

**Factors that influence customers purchase intentions of  
Australian farmed prawns from seafood retail outlets.**

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## ***Declaration***

I, Hannah O'Brien, certify that this thesis is, to the best of my knowledge, original, except as acknowledged, and that the material has not been submitted, either in whole or in part, for a degree at this or at any other institution of higher education.

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## *Acknowledgments*

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## ***Abstract***

One of the most important global food sources is seafood, and in particular saltwater seafood. However, while demand is increasing, the supplies of wild caught sources are depleted and there is now an increased need to source seafood species, such as prawns from farmed stocks. Aquaculture has become a reliable source for many species, particularly prawns. It has been identified that consumers around the globe have many preconceived and often negative perceptions of farmed prawns, which is preventing the demand and growth of the industry. Australia is a world leader in best practice management and product quality, with a vast amount of ideal topographical locations for prawn farming, but despite these positives, it continues to have one of the smallest gross production outputs of farmed prawns. Thus it is important to determine the factors that encourage positive behavioural intentions toward this product. Many studies have demonstrated the power that consumer perceptions have on both customer satisfaction and behavioural intentions. Trust has also been identified as having significance influence on these elements. Therefore, this study measures the perceptions, trust, satisfaction and behavioural intentions of customers of Australian farmed prawns within South East Queensland.

Ten locations within South East Queensland were investigated in this study, with a total of 211 respondents.

The findings of this study show that *Trust* has a very large impact on *Customer Satisfaction*, *Behavioural Intentions*, *Customer Perceptions of Product- Physical attributes*, *Product- Health aspects*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People* of the customers of Australian farmed prawns within South East Queensland.

Another illuminating finding was that *Customer Perceptions of Product- Physical attributes* and *Price* were the two key variables of eight *Customer Perception* variables that have a significant influence on both *Customer Satisfaction* and *Behavioral Intentions* of customers of Australian farmed prawns within South East Queensland.

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# **CHAPTER 1**

## **Introduction**

---

## ***1.1 Background to the research.***

### **1.1.1 Health benefits of prawns vs. seafood**

Seafood is known to contain an abundant amount of nutrients; Bourre and Paquotte (2008b) found that seafood (finfish, shellfish, freshwater and marine) provides high amounts of vitamin D, vitamin B12, selenium, iodine, and omega-3 fatty acid (docosahexaenoic acid - DHA) to consumers. Vitamin D, found in some finfish and all shellfish, (Bourre & Paquotte 2008b), regulates the intake of calcium resulting in improved bone density (Bourre & Paquotte 2008a). Seafood is one of only a few foods that have high levels of this vitamin (Bourre & Paquotte 2008a). Vitamin B12 can be found in most finfish and all shellfish (Bourre & Paquotte 2008b). Bourre & Paquotte (2008a) believe that it is positively linked to memory performance within middle-aged people and that low levels of this vitamin are contributing to the development of Alzheimer's disease. Selenium, in the correct dose, has the ability to preserve cognitive and immune functions, it can be found in almost all seafood (Bourre & Paquotte 2008b). Iodine is found in shellfish and marine fish but not freshwater fish (Bourre & Paquotte 2008b). A lack in iodine is the major cause for serious health problems and brain disorders (Bourre & Paquotte 2008a). Omega 3 fatty acids (docosahexaenoic acid - DHA) found in all seafood, helps to prevent and treat several disorders (Bourre & Paquotte 2008a). These essential polyunsaturated fatty acids have been shown to reduce the risk of death from cardiovascular disease (He et al 2004), increase neurological development and vision (Beurre 2006), and, being an anti-inflammatory, they also have the ability to counteract rheumatological and dermatological disorders (Bourre & Paquotte 2008a).

Seafood is also a high quality source of protein (Bourre & Paquotte 2008b) and in comparison to other protein sources, meat, poultry and eggs, it is much lower in saturated fatty acids (Brunner et al 2009). According to FAO (2008) 2.5 billion people worldwide rely on seafood for 15 percent of their animal protein and, in many countries, such as Cambodia, Equatorial Guinea, French Guinea, Ghana and Indonesia, seafood accounts for more than 50 percent of the populations animal protein. The misconception that dietary cholesterol is bad for blood cholesterol has produced persistent negative perceptions towards certain products

(Grey & Griffin 2009), when in fact prawns, a cholesterol-rich food, has no significant effect on circulating cholesterol due to low levels of saturated fat (Grey & Griffin 2009).

A study conducted in Belgium found that there were significant gaps between consumer perceptions of health benefits of seafood consumption and scientific evidence (Verbeke et al. 2004).

### **1.1.2 Farmed prawns vs. wild caught prawns**

While it was once believed that the oceans were an endless source for seafood it is now severely depleted of a variety of fish stock (Tidwell & Allen 2001). More than half (58%) of known stocks are fully exploited, 19 percent are over exploited, 8 percent are depleted, 1 percent is recovering from depletion, 18 percent is moderately exploited and 2 percent is underexploited (FAO 2008). Seafood is currently the only important food source that is still being sourced from the wild, rather than farmed (Tidwell & Allen 2001). „If agriculture had not developed to increase the production of terrestrial livestock, we would not be able to support the current population“ (Tidwell & Allen 2001 p.692). Like many other forms of aquaculture, prawn farming was developed to reduce the pressure on wild caught populations (Boyd & Clay 1998). In many countries around the world it is making a substantial contribution to food supplies (Kaiser & Stead 2002) while simultaneously taking pressure off the diminishing wild species (Gempshaw, Bacon, Wessells and Manalo, 1995; Verbeke et al. 2007; Mazur & Curis 2006).

According to The Food and Agriculture Organisation aquaculture is classified as „the farming of aquatic organisms in inland and coastal areas, involving intervention in the rearing process to enhance production and the individual or corporate ownership of the stock being cultivated for commercial purposes.“ (FAO 2008, Love, Langenkamp & Galeano 2004) It is one of the fastest growing sectors in Australian and world food production (IBISWorld 2009, Mazur and Curtis 2006, Kaiser and Stead 2002).

Within Australia, aquaculture is mainly based in the rural areas and has a significant and positive influence on rural development (Kaiser & Stead 2002). With newly developed infrastructure in these areas to specifically support the industry (Mazur & Curtis, 2006). (see Appendix A for a guide to rural and urban areas). While there is a wide range of species of marine life farmed within Australia (Mazur, Aslin & Byron 2005), there are five species that

contribute 91 percent of the industry's gross value product, these include pearls, oysters, Atlantic salmon, prawns and southern bluefin tuna (Mazur & Curtis, 2006). Within Queensland prawns account for 70.1 percent of the total aquaculture value (IBISWorld 2009)

There are currently 22 prawn farms within Australia, and while there are also farms in New South Wales the majority are in Queensland (Love, Langenkamp & Galeano 2004; Preston, Jackson, Thompson, Austin, Burford & Rothlisburg, 2005, APFA 2010). The Australian farmed prawn species include giant tiger prawns, banana prawns, brown tiger prawns and kuruma prawns (FAO 2006). Twenty five percent of Australian Farmed Black Tiger Prawns, Banana Prawns and Brown Tiger Prawns are sold to Queensland while the remaining 75 percent is sold interstate. 90 percent of Australian Farmed Kumera Prawns are exported and the remaining 10 percent is sold within Australia (Love, Langenkamp & Galeano 2004).

After trialing methods from many other countries Australia is now a world leader in best practice management and product quality and has a vast amount of ideal topographical locations for prawn farming, though despite these positives it continues to have one of the smallest gross production outputs (Callinan et al. 2006). Currently, China, Vietnam, India, Thailand and Indonesia are the largest prawn producers of prawns (IBISworld, 2009).

### **1.1.3 Perceptions of Aquaculture and Farmed Prawns**

A study of European consumers found that on average there was a lack of knowledge and some confusion around the concept of aquaculture (Aarset et al 2004). French consumers believe that organically farmed fish species should taste better, be healthier and be much more expensive than wild caught seafood (Aarset et al 2004). German consumers have quite different perceptions, believing that there are high personal health risks involved in farmed fish, or any artificial additives (Aarset et al 2004). European consumers have been found to be skeptical about classifying farmed marine life as organic (Aarset 2004) commenting that „farmed fish are less healthy, because they grow up in an artificial environment“ and „wild fish are happier; they can swim wherever they want, move freely, which makes the fish stronger“ (Verbeke et al. 2007 p.129). Additionally, Verbeke et al. (2007) found, within, that there are many gaps between Belgium consumer perceptions of farmed versus wild seafood and scientific evidence. These gaps included taste, nutrition, safety, availability and environment (Verbeke et al. 2007). With very little factual knowledge of aquaculture, it

appears that worldwide, consumers perceptions of farmed seafood are a combination of stereotypes, image transfer and emotion (Verbeke et al. 2007). Food scares, such as microbiological, contamination and animal disease, can also have significant negative impacts on customer purchasing behaviours and on the industry (Knowles, Moody & McEachern 2007), Partially due to consumers' lack of trust in the industry regulations and control (Knowles, Moody & McEachern 2007; Mazur & Curtis 2006; Mazur, Aslin & Byron 2005). It appears that public judgements, concerns and mistrust have caused negativity towards the farmed seafood industry's credibility within the community (Mazur and Curtis 2006)

In addition to a negative perception of farmed seafood, the industry has to also contend with a lack of consumer knowledge and awareness. Verbeke et al. (2007) found that infrequent customers of seafood (less than once per week), in Belgium, were largely unaware of the existence of aquaculture while regular customers (more than once per week) were aware but with limited knowledge both of aquaculture and the potential benefits that it presents. Mazur, Aslin and Byron (2005) also found this to be an issue with customers in Victoria, Australia. So although Australian prawn farms have the potential to produce more than one crop of prawns per year, the perceptions of Australian customers mean that it is more profitable for these farms to produce just one – two crops during the festive seasons (Callinan et al 2006)

The prawn aquaculture industry has great potential to develop within the Australian community, thus reducing the stress on wild species, whilst also creating employment opportunities and economic growth within rural areas, and providing Australians with an alternative protein source with many health benefits. However this can only be achieved if consumers have positive perceptions of Australian farmed prawns, resulting in an increase of positive behavioural intentions of customers. The desired behavioural intentions include positive word of mouth communications, positive purchase intentions and increased loyalty. In order to improve consumer perceptions, the industry first needs to understand what influences customer perceptions and satisfaction with farmed prawns. Therefore the intention of this study is to measure the impact that trust and the other marketing elements have on the perceptions, satisfaction and behavioural intentions of customers for Australian farmed prawns.

## ***1.2 Research question and objectives***

The research question proposed for this study is: What Factors influence customers purchase intentions of Australian farmed prawns from seafood retail outlets?

The proposed research objectives (RO) of this study consist include:

RO1: To identify which factors of Customer Perceptions influence Customer Satisfaction.

RO2a: To identify which factors of customer perceptions influence Behavioural intentions.

RO2b: To identify how much effect Customer Satisfaction has on Behavioural Intentions.

RO3: To identify the effect that Trust has upon Customer Perceptions, Customer Satisfaction and Behavioural Intentions.

## ***1.3 Definitions***

Australian Farmed Prawns: Prawns grown for consumption within Australian aquaculture systems; including marine environments and land based systems.

Wild Caught Prawns: Prawns captured from wild sources

South East Queensland: See map in Appendix A.

Seafood retail outlets: Fresh and cooked seafood outlets, both independent and chain supermarkets.

## ***1.4 Methodology***

Secondary and primary data were used for the purpose of this thesis. Secondary data such as industry reports, academic literature, governments, trade associations, and published peer reviewed research findings were utilised for the completion of the literature review to establish what has been learned within this research area.

Primary data has been utilised in the form of qualitative and quantitative research methods. During the exploratory stages of the research, qualitative data was collected through in-depth interviews. This provided a stronger understanding of the current situation and aided in adjusting measurement scales for the purpose of the quantitative research collection. Quantitative data was then collected through the use of questionnaires. This data is analysed through the use of SPSS software. An Alpha Components Analysis identifies the validity of the factors, while a reliability test measures the reliability of the factors. Pearson Product-Moment Correlation and Multiple Linear Regression are used to analyse the relationships between the factors.

The participants for the quantitative study included customers within South East Queensland selected for face to face interviews through convenience sampling.

### ***1.5 Outline of Thesis***

This chapter (Chapter One) provides a concise background to the research, an outline of the research problem, research objectives and a brief outline of the methodology.

