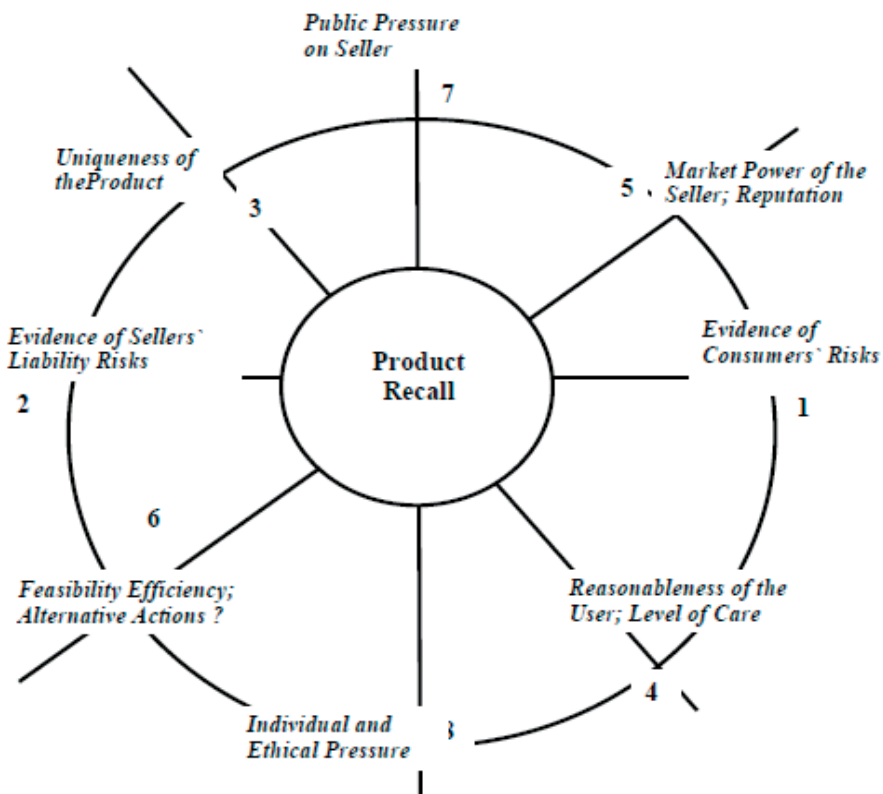


Figure 2.1: Main Factors in the Decision For and Against a Product Recall

(Standop, 2006)

In detail:

1. **Evidence of consumers' risks:** If consumers perceive the product as defective.
2. **Evidence of sellers' liability risks:** If companies consider the product defective.
3. **Uniqueness of the product:** The special value of the product. For example, there is a drug with considerable risky side effects which are unavoidable. Whether these side effects are tolerable or intolerable might be an open question in crucial cases.
4. **Reasonableness of the user:** (Level of care). This factor indicates the fitness and will of the consumer to take care while using the product.
5. **Market power of the seller:** (reputation): Does the company have high or low reputation?
6. **Feasibility efficiency:** Do the efficiency of the response and costs match? The number of returned products is used to measure the efficiency and costs of a product recall.
7. **Public pressure on seller:** The pressure built up by the media, public authorities, and regulatory agencies.
8. **Individual and ethical pressure:** Individual decision maker's pressure, resulting from ethical and religious reasoning.

Standop's study provides a broad look at product recalls. There are other dimensions of response strategies to be considered. In the next section, four crisis response strategies will be explained in detail.

1. Denial

As one possible response to a product-harm crisis, companies may choose to deny that harm has been done to the customers. In this response, the company attempts to minimize the negative impact, and does not accept responsibility for the situation (Kabak and Siomkos, 1990). There are several kinds of denial, such as, denying that anything happened, denying the knowledge that anything happened, denial of intention, and denial of volition (in other words, denying responsibility by stating that the company had no other choice) (Coombs, 1995).

Many scholars believe companies should avoid denying their responsibility for a crisis incident (Siomkos and Shrivastava, 1993). This is particularly important for companies with poor reputations as, in this situation, no amount of denial will convince consumers of the company's innocence. For consumers, denial may be seen as a narrow, defensive, and selfish reaction on the part of companies (Siomkos and Shrivastava, 1993). In practice, many companies choose to deny responsibility or to engage in an effort to moderate negative impacts, based on cost-benefit analysis. A company may let a disquieting situation abate on its own with the thought that too much activity may actually give counter-productive results (Siomkos and Kurzbard, 1994). This was what San Lu initially chose to do during the melamine crisis in 2008. When San Lu recognized the crisis, its PR department suggested paying people off to encourage them to keep quiet about the negative effect on their children. San Lu management subsequently agreed to spend hundreds of thousands Chinese yuan on such an effort (Manna, 2009).

Denial as a strategy has to be evaluated in association with the causes of the crisis. If internal parties are to be held responsible, as may be the case when the product crisis is due to technical failure, the company may have very different reasons for denial than in cases where external parties are responsible. Potentially, if the crisis is caused by external parties, a denial response may be justified in pragmatic terms but still may negatively influence customer trust. Alternatively, there may be cases in which the strategy of denial might be seen by consumers as a reasonable strategy to protect a company's reputation.

2. Voluntary Product Recall

The company may exhibit concern for customers' welfare, public safety, and information disclosure by taking the initiative in adopting voluntary recall actions (Kabak and Siomkos, 1990). Most recalls are voluntary, undertaken not only to protect the public and the reputation of the company and the brand, but also since it is more responsible and less damaging than seizures or court injunctions by regulatory authorities (Seymour and Moore, 2000). Current research found that companies are perceived to be more responsible by consumers if they react before regulatory agencies like the Consumer Product Safety Commission (CPSC) take actions (Siomkos and Kurzbard, 1994). An example of such a response is Source Perrier S.A.'s benzene contamination disclosures. Perrier recalled 170 million bottles of water from the market, until the crisis situation was fully resolved. The company re-entered the market when it was certain their product was no longer a threat to consumers' health (Kurzbard and Siomkos, 1992).

3. Involuntary Recall

Here a company takes actions only after a regulatory agency orders it to do so. In general, the company complies with minimum legal requirements (Kabak and Siomkos, 1990). In New Zealand, the Minister of Consumer Affairs can order a compulsory product recall (Ministry of Consumer Affairs, 2007). Although an involuntary recall may have similar actions to a voluntary recall, the effect of an involuntary recall can be much different. This is because consumers react differently to recall decisions ordered by the government or by the company; consumers take recalls more seriously when presented by government than by the company (Jolly and Mowen, 1985). A voluntary recall may reassure consumers that a company willingly stands behind its products, while a government-ordered recall may provide the opposite signal; that the product is so defective that the government had to step in to correct the situation (Davidson and Worrell, 1992). However, Davidson and Worrell (1992) found that there is limited support to show that an involuntary recall may result in greater shareholder losses than a voluntary recall.

The government-ordered recall may be best illustrated by an example from the United States. The Consumer Product Safety Commission (CPSC) is the Federal regulatory agency responsible for overseeing the safety of most consumer products in the U. S. The CPSC recalled large numbers of toys and infant products in 2003, such as Cosco strollers (3,000 complaints about the folding mechanism unexpectedly collapsing with a child in the product, causing more than 200 injuries to babies, including bone fractures, head injuries, and lacerations requiring stitches), and Graco infant swings

(181 reports of falls, 22 infants entrapped at neck or chest, and 6 deaths) (Felcher, 2003).

4. Super Effort

Super effort exhibits primary concern for customer welfare rather than saving company resources (Siomkos and Shrivastava, 1993). It aggressively controls the technical damage, immediately recalls the defective product, and potentially recaptures its income and reputation loss rapidly by introducing redesigned products (Kabak and Siomkos, 1990). To make up for the inconvenience to customers, it may distribute free product samples, coupons or price discounts for other products (Siomkos and Shrivastava, 1993). The Tylenol crisis was handled in this fashion by J&J. As part of its crisis management strategy, J&J recalled Extra-Strength Tylenol capsules at a cost of \$100 US million. They also established a toll-free telephone hotline for questions, and provided refunds or exchanges (Seymour and Moore, 2000). J&J's successful super effort strategy helped company to take over the crisis, and this case became an early model for crisis management (Seymour and Moore, 2000).

Time Delay in Response

Time pervades every aspect of consumer behaviour (Allen and Hayes, 1985); marketing actions and the consumer are inextricably bound and affected by time (Jacoby, Szybillo and Berning, 1976). For example, it affects the timing and frequency of purchases, and the length of time consumers expect a product to last (Brodowsky, Anderson, Schuster, Meilich and Venkatesan, 2008).

When companies deal with a product-harm crisis, quick response (short time span) is seen as a sign of responsible action (Standop, 2006). For example, in a series of studies on product recall, Mowen and his colleagues (1981) found that quick or responsive product recalls may substantially lower an organization's risk in product liability trials. They suggested that a prompt and effective product recall is part of the solution, rather than a problem. However, companies may not always recall defective products quickly.

There are several factors that can influence companies' response speed: First, companies may spend time waiting for diffuse evidence (such as the laboratory test results) to clear, as the recall decision based on insufficient evidence is dangerous (Standop, 2006). Second, a government's involvement may have effect on the companies' response speed. If the company predicts that the government will get involved in the crisis and may order company to recall, the company is more likely to voluntarily recall the product quickly, before governmental action. This is because a voluntary recall is seen as a more responsible response to the harm caused (Siomkos, 1999). In addition, when consumers process the source of a product recall order, they may perceive the harm to be potentially more serious when it is presented by government (Jolly and Mowen, 1985). Third, if a company has a highly positive reputation and are seen as socially responsible, it is more likely to respond quickly. Reputation may be the ultimate determinant of competitiveness (Haywood, 2002), and CSR could lead to a sustained competitive advantage (Hart, 1995). To maintain these advantages, companies need to respond quickly.

Most consumers believe that the time span between the first signal of potential injuries and liability and the actual date when the recall is set in action is a powerful indicator of responsible business behaviour (Standop, 2006). Compared with a long time span, a short time span is seen as a signal of responsible action; whereas the more time a response takes, the harder it is to find an acceptable reason for the late recall. In this instance, companies need to explain both the recall and the long period of hesitation (Standop, 2006). Mowen, Jolly and Nickell (1981) argued that the perceived length of time to recall directly influences the perceptions of the company by consumers. If the company acts rapidly and decisively to recall a product, consumers will perceive it as acting against its own short term interest and in the interest of consumers.

2.5 Brand Trust

“The ultimate goal of marketing is to generate an intense bond between the consumer and the brand, and the main ingredient of this bond is trust” (Hiscock, 2001). Trust is developed with customers through competence, which is the ability of a company to do a job well. To earn trust, it is important that consumers believe that there will be consistency in the company’s decisions and judgments even when there are changes (Ryan, 2002). For example, if consumers trust a company, even when the company starts to work with new material suppliers, consumers will still believe the quality of the product is the same.

Many studies have well defined the concept of trust. For Deutch (1973), trust is a person’s willingness to be dependent on another party, in the belief that the other party will not intentionally disappoint them. Bagozzi (1975) defines trust as “the degree of

perceived validity in the statements or actions of one's partner in a relationship". Moreover, Gulati (1995) added that trust is a type of expectation that lowers the fear that one's partner will act opportunistically.

Company Trust

The marketing area has analysed in depth the characteristics of the trust concept and its influence on commercial relationships. Morgan and Hutt (1994) found that trust plays a decisive role in the continuity and development of the relationships between a company and the different agents, which constitute its environment. Trust is also a key component in the perceived quality of a relationship (Dwyer, Schurr, and Oh, 1987). Flavian, Guinaliu and Tores (2006) pointed out:

Trust facilitates the adoption of decisions in risky situations, and reduces the number of possible alternatives, reduces the environmental complexity; facilitates cooperation and coordination; improves conflict resolution; reduces the need for control mechanisms; and helps to develop commercial exchanges in the long term. (p.409)

Trust between organizations has been identified as an important component of relationships, which makes partnerships, strategic alliances, and networks successful (Kramer, 2006). Trust is an expectation held by an agent that "*its trading partner will behave in a mutually acceptable manner*" -- an expectation that reduces the uncertainty surrounding the partner's actions (Kramer, 2006).

To earn trust, it is important that the company is open, honest, and truthful with their customers. To be more specific, this means companies have to be as transparent as possible with their business actions, and take responsibility for their actions when they wrongfully hurt consumers (Reynolds, 1997). Furthermore, companies need to show their consumers that they are reliable and consistent, which simply means that they do what they say that they are going to do (Ryan, 2002). Lastly, consumers will not trust the company if they feel its actions are unreasonable, for example, by overpricing the brand (Reynolds, 1997). Therefore, a company must find out what consumers really want and provide it equitably and fairly (Ryan, 2002).

Factors for Achieving Trust

Shaw (1997) found there are three actions can help companies to create trust in a rapidly changing marketplace. These are: “achieving results, acting with integrity, and demonstrating concern.” Most importantly, in order to achieve a high level of trust with consumers, companies must understand and practice these factors consistently (Shaw, 1997).

Achieving results: It is companies’ responsibility to be committed to fulfilling the promises they make (Ryan, 2002), because customers’ expectations depend on what companies promise the brand will achieve, what it will do for the customer. Customers might lose trust if their expectations are not met, or the brand does not deliver on their promises (Sanner, 1997).

Acting with integrity: Most customers are prone to trust those companies that behave consistently in their words as well as actions. If companies want to gain trust, it is

imperative that they act with integrity (being honest, truthful, and consistent) in all their actions (Ryan, 2002).

Demonstrating concern: It is imperative to demonstrate concern, if companies want to develop trust with customers. The company can do this by showing consumers that they understand and are responsive to their well-being (interests, needs, and satisfaction) (Shaw, 1997).

