

Did the Earth Move for You Too?

Understanding Post-Earthquake Changes in Retail Shopping Behaviour

Introduction

Christchurch, the second largest city in New Zealand, was rattled by three major earthquakes in a span of six months from September 2010. The first was a 7.1 magnitude earthquake which occurred at 4:35am on 4 September 2010, the second was a 4.9 magnitude earthquake which occurred at 10:30am on 26 December 2010, with the third event being a 6.3 magnitude earthquake which occurred at 12:51pm on 22 February 2011. In the two years following the original event, more than 11,000 aftershocks were recorded. Even though no loss of life was reported for the September earthquake, structural damage was recorded in the central and south-western suburbs of the city. The December earthquake created havoc on one of the key retail trading days of the year (Boxing Day), caused damage to a further twenty buildings in the central city, and led to the entire Central Business District (CBD) being closed down for the day. The February earthquake was the most devastating. It caused widespread damage to the city and resulted in 185 fatalities. The epicentre of the February earthquake was in close proximity to the CBD, which led to two large multi-storey buildings collapsing, and much of the CBD subsequently needing to be demolished.

In terms of retail space, little remains of the Christchurch CBD. Following the February earthquake, many of the suburban shopping malls in Christchurch were closed for a period of a few days (in order for safety checks to occur), with two malls being so badly damaged that they needed to close for several months. With significant loss of life, collapsed buildings and damaged infrastructure, consumers were confronted with the notion that retail spaces, in the event of an earthquake, had the potential to be unsafe and a source of possible personal harm. The main purpose of this paper is to examine how consumers modified their retail shopping behaviour following these earthquakes, and especially the February one. To achieve this aim, we look at what changes occurred in shopping behaviour, what factors led to these changes (beyond the obvious loss of retail infrastructure), and the permanency of these changes.

Literature Review

The literature on why people shop is extensive, with Tauber (1972) providing a seminal paper suggesting that shopping motivations fall into two main categories – personal and social. The motivations identified by Tauber have similarly found support in more recent research, like the hedonic shopping motivations discussed by Arnold and Reynolds (2003). Other authors, such as Batra and Ahtola (1991), have suggested that attitudes are bi-dimensional in nature, and that consumers buy goods and services for hedonic gratification and utilitarian reasons. Hedonic consumption has been defined as those facets of behaviour that relate to the multisensory, fantasy, and emotive aspects of consumption (Hirschman & Holbrook, 1982), and often focusses on the pleasure derived from the act of shopping rather than the pleasure derived from the merchandise purchased. Utilitarian consumption, on the other hand, is task-related and rational, and mainly looks for the answer to the question: how useful or beneficial is the product? (Batra & Ahtola, 1991). Not surprisingly, these motivations which are used to help understand retail behaviour have not been applied to understanding how consumers may alter their behaviour following a natural disaster. Moreover, the field of consumer behaviour fails to shed much light on the effects of natural disasters upon retail shopping behaviour. In contrast, the effects of natural disasters upon individuals has been explored in greater detail within the broader field of psychology.

The literature on how people respond to a natural disaster, such as an earthquake, suggests three main areas of focus: (1) preparatory actions, (2) responses to the disaster itself, and (3) coping strategies. Preparatory actions refer to two types of practices: survival actions and mitigatory actions (Spittal, McClure, Siegert, & Walkey, 2008). Survival actions refer to practices like storing water and food, possessing a first aid kit close by, and making sure that one has access to a torch and battery powered radio. Mitigatory actions aim to reduce the impact of a natural disaster, and in the context of an earthquake, include securing bookshelves and other heavy objects, and strengthening buildings to prevent them from collapsing.

There are a range of responses that people may have towards a natural disaster, with much of the research in this area focusing on how individuals react to the event they have experienced. In one of the earlier works in this area, Fritz and Marks (1954) suggested that reactions to a disaster differ from individual to individual due to past experiences, mind-sets, culture and learned behaviours. However, two classifications: agitated reactions and depressive reactions, are two general modes of reaction to disasters. Agitated reactions suggest an increase in the level of activity (physical or emotional) of an individual, where depressive reactions suggest a decrease in the level of activity.

Burton, Kates, and White (1978) outlined four patterns of response to risk, that include: (1) denying behaviour, (2) the acceptance of loss, (3) practical behaviour, and (4) extreme behaviour. Denying behaviour occurs when an individual tries to deny risk through a belief that the risk does not apply to them and will only affect others. Acceptance of loss includes those individuals who are aware of the hazards or risks and accept them, but who do not alter their behaviours to help mitigate these risks. Practical behaviour is characterised by those individuals who believe that positive actions are possible, and who take adequate mitigatory actions in order to reduce the impact of another disaster. Finally, extreme behaviour includes those individuals who exhibit a strong internal locus of control, and who take all possible mitigatory actions to diminish the risk posed due to a natural disaster.