Chapter Two is to provide a review of the body of academic literature related to the research project. This chapter marks the beginning of the development of the conceptual framework, are developed according to the findings in the reviewed literature.

Chapter Three presents the proposed methodology for the research. This methodology is discussed in detail, justification is provided and ethical issues arising from the research is discussed. Chapter Three also presents the operational definitions of concepts, theoretical frameworks and hypotheses.

The collected data for the study is presented within Chapter Four. This data is then analysed and the consequent results are provided.

Within Chapter Five the research findings are explained in relation to the literature discussed in Chapter Two. Conclusions to the research problem and hypotheses are presented. Finally, limitations for the research, implications for theory, practice and further research are discussed.



## ***1.6 Delimitations***

Due to time and budget restraints this research is restricted to customers of seafood retail outlets within South East Queensland (see appendix A).

## ***1.7 Conclusion***

In conclusion, the aim of this thesis is to identify the influencing factors of strong marketing relationships between Australian farmed prawn consumers and independent fresh seafood outlets. This chapter has discussed the background and justification for the research. The research question and the objectives were identified, along with key definitions for the study. This was followed by an overview of the methodology and the structure for the research. The final section identifies the delimitations for the study.

**CHAPTER 2**  
**Literature Review**

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## ***2.1 Introduction***

The purposes of this chapter are to investigate the existing literature relevant to this research study, to develop research hypotheses from this literature and to develop a conceptual model for the study. The chapter will begin with a review of studies relating to perceptions of aquaculture and farmed prawns. This will be followed by in-depth discussion of concepts, measurements and relationships between customer perceptions, trust, customer satisfaction and behavioural intent. The chapter concludes with the presentation of the proposed research hypotheses and conceptual map.

## ***2.2 Customer Perceptions***

### **2.2.1 Customer perceptions of aquaculture and farmed prawns**

Much of the literature pertaining to aquaculture identifies negative health and environmental perceptions. Wide spread public concern developed within South East Asia and Central America due to poor environmental management of aquaculture farms (Preston et al. 2005), these issues ensured that Australian aquaculture developed with strict environmental regulations and a high level of community awareness (Preston et al. 2005). However unfounded negative media coverage has the ability to restrain the growth of the industry, particularly within regional areas (Tidwell & Allen 2001, Kaiser & Stead 2002). Media has also fueled customer concern over issues such as food safety, quality, health, the environment and animal welfare (Aarset et al, 2004; Knowles, Moody & McEachern 2007). Many consumer studies have found that technology (such as Biotechnology) in food production is viewed quite negatively (Kaiser & Stead, 2003; Mazur & Curtis, 2006; Evans & Cox, 2006; Knowles, Moody & McEachern 2007). Therefore there has been a stronger demand for organic foods (Aarset 2004). As discussed within the introduction, customers have been identified to have difficulty in viewing farmed marine life as organic products (Aarset 2004; Verbeke et al. 2007), with ill-informed participants associating the aquaculture process to that of „hens in battery cages“ (Verbeke et al. 2007. Pp129). Current perceptions of aquaculture are driven by intensive terrestrial livestock farming and are the result of negative press coverage including contaminant-related food scares (e.g. introduction of antibiotics and chemicals) (Verbeke et al. 2007; Verbeke et al. 2007), microbiological-related food scares (e.g. Salmonella) and animal diseases (e.g. BSE and foot and mouth disease) (Verbeke et al,

2007; Kaiser & Stead, 2002). Due to the lack of knowledge about aquaculture, these perceptions are a combination of stereotypes, image transfer and emotion. It is important for customers to be better informed about the industry. There are some negative perceptions from non-government agencies and environmental groups who have voiced their fears of the effects of aquaculture on the environment (Tidwell & Allen 2001), including a belief that aquaculture is a major cause of the destruction of the worlds original coastal eco-systems, the major causes for the degradation of eco-systems were found to be clearing for rice development, urban development, tourism and fuel spills (Tidwell & Allen 2001). In fact, due to the soil composition and vulnerability to storms, these environments are unsuitable for prawn farming practices (Boyd & Clay 1998), and therefore aquaculture does not seem to warrant the negative press from many of the groups currently attacking aquaculture (Tidwell & Allen 2001 p.962).

However there are positive public perceptions of aquaculture in regards to the benefits that the industry brings to economic growth and employment in rural areas (Mazur & Curtis 2006; Mazur, Aslin & Byron 2005). Additionally, Verbeke et al. (2007) found positive perceptions towards farmed seafood in the consistency in timing, quantity, size and quality of the product. Many customers have also developed the perception that Australian wild caught prawns are an expensive luxury product (Peshanoff & Jeansch 2009), however regular seafood customers (more than once per week) are beginning to recognize that increased production from aquaculture is creating wider availability and more affordable prices for customers of these products (Verbeke et al. 2007; Tidwell & Allen 2001; Boyd & Clay 1998).

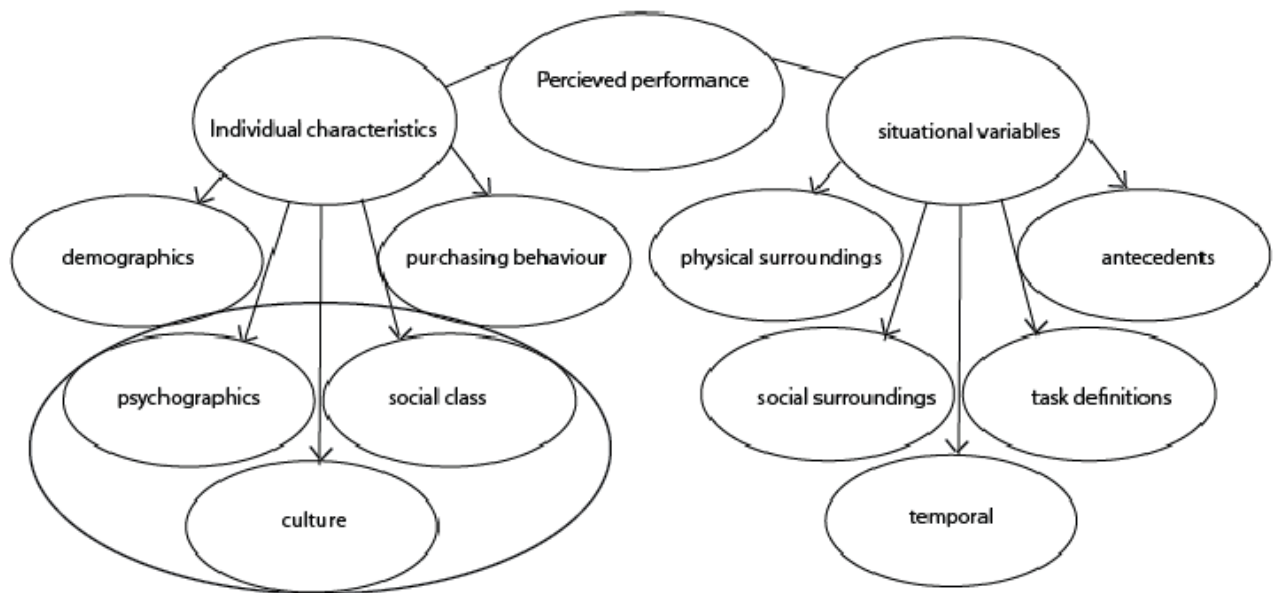
### **2.2.2 Definition of Customer Perceptions (perceived performance/quality)**

Consumer perceptions of quality are a highly discussed topic throughout marketing literature (Parasuraman, Zeithaml & Berry 1985; 1991; Baker & Crompton 2000; Cronin, Brady & Hult 2000; Leek, Maddock & Foxall 2000; Kaynak & Kara 2000; Olson 2002; Spinks 2009). Customers perceptions of quality is mostly defined as the difference between customer expectations and the actual experience (Cronin & Taylor 1992; Parasuraman, Zeithaml & Berry 1985; 1991; 1994). The next section examines factors that influence customer perceptions.

### 2.2.3 Factors that influence Customer Perceptions

Customer perceptions are influenced by both individual characteristics and situational variables (Belk 1974; Spinks 2009) (see figure 2.1). Individual characteristics include demographics, psychographics, culture and social class, and purchasing behaviour. While situational variables include physical surroundings, social surroundings, temporal, task definitions and antecedents. The situational variables will not be discussed further within this report due to their exclusion from the scope of the project. However the individual characteristics were included in the scope and will be discussed in more detail.

**Figure 2.1** – Elements of perceived performance



Source: adapted from Spinks (2009); Belk (1974).

Individual characteristics have been shown to have a large role in developing customer perceptions (Verbeke et al. 2004; Von Freymann 2006; Belonax, Newell & Plank 2006; Verbeke et al. 2007; Spinks 2009) individual characteristics include demographics, psychographics, culture, social class and purchasing behaviour.

**Demographics.** The first of the individual characteristics, demographics, includes gender, age and income. Gender has been identified as having significant statistical differences in perceptions (Belonax, Newell & Plank 2006; Ganesan-Lim, Russell-Bennett & Dagger 2008). Verbeke et al. (2004) found gender has quite an impact on both perceptions and intentions of purchasing seafood. For example, women have stronger beliefs that seafood has a high nutritional value and they also consume more seafood products at both home and in restaurants. Additionally, it was found that men are more suspicious that seafood might contain harmful substances (Verbeke et al. 2004).

Additionally, studies have shown that age can have a large impact on customer perceptions (Verbeke et al. 2004; Von Freymann 2006; Verbeke et al. 2007; Ganesan-Lim, Russell-Bennett & Dagger 2008). Verbeke et al. (2007) found that perceptions of between wild caught seafood and farmed seafood differ greatly according to the age of the consumer. The older customers (over 55 years) believe that wild caught seafood is much healthier and tastes better than farmed seafood (Verbeke et al. 2007). It has also been identified that younger customers (under 25 years) are more aware of the specific nutrients in seafood, especially in regards to omega 3, while older customers have strong beliefs that seafood is healthy, but have little knowledge of actual nutrients (Verbeke et al. 2004).

Income is inclusive of wages and salaries from employment, profit/loss from unincorporated business, investment income, government pensions and allowances, and superannuation (Australian Bureau of Statistics 2009). It has been identified that individual income levels affect the expectations and perceptions of customers (Gagliano & Hathcote 1994; Ganesan-Lim, Russell-Bennett & Dagger 2008). Verbeke et al (2004) found that respondents with higher income had higher awareness of the health and nutrition of seafood, however, Verbeke et al. (2007) found that higher income respondents have a lower perception of farmed seafood than that of low income respondents.

**Psychographics, Culture and Social Class.** The second element of individual characteristics is psychographics, this includes variables such as personality and lifestyle. While researchers believe that these variables may have more influence over customer perceptions than demographics, they are more difficult to identify and measure (Wu 2007; Spinks 2009).

Culture affects activities, motivations and values and is believed, by many marketing theorists, to be a major determinant of consumer behaviour (Kong & Jogaratnam 2007).

Social Class relates to social hierarchies created from unequal distributions of status and power (Kong & Jogaratnam 2007). In many countries this has a strong impact on customer perceptions (Kong & Jogaratnam 2007). However, due to the casual approach that Australia takes to social status, it becomes an unrealistic predictor for customer behaviour (Spinks 2009).

Psychographic, cultural and social class items add considerable length to questionnaires (Spinks 2009) and often include sensitive questions (Wu 2007) in which respondents are less likely to complete, resulting in non-response difficulties during the data analysis stage of the research (Aaker et al 2007). It is for these reasons that data for these three items have not been collected for this research.

From previous research it appears that age, gender and income may have an impact on customer perceptions and behavioural intentions toward Australian farmed prawns (Gagliano & Hathcote 1994; Verbeke et al 2004; Von Freymann 2006; Belonax, Newell & Plank 2006; Verbeke et al 2007; Ganesan-Lim, Russell-Bennett & Dagger 2008; Peshanoff 2009). In addition to these characteristics, it is important to measure customer perceptions of other aspects such as product attributes to develop more accurate representations of customer perceptions (Von Freymann 2006).

Table 2.1 presents a review of the measurements that researchers have used for measuring customer perceptions.