Cognitive and Emotional Perceptions of Trust

In Luhmann's (1979) sociological theory of trust, he argued that there are three modes of asserting expectations about the future: "familiarity, confidence, and trust." He argued that familiarity is a precondition of trust, and "trust is only possible in a familiar world, it needs history as a reliable background. But trust is required only in situations of high perceived risk; at other times confidence or mere familiarity will suffice for action to ensure" (Luhmann, 1979). At higher levels of perceived risk, trust becomes necessary for purchase to occur. This involves emotional judgments rather than just cognitions, and for suspension of fear of the unknowable risks during the product purchase (Elliott and Percy, 2007).

Brand Trust

A brand is a name, term, sign, symbol, or design intended to identify a seller's goods or services, and to differentiate them from competitors. Smith (2001) claims that trust is the most important attribute any brand can own. MacLeod (2000) considered that much of the vocabulary of modern brand building uses words associated with personal relationships, such as trust. Trust in a brand can be defined as "*a consumer's*

willingness to rely on the brand in face of risk because of expectations that the brand will cause positive outcomes” (Lau and Lee, 1999) or as the “feeling of security held by the consumer in his/her interaction with the brand, that it is based on the perceptions that the brand is reliable and responsible for the interests and welfare of the consumer” (Delgado-Ballester, 2003).

Delgado-Ballester (2003) synthesized a set of relevant components of prior research for this definition. First, brand trust involves a willingness to put oneself at risk, through reliance on the promise of value that the brand represents. Second, brand trust is defined by feelings of confidence and security. Third, it is related to positive or non-negative outcomes. Lastly, it requires making certain attributions to the brand such that it is regarded as reliable and dependable.

Modern marketing includes an emphasis on building relationships. Aaker and Biel’s (1993) study on the relationship between consumers and corporate brands documented two key components for successful relationships: “brand trust and customer satisfaction with the brand.” They believe that the relationship between the consumer and the brand will be successful if the consumer trusts the brand and is satisfied with it. This is illustrated graphically in Figure 2.2:

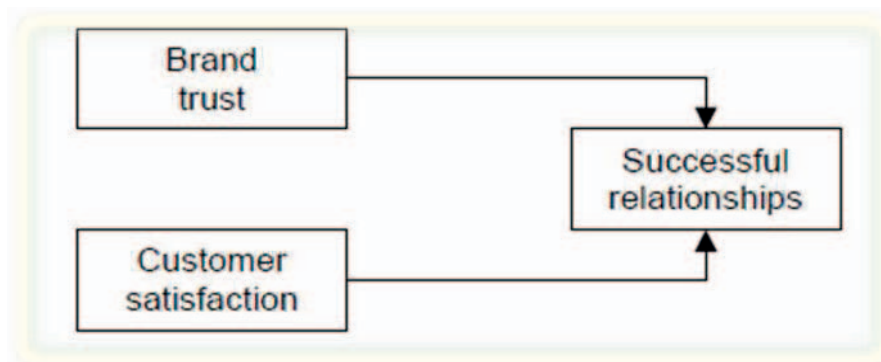


Figure 2.2: The Components for Successful Relationships (Aaker and Biel, 1993)

2.6 Development of the Research Question

During the last decade, the product-harm crisis has been classified as one of the most important issues in business practice and, specifically, one of the biggest threats to brand building (Van Heerde, Helsen and Dekimpe, 2005). Some notorious marketing cases include the above noted J&J's Tylenol crisis, Bridgestone/Firestone's defective tires, and the benzene contamination of Perrier. Although companies have already noticed that product-harm crises can cause a serious damage to organizations (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008), they still occur. This is likely because of the increasing complexity of products and the closer scrutiny by manufacturers and policy makers, as well as the higher demands by consumers (Dawar and Pillutla, 2000). Moreover, the media is paying more attention to product quality, which also makes a crisis more visible to the public (Van Heerde, Helsen and Dekimpe, 2005). An example of a most recent crisis was the Chinese dairy company San Lu's melamine contamination crisis in 2008.

More research on product-harm crises is needed. Though product-harm crises are frequent enough for concern, only a few research studies have been done on the topic (Klein and Dawar, 2004). In 1980s, some studies were done after the J&J Tylenol crisis (Siomkos and Shrivastava, 1993; Mowen, Jollyand Nickell, 1981), but 20 years later, the marketing environment and consumers' behaviour have changed. Previous studies on product-harm crises might not give much guidance to contemporary companies facing modern crises.

Siomkos and Kurbard (1994) demonstrated that there are four basic organizational responses to these crises: denial, involuntary recall, voluntary recall and super effort. However, in the real business world, when companies face a product-harm crisis, the single strategy is not the only potential response to complicated situations. Companies may respond to the crisis with multiple strategies for a number of reasons. The product-harm crisis may happen suddenly and without any indications. Therefore, the company may need to “buy time” to find out the actual reason behind the crisis (for example, to determine whether the crisis was due to internally controllable factors or not). As the investigation goes on, the company might adjust its strategy as a result of information gathered. For example, when Chinese dairy company San Lu responded to the melamine crisis, there were three response strategies used: denial, involuntary recall, and voluntary recall (Manna, 2009). To date, the researcher has found no previous studies testing the combination of strategies in a product-harm crisis situation.

In conclusion, it is clear that a product in crisis presents a research opportunity that is worthy of further exploration. This study aims to investigate how different combinations (always using a response of denial first) of crisis response strategies influence the maintenance and rebuilding of brand trust. Brand trust is an important and key factor in the development of brand loyalty and relationships with customers. There are no previous studies on the impact of multiple crisis response strategies on brand trust. To illustrate this focus, the general research question for this project is:

When a product-harm crisis happens, will different combinations of crisis management strategies have different levels of impact on the recovery of brand trust?

In addressing this question, six response strategies will be tested. They are, as identified and discussed above: involuntary recall, voluntary recall, super effort, denial first then involuntary recall, denial first then voluntary recall, and denial first then super effort. In particular, this research will hopefully provide insight into product-harm crises in the context of brand trust recovery that will offer guidelines for future implementation. It is hoped that this study will help troubled companies choose the best strategies to successfully overcome the product-harm crisis.

Chapter 3: Conceptual Framework and Research Hypotheses

3.1 Research Model

During a product-harm crisis, the market receives a wide range of information about both the company and the product. On the company's side, they may communicate information to consumers about the crisis, and inform them of its effort to manage it (Siomkos, and Kurzbard, 1994). These communications can be seen as part of the response strategy of the troubled company. Based on the information provided, consumer's impressions of the company and its products might be changed (Siomkos, and Kurzbard, 1994).

The consumer is the ultimate judge of whether the troubled company has successfully handled the crisis or not (Kurzbard and Siomkos, 1992). After all the efforts a company makes, the consumer will make a decision about whether he or she will be satisfied with the company's response to the crisis, and will or will not trust the brand. In this research, brand trust is a "barometer" of response success. If the customer feels that the company's response to the crisis was appropriate, then they will be more likely to re-trust this brand and repurchase their products. For the company, regaining trust from the consumer means that consumers are still willing to rely on the brand (Lau and Lee, 1999), and any market share lost by the company might be recaptured (Kurzbard and Siomkos, 1992).

Past studies of crisis management have shown that there are several organizational variables which can influence consumers' inclination to respond in a certain way to product-harm crises, such as brand attitude and preference (Mowen and Ellis, 1981). Based on previous studies, the present study uses the model comprised of the four widely accepted organizational factors which influence the effectiveness of product-harm crisis management. They are:

1. Reputation;
2. Corporate Social Responsibility;
3. Organizational response (denial, involuntary recall, voluntary recall, super effort, denial first then involuntary recall, denial first then voluntary recall and denial first then super effort); and
4. Response delay.

Based on the factors discussed above, a research model was developed to illustrate the relationships between these issues (Figure 3.1). This model proposes that four factors (reputation, CSR, corporate responses and time in response) have direct impacts on brand trust rebuilding in product-harm crisis management.

When a crisis happens, corporate reputation and CSR are two company characteristics likely to influence how consumers perceive the product-harm crisis. For example, if the company has high reputation and is always socially responsible, consumers are arguably less likely to perceive a product as dangerous, and are more likely to form a positive opinion and to make a future purchase (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008). Moreover, the time span between the first

signals of potential injuries and when the company starts to react has also been found to have a strong impact on customers' perspective of the crisis management (Vassilikopoulou, Siomkos, Chatzipanagiotou and Pantouvakis, 2008; Standop, 2006). To respond to the crisis, six response strategies are chosen as the possible reactions of the troubled companies. These are illustrated in the research model (Figure 3.1)

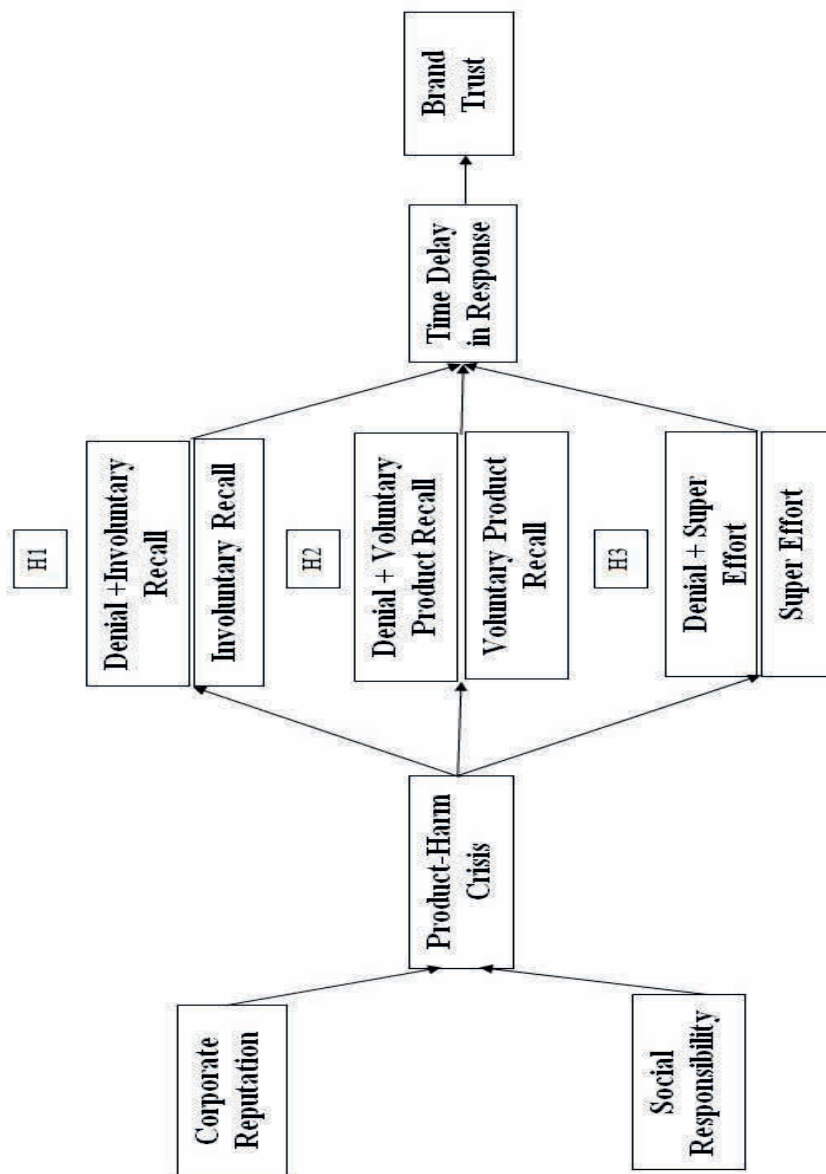


Figure 3.1 Research Model

In this research, the focus is on testing the impact of corporate response strategies on maintaining and rebuilding brand trust in a product-harm crisis. There are many scholars who have already documented that corporate reputation and corporate social responsibility have a positive impact on consumers' attitudes and perceptions during the crisis. Moreover, there are published studies that have confirmed that time is an important factor influencing crisis management. In consideration of the requirement of a master's thesis, it is thought that any extra value which might be gained from collecting data on these variables was far outweighed by the extra layers of complexity they posed. Therefore, these three factors are held constant in the current research. Summaries of the relevant literature on reputation, CSR, and time response in crisis management are outlined in Table 3.1, Table 3.2, and Table 3.3 respectively.

Reputation in Crisis Management:

Croft, S. (2003)	Good reputation helps insulate and cushion the organization/brand during a crisis (lessens lasting damage)
Jones, G., Jones, B. and Little, P. (2000)	Outstanding reputation companies may more effectively overcome product-harm crisis, as positive reputation protects the company when the crisis hits
Tucker, L. and Melewar, T.C. (2005)	If a company has a poor reputation, it will be assumed guilty of harmful allegations regardless of the legitimacy of its response
Mak, A.K. (2005)	Well known companies could more effectively overcome product-harm crisis
Morley, M. (1998)	A good reputation provides the corporation with a reservoir of good-will, from which the firm can draw in times of crisis

Siomkos, G.J. and Kurzbard, G. (1994)	The crisis effect on a well-known company with a positive image may be minimal. The effect can be devastating if the company is unknown
Siomkos, G. and Shrivastava, P. (1993)	Well-reputed companies often have an easier time regaining the confidence of customers; less reputable companies finds it very difficult to implement credible responses
Vassilikopoulou, A., Siomkos, G., Chatzipanagiotou, K. and Pantouvakis, A. (2008)	Good reputation and CSR may protect the company's image in times of crises

Table 3.1 Summary of the Relationship between Reputation and Crisis Management

CSR in Crisis Management:

Croft, S. (2003)	CSR reduces exposure to risk and accusations of irresponsible behaviour: helps cushion and vaccinate during times of crisis
Henderson, J. (2007)	Minimizes harm, promotes good causes and helps in resolving outstanding social and environmental problems
Klein, J. and Dawar, N. (2004)	Affects consumers' attributions of blame in product-harm crises. It may operate for the firm as an "insurance policy" against the negative impact of untoward events, such as product-harm crisis
Sen, S. and Bhattacharya, C.B. (2001)	A positive relationship exists between a company's CSR actions and consumers' attitudes toward that company and its product
Vassilikopoulou, A., Siomkos, G., Chatzipanagiotou, K. and Pantouvakis, A. (2008)	CSR produces a positive impact on consumers' attitudes and perceptions during crises

Table 3.2 Summary of the Relationship between CSR and Crisis Management

Time in Crisis Management:

Standop, D. (2006)	A crucial factor, as the more time elapses between the crisis and the recall, the harder is for the company to find an acceptable reason for the late recall
Vassilikopoulou, A., Siomkos, G., Chatzipanagiotou, K. and Pantouvakis, A. (2008)	The most important factor that influences consumers' attitudes towards a company that has gone through a crisis

Table 3.3 Summary of the Relationship between Time and Crisis Management

This study has proposed a research model which aims to illustrate issues involved in product-harm crisis. In particular, six strategies have been identified as potentially important in rebuilding the consumers' brand trust. In the following table (Table 3.4), the descriptions of key concepts are outlined.