Coping after a natural disaster refers to efforts (both cognitive and behavioural) to manage environmental and internal demands that exceed personal resources (Coyne, Aldwin, & Lazarus, 1981). It has been established that individuals trying to cope after a natural disaster experience stress and emotional upheaval. Mathur, Moschis, and Lee (2006) noted that stress is a signal that an individual is struggling to restore stability and equilibrium into their life. Although no research has been conducted on how stress following a natural disaster leads to changes in consumer behaviour, stress due to changes in life events (e.g. transitioning into new roles, economic conditions, and a change in mind-sets) has been proven to have an effect on consumer buying patterns and behaviour (Andreasen, 1984; Schewe & Balazs, 1992).

Reich (2006) discussed the three core principles of resilience, referring to them as the 3C's: control, coherence and connectedness. The principle of control draws its ideologies from the past research done on individuals and personal control. Reich (2006) states that people who have higher levels of personal control beliefs have higher life satisfaction and morale, lower levels of depression, and they tend to live longer. The belief that individuals have personal resources to achieve their goals acts as a fuel for building resilience. Coherence fulfils an individuals need to know and understand their surroundings in order to reduce uncertainty. Connectedness builds on the notion that human nature is social, and evidence suggests that there are positive benefits of strong social ties (e.g. Thoits, 1995). Along with resilience, unrealistic optimism may also be a coping mechanism for individuals following a natural disaster. Optimism is defined as a generalised expectancy for positive outcomes (McKenna,

1993), whereas the concept of unrealistic optimism refers to a bias of relative invulnerability (Hoorens, 1996; Schwarzer, 1994; Weinstein, 1989) that occurs when an individual has the tendency to claim that their own risk is less than that of their peers.

Taken together, and moving beyond the traditional theories that help explain retail shopping behaviour, the extant research highlighted in this section may be useful in helping understand the reasons as to why consumers change their shopping behaviour following a natural disaster like an earthquake. The remainder of this paper will present the results of a qualitative study that explored how consumers modified their retail shopping behaviour following a sequence of earthquake events over the 2010/2011 timeframe in Christchurch, New Zealand.

Methodology

This study was interested in the post-earthquake experiences of consumers as it relates to their retail shopping behaviour. Since these experiences are subjective, and full of emotional and symbolic content (e.g. Holbrook & Hirschman, 1982), rich exploratory qualitative data was gathered from participants. Moreover, given the purpose of this study was to understand the experiences of participants in their own words, an interpretivist methodological approach (e.g. Lincoln & Guba, 1985) was taken.

Ten participants were interviewed for this study using a series of in-depth semi-structured interviews. Each interview was approximately one hour in length. The participants ranged in age from 20 to 50, with eight females and two males. To recruit participants, both purposive and snowball sampling were used. Purposive sampling allowed participants to be selected on the basis of specific criteria (i.e. they were all long-time residents of Christchurch who had experienced the earthquake activity since September 2010 and who were frequent shoppers), and allowed diversity to be built into the sample (Lincoln & Guba, 1985). Due to the potential sensitivity of the experiences participants were asked to reflect upon, snowball sampling then meant that those people who participated in this study could help identify other participants (Miles & Huberman, 1994). The interviews were conducted in July and August 2011, which meant that five months had passed since the most devastating (February 2011) earthquake.

The interviews had a phenomenological focus (i.e. they were from the perspective of the participants), and focussed on participants' experiences of the Christchurch earthquakes, and how their retail shopping behaviour changed as a result. Although an interview guide was followed, the interviews had the nature of a conversation, allowing the researcher to follow the interviewees lead and adjust the course of the interview to the topics that emerged. To analyse the post-earthquake shopping behaviour of participants, a within case analysis (Miles & Huberman, 1994) was used to gain insight, and was undertaken in the form of coding and sorting, which Tesch (1990) describes as decontextualising as the data are separated from their original cases. The data were then recontextualised through the identification of themes present across cases. The themes were constructed from reoccurring statements or concepts described by the participants. Given the potential for multiple interpretations of the data, two independent judges were used to authenticate the findings.

Findings

Three key organising themes emerged from the interviews, which allow us to understand how consumers modified their retail shopping behaviour following the earthquake activity outlined at the start of this paper. The themes were: early purchasing behaviour, shopping motivations,

and personal safety. Participants also discussed their actual experiences with the earthquakes, and their initial feelings and emotions following these events, but the findings related to these two areas are omitted from this paper due to issues of length.

Early Purchasing Behaviour

The first theme which emerged from the data was the early purchasing behaviour adopted by participants. Immediately following the earthquakes, initial purchases were typically made from corner dairies (convenience stores) and takeaway food outlets. The reasons provided for this behaviour were attributed to the shutdown of local supermarkets as well as a fear of going into them. Alfred (aged 24) was typical of many participants stating: “we just had to go out to the petrol station and dairies to stock up on essentials ... bread, drinking water, milk, petrol and all ... [we] bought takeout’s from the open places at other times ... the supermarkets were closed or very low on supplies given that there were a lot of people just buying whatever they could ... no one really wanted to go to the big supermarkets even if they were open ... people were scared going in there after all that happened”.