**Table 2.1:** Items used to measure customer perceptions of performance

Author(s)/date	Product/Service	Sample	Scale	Constructs
Parasuraman, Zeithaml and Berry 1985	Banking Credit Cards Brokering Repairs and Maintenance	12 focus groups 14 expert interviews	<i>Not available.</i>	-Responsiveness -Reliability -Competence -Access -Courtesy -Communication -Credibility -Security -Understanding -Tangibles
Parasuraman, Zeithaml and Berry 1991	Customers of: A telephone company 1 banks An insurance company	290-487 across companies	7 point scale	SERVQUAL- 22 items <b>Tangibles:</b> XYZ has modern looking equipment The physical facilities at XYZ are visually appealing Employees of XYZ are neat-appearing Materials associates with the service (such as pamphlets or statements) at XYZ are visually appealing <b>Reliability:</b> When XYZ promises to do something by a certain time they do so. When customers have a problem, XYZ shows sincere interest in solving it. XYZ perform the service right the first time XYZ provide their services at the time they promise to do so. XYZ insist on error-free records <b>Responsiveness:</b> Employees of XYZ tell customers exactly when the service will be performed Employees of XYZ give prompt service Employees of XYZ are always be willing to help customers Employees of XYZ are never be too busy to respond to customer requests <b>Assurance</b> The behaviour of XYZ employees instills confidence in customers Customers at XYZ feel safe in their transactions Employees of XYZ are consistently courteous with customers Employees of XYZ have the knowledge to answer customer questions <b>Empathy</b> XYZ give customers individual attention XYZ has operating hours convenient to all of their customers XYZ has employees who give customers personal attention XYZ has the customers best interests at heart The employees of XYZ understand the specific needs of their customers



Author(s)/date	Product/Service	Sample	Scale	Constructs
Cronin, Brady and Hult 2000	Sporting events Entertainment Health care Long distance carrier Fast Food	1200 participants – Study 1 700 participants – Study 2	9 point Likert Scale.	<ul style="list-style-type: none"> <li>-XYZ has up to date equipment</li> <li>-XYZ's facilities are visually appealing</li> <li>-XYZ's employees are well dressed and appear neat</li> <li>-The appearance of the physical facilities are in keeping with the type of service provided</li> <li>-When XYZ promises to do something by a certain time it generally does so</li> <li>-When you have problems, XYZ is sympathetic and reassuring</li> <li>-XYZ is dependable</li> <li>-XYZ provides its services at the time it promises to</li> <li>-XYZ keeps its records accurately</li> <li>-XYZ does not tell its customers exactly when services will be performed</li> <li>- You do not receive prompt service from XYZ employees</li> <li>- Employees of XYZ are not always willing to help customers</li> <li>-Employees of XYZ are too busy to respond to customer enquiries promptly</li> <li>-You can trust XYZ employees</li> <li>-You can feel safe w=in your transactions with XYZ's employees</li> <li>-XYZ employees are polite</li> <li>-Employees get adequate support from XYZ to do their jobs correctly</li> <li>- Employees of XYZ does not give you personal attention</li> <li>-Employees of XYZ do not know what your needs are</li> <li>-XYZ does not have your best interests at heart</li> <li>-XYZ does not have convenient operating hours for all of its customers</li> </ul>
Leek, Maddock and Foxall 2000	Fish	311 participants	7 point scale	<ul style="list-style-type: none"> <li>Strongly agree – strongly disagree</li> <li>„Fish is a healthy food“</li> <li>„Fish is difficult to prepare“</li> <li>„Fish makes a good family meal“</li> <li>„Fish provides an alternative to red meat“</li> <li>„Fish goes off quickly“</li> <li>„Fish can be used in many recipes“</li> <li>„The bones in fish are off putting“</li> <li>„Fish is readily available in the shops“</li> <li>„Fish provides good value for money“</li> <li>„I prefer poultry“</li> <li>„Fish is versatile“</li> <li>„I like to serve fish when I have guests“</li> <li>„Fish is expensive“</li> <li>„There are lots of different varieties of fish“</li> <li>„There is a danger in food poisoning“</li> <li>„Fish is a nutritious food“</li> <li>„Fish has an unpleasant smell“</li> </ul>

Author(s)/date	Product/Service	Sample	Scale	Constructs
Kaynak and Kara 2000	Products in general from: Japan USA Russia China Eastern Europe Western Europe	240 Turkish Graduate students	5 point Likert scale	The products are expensive The products are reasonably priced, considering quality This country supplies more luxury items than necessities Their products are tailor-made rather than mass produced The products are reliable The employees show bad workmanship The company is technically advanced The products are a cheap imitation of better brand The products are very durable and made of good material The products give a bad performance The employees are supported by a good maintenance service These goods have low prestige, so I do not tell others that I buy them The products are much advertised Have a well recognized brand name The company provides a wide choice of size and model The products have a good style and appearance
Olson 2002	Seafood	495 participants	7 point scale	-Taste -Tenderness -Texture -Appearance
Spinks 2009	Health and Wellbeing services	630 participants	7 point scale	Price Place Product Promotion Process People Physical evidence

As seen in Table 2.1, there are many different measures used in customer perceptions. Parasuraman, Zeithaml and Berry (1985) identify that consumer perceptions and expectations are made up of 10 factors, later research by Parasuraman, Zeithaml and Berry (1988; 1991; 1994; 1996) use five factors: tangibles, responsiveness, reliability, assurance, and empathy, which have been classified as SERVQUAL, an instrument used to measure customer perceptions of service quality (Parasuraman, Zeithaml and Berry 1991). While this traditional scale may have been proven in many studies, Spinks (2009) believes that customer perceptions are better measured by the extended marketing mix or the controllable elements that collectively form the basis of customer perceptions (Judd 2003). Table 2.2 identifies which of the studies that have used questions relating to the extended marketing mix when measuring customer perceptions.

**Table 2.2: Common elements identified for measuring customer perceptions**

	Product	Price	Place	Promotions	People	Physical Evidence	Process;
Parasuraman, Zeithaml and Berry 1985	✓		✓	✓	✓	✓	✓
Parasuraman, Zeithaml and Berry 1991	✓		✓	✓	✓	✓	✓
Cronin, Brady and Hult 2000	✓		✓	✓	✓	✓	✓
Leek, Maddock and Foxall 2000	✓	✓	✓				
Kaynak and Kara 2000	✓	✓			✓		
Olson 2002	✓						
Spinks 2009	✓	✓	✓	✓	✓	✓	✓

Similarities exist between the items used by different researchers. For example, Parasuraman, Zeithaml and Berry (1985; 1991) include „XYZ has operating hours convenient to all of their customers“, Cronin, Brady and Hult (2000) include the question „XYZ does not have convenient operating hours for all of its customers“. Leek Maddock and Foxall (2000) „the fish is readily available in shops“. The three researchers identified place, or distribution, as one of the factors for measuring customer perceptions.

Kaynak and Kara (2000) pose the questions; „The products have a good style and appearance“, „The products are very durable and made of good material“. While Olson (2002) centers the questions around the taste, tenderness, texture, and appearance of the product. Both of these researchers have identified the product as a key factor in measuring customer perceptions.

### **Product, Price, Place, Promotions**

Product, price, place and promotion are the original four variables included in the marketing mix (Fisk et al. 2007; Gummesson, 1994; Pride et al. 2006; Sarshar, Serysilisik, Parry, 2009).

As can be seen in Table 2.2, the product is a very common concept in measuring perceptions (Parasuraman, Zeithaml & Berry 1985; 1991; Baker & Crompton 2000; Cronin, Brady & Hult 2000; Leek, Maddock & Foxall 2000; Kaynak & Kara 2000; Olson 2002; Spinks 2009). Parasuraman, Zeithaml and Berry (1985) believe that goods are much easier for customers to evaluate than services due to the ability to judge the quality of goods through tangible cues such as style, hardness, color, label, feel, packaging, fit. Olson (2002) assesses the perceived quality of four different seafood products through focusing only on the attributes of the products. This however does not allow for other influencing factors, such as price, place, promotions, people, process and physical evidence, to be included in the customers evaluation.

Price or value represents the customer's perception of the perceived benefits of the product against the perceived sacrifices (Hoffman et al 2010). It includes all costs involved in acquiring the product or service, these include monetary costs, time costs, energy costs (physical energy), and psychic costs (mental energy) (Hoffman et al 2010).

Place, or distribution, relates to the availability of the product or service, both in convenient times and locations (Pride et al 2006). This element has the ability to create strong economic and social bonds or may impede the facilitation of selling products/services, therefore it is has the ability to affect customer perceptions (Bolton, Lemon & Verhoef 2004)

Promotions, or marketing communications, involve all activities that companies use to communicate with customers (Shimp 2007). Media is a powerful tool, it is therefore an important factor in shaping customer perceptions (Kaiser & Stead 2003).

### **People, Physical Evidence, Process**

The extended marketing mix was developed as a result of the differences between services and goods (Bitner 1991). Increases of technology in production has seen many goods-sector companies turn to service as their point of differentiation, in addition, the growth of information technology has also enhanced communication channels allowing for increased service (Rust & Chung, 2006). These changes have resulted with modifications being made to the marketing mix (Rust & Chung, 2006). These include the addition of people, physical evidence and process to create the extended marketing mix (Fisk et al. 2007; Gummesson, 1994; Hoffman 2010). The extended marketing mix takes into account that customers are often within a service environment for the delivery, interacting directly with the personnel and observing or participating in the service procedures (Bitner 1991). These additions allow for a more complete view of customer needs within the service environments (Gummesson 1994). These three items relate to the direct interaction between the customer and the company and have been identified as important determinants for customer perceptions (Spinks 2009).

### **2.3 Trust**

Trust is a very common element throughout relationship marketing literature. It is often identified as having a large influence on customer relationships (Dwyer, Shurr & Oh, 1987; Garbarino & Johnson, 1999; Gwinner, Gremler & Bitner, 1998; Morgan & Hunt, 1994; Swanson, Davis and Zhao, 2007). Gwinner, Gremler & Bitner (1998) define customer relationships as long-term relational exchanges. Building strong customer relationships produces many advantages for business, such as loyal repeat customers and favourable word of mouth (Chaudhuri & Holbrook, 2001; Ndubisi & Wah 2005; Swanson Davis & Zhao 2007). Research shows that increased trust in a brand enhances confidence and reduces risk perception, allowing customers to feel safe when purchasing and using the brand (Gwinner, Gremler & Bitner, 1998) and in turn allows them to have increased positive behavioural

intentions (Chaudhuri & Holbrook 2001; Lacey 2007). Ravald and Gronroos (1996) believe that satisfaction with a product and company allows a customer to feel safe, thus developing trust (Ball, Caelho & Vilares, 2006). However other researchers, such as Chaudhuri and Holbrook (2001), believe that trust reduces uncertainty in a brand or product allowing them to rely on the brand, resulting in either satisfaction or dissatisfaction. Lacey (2007), Morgan and Hunt (1994) and Moorman Deshpande and Zaltman (1993) all view trust as the willingness of the average customer to rely on the ability and reliability of an organisation to perform and deliver on promises. Garbarino and Johnson (1999) agree with this view, stating that trust is „the consumers perception of confidence in the exchange partner’s reliability and integrity“ (pp71). Chaudhuri and Holbrook (2001) consider trust to have multiple facets such as consumers beliefs about reliability, safety, honesty and benevolence. Ball, Caelho and Vilares (2006) agree in part, identifying two types of trust, credibility trust and benevolence trust. The former relates to the belief in the company to deliver on promises and the latter to the belief that the provider is acting in the best interest of customer. These definitions suggest that a consumer must have trust in the retailer and product before they will purchase.

Kaiser and Stead (2002) believe that it would take only minor incidents to undermine the trust that customers have for industries, such as the topic for this thesis. Due to the earlier discussion of agriculture, in regards to food safety, it is clearly important for aquaculture industries to develop and maintain trust between their customers to ensure the steady growth of the industry (Kaiser & Stead 2002). Mazur, Aslin and Byron (2005 p.40) found customers in Victoria, Australia, have high levels of uncertainty in relation to both „trust in the industry“ and „trust in governments“ decisions [relating to aquaculture decisions]“.

### **2.3.2 Measurements of Trust**

Again there are varying method of measuring trust. Table 2.3 has been created to aid in the reviewing of items used by researchers within peer reviewed journals, this table identifies the authors in ascending order of the year published, the product or service that they studied, the sample size, their preferred scale and the constructs that were used. The Chronbach’s alpha coefficient can also be found within the table.