Product-harm crises	Well-publicized events wherein products are found to be defective or even dangerous (Dawar and Pillutla, 2000)
Reputation	Extent to which an organization is held in high esteem or regard (Weiss, 1999). The perception of an organization based on its stakeholders' interpretation of that organization's past, present and future activities and the way in which these are communicated (Tucker and Melewar, 2005)
Corporate social responsibility	Refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of society (Bowen, 1953).

Denial	A company may simply deny their responsibility or situation or shift blame for a defective product (Miller, 2003)
Involuntary recall	Companies recall the product only after a government agency orders it to do so
Voluntary recall	Companies recall the defective product prior to governmental intervention
Super effort	Companies respond by showing great concern for customers' welfare by being honest in its communications related to the crisis. They normally aggressively control the technical damage, immediately recall the defective product, and recapture their loss rapidly (Kabak and Siomkos, 1990)
Brand trust	A consumer's willingness to rely on the brand in face of risk because of expectations that the brand will have positive outcomes (Lau and Lee, 1999)

Table 3.4 Definitions of Key Concepts and Related Terms

3.2 Hypothesis Development

In the following section, three hypotheses are developed to test the model. These hypotheses aim to evaluate three groups of harm crises response strategies (the first group of strategies is denial first then involuntary recall, and involuntary recall only; the second group is denial first then voluntary recall, and voluntary recall only; the last group is denial first then a super effort, and super effort only) with brand trust. Previous studies have identified four basic organizational responses (denial, involuntary recall, voluntary recall and super effort) (Siomkos, 1999). These strategies have been found to have different impacts on the consumer's attitude and likelihood of

future purchase (Vassilikopoulou, Siomkos, Chatzipanagiotou, and Pantouvakis, 2008). What is not known is the impact of denying a product harm crisis prior to engaging in different response strategies. In business practice, companies face complicated situations, hence more than one response strategy may be used. Ihlen (2002) believes the crisis response strategies can be combined and work in different ways.

Denial is widely used when the company thinks the crisis does not exist or wants to weaken the linkage between the crisis and the company (Coombs, 1995). In the face of a product-harm crisis, how companies respond may be viewed as evidence of the company's commitment to the brand. The crisis provides an opportunity for customers to distinguish between two types of companies: those who will try to protect their brand and those who will not (Dawar, 1998). For this research, the denial strategy is defined as denying that the product has caused injury or is potentially risky for consumers.

Although denial is seen as a narrow, defensive and selfish reaction (Simokos and Shrivastava, 1993), denial may still often be used as a response strategy, based on cost-benefit analysis. If companies see that the future has uncertain returns, denial might be the way to abandon their brand rather than make an investment to salvage the brand from the crisis (Dawar, 1998). However, if the consumer perceives that the company is working to salvage the brand, perhaps they will be more likely to continue to trust the brand.

Hypothesis 1: Denial + Involuntary Recall vs Involuntary Recall

Government regulation is one of the most important forces driving companies to conform to product manufacturing standards (Zhao, Lee, Ng and Flynn, 2009). A forced recall is one of the ways government agencies protect the public from unreasonable risk of serious injury or death from consumer products (Zhao, Lee, Ng and Flynn, 2009). Shrivastava and Siomkos (1989) indicate that denial and involuntary recall are the corporate reactions least respected by customers. However, Reilly and Hoffer (1983) speculate that consumers have different responses to a product recall; an involuntary recall is not always the worse way to recall.

Once government agencies believe the product caused injury or is potentially risky for consumers, the compulsorily involuntary recall may be put in place. It is seen as an important way for government to become involved in a consumer protection capacity. Thus, we hypothesized the following:

H1₀: The combination of denial and involuntary recall will affect brand trust no differently than a strategy of involuntary recall alone.

H1₁: The combination of denial and involuntary recall will affect brand trust more negatively than a strategy of involuntary recall alone.

Hypothesis 2: Denial + Voluntary Recall vs Voluntary Recall

Normally, if a company decides to deny its responsibility when a crisis occurs, they might be less likely to voluntary recall later. One of the reasons companies do not voluntary recall or make a super effort at this time is because denial is used as a

dilatory tactic to gain more time to investigate possible reasons for a product failure, such as conducting plant visits, interviewing employees, and testing products and equipment (Berman, 1999). Yet, voluntary recalls may still be done after this period, which reassures consumers that companies are willing to stand behind their products and brands (Davidson and Worrell, 1992). Jolly and Mowen (1984) argue that companies are perceived to be more responsible if they act before a government agency steps in and orders a response. In addition, Shrivastava and Siomkos (1989) indicate voluntary recall is more favourably perceived by customers. Thus, we hypothesized the following:

H2₀: The combination of denial and voluntary recall will affect brand trust no differently than a strategy of voluntary recall alone.

H2₁: The combination of denial and voluntary recall will affect brand trust more negatively than a strategy of voluntary recall alone.

Hypothesis 3: Denial + Super Effort vs Super Effort

Super effort means that a company invests substantially more resources into resolving its crisis communicating a very responsible image to consumers through the company's actions (Kabak and Siomkos, 1990). In the face of a crisis, companies institute a product recall to demonstrate that they are willing to stand behind their brand, even if doing so is very expensive (Dawar, 1998). If the company is willing to make a super effort, the company clearly is strongly concerned about their brand, and the well-being of customers who trusted their brand. Shrivastava and Siomkos (1989) found customers are much more likely to form a positive opinion about the company when the super effort response is used.

If the troubled company tries to make a super effort after denial, it is highly possible that consumers will think the company did not mean to deny its responsibility purposely. The strategy of denial might contradict a super effort by nature, however. In this situation, the denial strategy is used while further investigation is being conducted or when the company truly believes the crisis does not exist (Coombs, 1995). Moreover, from the customers' perspective, this response might symbolize the troubled company trying to repair the mistake.

H3₀: The combination of denial and super effort will affect brand trust no differently than a strategy of super effort alone.

H3₁: The combination of denial and super effort will affect brand trust more negatively than a strategy of super effort alone.

Chapter 4: Research Design and Survey Method

4.1 Overview

Crucial to this research is the measurement of the effect of different crisis management strategies on consumers' recovery of brand trust after a product harm crisis. A scenario analysis was conducted for this purpose, presenting product failure crises for two fictitious companies. A quantitative research method was employed and a self-administered mailed survey was used to collect data. The questionnaire was designed to test consumers' response to different crisis management strategies. This chapter describes the research design, data source, administrative procedures, sample size, criteria for sample selection, and the data analysis techniques. The survey, scenario analysis, fictitious companies' background and variables measurement are discussed in the following sections.

4.2.1 Self-Administered Mailed Survey

The mailed survey used as the main data collection instrument contained three sections. Sections One and Two described two fictitious Australian companies in the midst of different product-harm crises in detailed scenarios. In order to test respondents' reactions to different brand trust recovery strategies, six questions were designed to test the impact of each scenario. Section Three captures the descriptive demographic information.

Systematic sampling was employed to select participants from the residents of Christchurch, New Zealand. This method presented three advantages (Zikmund, 2003): (1) Geographic flexibility. The questionnaire was easily distributed to a sample representing the whole of Christchurch. (2) The study was done with a limited budget. Mailed surveys are relatively inexpensive compared to personal interviews and telephone surveys. (3) Self-administered questionnaires can be filled out whenever the respondent has time. This can increase the reliability of the data since respondents can take time to think about their replies.

4.2.2 Scenario Analysis

Companies in the product-harm crisis scenarios were designated as from Australia. Previous research found that when consumers are not familiar with a brand, country of origin can impact on consumers' blame attributions (Laufer, Gillespie and Silvera, 2009). Furthermore, country of origin does have an impact on the assessment of blame by consumers to a product-harm crisis when the information about the company is unclear (Laufer, Gillespie and Silvera, 2009). Therefore, it is important to choose a country which will minimise the response bias. Australia was chosen because its good country image would not negatively influence how respondents perceive the reputation of the fictitious company (Papadopoulos and Heslop, 1993). From the New Zealand consumer's perspective, the quality of Australian-made products is comparable to any foreign-made competitors. Elliott and Cameron (1994) noted that there is a consumer preference for Australian-made products among consumers in New Zealand.

Two fictitious brand names were developed for the scenarios. Fictitious brands / companies were used because if questionnaire respondents were asked to recall existing brands or companies from memory, they might be influenced by their previous experience or loyalty to that brand instead of being focused on the specific research issues of current interest. This might lead to response bias in the research, with respondents consciously or unconsciously misrepresenting the true view on the research question (Zikmund, 2003). By using a fictitious brand name and company, any effects due to previously acquired real-world brand knowledge were avoided (Lafferty and Goldsmith, 1999).

The main purpose of this study was to compare the impact of different strategies (both in combination with denial and without) on brand trust recovery. To accomplish this, two treatment conditions were designed into the questionnaire, with respondents exposed to one of these; one group of respondents only looked at combination strategies; another only looked at single strategies. Each group read about two fictitious Australian companies (one dairy company and one battery company) which were involved in product-harm crises (defective products). Zhao, Lee, Ng and Flynn (2009) found that consumers can have different perspectives on product-harm crises occurring in different industries. They suggested that the food industry could suffer more severe effects in product harm situations, because people ingest these products and the health consequences of food problem are potentially both serious and immediate. Tainted food poses a near universal risk. Batteries were chosen because they are a frequently used product in people's lives, an omnipresent fact of modern everyday life. These two product categories were thus chosen because of their universal consumption and therefore relevance to respondents.

4.2.3 Fictitious Companies' Backgrounds

The two fictitious Australian companies in the survey were described as having good corporate reputations, and being socially responsible. The scenarios were written such that the companies responded to their crises in the same time span, thus having the same response delay.

Company one was described as producing a rechargeable battery (Thunder Battery) of a specific model that overheats during charging and explodes as a consequence. The explosion caused a fire, and the user's house was burned down. Two people were seriously injured, and there was one death in the fire. For one group of respondents, additional information followed describing the company's act of denying responsibility for the product crisis and then describing different responses to the crisis. These same responses were included in another set of questionnaires (the single strategy ones) in which the denial part of the scenario was not included.

The following table (Table 4.1) maps the previously presented product harm crisis model to the measurement instrument developed for the current study.

Scenario One Background Information	
Good reputation	<ul style="list-style-type: none"> ● Thunder Battery is the leading manufacturer of batteries in Australia, with a significant sales volume in New Zealand. ● The company has a good reputation, and was nominated for the Certificate of Manufacturing Excellence in 2007 by Business Victoria.
Being social responsible	<ul style="list-style-type: none"> ● Thunder Battery is famous for its environmentally conscious strategies. The company donates \$1 to the Australian Government Water Fund from every sale of its rechargeable batteries. ● In 2008, Thunder Battery received a prize for its social responsibility.
Product-harm crisis	In 2009, one of the company's rechargeable batteries overheated during charging and exploded. The explosion caused a fire, and the user's house was burned down. Two people were seriously injured, and there was one death in the fire.
Treatment Group One: Combination Strategies Used	
Denial + involuntary recall	After the crisis happened, Thunder Battery quickly argued that all of its products were appropriately made and, in the newspaper, denied responsibility for the incident. Soon afterwards, the Minister for Competition Policy and Consumer Affairs in Australia declared that the material used in the specific model of the rechargeable batteries involved was defective, and forced Thunder Battery to recall all of the company's batteries of this same model wherever they were distributed.
Denial + voluntary recall	After the crisis happened, Thunder Battery quickly argued that all of its products were appropriately made and denied responsibility for the incident. Soon afterwards, though, the company discovered that the material used in the rechargeable batteries was defective, and chose to voluntarily recall all of its batteries of this same model. Thunder Battery made recall announcement in the newspaper, and required its distributors to withdraw all problem batteries from the market.
Denial + super effort	After the crisis happened, Thunder Battery quickly argued that all its products were appropriately made and denied responsibility for the incident. Soon afterwards, though, the company discovered that the material used in rechargeable battery was defective. The company recalled all of its batteries of this same model, and immediately apologised publicly, compensated the victims, and offered special price coupons for other products it made to the general public.

Treatment Group Two: Single Strategies Used	
Involuntary recall	After the crisis happened, the Minister for Competition Policy and Consumer Affairs in Australia declared that the material used in the specific model of the rechargeable batteries involved was defective, and forced Thunder Battery to recall all of the company's batteries of this same model wherever they were distributed.
Voluntary recall	After the crisis happened, the company discovered that the material used in the rechargeable batteries was defective, and chose to voluntarily recall all of its batteries of this same model. Thunder Battery made recall announcement in the newspaper, and required its distributors to withdraw all problem batteries from the shelf.
Super effort	After the crisis happened, though, the company discovered that the material used in rechargeable battery was defective. The company recalled all of its batteries of this same model, and immediately apologised publically, compensated the victims, and offered special price coupons for other products it made to the general public.