Another phenomenon, stockpiling, was also observed in a number of instances. Stockpiling is defined as buying larger quantities of a product and/or shifting purchase times to buy before the expected time of next purchase (Blattberg & Neslin, 1989). Even though the literature on stockpiling is considerable (e.g. Ailawadi, Gedenk, Lutzky, & Neslin, 2007; Guo & Villas-Boas, 2007; Hendel & Nevo, 2006; Macé & Neslin, 2004), it focuses primarily on the effect of temporary price reductions, promotional activities and sales; while stockpiling due to the uncertainty following uncontrollable disastrous events has not previously been researched. Evidence of stockpiling was evident in a number of cases, with Bella (aged 22) noting: “I remember there were lots of people buying essentials like bread and water and they (dairies) were running out quick, so we decided to buy milk, bread and other things as well”.

Shopping Motivations

In the first overarching theme, the behaviour of stocking-up on essentials was observed immediately following each major earthquake. In terms of motivators, the initial driving motivation of participants to go shopping was utilitarian in focus, where participants looked to fulfil their physiological needs of food, water and fuel. When asked about her initial shopping motives, Sonia (aged 20) stated: “we didn’t really go ‘shopping’ shopping ... as in buying clothes or anything ... [we bought] essentials like bread and stuff”. This statement presents a distinction in the two basic types of shopping motivators – needs focused or utilitarian motivations (i.e. shopping for essentials) and wants focused or hedonic motivations (i.e. shopping for clothes) – as well as her sole focus on utilitarian motivations. Building upon the earlier discussion of stockpiling behaviour, considerations of scarcity were also a dominant motivator for many participants in this study.

The desire to revert back to old patterns was observed consistently throughout the interviews, although this typically occurred many days or weeks after each significant earthquake event. Sonia (aged 20) commented: “Initially no one wanted to go and hang around at the mall or anything ... everyone wanted to stay home with their families the maximum they could ... but after a while, everything seemed ok I guess ... [we] can’t really stay holed up at home all the time in fear now, can we? Life moves on”. With time, participants also exhibited resilience, as they expressed a strong desire to reengage with their normal day-to-day pre-quake shopping behaviour. This need to re-establish personal control is consistent with one of the three core principles of resilience among humans (Reich, 2006).

Personal Safety

When reverting back to old patterns to bring about a sense of normalcy, participants were often found to focus on their personal sense of safety. All participants stated that subsequent to a significant event (most notably February), that they felt safer visiting supermarkets when accompanied by a family member or friend. Fleur (aged 50) was typical of this when stating: “I didn’t really feel safe going into supermarkets ... I wouldn’t have gone alone but Matthew (partner) was supportive and came with me every time”. With this, Reich’s (2006) principle of connectedness was found to influence heavily on participants’ sense of individual safety.

The physical characteristics of retail outlets such as the structure of the building, shelving in supermarkets, and open versus enclosed spaces, were all regularly mentioned by participants when probed about what factors they based their feelings of safety or lack thereof upon. When asked what would make them feel safer about going back to malls and supermarkets, a range of responses were recorded, and included the following: “Maybe if they decide to make it (the mall) one storey and reinforce the ceilings and give some sort of guarantee that nothing would fall over ... but that would be unrealistic ... there are no guarantees” (Fleur, aged 50); “I’ve seen a few videos of the shelves (at the supermarket) falling over and the product jumping out of the shelves ... and then they have those really high heavy looking beams ... if they [staff in the supermarket] made sure the shelves were secure and the product in them was secure I’d feel better about it” (Fiona, aged 28); “They’ve got product stocked right up to the roof and the shelves are so big ... I don’t like the feeling of walking between two shelves ... it makes me uncomfortable” (Denise, aged 45); “It’s not like I imagine myself being buried under the shelves, but yeah, I do try and get out of there as fast as I can ... which is why I make lists before I go” (Bridget, aged 23). From these statements, it is evident that participants needed to make judgements about what conditions they felt safe in, and that they also needed to make conscious efforts to mitigate those risks.

Discussion and Conclusions

When probed into their consumption patterns immediately following a major earthquake, as well as the months following it, a retail chain hierarchy was found. Almost all participants chose to first visit smaller sized retailers, such as dairies (convenience stores). This decision was informed by not only the knowledge that supermarkets were shut, but because there was a fear of going into them. Over time, participants began to venture back into supermarkets, and eventually the malls. The decision to revert to shopping patterns that were similar to the ones they had prior to the earthquakes was driven by a desire to bring back a sense of normalcy, unrealistic optimism in some cases, and a need to regain a sense of personal control.

Despite evidence of reverting to their old shopping patterns, participants did make a number of changes to their behaviour due to the consideration of their personal safety. Some people felt safer going to larger retail stores (e.g. supermarkets) with friends and/or family members, while others began making lists in order to have a more organised and quicker shopping trip. Participants also displayed a keener eye when it came to the structure of retail buildings, the shelving used, and crowding and space issues in retail outlets. During this time of emergency, new motivations for shopping were evident beyond those provided in the traditional literature (e.g. Tauber, 1972). However, while it is important for retailers to consider the safety of their customers following a natural disaster such as an earthquake, a trade-off exists. Specifically, by choosing to communicate the structural safety of their buildings, this could contrast with the customers’ mindset of optimism, and make them question the realities that they may have chosen to avoid.

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