**Table 2.3:** Items used to measure trust

Author(s)/date	Product/Service	Sample	Scale	Constructs	Chronbach's $\alpha$
Crosby Evans and Cowles 1990	Insurance agencies	151 completed participants  Sent to 469, 269 returned.	7 point scale	Strongly agree – strongly disagree „My agent can be relied upon to keep his/her promises.“ „There are times then I find my agent to be a bit insincere“ (reverse coded) „I find it necessary to be cautious in dealing with my life insurance agent“ (reverse coded) „My agent is trust worthy“ „My agent and I are in competition – he/she is trying to sell me a lot of insurance and I am trying to avoid buying it“ (reverse coded) „My agent puts the customer“s interests before his/her own. Some people, including my agent, are not above „bending the facts“ to create the impression they want.“ (reverse coded)	.89
Moorman, Zaltman and Deshpande 1992	Research	779 participants	7 point scale	Strongly agree – strongly disagree „IfI or someone from my department could not be reached by our researcher, I would be willing to let my researcher make important research decisions without my involvement“ „IfI or someone from my department were unable to monitor my researcher's activities, I would be willing to trust my researcher to get the job done right“ „I trust my researcher to do things I can't do myself“ „I trust my researcher to do things my department can't do itself“ „I generally do not trust my researcher“	.84
Morgan and Hunt 1994	Tire retailers	204 participants	7 point scale	7-items Examples: „XYZ cannot be trusted at times“ „XYZ can be counted on to do what is right“ „XYZ has high integrity“	.95
Garbarino and Johnson 1999	Theatre	401 participants	5 point scale	„Always meets expectations“ „Can be counted on to be good quality“ „Reliable“ „Cannot always be trusted“ „Consistently high quality“ „Not worth the money“ „Waste of time“	.93
Chaudhuri and Holbrook 2001	Assorted brands (page 87)	149 participants	7 point scale	„I trust this brand“ „I rely on this brand“ „This is an honest brand“ „This brand is safe“	.81





Author(s)/date	Product/Service	Sample	Scale	Constructs	Chronbach's $\alpha$
Ndubisi and Wah 2005	Bank customers Malaysia	220 Participants	5 point scale	„My bank very is concerned with security for my transactions“ „My bank“'s words and promises are reliable“ „My bank is consistent in providing quality services“ “Employees of the bank show respect to customers“ „My bank fulfils its obligations to customers“ „I have confidence in my bank“'s services“	.84
Lacey 2007	Departmental store National restaurant chain	639 participants	7 point scale	XYZ : - Is very honest and truthful - Has high integrity - Can be completely trusted Can be counted on to do what is right	Not available

As can be seen in Table 2.3, while the operationalisation may vary, many researchers have used a number of similar questions. For example, “the company/product can/cannot be trusted” is used by Crosby, Evans and Cowles (1990), Morgan and Hunt 1994, Garbarino and Johnson (1999), Chaudhuri and Holbrook (2002) Hennig-Thurau, Gwinner and Gremler (2002) and Garbarino and Lee (2004), whereas Crosby, Evan and Cowles (1990), Garbarino and Johnson (1999), Chaudhuri and Holbrook (2001), Verhoef, Franses and Hoekstra (2002), Garbarino and Lee (2004), Ndubisi and Wah (2005) use the company/product can be relied on”. The scale used by Chaudhuri and Holbrook (2001) has been chosen to be utilized within this study, due to the similarity of focus of their study on various products, similar to prawns, as opposed to the focal point of others being services, and thus are very relevant to the topic of the current research.

## **2.5 Customer Satisfaction**

Customer satisfaction is a widely researched concept within marketing literature. It is considered to be a key component in marketing research (Churchill & Surprenant 1982; Hennig-Thurau, Gwinner & Gremler 2002; Garbarino & Johnson 1999, Swanson, Davis & Zhao 2007; Homburg, Koschate & Hoyer 2005; 2006; Luo & Homburg 2007). There is believed to be a major link between satisfaction and behavioural intentions such as attitude change, repeat purchase and brand loyalty (Churchill & Surprenant 1982; Anderson & Sullivan 1993; Mittal & Kumakura 2001; Luo & Homburg 2007). Therefore it is treated as a „necessary premise for the retention of customers“ (Hennig-Thurau & Klee 1997 p738; Anderson, Fornell & Mazvancheryl 2004). The following section will discuss customer satisfaction in further detail.

### **2.5.1 Defining Customer Satisfaction**

Two conceptually different definitions of satisfaction are present within the literature; transaction-specific and cumulative. Transaction specific satisfaction can be defined as an immediate post-purchase evaluation of the most recent transaction experienced with a company (Garbarino and Johnson 1999). This method is common among earlier researchers, such as Oliver (1980), Churchill and Surprenant (1982), Oliver and DeSarbo (1988) who

view customer satisfaction as the evaluation of the perceived difference between expectations and the actual performance of the product. Cumulative satisfaction, or overall satisfaction, is described as „an overall evaluation based on the total purchase and consumption experience with a good or service over time“ (Anderson, Fornell & Mazvancheryl 2004 pp174). Cognition, the affect experienced during the acquirement and consumption of a product has also been shown to influence satisfaction judgments (Homburg, Koschate & Hoyer 2006, Spinks 2009).

### **2.5.2 Measurements of Satisfaction**

Table 2.4 gives a brief overview of measurements that have been utilized for customer satisfaction.

**Table 2.4:** Items used to measure satisfaction

Author(s)/date	Product/Service	Sample	Scale	Constructs	Chronbachs alpha
Woodside, Frey and Daly 1989	Health care	392 participants	11 point scale	„Overall satisfaction with the service?“	Not available
Baker and Crompton 2000	Recreation	141 participants	9 point scale	5 items (Crosby and Stephens 1987) Satisfied – dissatisfied Favorable – unfavorable Pleased – unpleased Positive – negative	.98
Cronin, Brady and Hult 2000	Sporting events Entertainment Health care Long distance carrier Fast Food	1200 participants – Study 1	9 point Likert Scale.	<b>Emotion based –</b> Interest Enjoyment Surprise Anger Shame/shyness	.88
		700 participants – Study 2		<b>Evaluation based –</b> „My choice to purchase this service was a wise one“ „I think that I did the right thing when I purchased this product“ „This facility is exactly what is needed for this service“	.85
Hennig- Thureau, Gwinner and Gremler 2002	Variety of services	336 participants	Not available	„My choice to use this company was a wise one“ „I am always delighted with the service from this company“ „Overall I am satisfied with this organisation“ „I think I did the right think when I decided to use this company.“	.92
Homberg, Koschate and Hoyer 2005	Restaurants	80 participants	11 point scale	„I am satisfied with the service“ „The service meets my expectations“ „The restaurant compares with ideal competitors“ „I am overall satisfied“	.95
Olson, Wilcox and Olsson 2005	Seafood	1194 participants	Not available	Agree – Disagree „I feel satisfied“ „I feel pleased“	.90
Spinks, Lawley and Richins 2005	Tourist attractions	412 participants	5 point scale	„I think that it was worthwhile using this service.“ „I am pleased that I used this service.“ „Using this service has been a good experience.“ „Overall, I am satisfied with the service.“	.92
Swanson, Davis and Zhao 2007	Theater	442	7-point likert scale	„The performances at this theatre always meet my expectations“ „This theatre can always be counted on to produce a good show“ „I can always trust performances at this theatre to be good“	.90

Of the above-mentioned measurements, Olson, Wilcox and Olsson (2005) are the only researchers to have tested their scale on a product, and while their subject of research is in proximity to the current research, the lack of methodological information prevented the use of this measurement. The scale created by Spinks, Lawley and Richins (2005) has also been used in a more recent study concerning customer satisfaction with health and wellbeing services, measured on a seven-point Likert type scale rather than five-point (Spinks 2009). This scale, having addressed the four elements of customer satisfaction; cognitive, affective, experiential and overall and being found to be successful with customers within South East Queensland has been chosen to be utilized within this current research.

### **2.5.3 Outcomes of Customer Satisfaction**

As previously noted, there are many positive behavioural intentions linked to satisfaction. Lou and Homburg (2007) identify both customer intentions and customer behaviours that result from satisfaction. Customer intentions range from customer commitment to purchase intentions and willingness to pay premium prices (Lou & Homburg 2007, Homburg, Koschate & Hoyer 2006). While customer behaviours can consist of word of mouth, repurchase intentions and loyalty to the firm (Anderson & Sullivan 1993; Lou & Homburg 2007; Mittal & Kumakura 2001). Loyal customers have been found to allow organisations more flexibility, as they are likely to believe that a negative experience is a deviation from the norm (Ndubisi & Wah 2005). In addition, loyal customers develop an understanding of the company, resulting in quicker processing times and lower overall operating costs (Gwinner, Gremler & Bitner 1998; Leverin & Liljander 2006; Zineldin 2006). Benefits of customer satisfaction also include non-customer related benefits such as efficiency and overall performance of businesses (Anderson, Fornell & Mazvancheryl, 2004; Lou & Homburg 2007). It comes as no surprise that many companies have implemented programs designed to measure and improve customer satisfaction (Homburg, Koschate & Hoyer 2005; 2006), however it seems logical that such programs should also include management of customer perceptions. Consumer behavioural intentions and outcomes will be discussed in further detail in the following section.

## **2.6 Behavioural intentions**

Whilst post-purchase behaviours are preferred over post-purchase behavioural intentions, these are quite difficult to obtain and rarely reported (Olson, Wilcox & Olsson 2005). It is for this reason that this study will measure post-purchase behavioural intentions.

### **Post-Purchase behaviour:**

Post-purchase behaviour is a combination of the length a customer has supported a company, the frequency in which they patronize the company, and the range of products that they purchase from the company (Spinks 2009; Widing et al. 2003). These behaviours are influenced by perceptions of price, satisfaction, marketing communications, as well as past experience, perceived risk and the cost of switching to an alternative (Bolton, Lemon and Verhoef 2004). It is believed that gaining an understanding of this element will allow the researcher to obtain increased knowledge in relation to the customer's evaluation of the product/company. Previous research identifies that only one in three young people (18-25 years) will buy prawns, tending to rely on others in the household (Peshanoff 2009). The same research study also found that customers strongly associate prawns with special occasions, resulting with the majority of the purchase frequency being once per month or less. Behavioural intentions will be further discussed in the following section.

### **2.6.1 Defining Behavioural Intentions**

Behavioural intentions can be split in to two sections; favourable and unfavourable intentions (Zeithaml, Berry & Parasuraman 1996). A list of favourable intentions compiled by Zeithaml, Berry and Parasuraman (1996 pp34) include: repeat purchasing, remaining loyal to a company, positive word of mouth communications (Saying positive things about a company and/or recommending it to others) and paying premium prices. Unfavourable intentions include seeking compensation, participating in negative word of mouth communications and, in extreme circumstances, taking legal action (Zeithaml, Berry & Parasuraman 1996).

Zeithaml, Berry and Parasuraman (1996) found that both satisfaction and perceptions positively affect favourable intentions. As stated above, favourable intentions include repeat purchasing and remaining loyal to a company, it has been identified that retaining existing

customers is far easier and five times more cost effective than attracting new customers (Athanasopoulou 2009; Blattberg & Deighton 1996; Blodgett, Wakefield & Barnes 1995; Gupta et al 2004; Ndubisi & Wah 2005). Organisations with loyal customers also find that they have more flexibility, as their loyal customers are more forgiving and are likely to believe that a negative experience is a deviation from the norm. It may take more than one bad experience before loyal customers consider changing companies (Ndubisi & Wah 2005). Zeithaml, Berry and Parasuraman (1996) also believe that paying premium prices is a sign of favourable intentions. However, Zineldin (2006) believes that while loyal customers are often prepared to pay premium prices for reliable, quality goods, their favourable intentions lay in their loyalty to the brand/product.

The third favourable intention mentioned by Zeithaml, Berry and Parasuraman (1996) is positive word of mouth communications. Reichheld and Sasser (1990 p. 107) classify this as „free advertising“. Consumers often believe that personal communications are more reliable sources than non-personal information (Hennig-Thurau Gwinner & Gremler 2002), due to the seemingly unbiased opinion of the product or service (Swanson Davis & Zhao 2007). It is for these reasons that word of mouth communication has such a powerful influence on the purchasing decisions of consumers (Hennig-Thurau Gwinner & Gremler 2002; Swanson Davis & Zhao 2007; Sheth & Parvatiyar 1995). Due to the influential power of this medium, it is important for companies to attempt to maximise positive communications and minimise the negative (Blodgett, Wakefield & Barnes 1995).