Table 4.1 Scenario of Thunder Battery

Company two (Ausmilk) was described as a best-known dairy company whose milk products were found to contain a chemical which caused the death of two children with hundreds of other children sickened. As with the first scenario, for one group of respondents, additional information followed describing the company's act of denying responsibility for the product crisis. After the incident happened, the company was said to have denied its responsibility and argued the product might have been polluted in the process of transport. Then different responses to the crisis were described. These same responses were used for another set of questionnaires where, as in the first scenario, the mention of denial was withheld (see Table 4.2).

Scenario Two Background Information	
Good reputation	One of the best-known dairy companies in Australia
Being social responsible	<ul style="list-style-type: none"> ● In 2006, the brand was voted one of the Top 10 most trusted brands in Australia. ● Ausmilk regularly supports local communities and provides free milk to 100 schools running breakfast clubs.

Product-harm crisis	In early 2009, Ausmilk's milk products were found to contain a chemical which caused the deaths of two children and left hundreds of children sickened.
Treatment Group One: Combination Strategies Used	
Denial + involuntary recall	After the incident happened, the company denied its responsibility, and argued that the product might have been polluted in the process of transportation. Soon afterwards, an official laboratory test result showed that the product was polluted by a chemical that came from the product package. The Australian government stepped in to force the company to recall all of the company's milk products.
Denial + voluntary recall	After the incident happened, the company denied its responsibility, and argued the product might have been polluted in the process of transportation. But, when Ausmilk found their products were polluted by a chemical coming from the product package, the company chose to voluntarily recall all of its products using this same package. A quick recall announcement was given on the TV, and a full refund was promised to customers.
Denial + super effort	After the incident happened, the company denied its responsibility, and argued the product might have been polluted in the process of transportation. But when the company realised its products were actually polluted by the chemical which came from the package, Ausmilk recalled all products using a similar package, and opened telephone and E-mail hotlines to respond to customer concerns. The CEO of the company gave a formal apology to the public, and donated \$200,000 to ChildFund Australia.
Treatment Group Two: Single Strategies Used	
Involuntary recall	After the incident happened, an official laboratory test result showed that the product was polluted by a chemical that came from the product package. The Australian government stepped in to force the company to recall all of the company's milk products.
Voluntary recall	After the incident happened, when Ausmilk found their products were polluted by a chemical coming from the product package, the company chose to voluntarily recall all of its products using this same package. A quick recall announcement was given on the TV, and a full refund was promised to customers.
Super effort	After the incident happened, when the company realised its products were actually polluted by the chemical which came from the package, Ausmilk recalled all products using a similar package, and opened telephone and E-mail hotlines to respond to customer concerns. The CEO of the company gave a formal apology to the public, and donated \$200,000 to ChildFund Australia.

Table 4.2 Scenario of Ausmilk

4.2.4 Measurement

The focus of this study is to test the impact of different types of corporate responses strategies on rebuilding brand trust in the event of a product-harm crisis. A measure of brand trust is therefore used to determine if a particular crisis management strategy is the preferable response when a product-harm crisis happens.

After having read the Thunder Battery or Ausmilk scenario, respondents were asked to answer several questions to measure the degree of trust they might have in a brand as a result of the crises response strategies implemented. Ease-of-response was assisted by the use of Likert scales. Items were scored on a five point scale ranging from Strongly Disagree (1) to Strongly Agree (5). When Likert scaled questions each measure some aspect of a single common factor (in this case, Brand Trust), the items can be legitimately summed (Aaker, Kumar, Day, and Lawley, 2001).

To calculate the brand trust score, six measurements were chosen to describe characteristics of brand trust. These were:

- trusting the brand to act in the best interests of the consumer,
- believing that the brand did right in responding to the product-harm crisis,
- believing that the brand is concerned with recovering brand trust,
- regarding the brand as a honest brand,
- seeing brand advertisements as accurate, and
- having a willingness to purchase the brand product in the future.

Since trust in the past logically very tightly connects with trust in the future, this research looks at both current and future-oriented aspects of brand trust within the

measurement index. From this base, a simple model was developed as follows:

$$\mathbf{BT = ABI + DR + CR + HB + AA + BF}$$

Where:

BT = Brand Trust Score

ABI = Score for Act in Best Interest

DR = Score for Did what is Right

CR = Score for Concerned with Recovering Brand Trust

HB = Score for Honest Brand

AA = Score for Advertisements as Accurate, and

BF = Score for Buy in the Future.

Measurements for ABI, CR, and AA (which were each phrased negatively in the question), were entered into the response database in their raw form and then reverse coded. Then, for each of these measures, a score / value of 1 was assigned if the respondents strongly agree, 2 if agree, 3 if neutral, 4 if disagree, and 5 if strongly disagree.

In the third section of the questionnaire, the demographic items of age, ethnicity, education, occupation, and income were measured by asking respondents to tick the box which best described themselves. In addition, respondents' attitudes toward batteries and milk, as well as their previous experience with product-harm crises were also measured. Respondents were encouraged to comment on or raise any issues concerning product harm crises by responding to an open-ended question.

4.3 Pre-Testing the Questionnaire

As the questionnaire was developed specifically for this study, pre-testing was conducted on a random sample of 30 respondents by using convenience sampling. The purpose of this pre-testing was to determine if the respondents had any difficulty understanding the questionnaire, whether there were any ambiguous or biased questions (Zikmund, 2003) or questions that they were unable to answer. The results of pre-testing revealed only minor issues, which were resolved via small editorial changes. All respondents believed the questions were straightforward, and easy to answer. The final version of the questionnaire is presented in Appendix 1 and Appendix 2.

4.4 Sampling Design

The research population in this study included all residents of Christchurch as listed in the Christchurch Telephone Book, 2009 Edition. Systematic sampling was considered the most appropriate method for this research, since it offers the advantage of ease and quickness in developing the sample (Sekaran, 2003), and it represents a true probability method, as every sampling unit has an equal chance of being chosen for the sample (Proctor, 1997).

4.4.1 Sample Size

Yamane's model was used to calculate the number of respondents necessary (EDIS, 2008). Christchurch's 2006 population of 348,485 (Statistics New Zealand Census, 2006) was used as N , and e was set at 0.05. Applying the formula gave 400 as the number of completed questionnaires needed (See Appendix 3). Schumacker and Lomax (1996) pointed out that many studies use a sample size from 250 to 500

respondents, although the greater the sample size, the better. Mailed questionnaires typically gain response rates of about 25%, to meet the target of 400 questionnaires would therefore require a mailing of 1200 questionnaires. However budgetary limitations restricted this to 900, with about 225 (900×0.25) questionnaires would be returned. Taking into consideration the research budget and the possibility of the generally low response rate (25%) for the questionnaire method (Cooper and Schindler, 1998), 900 questionnaires were sent out to gather enough questionnaires to run the analysis. Whilst not ideal, 225 respondents were considered acceptable in order to obtain reliable data.

4.4.2 Sampling Method

The list of respondents was obtained from the telephone White Pages for Christchurch (09/10). There are 573 pages listing the names and addresses of Christchurch's consumers, with around 213 listings per page. It was thus estimated that there was a total of 122,049 listings (573×213). As noted above, this study required a list of 900 respondents for sampling purposes. This meant that every 136rd listing ($122,049/900$) was drawn from the White Pages. These names and addresses were copied onto envelopes.

4.5 Data Collection

The questionnaire was sent out together with a personalised cover letter. The cover letter described the reason for conducting the research and the importance of the respondent's participation. Moreover, it also assured invitees that any and all information they provided would be confidential, that they would remain anonymous,

and that their participation was completely voluntary. In order to increase the response rate, five \$35 The Warehouse (a national variety store chain) gift cards were used as rewards to show the appreciation to respondents. If the respondents wanted to be placed in the draw for one of these rewards, they were asked to fold the original envelopes in which they received questionnaires (the one with their name and address on it) and put this and the finished questionnaire together into the return envelope, following the close of the data collection period, five respondents were randomly selected from the pool and posted The Warehouse gift card. Prepaid reply-mail envelopes were included with the surveys for respondents to return the completed surveys. Follow-up procedures (such as mailed reminder) could not conduct because of money and time limitations.

4.6 Data Analysis

The focus of this study was on testing the impact of corporate response strategies on rebuilding brand trust in a product-harm crisis. The Statistical Package for the Social Sciences (SPSS) was used for data entry as well as for examining the data. Data preparation in this stage converted the raw data into structured formats that are more appropriate for analysis. Tasks in this stage included data editing, coding, and recording in machine-useable form.

Descriptive statistics were calculated to summarize respondent's characteristics, including gender, age, ethnic background, education, occupation and income. Questions about the respondents' thoughts of battery, milk and the product-harm crisis were included. Ratios, means and standard deviations were calculated to describe the

nature and characteristics of these variables. Furthermore, the items used to measure each construct were tested for reliability by calculating the Cronbach Alpha. A value of 0.6 was chosen as the reliability cut-off point, following the suggestion of Hair, Bush and Ortinau (2000). Lastly, to test hypotheses, brand trust scores compared between each single strategy group and the associated combination strategy group by using t-tests.

Chapter 5: Results

5.1 Overview

This chapter presents the results of the analysis conducted according to the research method discussed in Chapter Four. The response rate and descriptive statistics are presented, and three hypotheses are tested.

5.2 Response Rate

Nine hundred copies of the questionnaire were sent out by mail to collect the data. There were 235 questionnaires returned; 112 responses came from people receiving scenarios in which denial is mentioned, and 108 responses came from the comparison group in which denial is not presented. However, fifteen incomplete questionnaires were returned, due either to the respondent not wanting to take part in the research, or the intended respondent was no longer living at the address on the envelope. Among those completed questionnaires, no questionnaire contained substantially incomplete sections. This resulted in a total of 220 useable responses, for a 24.4% response rate. Cooper and Schindler, (1998) pointed out that 25% is a reasonable response rate for a mail survey. As such, results from this research are considered reasonably representative of the Christchurch population by the researcher and the ability to cautiously generalize is not substantially compromised. This conclusion is explained in more detail in the next section detailing demographic characteristics.

5.3.1 Demographic Characteristics

Reported in following sections, descriptive statistics were obtained from the data by using SPSS (Version 17.0). Summaries of the characteristics of the sample are presented in the figures below.

In general, the characteristics of the sample are, in some cases, representative and, in other cases, not representative of the national statistics provided by Statistics New Zealand. The respondents were comprised of 49.5% (109) males and 48.6% (107) females. Two questionnaires were missing gender data. With respect to age, 68 participants (30.9%) were over sixty-five years old; in particular, 19.5% of participants were over 70 years. Compared with the actual population proportion number for age over 65 years (12%) (Statistics New Zealand, 2009), the proportion of 30.9% is misrepresentative (Figure 5.1). This difference might be because the older respondents presumably have more spare time to finish the questionnaires than younger respondents. Also mobile phones and the Internet play an important role, as younger people are much less likely to rely on a landline phone than before. Therefore, it is less likely that young people's contact details would in the telephone White Pages.

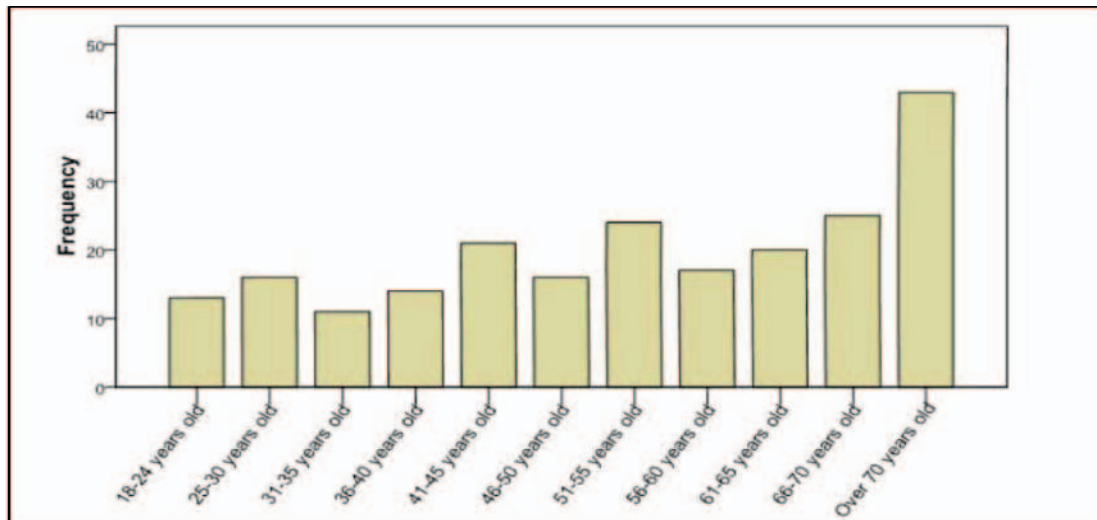


Figure 5.1: Age of respondents

One hundred and sixty-six respondents (75.5%) identified themselves as New Zealand European. There are also significant numbers of participants who identified as European (10.5%) and Asian (7.7%) (Figure 5.2). Only 0.9% of respondents identified themselves as New Zealand Maori. According to Statistics New Zealand, more than one in seven people (14.6 %) living in New Zealand in 2006 belonged to the Maori ethnic group (Statistical New Zealand, 2006). However, it also should be noted that only a small proportion of New Zealand Maori live in Canterbury area (8.1%) (Statistics New Zealand, 2001).

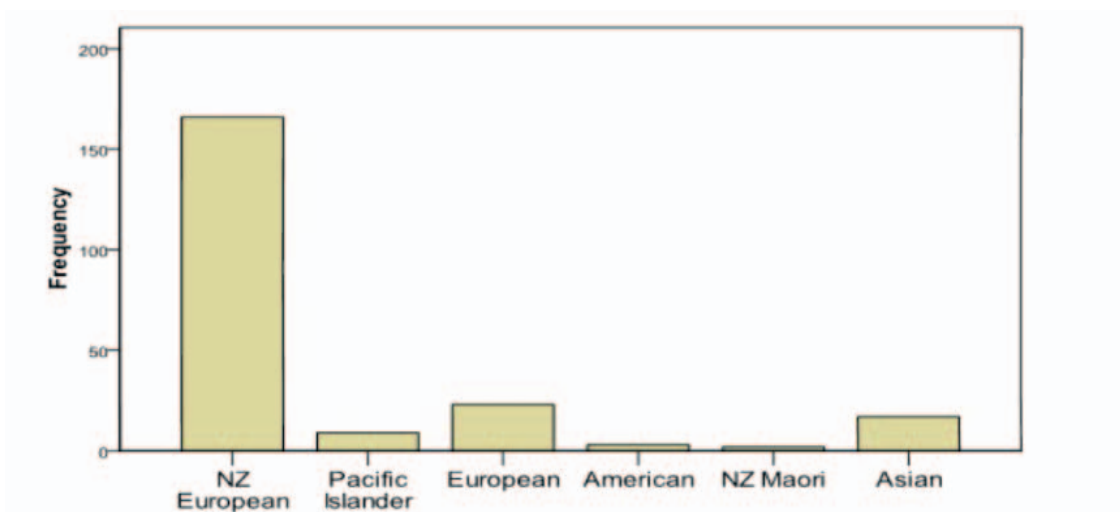


Figure 5.2: Ethnicity of respondents

Most of the respondents were well educated. In particular, 148 respondents (67.7%) hold at least a bursary (Figure 5.3), which is in line with official census information. Statistics New Zealand, in 2006 documents that 40 percent of New Zealanders aged 15 years and over held a post-school qualification (after Year 12 in New Zealand) as their highest qualification (Statistics New Zealand, 2006).

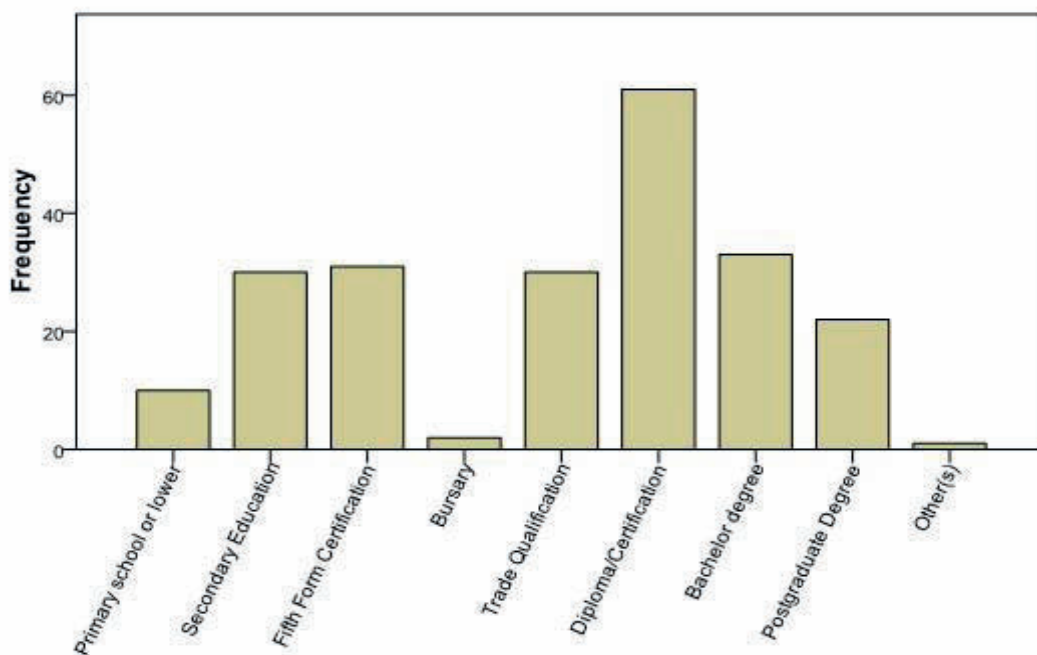


Figure 5.3: The Education Level of Respondents

Over a quarter (28.6%) of the respondents claimed their current occupational status as retired, which is consistent with the result found in question regarding to respondents' age, but it is not in line with the actual proportion for retired New Zealanders on a national basis. Roughly 30% of respondents stated their occupations belonged to the professional category (Figure 5.4).

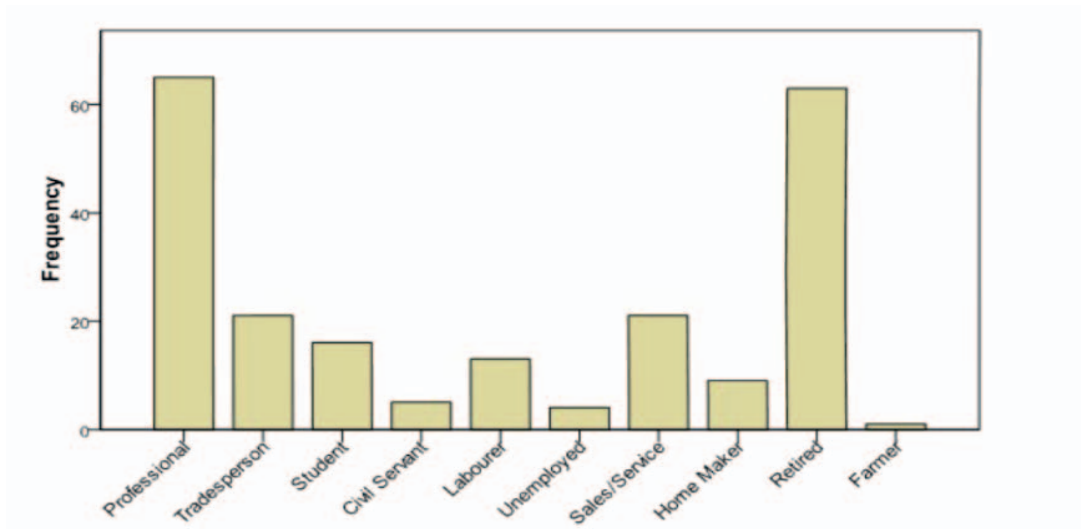


Figure 5.4: Occupation of Respondents

The results indicate that the median annual income before tax was between \$20,000 and \$49,999 (59.1%) (Figure 5.5), this result is comparable with the data released from Statistics New Zealand (2006), which shows that median weekly income for all people in New Zealand from all sources for the June 2006 quarter was \$610 (Annual income = \$610 x 52 weeks = \$31720).

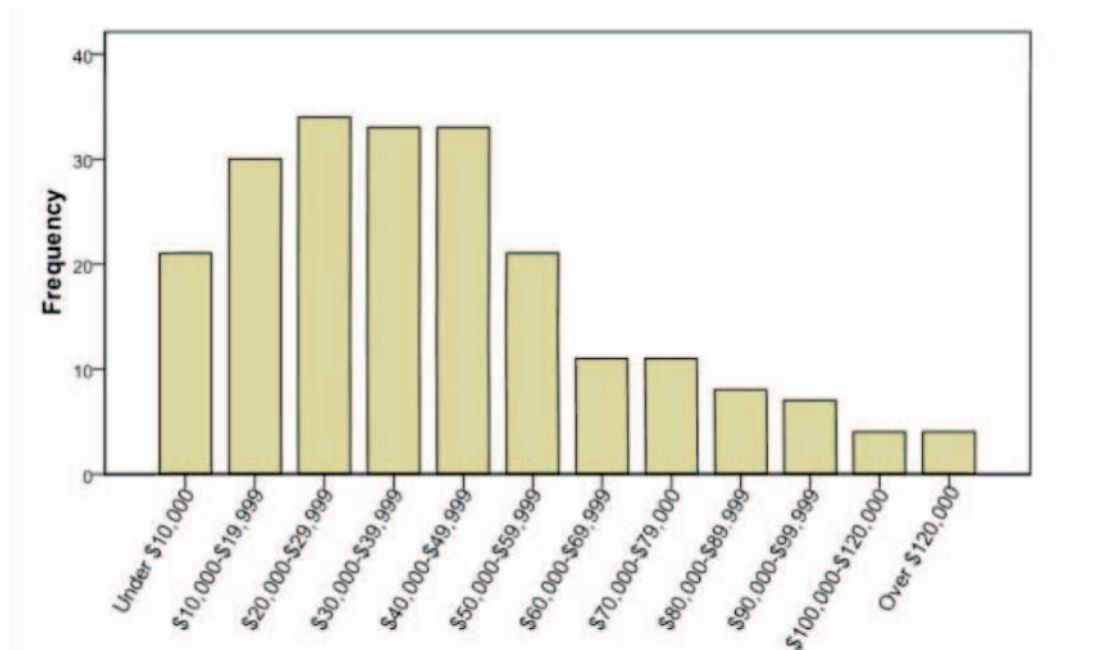


Figure 5.5: Income of Respondents

Compared with the data from Statistics New Zealand 2006 (Table 5.1), it can be seen that the demographic characteristics described in this research are largely representative, and comparable to official census information. Age and occupation are the only factors deviating substantially from the situation described by the census.

Demographic Variable	Is the Sample Similar to Population?	
	Yes	No
Gender	√	
Age		√
Ethnicity	√	
Education	√	
Occupation		√
Income	√	

Table 5.1: Sample versus Population

5.3.2 Consumer Involvement with Scenario Product Categories

Consumer's Attitude to Batteries

The battery is a common power source for many household and industrial applications. Consumer electronics energy consumption and battery consumption are projected to increase steadily for at least the coming decade as the number and variety of information and communication technologies used by consumers increase (McAllister and Farrell, 2006). In general, survey results indicate that more than half of respondents (55.9%) believe that the battery plays an important role in their day-to-day life, 72% of respondents claimed the battery is beneficial or very beneficial to them (See Table 5.2).

Important or very important to me	55.9%
Of concern or of great concern to me	49.1%
Relevant or very relevant to me	59.5%
Beneficial or very beneficial to me	72.8%
Often used or used very much	65.5%
Average percentage:	60.56%

Table 5.2: Attitudes towards Batteries

Brand Loyalty towards Batteries

Consumers ordinarily have specific expectations about the product from the brand they purchase. When their expectations are met or exceeded, loyalty to that particular brand often results (Blackwell, D’Souza, Taghian, Miniard and Engel, 2006). Yet only 20% of the respondents in this study claimed that they are loyal or very loyal to a particular battery brand. Energizer® and Eveready® were chosen as the first and the second most popular brands in the survey. The data suggest that consumers in the Canterbury area may be price sensitive. More than half (53.2%) of respondents agree or strongly agree that they prefer to buy whatever brand of batteries that are on sale.

Product-harm Crises involving a Battery

Nearly the entire sample (97.3%) had not experienced a product-harm crisis involving a battery. Only three respondents claimed batteries they used had caught fire or exploded.

Consumers' Attitude to Milk

Milk has a central position in the life of consumers. Several studies have shown that the general public is generally aware of the importance of milk and milk products (Bus and Worsley, 2003). Most respondents (73.1%) believed that milk is important or very important in their daily life, 78.6% of respondents claimed the milk is beneficial or very beneficial to them (See Table 5.3).

Important or very important to me	73.1%
Of concern or of great concern to me	66.8%
Relevant or very relevant to me	70.9%
Beneficial or very beneficial to me	78.6%
Often used or used very much	66.8%
Average percentage:	71.24%

Table 5.3: Attitudes towards Milk

Brand Loyalty towards Milk

Compared with brand loyalty to batteries, respondents seem to have greater loyalty to milk brands; 32.3% of participants claimed they are loyal or very loyal to a brand. In particular, Meadow Fresh® was chosen as the most popular. Yet, 44.6% of respondents agree or strongly agree that they are willing to buy whatever brand of milk that is on sale. Consumers seem relatively less price conscious when they purchase a milk product; this might be because consumers are more careful to choose products which they put into their bodies. Using criteria suggested by Cohen (1997), the price effect on perceived quality for consumer products is moderately large. That means, in certain circumstances, consumers believe that the brand and the price can represent the quality of products.

Product Harm Crises involving Milk

New Zealand has some of the most rigorous standards and Government enforced acts to ensure milk safety (Ministry of Consumer Affairs, 2009). This suggests why only ten respondents (1% of the sample) claimed that they had experience a product-harm crisis involving a milk product. None of the ten respondents, however, provided the details about their product-harm experience.

5.3.3 Comparison of Single Strategies

Trust may be the most important attribute any brand can own (Delgado-Ballester, 2003). In this study, a scale was developed and validated to measure the brand trust regarding different recovery strategies. Although testing the effects of single strategies is not the primary purpose for this study, a remaining question of interest is to know how these single strategies work with New Zealand consumers. To calculate the total brand trust score, all brand trust scores in each strategy in each scenario were simply added together. These sums are shown in Table 5.4. These results indicate that the super effort strategy has the highest brand trust scores in both scenarios (2637 and 2469). They were followed by the strategy of voluntarily recall (2363 and 2084). Lastly, the strategy of involuntarily recall has the lowest brand trust scales among these three single strategies.

Single Strategies	
Battery - Involuntarily recall	1846
Milk - Involuntarily recall	1429
Battery - Voluntarily recall	2363
Milk - Voluntarily recall	2084
Battery - Super effort	2637
Milk - Super effort	2469
Total number of respondents: 108	

Table 5.4: Comparison of overall Brand Trust Scores between Single Strategies

5.4 Normality and Reliability of the Construct Measures

Screening continuous variables for normality is an important early step in almost every analysis (Tabachnick and Fidell, 2007). A normal probability plot was adopted to examine the normality of the distribution of all dependant variables. The result indicates the distribution is normal as the lines representing the actual data distribution closely follow the straight diagonal distribution line. All the data were subjected to the tests of normality and all conformed to the assumption.