### **2.6.2 Measurements of Behavioural Intentions**

Table 2.5 identifies different measurements used for measuring Behavioural Intentions.

**Table 2.5:** Items used to measure Behavioural Intentions.

Author(s)/date	Product/Service	Sample	Scale	Constructs
Woodside, Frey and Daly 1989	Health Care	392 participants	11 point scale	„Likelihood to use the service again“
Boulding, Kalhra, Staelin and Zeithaml 1993	Hotels	96 participants	Chronbachs alpha =.92	„How likely are you to use this service again?“ „How likely are you to recommend this service to your friends/family?“
Garbarino and Johnson 1999	Theatre	401	5 point scale	„How likely are you to: .....Attend in the future .....Subscribe in the future .....Donate in the future“
Baker and Crompton 2000	Recreation	141 participants	9 point scale	„I would continue to attend in the admission price were to increase“ „I would pay a higher price for this festival rather than others in the area“ „I am likely to say positive things about the festival to other people“ „I would attend the festival next year or the year after“ „I get tired of returning to the same festival“ „I would encourage friends to go to the festival“ If this festival were not available, it would make little difference to me, since I would go to another.“
Cronin, Brady and Hult 2000	Sporting events Entertainment Health care Long distance carrier Fast Food	1200 participants – Study 1 700 participants – Study 2	9 point Likert Scale. Reliability=.87	„The probability that I will use this service again is...“ „The likelihood that I will recommend this facility to a friend is...“ „If I had to do it over again, I would make the same choice“
Olson 2002	Seafood	495 participants	9 point scale	How many times have you eaten: - Product 1 - Product 2 - Product 3 - Product 4
Olson, Wilcox and Olsson 2005	Seafood	1194 participants	15 point scale	„How many times do you estimate that you will eat seafood in the next 14 days?“
Spinks 2009	Health and wellbeing	630 participants	9 point scale	„If I need to use this type of service again, I will use this provider.“ „I will say positive things about this service provider.“ „I would encourage my friends and relatives to try this service provider.“ „If someone asked me, I would recommend this service provider to them.“



As seen in Table 2.5 there have been many different methods of measuring behavioural intentions. However all but two of the above measures have a question to determine the potential for repeat purchasing of the service/product. Other similar elements amongst the methods is the likelihood of recommending the service/product. Spinks'' (2009) scale for behavioural intentions has an over all perspective, appears to have good face validity and an excellent tested reliability of .95. Therefore this measurement has been chosen for the current research.

## ***2.7 Consumer perceptions, trust, customer satisfaction, and behavioural intentions.***

Many studies have been conducted that address the connections between consumer perceptions, trust, customer satisfaction and behavioural intentions. Various studies examining the relationships between customer satisfaction and behavioural intentions have found strong positive correlations (Boulding et al 1993; Zeithaml, Berry & Parasuraman 1996; Luo & Homburg 2007). However, Spinks (2009) found that, while customer satisfaction does have a positive influence on behavioural intentions, customer perceptions has a stronger impact on behavioural intentions than customer satisfaction. Baker and Crompton (2000) acknowledge the numerous studies finding the strong positive influence that both customer satisfaction and customer perceptions have on behavioural intentions. While research regarding the above mentioned relationships is rather abundant, only a small amount of research regarding the relationships between trust, customer perceptions, customer satisfaction and behavioural intentions exists. However, Delgado-Ballester and Manurera-Aleman (1999) believe that trust is a central part of customers'' attitudes and belief structures and customers must have trust in a brand to meet their future satisfaction. Both Delgado-Ballester and Manurera-Aleman (1999) and Chaudhuri and Holbrook (2001) found that trust indeed has a significant influence on behavioural intentions such as loyalty.

## **2.8                      *Research problem, aims and Conceptual Framework***

The research question proposed for this study is: What Factors influence customers purchase intentions of Australian farmed prawns from seafood retail outlets?

The proposed research objectives (RO) of this study consist include:

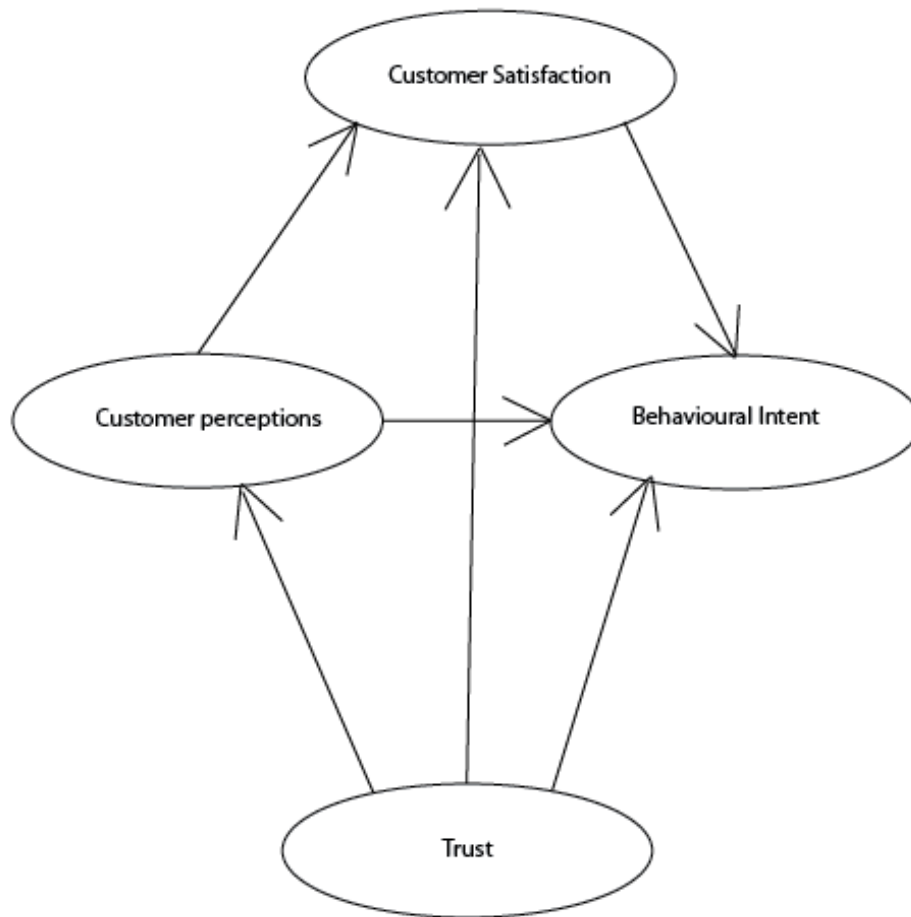
RO1: To identify which factors of Customer Perceptions influence Customer Satisfaction.

RO2a: To identify which factors of customer perceptions influence Behavioural intentions.

RO2b: To identify how much effect Customer Satisfaction has on Behavioural Intentions.

RO3: To identify the effect that Trust has upon Customer Perceptions, Customer Satisfaction and Behavioural Intentions.

Figure 2.2 displays a graphical representation of the proposed conceptual framework for this study.



**Figure 2.2:** Conceptual framework – Trust, Customer perceptions, Customer satisfaction and Behavioural intent.

## **2.9 Conclusion**

The purpose of this chapter has been to discuss the current literature of trust, customer satisfaction, consumer perceptions and behavioural intentions. Through reviewing these concepts it has been possible to develop the conceptual framework. Measurements of the key concepts have also been reviewed in order to draft the measurement scales for this research project.

**CHAPTER 3**  
**Research Design and Methodology**

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### **3.1        *Introduction***

This chapter addresses the research methods employed for this study. The research design, sampling design, questionnaire design, pre-testing of the questionnaire and data collection will be discussed in detail. Operational definitions of the variables, the theoretical framework and hypotheses will be presented and ethical issues will be considered.

### **3.2        *Research Design***

This research project utilizes both exploratory and descriptive research techniques. The use of exploratory research prior to descriptive allows for a deeper understanding of the elements of the research (Yauch & Steudel 2003), while descriptive research then allows the researcher to provide statistical inferences for the research problem (Currall, Hammer, Baggett & Doniger 1999). Table 3.1 gives a summary of three research approaches to research.

**Table 3.1 – Summary of research approaches**

<b>Comparison Criteria</b>	<b>Exploratory</b>	<b>Descriptive</b>	<b>Causal</b>
<b>Problem definition</b>	Seeks insights with no previous knowledge; explores	Describes some aspect of a population	Establishes a cause-effect relationship
<b>Hypothesis</b>	None, or very vague	Tentative and speculative	Very specific
<b>Type of data</b>	Qualitative	Quantitative	Quantitative
<b>Data collection method</b>	Secondary data analysis Focus groups Depth interviews Participant-observer field research Case Studies Projection Techniques	Secondary data analysis Surveys Observation (participant observer field research) Secondary data analysis	Experiments
<b>Ability to predict causation</b>	None	Can predict but cannot confirm causation	Establishes a cause-effect relationship
<b>Sampling</b>	Often small chosen using a non-probability method	Larger sample size, often using probability-based sampling methods	Larger sample size, often using probability-based sampling methods
<b>Generalisability</b>	Cannot be generalised	Can be generalized depending on the sample and the method	Can be generalized depending on the sample and the method
<b>Cost (In relation to other approaches)</b>	Low - Medium	Medium*	High
<b>Time (on average) (In relation to other approaches)</b>	Quick - Moderate	Moderate*	Longest

\*Internet approaches are reducing both the cost of and the time required for descriptive studies.

Source: adapted from Aaker, Kumer, Day, Lawley and Stewart (2007).

Currall et al (1999) found that neither method has superiority over the other, and that the combination of qualitative and quantitative research maximizes the knowledge yield for organizational research. According to Yauch and Steudel (2003) there are three main benefits for the combination of these two techniques. These include triangulation, complementation and development. These three benefits allow for the results of the research to obtain convergent validity, provide a better understanding of the research problem and guide further research (Yauch & Steudel 2003).

The exploratory research techniques used for this research include secondary data and depth interviews to explore which factors influences consumer purchase of Australian farmed prawns. Surveys were used for the descriptive research. The purpose of the surveys was to answer the question „What factors influence SE Queensland consumers to purchase Australian farmed prawns“ and „How these factors influence the post-purchase evaluation and behaviours.“

### **3.3        *Sampling Design***

Due to this research being sponsored by the Seafood Cooperative Research Centre (CRC), it was confined to members of the CRC. Of the eligible members of the CRC, one prawn farmer, one prawn fisher and one retailer were available for in-depth interviews, the results of these interview are summarized in Appendix B.

Zikmund et al. (2011) believe that sampling although determining samples through formulae is theoretically useful, it is often (due to research objectives and/or lack of resources), impractical for many studies. Both Zikmund et al. (2011) and McGivern (2006) agree that a suitable method of sample size determination is experience (or the experience of others) in similar fields. While „larger samples can give increased confidence in incorrect results“ (Zikmund et al. 2001. P.345). Hair et al. (2006) believe that, as a rule of thumb, a sample size of 100 is preferred although a sample size of 50 can still be effective for analysis. Therefore, as thin research in a pilot study and due to the difficulty of collection data, the minimum sample size for this research was set at 200 responses, with a minimum of 50, and ideally 100, respondents who had purchased Australian farmed prawns.

The sampling design used within this research project is a non-probability method classified as „convenience sampling“ (Zikmund et al. 2011) this method was used with a combination of “on-site intercept“ at seafood outlets and „quota intercept“ sampling (Veal 2005). Ten areas within Brisbane and the Sunshine Coast were chosen as intercept points (5 for each area) with a quota minimum of 15 respondents (male and female combined) per area. This method was used within South-East Queensland.

### **3.4      *Questionnaire Design***

The concepts of consumer perceptions, trust, customer satisfaction and behavioural intent have been identified through out literature review, and thus scales to measure these concepts have formed the basis for the development of the questionnaires for this research study.

Two questionnaires have been developed for this study, the first addressing employees of the seafood industry and the second addressing customers within South East Queensland.

7-point likert scales were used for all questions, with the exception of demographic questions and qualitative questions (open ended), within this study, these scales allow for respondents to indicate their level of agreement or disagreement to statements relating to the object (Aaker et al. 2007)

### **3.5      *Operationalisation of concepts***

Operationalisation of concepts is the process of representing unmeasurable abstract concepts by measurable variables (Manning and Munro 2005). This process begins with the conceptual framework showing the unmeasurable abstracts (see Figure 3.1).