All six items used to measure the brand trust were tested for reliability by using Cronbach Alpha. A value of 0.60 was used as the minimal cut-off point, which is widely accepted for assessing the reliability of measurement scales (Churchill, 1979). All scores were substantially above this threshold. It can therefore be concluded that these constructs demonstrated strong reliability for this study. These coefficients are as shown in Table 5.5.

Scenarios and Strategies	Cronbach's Alpha
Battery and Involuntary recall	0.859
Battery and Voluntary recall	0.830
Battery and Super effort	0.831
Milk and Involuntary recall	0.913
Milk and Voluntary recall	0.884
Milk and Super effort	0.834
Battery and Denial + Involuntary recall	0.816
Battery and Denial + Voluntary recall	0.832
Battery and Denial + Super effort	0.806
Milk and Denial + Involuntary recall	0.863
Milk and Denial + Voluntary recall	0.862
Milk and Denial + Super effort	0.837

Table 5.5: Reliability Tests for Strategies in Each Scenario

5.5 Results Relating to the Hypotheses Tests

This research aims to measure the effect of different crisis management strategies on consumers' brand trust recovery. Three main hypotheses have been generated to compare the effect of combination response strategies and single strategies. The key difference between these two kinds of strategies is that in the combination strategies, denial is adopted as the first reaction before a second strategy is adopted (involuntary recall, voluntary recall, or super effort). In the following section, detailed results of these hypotheses tests are presented.

5.5.1 Hypothesis One

If the denial precedes an involuntarily recall, the common link is that each component of this response strategy makes it clear that the company does not want to take any responsibility for the crisis.

The involuntarily recall is explained as the “back-up” strategy of denial. To examine the effect of this combination strategy, hypotheses were constructed as follows:

H1₀: The combination of denial and involuntary recall will affect brand trust no differently than a strategy of involuntary recall alone.

H1₁: The combination of denial and involuntary recall will affect brand trust more negatively than a strategy of involuntary recall alone.

T-tests were conducted in both scenarios (battery and milk), and the results (Table 5.6) indicate the t value in the scenario of battery ($t=5.081$, $d.f.=218$) is greater than the critical value ($t=1.645$) at 0.05 significance level; moreover, the t value (Table 5.7) in the scenario of milk ($t=3.513$, $d.f.=218$) is also greater than the critical value. Therefore, we reject the null hypothesis and conclude that the combination of denial and involuntary recall will affect brand trust more negatively than a strategy of involuntary recall alone. Hence, the strategy of denial produces less satisfactory outcomes when the troubled company adopts it before they involuntarily recall the product.

Table 5.6: T-test result: Brand Trust in Scenario of Battery (Involuntary Recall)

Group Statistics					
Strategies	N	Mean	Std. Deviation	Std. Error Mean	
BTSscenario1 Single Strategies	108	17.09	5.965	.574	
Combination Strategies	112	13.31	5.046	.477	

Independent Samples Test									
Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
BTSscenario1 Equal variances assumed	2.861	.092	5.081	218	.000	3.780	.744	2.314	5.246
Equal variances not assumed			5.066	209.469	.000	3.780	.746	2.309	5.251

Table 5.7: T-test result: Brand Trust in Scenario of Milk (Involuntary Recall)

Group Statistics					
Strategies	N	Mean	Std. Deviation	Std. Error Mean	
BTSscenario6 Single Strategies	108	13.23	6.740	.649	
Combination Strategies	112	10.39	5.166	.488	

Independent Samples Test

		Levene's Test for Equality of Variances				t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
BTSscenario6	Equal variances assumed	10.343	.001	3.513	218	.001	2.839	.808	1.246	4.431	
	Equal variances not assumed			3.497	200.535	.001	2.839	.812	1.238	4.439	

5.5.2 Hypothesis Two

Most recalls are voluntary (Berman, 1999), which not only protects the public, but also protects the reputation of the company. One possible reason for companies first denying a problem then voluntarily recalling the product involved is that the strategy of denial is used as a dilatory, or stalling, tactic to gain more time to investigate (Berman, 1999). To examine the effect of this combination strategy, hypotheses are constructed as follows:

H2₀: The combination of denial and voluntary recall will affect brand trust no differently than a strategy of voluntary recall alone.

H2₁: The combination of denial and voluntary recall will affect brand trust more negatively than a strategy of voluntary recall alone.

The result (Table 5.8) indicates the t value in the scenario of battery ($t=3.065$, $d.f.=218$) is greater than the critical value ($t=1.645$) at 0.05 significance level. However, the t value (Table 5.9) in the scenario of milk ($t=1.574$, $d.f.=218$) is smaller than the critical value ($t=1.645$). Therefore, in the battery scenario, the null hypothesis is rejected and we conclude that the combination of denial and voluntary recall will affect brand trust more negatively than a strategy of voluntary recall alone. But, in the scenario of milk, we do not have evidence to reject the null hypothesis.

Table 5.8: T-test result: Brand Trust in Battery Scenario (Voluntary Recall)

Group Statistics					
Strategies	N	Mean	Std. Deviation	Std. Error Mean	
BTScenario3 Single Strategies	108	21.88	4.950	.476	
Combination Strategies	112	19.77	5.259	.497	

Independent Samples Test									
Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
BTScenario3 Equal variances assumed	.214	.644	3.065	218	.002	2.112	.689	.754	3.470
Equal variances not assumed			3.068	217.874	.002	2.112	.688	.755	3.468

Table 5.9: T-test result: Brand Trust in Milk Scenario (Voluntary Recall)

Group Statistics					
Strategies	N	Mean	Std. Deviation	Std. Error Mean	
BTSscenario5 Single Strategies	108	19.30	5.527	.532	
Combination Strategies	112	18.14	5.342	.505	

Independent Samples Test									
Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
BTSscenario5 Equal variances assumed	.167	.683	1.574	218	.117	1.153	.733	-.291	2.598
Equal variances not assumed			1.573	216.922	.117	1.153	.733	-.292	2.599

5.5.3 Hypothesis Three

Super effort exhibits primary concern for customer welfare rather than saving company resources (Siomkos and Shrivastava, 1993). It seems to be the opposite to the strategy of denial. But in practice, the denial strategy can be used first while further investigation is being conducted, and then the strategy of super effort symbolizes that the troubled company trying to correct its mistake. To examine the effect of this combination strategy, hypotheses were constructed as follows:

H3₀: The combination of denial and super effort will affect brand trust no differently than a strategy of super effort alone.

H3₁: The combination of denial and super effort will affect brand trust more negatively than a strategy of super effort alone.

In the scenario of the battery (Table 5.10), the t value ($t=4.192$) is greater than the critical value ($t=1.645$) at 0.05 significance level. Furthermore, the t value (Table 5.11) in the scenario of milk ($t=3.222$) is also greater than the critical value. Therefore, the null hypothesis is rejected, suggesting that the combination of denial and super effort will affect brand trust more negatively than a strategy of super effort alone. In other words, denial should not be adopted as a brand trust recovery strategy before adopting the strategy of super effort.

Table 5.10: T-test result: Brand Trust in Battery Scenario (Super Effort)

Group Statistics					
Strategies	N	Mean	Std. Deviation	Std. Error Mean	
BTSscenario2 Single Strategies	108	24.42	4.531	.436	
Combination Strategies	112	21.74	4.919	.465	

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
BTSscenario2 Equal variances assumed	.612	.435	4.192	218	.000	2.676	.638	1.418	3.933	
Equal variances not assumed			4.199	217.548	.000	2.676	.637	1.420	3.932	

Table 5.11: T-test result: Brand Trust in Milk Scenario (Super Effort)

Group Statistics						
Strateqies	N	Mean	Std. Deviation	Std. Error Mean		
BTSscenario4 Single Strategies	108	22.86	4.741	.456		
Combination Strategies	112	20.68	5.282	.499		

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
BTSscenario4 Equal variances assumed	.357	.551	3.222	218	.001	2.183	.677	.847	3.518
Equal variances not assumed			3.228	216.899	.001	2.183	.676	.850	3.515

5.6 Chapter Summary

In this chapter, analysis results were outlined. The nature of mailed surveys and the limited research budget provide a reasonable explanation for the relatively modest response rate (24.4%) of the study. The demographic characteristics described in this research are largely representative of the New Zealand population, and in line with official census information. Hypotheses examining the impact of denial on brand trust recovery were presented. Results indicate the majority of arguments have been supported. The summary of hypotheses results is outlined in Table 5.12.

	Hypothesis	Significance ($\alpha = 0.05$)	Result
H ₀ (1) - battery	The combination of denial and involuntary recall will affect brand trust no differently than a strategy of involuntary recall alone.	Significant	Reject H ₀ (1)
H ₀ (1) - milk		Significant	Reject H ₀ (1)
H ₀ (2) - battery	The combination of denial and voluntary recall will affect brand trust no differently than a strategy of voluntary recall alone.	Significant	Reject H ₀ (2)
H ₀ (2) - milk		Not Significant	Cannot reject H ₀ (2)
H ₀ (3)- battery	The combination of denial and super effort will affect brand trust no differently than a strategy of super effort alone.	Significant	Reject H ₀ (3)
H ₀ (3)- milk		Significant	Reject H ₀ (3)

Table 5.12: Summary of Hypotheses Results

Chapter 6: Discussion

6.1 Overview

In the previous chapter, results of hypotheses testing documented the effect of denial in different product harm scenarios. This chapter will discuss the research findings further. Managerial implications and recommendations are also presented. In addition, limitations of the research and future research opportunities related to product harm crises management are outlined.

6.2 Research Findings

There are many scholars who have already documented that corporate reputation and corporate social responsibility have a positive impact on consumers' attitudes and perceptions during the crisis. In addition, there are published studies that have confirmed that time is an important factor influencing crisis management. Therefore, the main contribution of this study is on testing the impact of corporate response strategies on rebuilding brand trust in a product-harm crisis.

6.2.1 Denial and Involuntary Recall

Involuntary recalls occur when the company takes action only after a regulatory agency orders it to do so (Kabak and Siomkos, 1990). It is reasonable to expect that

consumers may become upset when the government feels compelled to require action to protect consumers' safety. In addition, denial and a forced recall would likely lead consumers to believe the company does not care about them (Laufer and Coombs, 2006). The result from Table 5.4 confirms this point of view; the brand trust score associated with involuntary recall is lower than the brand trust scores of each of the other two response strategies (voluntary recall and super effort). Brand trust is a feeling of security held by the consumer in his/her interaction with the brand (Delgado-Ballester, 2003). If the company unilaterally violates the security of the interaction, and chooses the strategies of denial or involuntarily recall, the consumer might not see the brand or company as reliable and responsible for the customer's and welfare.

The result from the testing of Hypothesis 1 clearly reveals that the combination of denial and involuntary recall will affect brand trust more negatively than a strategy of involuntary recall alone. Further, involuntary recall may consequently further erode a company's brand trust. Beyond harm to the public, such crises clearly carry risks to the company and its products. Adopting the strategy of denial before the involuntary recall will only makes the situation worse. This suggests that if the company is still concerned about the erosion of brand trust, the strategy of denial should not be adopted in situations where an involuntary recall is likely.

6.2.2 Denial and Voluntary Recall

Voluntary recall is the most common response to product harm crises (Laufer and Coombs, 2006). The public normally perceives recalls as an indicator of an industries' lax attitude toward quality control (Skees, Aleta and Kimberley, 2001). However,

compared with involuntary recall, voluntary recall usually appears to be carried out in the interest of public health and safety by responsible companies (Kramer, Coto and Weidner, 2005).

This study tested the combination strategy (denial first, then voluntary recall) in both scenarios, but found different results. When the product-harm crisis happens with a battery, the result indicates that adopting denial in the combination strategy would have a negative influence on brand trust. However, in the scenario for milk, the statistical analysis shows that there is no evidence to support the contention that the combination of denial and voluntary recall will affect brand trust more negatively. The effect of denial appears to be insignificant in shaping perceptions of brand trust. This result is quite unexpected. This may suggest that to some consumers, denial may be seen as a reasonable response for a firm when the causes of the product harm incident were initially unknown. At least from this test, a firm's denial first then taking up of voluntary recall when more crisis cause information is available could be a reasonable combination of crisis responses; at least this combination approach did not produce worse results than the single strategy of voluntary recall as the first response. From the reputation management point of view, "denial first, then voluntary recall" could potentially reduce the impact of the negative publicity on the company's reputation.

This result might also demonstrate that consumers react more severely when the crisis happen with food, rather than non-food. Once products companies have a food related product harm crisis, although they voluntary recall the defective products afterwards, consumers may struggle to trust the brand again regardless of whatever actions processed the recall. Another possible reason for the finding is because the respondents

in Christchurch potentially more connected to agriculture or the dairy industry, especially when nearly 31% of participants are over 65 years old. The dairy industry is a very important part of New Zealand's economy, and Canterbury is the South Island's largest dairying region (Statistics New Zealand, 2010). If the participant is connected to the dairy industry, they may be more likely to hold the company accountable when the crisis happens, and try to protect the reputation of whole dairy industry. Therefore, when the product-harm crisis happens with the milk, the result indicates that immediately accepting responsibility is not going to help a company when it comes to brand trust.

6.2.3 Denial and Super Effort

The super effort strategy exhibits primary concern for customer welfare rather than preserving company resources (Siomkos and Shrivastava, 1993), which is an even more vigorous response. It signals additional concern to the public by providing compensation and increasing communication efforts beyond what is required by law (Laufer and Coombs, 2006).

The result from both scenarios indicates that denial can affect the outcomes of super efforts more negatively than using the super effort alone. Brand trust would be negatively influenced if the company decided to deny its responsibility first. This suggests adopting only super effort as a response is more conducive to minimizing and recovering from brand trust damage. Table 5.4 suggests that the strategy of super effort has the highest brand trust score in both scenarios. The strategy of super effort may help preserve brand trust over the other strategies, but this benefit is mitigated by the strategy of denial.

6.2.4 Denial

Previous research has shown that in a product-harm crisis, denial is detrimental to both low and high reputation companies (Jolly and Mowen, 1984). More specifically, consumer attitudes can deteriorate, and consumers appear less willing to buy a new product developed to replace the defective one (Kabak and Siomkos, 1991). This seems to be because consumers no longer trust the brand and the product quality which is represented by it. Denial should only be used to correct a misunderstanding regarding culpability, and company management must be able to demonstrate that using the product causes no actual harm (Laufer and Coombs, 2006). In reality, companies cannot prevent mistakes, but they can avoid making wrong decisions. Product-harm crises may be a company's worst nightmare, but company response beyond simple denial appears to be a critical component of recovery.

Siomkos and Kurzbard (1994) believe that troubled companies should avoid denying their responsibility for a crisis incident. In general, the findings of this research support that companies in product-harm crises should avoid denying responsibility before they adopt any other recovery strategy. Almost all results have confirmed that the strategy of denial negatively affects the other three product harm crises recovery strategies.

6.3 Food products and Industrial Products

Consistent with previous studies, results revealed that companies in the food industry experienced more severe reactions after a crisis happens, while companies producing industrial products experienced less severe reactions. In the area of food, safety seems

to be of extreme importance for customer's decisions. Consumers' primary motivation in purchasing food products may more often be to avoid mistakes rather than to maximize utility (Tuu and Olsen, 2009). Compared with other crises, product-harm crises in the food industry are just about the worst situation (Kumar and Budin, 2006) possible. Consumers' emotions can be very intense when the crisis happens. This study suggests that respondents may be more loyal to food brands than to industrial products brands. Consumers may feel betrayed and may never purchase another product of the same brand or any other made by the same company, which can cause great damage to the company in both the short and long-terms.

6.4 Managerial Implications

This study had the intention to provide guidelines for effective crisis management operations, rather than to simply determine a course of action. The findings of this study may assist companies in choosing the right response strategy when a product harm crisis happens in New Zealand. As noted earlier, results of this study suggest that denial negatively affects the three other product harm crises recovery strategies. Hence, changes to management practice which may facilitate implementation are developed and presented as follows:

1. In general, if the troubled company is not willing to risk sacrificing their reputation and brand trust, they should not deny its responsibility for the harmful effects of the defective product. Denial appears to only make the situation worse.
2. Every crisis management situation is subtly different. However, the results presented in Table 5.4 shows that more aggressive the strategy, the higher the

brand trust scores. Putting aside the issue of cost efficacy, doing a super effort seems to be the best brand trust recovery strategy. It is important to note that a super effort may be able to harm a company when it is viewed as an overreaction.

3. Product harm crises in the food industry are usually associated with illness and injury. Therefore, a troubled company in the food industry should take more aggressive and immediate actions regarding a recall, and provide a generous all-out effort to provide relief for the victims. As the brand trust score shows in Table 5.4, the more effort companies put in, the better brand trust score they will regain.
4. The product harm crisis should not be viewed as the “end of the world”. It is an opportunity to prove that the troubled company is indeed honest, concerned with consumer welfare, and is socially responsible.

6.5 Research Limitations and Future Research

This study provides a number of contributions and has implications for further marketing research in product harm crises management. There are also limitations associated with this study, some of which present prospective research opportunities.

First, 30.9% of participants are over sixty-five years of age. The lack of information input from other age groups may have compromised the representativeness of the sample. Due to the limited research budget, it was not possible to increase the number of questionnaires mailed out, nor to engage in extensive follow-up requests to increase the size of the sample. In order to reach other age groups, instead of only conducting a mail survey, other data collection methods, such as convenience sampling or telephone

surveys, can be used as part of the data collection procedure. Such methods, however, would include the potential cost of an even less representative sample.

Second, the sample was drawn from the Christchurch population in New Zealand, thus it limits the generalisability of the research. Future research may consider replication of this research with a larger, more representative by drawing a sample from the whole country. Controlling for subculture within this population might provide interesting results, as would extending the study to compare across cultures.

Third, this research has suggested that the combination of denial and other recovery strategies will affect brand trust more negatively than strategies avoiding denial alone. Therefore, it would be interesting to explore other combination strategies, for example, the troubled company may involuntary recall first, then implement a super effort. In addition, a comparative study using this research frame between two combination strategies is worthy of exploring.

As the nature of individual industries varies, consumers' reactions may vary accordingly. For example, the food industry may experience a more severe reaction in the product-harm crises than clothing or body-care (i.e., perfume, deodorants, or other "beauty" items industries). Therefore, further cross-industry event studies may provide further research opportunities which could produce interesting and useful results.

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Appendix 1

Research Questionnaire One

An Empirical Study of Consumers' Response to Product-harm Crises in New Zealand

Dear Sir/Madam

My name is Zhou Shang (Joe) and I am a master's student at Lincoln University in Christchurch. You are invited to participate in a survey that is a part of my thesis. The purpose of the research is to assess New Zealand consumers' response to different crises management strategies. To ensure this research meets ethical standards, this research has been reviewed and approved by the Lincoln University Human Ethics Committee.

You have been randomly selected from the Christchurch population by using the telephone book. Your participation is **completely voluntary** and **the data will only be reported in aggregate form, so individuals cannot be identified**. The questionnaire is anonymous, it will be used only for the purposes of this research. The success of this research really does depend upon receiving a good response rate and a thoughtful response from you.

To avoid the effect of nationalism and response bias, two fictitious Australian companies are described in the survey. Each company is faced with different choices regarding a product-harm crisis. Please read each description first, and then complete all questions as per the instructions. This survey will require approximately 10 to 15 minutes. If you are 18 years or above, I would be extremely grateful if you would complete the questionnaire and return it in the pre-paid, self-addressed envelope. It needs to reach me by the 6th of November, so a prompt response would be appreciated.

To show my appreciation for your time and co-operation, five respondents will be randomly selected by my supervisors and I, and each of these will be sent a \$35 gift card from The Warehouse. If you would like to be placed in the draw for this reward, please fold the original envelope which you received (the one with your name and address on it) and put this and the finished questionnaire together into the return envelope.

If you have any questions about this survey, please contact me on **(03)3253838-8096**, or by Email at **Zhou.Shang@lincolnuni.ac.nz**.

Best Regards,

Zhou Shang. (Mr)
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Lincoln University 7647
Christchurch, New Zealand.

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This questionnaire contains three sections, each asking for your opinions on the company's responses to the product-harm crisis. Please respond to all of the statements in the relevant section.

SECTION ONE:

Please read the fictitious story about a battery company facing choices on how to respond to a product-harm crisis. Then please **circle** the number which most accurately reflects how strongly you agree or disagree with each statement.

Thunder Battery is the leading manufacturer of batteries in Australia, with a significant sales volume in New Zealand. Its products include rechargeable batteries, and alkaline batteries. The company has a good reputation, and was nominated for the Certificate of Manufacturing Excellence in 2007 by Business Victoria. Thunder Battery is famous for its environmentally conscious strategies. The company donates \$1 to the Australian Government Water Fund from every sale of its rechargeable batteries. In 2008, Thunder Battery received a prize for its social responsibility. Unfortunately, in 2009, one of the company's rechargeable batteries overheated during charging and exploded. The explosion caused a fire, and the user's house was burned down. Two people were seriously injured, and there was one death in the fire.

Possible Response Strategy 1 (Involuntary Recall):

After the crisis happened, the Minister for Competition Policy and Consumer Affairs in Australia declared that the material used in the specific model of the rechargeable batteries involved was defective and **forced Thunder Battery to recall** all of the company's batteries of this same model wherever they were distributed.

	Strongly Agree		Strongly Disagree		
1.1 In the future, I would not trust Thunder Battery to act in the best interests of the consumer.	1	2	3	4	5
1.2 Thunder Battery generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
1.3 Thunder Battery is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
1.4 I think that consumers will still regard Thunder Battery as an honest brand, and trust it.	1	2	3	4	5
1.5 If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.	1	2	3	4	5
1.6 If I were a consumer in this market, I would buy a Thunder Battery product in the future.	1	2	3	4	5

Possible Response Strategy 2 (Super Effort):

After the product harm crisis happened, Thunder Battery discovered that the material used in rechargeable battery was defective. **The company recalled all of its batteries of this same model, and immediately apologised publically, compensated the victims, and offered special price coupons for other products it made to the general public.**

	Strongly Agree					Strongly Disagree
2.1	In the future, I would not trust Thunder Battery to act in the best interests of the consumer.					5
2.2	Thunder Battery generally did what is right in how they responded to the product-harm crisis.					5
2.3	Thunder Battery is not concerned with recovering their consumers' trust in the brand.					5
2.4	I think that consumers will still regard Thunder Battery as an honest brand, and trust it.					5
2.5	If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.					5
2.6	If I were a consumer in this market, I would buy a Thunder Battery product in the future.					5

Possible Response Strategy 3 (Voluntary Recall):

After the product harm crisis happened, Thunder Battery discovered that the material used in the rechargeable batteries was defective, and **chose to voluntarily recall all of its batteries of this same model. Thunder Battery made recall announcement in the newspaper, and required its distributors to withdraw all problem batteries from the shelf.**

	Strongly Agree					Strongly Disagree
3.1	In the future, I would not trust Thunder Battery to act in the best interests of the consumer.					5
3.2	Thunder Battery generally did what is right in how they responded to the product-harm crisis.					5
3.3	Thunder Battery is not concerned with recovering their consumers' trust in the brand.					5
3.4	I think that consumers will still regard Thunder Battery as an honest brand, and trust it.					5
3.5	If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.					5
3.6	If I were a consumer in this market, I would buy a Thunder Battery product in the future.					5

SECTION TWO

This section is about your thoughts regarding the second scenario. Please read the fictitious story about a dairy company first, and then please **circle** the number which most accurately reflects how strongly you agree or disagree with each statement.

Ausmilk is one of the best-known dairy companies in Australia. It has been seen as a socially responsible company by Australian customers for 75 years. In 2006, the brand was voted one of the Top 10 most trusted brands in Australia. Ausmilk regularly supports local communities and provides free milk to 100 schools running breakfast clubs. But, in early 2009, Ausmilk’s milk products were found to contain a chemical which caused the deaths of two children and left hundreds of children sickened.

Possible Response Strategy 1 (Super Effort):

After the incident happened, the company realised its products were actually polluted by the chemical which came from the package, **Ausmilk recalled all products using a similar package, and opened telephone and E-mail hotlines to respond to customer concerns. The CEO of the company gave a formal apology to the public and donated \$200,000 to Child Fund Australia.**

	Strongly Agree				Strongly Disagree
4.1 In the future, I would not trust Ausmilk to act in the best interests of the consumer.	1	2	3	4	5
4.2 Ausmilk generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
4.3 Ausmilk is not concerned with recovering their consumers’ trust in the brand.	1	2	3	4	5
4.4 I think that consumers will still regard Ausmilk as an honest brand, and trust it.	1	2	3	4	5
4.5 If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.	1	2	3	4	5
4.6 If I were a consumer in this market, I would buy an Ausmilk product in the future.	1	2	3	4	5

Possible Response Strategy 2 (Voluntary Recall):

After the incident happened, when Ausmilk found their products were polluted by a chemical coming from the product package, **the company chose to voluntarily recall all of its products using this same package. A quick recall announcement was given on the TV, and a full refund was promised to customers.**

	Strongly Agree			Strongly Disagree		
5.1	In the future, I would not trust Ausmilk to act in the best interests of the consumer.					
5.2	Ausmilk generally did what is right in how they responded to the product-harm crisis.					
5.3	Ausmilk is not concerned with recovering their consumers' trust in the brand.					
5.4	I think that consumers will still regard Ausmilk as an honest brand, and trust it.					
5.5	If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.					
5.6	If I were a consumer in this market, I would buy an Ausmilk product in the future.					

Possible Response Strategy 3 (Involuntary Recall):

After the incident happened, an official laboratory test result showed that the product was polluted by a chemical that came from the product package. **The Australian government stepped in to force the company to recall all of the company's milk products.**

	Strongly Agree			Strongly Disagree		
6.1	In the future, I would not trust Ausmilk to act in the best interests of the consumer.					
6.2	Ausmilk generally did what is right in how they responded to the product-harm crisis.					
6.3	Ausmilk is not concerned with recovering their consumers' trust in the brand.					
6.4	I think that consumers will still regard Ausmilk as an honest brand, and trust it.					
6.5	If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.					
6.6	If I were a consumer in this market, I would buy an Ausmilk product in the future.					

SECTION THREE

Please kindly provide the following general information by ticking (✓) the appropriate box, or by circling the number.