**Figure 3.1:** Conceptual framework – Trust, Customer perceptions, Customer satisfaction and Behavioural intent.

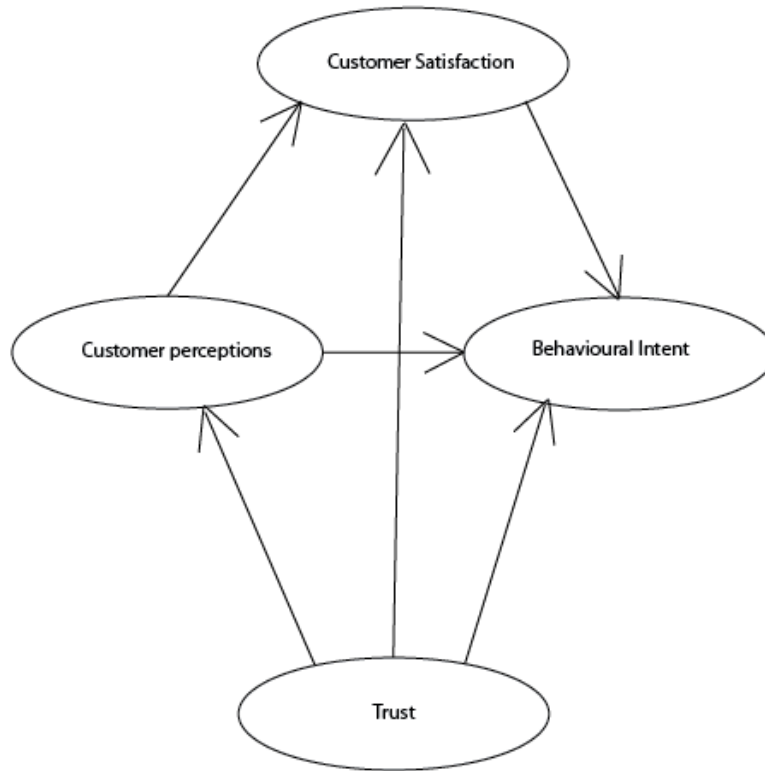


Table 3.6 describes how each abstract concept has been operationalised into measurable concepts.

### 3.1.1 Customer Questionnaire

This questionnaire (Appendix C) was developed to measure demographic characteristics, perceptions of Australian Farmed Prawns, Satisfaction with Australian farmed prawns and behavioural intentions of the customers of Australian farmed prawns within South East Queensland.

**Demographics:** Veal (2005) identified several individual characteristics that may be of importance in questionnaire surveys (See appendix D). These demographics have also been identified within the literature as factors that may influence customer behaviour. Therefore,

the characteristics that have been included in this research project include age, gender, income and residential location. The majority of this data has been collected as nominal data, with the exception of „age“, being on an ordinal scale and „postcode“ which is collected as nominal data.

**Trust:** Chaudhuri and Holbrook’s (2001) 4-item measurement for Trust has been selected for this study, due to both studies researching a type of product rather than a service. This measurement has a Chronbach’s alpha of .89, according to Hair et al (2006) Concept reliabilities above .7 suggest good reliability, therefore this measurement of Trust has a very high reliability. This measurement has also been selected due to similarities between the subjects of the two studies.

**Table 3.2:** Scale for Trust, including Chronbach’s alpha.

I trust the quality of Australian Farmed Prawns.	Original Chronbach’s alpha: .89
Australian Farmed Prawns are a reliable product.	
The Australian Farmed Prawn industry is an honest industry.	
Australian Farmed Prawns are a safe product.	

As can be seen in Table 3.2, wording has been slightly altered to relate the questions to Australian farmed prawns. The questions used a 7-point likert type scale with options ranging from 1 (strongly disagree) to 7 (strongly agree). The data for this scale is classified as interval data.

**Consumer Perceptions:** The extended marketing mix is used to measure customer perceptions within this study. This measurement, developed by Spinks (2009) has excellent reliability alphas ranging from .80 to .97. Wording of questions has been changed to apply to perceptions of Australian farmed prawns. Items relating to people place and process have been reduced due to these items focusing on services rather than goods. Customers are required to respond on a 7-point likert type scale with options ranging from 1 (strongly disagree) to 7 (strongly agree).

**Table 3.3:** Scale for customer perceptions, including Chronbach’s alpha.

Product	I prefer to buy Australian products.
Product	Australian Farmed Prawns are a high quality product.
Product	Farmed Prawns are more tender than wild caught prawns.
Product	Farmed Prawns are often smaller than wild caught prawns.
Product	Farmed Prawns have a better texture than wild caught prawns.
Product	Farmed Prawns taste better than wild caught prawns.
Product	Prawns are usually for special occasions.
Product	I try to buy environmentally friendly products.
Product	Australian Farmed Prawns are an environmentally friendly product.

**Table 3.3:** Scale for customer perceptions, including Chronbach’s alpha continued.

Product	Prawns are high in good cholesterol.
Product	Prawns are high in bad cholesterol
Product	Prawns are a healthy product.
Price	Australian Farmed Prawns are expensive.
Price	Australian Farmed Prawns are worth the effort to get them.
Price	Australian Farmed Prawns are worth the price.
Marketing Communications	I was made aware of the country of origin of the product.
Marketing Communications	I was made aware of whether the Prawns were farmed or wild caught.
Marketing Communications	The retailer recommended a product.
Place	I could easily access Australian Farmed Prawns.
Place	This location was convenient for me
People	The staff knew their seafood well
People	The staff were courteous and helpful
Physical Evidence	The prawns were displayed in a visually appealing manner
Physical Evidence	The retail outlet looked clean and hygienic
Process	The retailer is efficient
Process	The retailer is quick to respond to enquiries and requests

**Customer Satisfaction:** Spinks’ (2009) 4-item measure for customer satisfaction has been selected for measuring customer satisfaction within this study. Wording has been changed slightly to account for measuring satisfaction with Australian farmed prawns. This scale has been found to have high reliability (Chronbach’s alpha .93). Customers were required to respond on a 7-point likert type scale with options ranging from 1 (strongly disagree) to 7 (strongly agree).

**Table 3.4:** Scale for Customer Satisfaction, including Chronbach’s alpha.

I think that it is worthwhile using Australian Farmed Prawns.	Original Chronbach’s alpha: .93
I am pleased to use Australian Farmed Prawns	
Using Australian Farmed Prawns has been a good experience.	
Overall, I am satisfied with Australian Farmed Prawns.	

**Behavioural Intent:** Spinks’ (2009) 4-item measure for behavioural intent has been selected for measuring behavioural intention within this study. Wording has been changed slightly to account for measuring intent to purchase Australian farmed prawns. This scale has been found to have high reliability (Chronbach’s alpha .95), and is a combination of other researchers such as Cronin, Brady and Hult (2000). Customers respond on a 7-point likert type scale with options ranging from 1 (strongly disagree) to 7 (strongly agree).

**Table 3.5:** Scale for Behavioural Intentions.

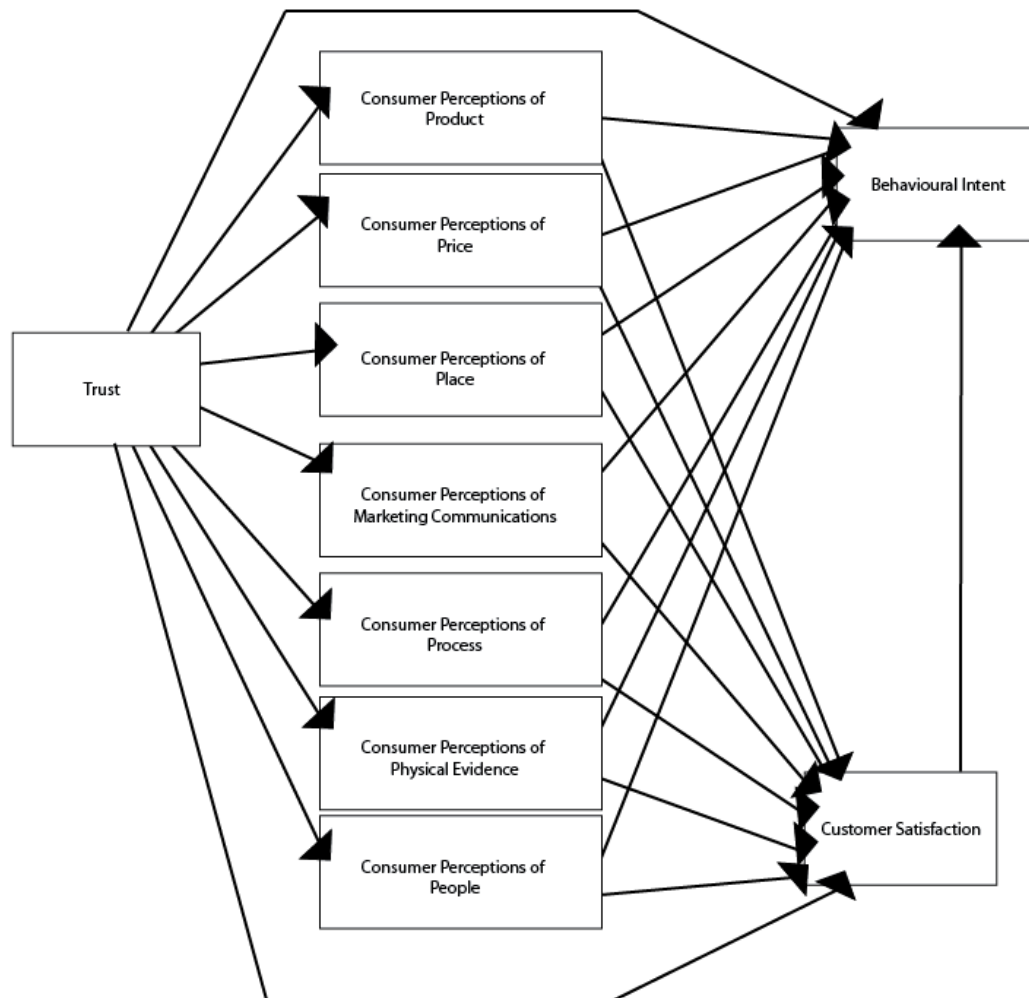
If I needed to purchase prawns, I would use Australian Farmed Prawns.	Original Chronbach’s alpha: .95
I will say positive things about Australian Farmed Prawns	
I would encourage my friends and relatives to try Australian Farmed Prawns.	
If someone asked me, I would recommend Australian Farmed Prawns.	

Full operationalisation of the concepts used in this research are set out in Table 3.6.

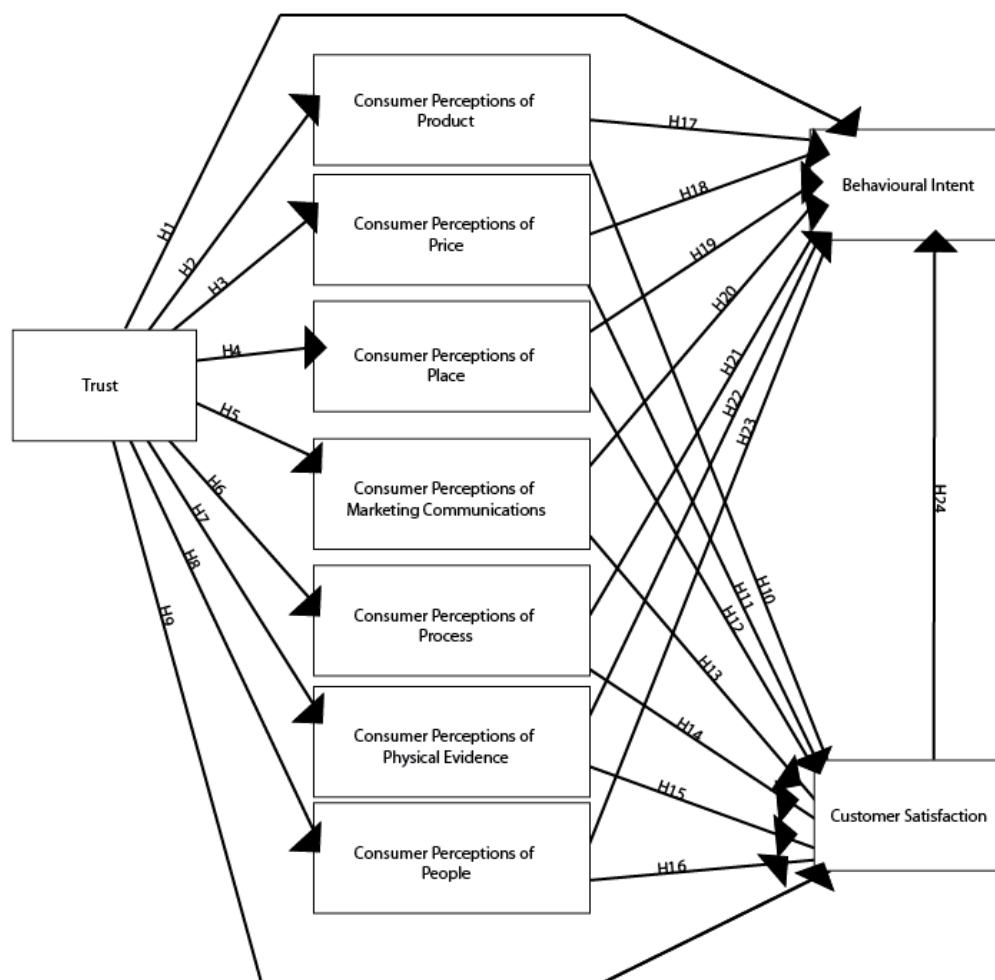
**Table 3.6: Operationalisation of concepts**