- 1 What is your gender?
 Male Female
- 2 What is your age group?
 Under 18 years old 36-40 years old 56-60 years old
 18-24 years old 41-45 years old 61-65 years old
 25-30 years old 46-50 years old 66-70 years old
 31-35 years old 51-55 years old Over 70 years old
- 3 What is your ethnic background?
 NZ European Pacific Islander European American
 NZ Maori Asian Other _____
- 4 Which is the highest level of education you have completed?
 Primary school or lower Secondary Education
 Fifth Form Certification Bursary
 Trade Qualification Diploma/Certification
 Bachelor degree Postgraduate Degree
 Other(s) please specify _____
- 5 What is your occupation?
 Professional Tradesperson Student
 Civil Servant Labourer Unemployed
 Sales/Service Home Maker Retire
 Farmer Other(s) please specify _____
- 6 What is your personal annual income before tax? (New Zealand dollars in the last year)
 Under \$10000 \$40,000-\$49,999 \$80,000-\$89,999
 \$10,000-\$19,999 \$50,000-\$59,999 \$90,000-\$99,999
 \$20,000-\$29,999 \$60,000-\$69,999 \$100,000-\$120,000
 \$30,000-\$39,999 \$70,000-\$79,000 Over \$120,000
- 7 Please circle the number closest to the end of the scale which most closely describes how you use, feel, or think about batteries in your day-to-day life:
- | | | | | | | |
|---------------------|---|---|---|---|---|------------------------|
| Unimportant | 1 | 2 | 3 | 4 | 5 | Very important |
| Of no concern to me | 1 | 2 | 3 | 4 | 5 | Of great concern to me |
| Irrelevant | 1 | 2 | 3 | 4 | 5 | Very relevant |
| Not beneficial | 1 | 2 | 3 | 4 | 5 | Very beneficial |
| Used very little | 1 | 2 | 3 | 4 | 5 | Used very much |
- 8 To what degree do you consider yourself to be loyal to a single brand of batteries?
- | | | | | | | |
|------------------|---|---|---|---|---|------------|
| Not at all loyal | 1 | 2 | 3 | 4 | 5 | Very loyal |
|------------------|---|---|---|---|---|------------|

9 If you consider yourself loyal to one brand of batteries, what is that brand?

10 I usually buy whatever brand of batteries that are on sale.

Disagree 1 2 3 4 5 Agree

11 Have you ever experienced a product-harm crisis involving a battery?

Yes No

12 If yes, please briefly explain

13 Please circle the number closest to the end of the scale which most closely describes how you use, feel, or think about milk in your day-to-day life:

Unimportant	1	2	3	4	5	Very important
Of no concern to me	1	2	3	4	5	Of great concern to me
Irrelevant	1	2	3	4	5	Very relevant
Not beneficial	1	2	3	4	5	Very beneficial
Used very little	1	2	3	4	5	Used very much

14 To what degree do you consider yourself to be loyal to a single brand of milk?

Not at all loyal 1 2 3 4 5 Very loyal

15 If you consider yourself loyal to one brand of milk, what is that brand?

16 I usually buy whatever brand of milk that is on sale

Disagree 1 2 3 4 5 Agree

17 Have you ever experienced a product-harm crisis involving a milk product?

Yes No

18 If yes, please briefly explain

19 Do you have any other thoughts about product-harm crises? If you do, please clarify.

**THE END! THANK YOU VERY MUCH FOR YOUR HELP IN THIS RESEARCH.
PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED PREPAID
ENVELOPE BY THE 6th OF NOVEMBER.**

Appendix 2
Research Questionnaire Two

This questionnaire contains three sections, each asking for your opinions on the company's responses to the product-harm crisis. Please respond to all of the statements in the relevant section.

SECTION ONE:

Please read the fictitious story about a battery company facing choices on how to respond to a product-harm crisis. Then please **circle** the number which most accurately reflects how strongly you agree or disagree with each statement.

Thunder Battery is the leading manufacturer of batteries in Australia, with a significant sales volume in New Zealand. Its products include rechargeable batteries, and alkaline batteries. The company has a good reputation, and was nominated for the Certificate of Manufacturing Excellence in 2007 by Business Victoria. Thunder Battery is famous for its environmentally conscious strategies. The company donates \$1 to the Australian Government Water Fund from every sale of its rechargeable batteries. In 2008, Thunder Battery received a prize for its social responsibility. Unfortunately, in 2009, one of the company's rechargeable batteries overheated during charging and exploded. The explosion caused a fire, and the user's house was burned down. Two people were seriously injured, and there was one death in the fire.

Possible Response Strategy 1 (Denial & Involuntary Recall):

After the crisis happened, Thunder Battery **quickly** argued that all of its products were appropriately made and, in the newspaper, **denied responsibility** for the incident. Soon afterwards, the Minister for Competition Policy and Consumer Affairs in Australia declared that the material used in the specific model of the rechargeable batteries involved was defective, and **forced Thunder Battery to recall** all of the company's batteries of this same model wherever they were distributed.

	Strongly Agree		Strongly Disagree		
1.1 In the future, I would not trust Thunder Battery to act in the best interests of the consumer.	1	2	3	4	5
1.2 Thunder Battery generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
1.3 Thunder Battery is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
1.4 I think that consumers will still regard Thunder Battery as an honest brand, and trust it.	1	2	3	4	5
1.5 If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.	1	2	3	4	5
1.6 If I were a consumer in this market, I would buy a Thunder Battery product in the future.	1	2	3	4	5

Possible Response Strategy 2 (Denial & Super Effort):

After the product harm crisis happened, Thunder Battery **quickly** argued that all its products were appropriately made and **denied responsibility** for the incident. Soon afterwards, though, the company discovered that the material used in rechargeable battery was defective. The company then **recalled all of its batteries of this same model, and immediately apologised publically, compensated the victims, and offered special price coupons for other products it made to the general public.**

	Strongly Agree			Strongly Disagree	
2.1 In the future, I would not trust Thunder Battery to act in the best interests of the consumer.	1	2	3	4	5
2.2 Thunder Battery generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
2.3 Thunder Battery is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
2.4 I think that consumers will still regard Thunder Battery as an honest brand, and trust it.	1	2	3	4	5
2.5 If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.	1	2	3	4	5
2.6 If I were a consumer in this market, I would buy a Thunder Battery product in the future.	1	2	3	4	5

Possible Response Strategy 3 (Denial & Voluntary Recall):

After the product harm crisis happened, Thunder Battery **quickly** argued that all of its products were appropriately made and **denied responsibility** for the incident. Soon afterwards, though, the company discovered that the material used in the rechargeable batteries was defective, and **chose to voluntarily recall all of its batteries of this same model. Thunder Battery made recall announcement in the newspaper, and required its distributors to withdraw all problem batteries from the shelf.**

	Strongly Agree			Strongly Disagree	
3.1 In the future, I would not trust Thunder Battery to act in the best interests of the consumer.	1	2	3	4	5
3.2 Thunder Battery generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
3.3 Thunder Battery is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
3.4 I think that consumers will still regard Thunder Battery as an honest brand, and trust it.	1	2	3	4	5
3.5 If I were a consumer in this market, I would not be likely to see information in future Thunder Battery advertisements as accurate.	1	2	3	4	5
3.6 If I were a consumer in this market, I would buy a Thunder Battery product in the future.	1	2	3	4	5

SECTION TWO

This section is about your thoughts regarding the second scenario. Please read the fictitious story about a dairy company first, and then please **circle** the number which most accurately reflects how strongly you agree or disagree with each statement.

Ausmilk is one of the best-known dairy companies in Australia. It has been seen as a socially responsible company by Australian customers for 75 years. In 2006, the brand was voted one of the Top 10 most trusted brands in Australia. Ausmilk regularly supports local communities and provides free milk to 100 schools running breakfast clubs. But, in early 2009, Ausmilk's milk products were found to contain a chemical which caused the deaths of two children and left hundreds of children sickened.

Possible Response Strategy 1 (Denial & Super Effort):

After the incident happened, the company **quickly denied its responsibility**, and argued the product might have been polluted in the process of transportation. But when the company realised its products were actually polluted by the chemical which came from the package, **Ausmilk recalled all products using a similar package, and opened telephone and E-mail hotlines to respond to customer concerns. The CEO of the company gave a formal apology to the public, and donated \$200,000 to Child Fund Australia.**

	Strongly Agree				Strongly Disagree
4.1 In the future, I would not trust Ausmilk to act in the best interests of the consumer.	1	2	3	4	5
4.2 Ausmilk generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
4.3 Ausmilk is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
4.4 I think that consumers will still regard Ausmilk as an honest brand, and trust it.	1	2	3	4	5
4.5 If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.	1	2	3	4	5
4.6 If I were a consumer in this market, I would buy an Ausmilk product in the future.	1	2	3	4	5

Possible Response Strategy 2 (Denial & Voluntary Recall):

After the incident happened, the company **quickly denied its responsibility**, and argued the product might have been polluted in the process of transportation. But, when Ausmilk found their products were polluted by a chemical coming from the product package, **the company chose to voluntarily recall all of its products using this same package. A quick recall announcement was given on the TV, and a full refund was promised to customers.**

		Strongly Agree			Strongly Disagree	
5.1	In the future, I would not trust Ausmilk to act in the best interests of the consumer.	1	2	3	4	5
5.2	Ausmilk generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
5.3	Ausmilk is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
5.4	I think that consumers will still regard Ausmilk as an honest brand, and trust it.	1	2	3	4	5
5.5	If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.	1	2	3	4	5
5.6	If I were a consumer in this market, I would buy an Ausmilk product in the future.	1	2	3	4	5

Possible Response Strategy 3 (Denial & Involuntary Recall):

After the incident happened, the company **quickly denied its responsibility**, and argued that the product might have been polluted in the process of transportation. Soon afterwards, an official laboratory test result showed that the product was polluted by a chemical that came from the product package. **The Australian government stepped in to force the company to recall all of the company's milk products.**

		Strongly Agree			Strongly Disagree	
6.1	In the future, I would not trust Ausmilk to act in the best interests of the consumer.	1	2	3	4	5
6.2	Ausmilk generally did what is right in how they responded to the product-harm crisis.	1	2	3	4	5
6.3	Ausmilk is not concerned with recovering their consumers' trust in the brand.	1	2	3	4	5
6.4	I think that consumers will still regard Ausmilk as an honest brand, and trust it.	1	2	3	4	5
6.5	If I were a consumer in this market, I would not be likely to see information in future Ausmilk advertisements as accurate.	1	2	3	4	5
6.6	If I were a consumer in this market, I would buy an Ausmilk product in the future.	1	2	3	4	5

SECTION THREE

Please kindly provide the following general information by ticking (✓) the appropriate box, or by circling the number.

- 1 What is your gender?
 Male Female
- 2 What is your age group?
 Under 18 years old 36-40 years old 56-60 years old
 18-24 years old 41-45 years old 61-65 years old
 25-30 years old 46-50 years old 66-70 years old
 31-35 years old 51-55 years old Over 70 years old
- 3 What is your ethnic background?
 NZ European Pacific Islander European American
 NZ Maori Asian Other _____
- 4 Which is the highest level of education you have completed?
 Primary school or lower Secondary Education
 Fifth Form Certification Bursary
 Trade Qualification Diploma/Certification
 Bachelor degree Postgraduate Degree
 Other(s) please specify _____
- 5 What is your occupation?
 Professional Tradesperson Student
 Civil Servant Labourer Unemployed
 Sales/Service Home Maker Retire
 Farmer Other(s) please specify _____
- 6 What is your personal annual income before tax? (New Zealand dollars in the last year)
 Under \$10000 \$40,000-\$49,999 \$80,000-\$89,999
 \$10,000-\$19,999 \$50,000-\$59,999 \$90,000-\$99,999
 \$20,000-\$29,999 \$60,000-\$69,999 \$100,000-\$120,000
 \$30,000-\$39,999 \$70,000-\$79,000 Over \$120,000
- 7 Please circle the number closest to the end of the scale which most closely describes how you use, feel, or think about batteries in your day-to-day life:
- | | | | | | | |
|---------------------|---|---|---|---|---|------------------------|
| Unimportant | 1 | 2 | 3 | 4 | 5 | Very important |
| Of no concern to me | 1 | 2 | 3 | 4 | 5 | Of great concern to me |
| Irrelevant | 1 | 2 | 3 | 4 | 5 | Very relevant |
| Not beneficial | 1 | 2 | 3 | 4 | 5 | Very beneficial |
| Used very little | 1 | 2 | 3 | 4 | 5 | Used very much |
- 8 To what degree do you consider yourself to be loyal to a single brand of batteries?
- | | | | | | | |
|------------------|---|---|---|---|---|------------|
| Not at all loyal | 1 | 2 | 3 | 4 | 5 | Very loyal |
|------------------|---|---|---|---|---|------------|

9 If you consider yourself loyal to one brand of batteries, what is that brand?

10 I usually buy whatever brand of batteries that are on sale.

Disagree 1 2 3 4 5 Agree

11 Have you ever experienced a product-harm crisis involving a battery?

Yes No

12 If yes, please briefly explain

13 Please circle the number closest to the end of the scale which most closely describes how you use, feel, or think about milk in your day-to-day life:

Unimportant	1	2	3	4	5	Very important
Of no concern to me	1	2	3	4	5	Of great concern to me
Irrelevant	1	2	3	4	5	Very relevant
Not beneficial	1	2	3	4	5	Very beneficial
Used very little	1	2	3	4	5	Used very much

14 To what degree do you consider yourself to be loyal to a single brand of milk?

Not at all loyal 1 2 3 4 5 Very loyal

15 If you consider yourself loyal to one brand of milk, what is that brand?

16 I usually buy whatever brand of milk that is on sale

Disagree 1 2 3 4 5 Agree

17 Have you ever experienced a product-harm crisis involving a milk product?

Yes No

18 If yes, please briefly explain

19 Do you have any other thoughts about product-harm crises? If you do, please clarify.

**THE END! THANK YOU VERY MUCH FOR YOUR HELP IN THIS RESEARCH.
PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED PREPAID
ENVELOPE BY THE 6th OF NOVEMBER.**

Appendix 3

Minimum Requirement of Sample Size

The sample size is estimated by the Yamane's model (EDIS, 2008):

$$n = \frac{N}{1 + N(e^2)}$$

Where, n: the sample size
N: the size of population
e: the tolerable error level for estimation (5%)

According to this formula, the number of population is 348,485 in June 2006 in Christchurch. Therefore, the sample size is calculated:

Sample size:
$$n = \frac{348485}{1+348485 \times 0.05^2}$$

$$n = 399.541$$