<b>Abstract concept</b>	<b>Conceptual definition</b>	<b>SPSS Variable name</b>	<b>Operational definition</b>	<b>Scale</b>	<b>Relevant Hypothesis</b>
<i>Product</i>	Customer Perception Dimension - <i>Product</i>	Product	Arithmetic mean of responses to 12 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 2, 10, 17
<i>Price</i>	Customer Perception Dimension - <i>Price</i>	Price	Arithmetic mean of responses to 3 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 3, 11, 18
<i>Place</i>	Customer Perception Dimension - <i>Place</i>	Place	Arithmetic mean of responses to 2 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 4, 12, 19
<i>Promotion</i>	Customer Perception Dimension - <i>Promotion</i>	Promotion	Arithmetic mean of responses to 3 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 5, 13, 20
<i>Process</i>	Customer Perception Dimension - <i>Process</i>	Process	Arithmetic mean of responses to 2 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 6, 14, 21
<i>Physical Evidence</i>	Customer Perception Dimension - <i>Physical Evidence</i>	Physical_Evidence	Arithmetic mean of responses to 2 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 7, 15, 22
<i>People</i>	Customer Perception Dimension - <i>People</i>	People	Arithmetic mean of responses to 2 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 8, 16, 23
<i>Trust</i>	Trust	Trust	Arithmetic mean of responses to 4 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypotheses 1-9
<i>Customer Satisfaction</i>	Customer Satisfaction with Australian farmed prawns	Customer_Satisfaction	Arithmetic mean of responses to 4 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 1-16 Hypothesis 9 Hypothesis 24
<i>Behavioural Intent</i>	Customer Behavioural Intentions for Australian farmed prawns	Behavioural_Intent	Arithmetic mean of responses to 4 items (each item is on a 1-7 attitude scale with options ranging from 1 (strongly disagree) to 7 (strongly agree))	Interval	Hypothesis 1 Hypothesis 17 - 24

Further developing the conceptual model, Figure 3.2 displays the theoretical framework. This model presents the measurable variables for the research.



**Figure 3.2:** Theoretical framework



**Figure 3.3:** Theoretical framework including explicit labelling of hypothesis.

Figure 3.3 displays the theoretical framework including explicit labelling of the hypothesis, which are as described in Table 3.7.

**Table 3.7:** Hypothesis derived from theoretical framework

Hypothesis 1:	A significant positive relationship is predicted between <i>Trust</i> and <i>Behavioural intentions</i> .
Hypothesis 2:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Product</i> .
Hypothesis 3:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Price</i> .
Hypothesis 4:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Place</i> .
Hypothesis 5:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Marketing Communications</i> .

**Table 3.7:** Hypothesis derived from theoretical framework continued.

Hypothesis 6:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Process</i> .
Hypothesis 7:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Physical Evidence</i> .
Hypothesis 8:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>People</i> .
Hypothesis 9:	A significant positive relationship is predicted between <i>Trust</i> and <i>Customer Satisfaction</i>
Hypothesis 10:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product</i> and <i>Customer Satisfaction</i> .
Hypothesis 11:	A significant negative relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Customer Satisfaction</i>
Hypothesis 12:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Customer Satisfaction</i>
Hypothesis 13:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Promotions (Marketing Communications) Product</i> and <i>Customer Satisfaction</i> .
Hypothesis 14:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Customer Satisfaction</i> .
Hypothesis 15:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Customer Satisfaction</i> .
Hypothesis 16:	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Customer Satisfaction</i>
Hypothesis 17:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product</i> and <i>Behavioural intentions</i> .
Hypothesis 18:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Behavioural intentions</i> .
Hypothesis 19:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Behavioural intentions</i>
Hypothesis 20:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Marketing Communications</i> and <i>Behavioural intentions</i> .
Hypothesis 21:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Behavioural intentions</i> .
Hypothesis 22:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Behavioural intentions</i> .
Hypothesis 23:	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Behavioural intentions</i> .
Hypothesis 24:	A significant positive correlation is predicted between the <i>Customer Satisfaction</i> and <i>Behavioural Intentions</i> .

Another hypothesis derived from the literature review is Hypothesis 25. As consumers tend to believe that personal communications are more reliable sources than non-personal information (Hennig-Thurau, Gwinner and Gremler 2002), as well as being a common element through-out in-depth interviews. It is expected that customers that have heard of Australian farmed prawns through the media will have lower behavioural intentions towards them as apposed to having heard through friends, family or retailers.

H25: There is a significant difference in behavioural intentions between those who have heard about Australian farmed prawns from the media and those who have heard about Australian farmed prawns from family and friends.

### **3.6 *Pre-testing of Questionnaires***

The proposed questionnaire was presented to the academic supervisors in draft format for changes before pretesting, these suggested changes included rewording of certain questions, format changes, font size, and exclusions of unnecessary items. It was then sent to industry professionals to identify methodological issues such as translation and ambiguities within the questions which could otherwise affect the reliability and validity of the results (Shaffer and Riordan 2003). Following all necessary changes a pilot survey was conducted in situations identical to that of the official study in order to gain familiarity with the respondents and to test the wording, layout, and completion times (Veal 2005). One fresh Seafood outlet within South East Queensland agreed to participate in the pre-test. According to Rogelberg and Stanton (2007) the rate of completion for surveys increases with increased interest in the survey topic, thus the participants of the pre-test were sought through „on-site intercept“ surveying (Veal 2005). 15 customers participated in the pre-test, while only one declined. The pre-test indicated that the questionnaire took approximately 10 minutes for participants to complete without assistance thus revealing that the questionnaire completion time was excessive, that the questions must be simplified and the overall questionnaire shortened.

After changes to the questionnaire a second pre-test was undertaken at another fresh seafood outlet within South East Queensland. 20 customers from the second store participated the questionnaire with an indication of 5-7 minutes for completion. four customers declined being involved in the pre-test.

### **3.7 *Data Collection***

Customer questionnaires were collected from five sites around Brisbane and five sites around the Sunshine Coast.

The surveys were collected via respondent-completed surveys, the surveys were handed to customers and collected by the researcher after completion. 30 customer surveys were completed at each site on the Sunshine Coast except two where circumstances allowed the collection of only 20. 20 surveys were completed for each site in Brisbane, while again two



sites failed to collect the aspired amount reaching 15 and 10. Data collection dates ranged from August 15 through to October 3 2010. See appendix E Data Collection Locations, Dates and Times and Number of Customer Surveys Completed

### **3.8        *Ethical Considerations***

According to Zikmund (2011) ethical issues that must be considered in research can include privacy, confidentiality, deception, accuracy of reporting, notice of intentions, the potential for physical or mental harm, etc. To avoid the occurrence of these issues arising this thesis adheres to the guidelines specified in the National Statement on Ethical Conduct in Human Research (NHMRC 2007) these can be viewed in Appendix F.

The proposed topic and research design has been submitted for review to the board of the Human Research Ethics Committee of the University of the Sunshine Coast, approval was granted by the Chairperson of that committee on 3 November 2010; Approval Number S/10/244. See appendix G: Letter: Ethics approval.

### **3.9        *Conclusions***

The purpose of this chapter has been to detail the processes in with the hypothesis will be tested for this research. The chapter has addressed the design of the research, including the sampling design, questionnaire design, pre-testing of surveys and data collection. Ethical considerations have also been discussed.

# CHAPTER 4

## Results

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## **4.1 Introduction**

This chapter presents the data preparation involved in this research, this is inclusive of missing data, creation of composites, validity and reliability of variables, outliers and normality. Descriptive statistics and demographics for customers are presented, Followed by the results of statistical analysis.

## **4.2 Data Preparation**

**Data File:** This file initially comprised of 215 responses from customers (questionnaires collected from South East Queensland), which, after data screening was reduced to 206. Data consisted of individual customer responses to Trust, Product, Price, Place, Marketing Communications, People, Physical Evidence, Process, Customer Satisfaction, Behavioural Intentions and demographic variables.

**Data Screening and Missing Data:** On completion of data entry into SPSS, all data must be screened for irregularities such as missing data (Manning & Munro 2007). There are many different methods for dealing with missing data, however, ambiguity surrounds the correct choice of alternative to use (Manning & Munro 2007). Of the 215 cases for this study 22 cases were found to be missing data (See Appendix H – Items with missing values and dealing with them). Four of the cases in question were found to be missing more than 50 percent of the data and were therefore removed from the study; these cases were removed from the data file. Eight other cases were identified to have only a small amount of missing data; and so the scores for these items were replaced with mean of the corresponding variable from available data (Manning & Munro 2007). Due to the small sample size for this study it was considered appropriate to use this method for these cases. The final ten cases were identified to be missing demographic data, and as these items are intended for descriptive rather than multivariate data analysis the cases were retained for analysis were possible (Manning & Munro 2007).

**Univariate Outliers:** Following this, the data was screened for univariate. Univariate outliers for nominal scales can be identified by examining the frequencies of each item (See appendix I). The data tested with this method can be seen in Table 4.1.

**Table 4.1: Identification of univariate outliers for data with a nominal scale.**

D1	Have you heard about Australian Farmed Prawns?	No outliers were identified.
D2	How did you hear about Australian Farmed Prawns?	No outliers were identified.
D3	Have you used Australian Farmed Prawns?	No outliers were identified.
D8	How many times have you used this service provider?	Case 59 input error: 6. Replaced with correct result, 2. Case 68 input error: 7. Replaced with correct result, 3.
D9	Please indicate your age.	Case 132 input error: 1868. Replaced with correct result, 1968.
D10	Please indicate your gender.	Case 114 input error: 3. Replaced with correct result, 1. Case 78 input error: 0. Replaced with correct result, 1.
D11	Please indicate your postcode.	Case 77 input error: 1988. Replaced with correct result, blank.
D13	Please select your average yearly individual income	No outliers were identified.

Univariate outliers for data with interval scales can be identified by examining descriptives and histograms (see Appendix J). Data tested with this method is displayed in Table 4.2

**Table 4.2: Identification of univariate outliers for data with an interval scale.**

A1	I think that it is worthwhile using Australian Farmed Prawns.	No outliers were identified.
A2	I am pleased to use Australian Farmed Prawns.	No outliers were identified.
A3	Using Australian Farmed Prawns has been a good experience.	No outliers were identified.
A4	Overall, I am satisfied with Australian Farmed Prawns.	No outliers were identified.
Prd1	I prefer to buy Australian products.	No outliers were identified.
Prd2	Australian Farmed Prawns are a high quality product.	No outliers were identified.
Prd3	Farmed Prawns are more tender than wild caught prawns.	No outliers were identified.
Prd4	Farmed Prawns are often smaller than wild caught prawns.	Case 49 input error: 32. Replaced correct result, 3.
Prd5	Farmed Prawns have a better texture than wild caught prawns.	No outliers were identified.
Prd6	Farmed Prawns taste better than wild caught prawns.	No outliers were identified.
Prd7	Prawns are usually for special occasions.	No outliers were identified.
Prd8	I try to buy environmentally friendly products.	No outliers were identified.
Prd9	Australian Farmed Prawns are an environmentally friendly product.	No outliers were identified.
Prd10	Prawns are high in good cholesterol.	No outliers were identified.
Prd11	Prawns are high in bad cholesterol	No outliers were identified.
Prd12	Prawns are a healthy product.	No outliers were identified.
Pri1	Australian Farmed Prawns are expensive.	No outliers were identified.
Pri2	Australian Farmed Prawns are worth the effort to get them.	No outliers were identified.
Pri3	Australian Farmed Prawns are worth the price.	No outliers were identified.
MC1	I was made aware of the country of origin of the product.	No outliers were identified.
MC2	I was made aware of whether the Prawns were farmed or wild caught.	No outliers were identified.
MC3	The retailer recommended a product.	No outliers were identified.
Pla1	I could easily access Australian Farmed Prawns.	No outliers were identified.
Pla2	This location was convenient for me	No outliers were identified.
Peo1	The staff knew their seafood well	No outliers were identified.
Peo2	The staff were courteous and helpful	No outliers were identified.
PhE1	The prawns were displayed in a visually appealing manner	No outliers were identified.
PhE2	The retail outlet looked clean and hygienic	No outliers were identified.
Pro1	The retailer is efficient	No outliers were identified.
Pro2	The retailer is quick to respond to enquiries and requests	No outliers were identified.
T1	I trust the quality of Australian Farmed Prawns.	No outliers were identified.
T2	Australian Farmed Prawns are a reliable product.	No outliers were identified.
T3	The Australian Farmed Prawn industry is an honest industry.	No outliers were identified.
T4	Australian Farmed Prawns are a safe product.	No outliers were identified.
D1	If I needed to purchase prawns, I would use Australian Farmed Prawns.	No outliers were identified.
D2	I will say positive things about Australian Farmed Prawns.	No outliers were identified.
D3	I would encourage my friends and relatives to try Australian Farmed Prawns.	No outliers were identified.
D4	If someone asked me, I would recommend Australian Farmed Prawns.	No outliers were identified.

**Creation of Composites:** Before the creation of composite variables recoding of reversed scores must occur (Manning & Munro 2007). Prd11 of the questionnaire has been posed in a negative direction, therefore, the decision was made to re-score the item in to a positive direction. Table 4.3 displays the a summary of the composites created for each construct, with the number of customer responses, the items used to produce composite variables and the composite label.

**Table 4.3:** Development of Composite Variables.

Customer Responses	Items used to produce composite variable.	Composite variable
211	Prd1, Prd2, Prd3, Prd4, Prd5, Prd6, Prd7, Prd8, Prd9, Prd10, Prd11, Prd12	<i>Product_Score</i>
211	Pri1, Pri2, Pri3	<i>Price_Score</i>
211	MC1, MC2, MC3	<i>MC_Score</i>
211	Pla1, Pla2	<i>Place_Score</i>
211	Peo1, Peo2	<i>People_Score</i>
211	PhE1, PhE2	<i>Product_Score</i>
211	Pro1, Pro2	<i>Product_Score</i>
211	T1, T2, T3, T4	<i>Trust_Score</i>
211	A1, A2, A3, A4	<i>Sat_Score</i>
211	D4, D5, D6, D7	<i>BI_Score</i>

**Validity and Reliability:** To determine the internal consistency of composite variables both item-to-total correlations and inter-item correlations were examined. Following this Alpha Factor Analysis was performed to identify underlying hypothetical factors (Graetz 2002). Coefficient Alpha (Chronbach's Alpha) was performed to test the reliability of the measures (Manning & Munro 2007)

**Product:** (see appendix K for SPSS tables) Item-to-total correlations created between *Product\_score* and Prd1-12 identify that only four items are displaying totals above .50, the criteria specified by Hair et al (1998 pp118), while inter-item scores also show low levels of correlations (many below .30).

The Alpha Factor Analysis extracted four hypothetical factors from Prd1-12 with eigenvalues over 1. Overall the correlations were found to be above the Kaiser-Meyer-Olkin (KMO) measure minimum of .60 for a good statistical analysis (Graetz 2002) with a result of .669

Coefficient (Chronbach's) alpha for the 12 items was found to be less than the minimum .60 (Manning & Munro 2007), with a reliability level of .59.

Having received less than desirable results for this factor it was decided to separate Product into the 3 major factors identified within the Alpha Factor analysis (See Table 4.4).

**Table 4.4:** Alpha Factor Analysis conducted for Customer Perception element; *Product*.

Pattern Matrix <sup>a</sup>				
	Factor			
	1	2	3	4
Prd6	<b>.812</b>			
Prd3	<b>.769</b>			
Prd5	<b>.741</b>			
Prd2	.449			
Product 11 RS		<b>.747</b>		
Prd10		<b>.595</b>		
Prd12		<b>.580</b>		
Prd9	.330	.373		
Prd1			.428	
Prd4				
Prd8				<b>.836</b>
Prd7				.317

Extraction Method: Alpha Factoring.  
 Rotation Method: Oblimin with Kaiser Normalization.  
 a. Rotation converged in 7 iterations.

Product 1 will consist of items Prd2, Prd3, Prd5, and Prd6 (as seen in Table 4.5).

**Table 4.5:** Questionnaire items used for product factor 1.

Prd2	Australian Farmed Prawns are a high quality product.
Prd3	Farmed Prawns are more tender than wild caught prawns.
Prd5	Farmed Prawns have a better texture than wild caught prawns.
Prd6	Farmed Prawns taste better than wild caught prawns.

This table identifies that the questions extracted by the Factor Analysis for Product 1 consist of specific attributes to the product.

Product 2 will consist of Prd10, Prd11 RS (reverse score) and Prd12 (as seen in Table 4.6). Prd9 has not been included in either of the above factors due to cross loading between Product 1 and Product 2.

**Table 4.6:** Questionnaire items used for product factor 2.

Prd10	Prawns are high in good cholesterol.
Prd11	Prawns are high in bad cholesterol – REVERSED SCORE
Prd12	Prawns are a healthy product.

These items relate to the health perceptions of prawns.

The third group consists of Prd7 and Prd8 (as seen in Table 4.7)

**Table 4.7:** Questionnaire items used for product factor 3.

Prd7	Prawns are usually for special occasions.
Prd8	I try to buy environmentally friendly products.

These two questions have been identified as a potential group through the alpha factoring, however due to the dissimilarity between the two items it was decided best to identify each as a single item factor, along with Prd1. These will be utilized for correlation analysis only.

Composite variables were created for each new variable and tests for internal consistency were repeated.

**Product 1:** 211 customer responses to Prd2, Prd3, Prd5, and Prd6 were used to produce the composite variable *Product1\_composite*. Item-to-total correlations identify that all four factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations for Prd3, 5 and 6 show correlations greater than .30. Prd2 however displayed one correlation of .261, identifying that this item has a low correlation with Prd5. The Alpha Factor Analysis identified only one factor, with excellent correlation (KMO = .71) (Graetz 2002). Coefficient (Chronbach’s) alpha for the 4 items was found to be acceptable at .66 (Manning and Munro 2007). From the pattern of the results it was decided to recalculate the composite variable using only Prd3, Prd5 and Prd6. The new score, *Product1.2\_composite*, was found to have excellent reliability of .82.

**Product 2:** 211 customer responses to Prd10, Prd11 RS (reverse score) and Prd12 were used to produce the composite variable *Product2\_composite*. Item-to-total correlations identify that each of the three factors displayed correlations greater than .50 (Hair et al 1998 pp118), and inter-item correlations for all items show correlations greater than .30. The Alpha Factor Analysis identified only one factor with excellent correlation (KMO = .66) (Graetz 2002). Coefficient (Chronbach's) alpha for the 3 items was found to be acceptable at .67 (Manning & Munro 2007).

**Product 3:** 211 customer responses to Prd7 and Prd8 were used to produce the composite variable *Product3\_composite*. Item-to-total correlations identify that each of the three factors displayed correlations greater than .50 (Hair et al. 1998 pp118), however, inter-item correlations show that the correlation between the factors is .25, less than the required .30 (Manning & Munro 2007). The Alpha Factor Analysis identified only one factor with acceptable correlation (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 2 items was found to be less than desirable at .39 (Manning & Munro 2007). Having found a very low reliability for this factor it was decided to use these items as separate items during correlation analysis.

In order to use composite variables with a high reliability, the measure of Product was contained to the three items for each Product 1 and Product 2.

**Price:** (See appendix L for SPSS tables) Item-to-total correlations identify that all four factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations for show correlations greater than .30. Pri1 however displayed one correlation of .204, identifying that this item has a low correlation with Pri2. The Alpha Factor Analysis identified only one factor, with a slightly low correlation measure (KMO = .46) (Graetz 2002). From the pattern of the results it was decided to recalculate the composite variable using only Pri2 and Pri3. The new score, *Price3\_composite*, was found to have excellent reliability of .79 (Manning & Munro 2007).

**Marketing Communications:** (See appendix M for SPSS tables) Item-to-total correlations identify that all three factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations for show correlations greater than .30. MC1



however displayed correlations of .204 and .064, identifying that this item has a low correlation with both other items. The Alpha Factor Analysis identified only one factor, with an acceptable correlation measure (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 3 items was found to be low, at .53 (Manning & Munro 2007). From the pattern of the results it was decided to recalculate the composite variable using only MC2 and MC3. The new score, *Price3\_composite*, was found to have acceptable reliability with a KMO measure of .50 and Chronbach's alpha measuring .72.

**Place:** (See appendix N for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with acceptable correlation (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 2 items was found to be acceptable at .70 (Manning and Munro 2007).

**People:** (See appendix O for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with acceptable correlation (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 2 items was found to be excellent at .84 (Manning & Munro 2007).

**Physical Evidence:** (See appendix P for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with acceptable correlation (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 2 items was found to be excellent at .84 (Manning & Munro 2007).

**Process:** (See appendix Q for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with acceptable correlation (KMO = .50) (Graetz 2002). Coefficient (Chronbach's) alpha for the 2 items was found to be excellent at .89 (Manning & Munro 2007).

**Trust:** (See appendix R for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with excellent correlation (KMO = .81) (Graetz 2002). Coefficient (Chronbach's) alpha for the 4 items was found to be excellent at .88 (Manning & Munro 2007).

**Satisfaction:** (See appendix S for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with excellent correlation (KMO = .85) (Graetz 2002). Coefficient (Chronbach's) alpha for the 4 items was found to be excellent at .94 (Manning & Munro 2007).

**Behavioural Intentions:** (See appendix T for SPSS tables) Item-to-total correlations identify that each of the factors displayed correlations greater than .50 (Hair et al. 1998 pp118), and inter-item correlations show correlations greater than .30. The Alpha Factor Analysis identified only one factor, with excellent correlation (KMO = .86) (Graetz 2002). Coefficient (Chronbach's) alpha for the 4 items was found to be excellent at .96 (Manning & Munro 2007).

**Multivariate Outliers:** A test for multivariate outliers was then conducted, using the data from a set of 8 variables (*Consumer perceptions of Product – physical attributes, Consumer perceptions of Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people*) Mahalanobis distances were calculated for each case. This was conducted with two sets of variables (*Behavioural intentions* and *Satisfaction*), in order to determine whether multivariate outliers are specific to one group of data or whether they repeat across the data. Allen and Bennett (2010) state that multivariate outliers exist when the Mahalanobis distance exceeds the critical chi-square ( $X^2$ ) value for  $df=k$  (i.e. the number of independent variables) at  $\alpha=.001$ . The critical  $X^2$  for  $df=8$  at  $\alpha=.001$  is 26.125. The first set of data (*Consumer perceptions of Product – physical attributes, Consumer perceptions of*

*Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people, and Behavioural intentions*) identified 5 cases as multivariate outliers (see appendix U for results).

The second data set (*Consumer perceptions of Product – physical attributes, Consumer perceptions of Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people, and Satisfaction*) also identified the same 5 cases as containing multivariate outliers (see appendix U).

Allen and Bennett (2010) identify 3 alternatives for dealing with multivariate outliers: 1) Ignore them, 2) remove them or 3) modify them. In this case, as the same 5 outliers were identified over two tests it was decided that the cases be removed for further statistical testing. Multivariate outliers exist when there is a unusual pattern to the responses to an individual (Manning & Munro 2007). There are several possible reasons for multivariate outliers, as is the case for the customer questionnaires identified, the respondent has selected the same check box for each question, which suggests the questions were not considered before the answer was chosen.

**Normality:** The normality for items *Consumer perceptions of Product – physical attributes, Consumer perceptions of Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people, Satisfaction, Behavioural intentions and Trust* were investigated. Histograms were examined, and skew and kurtosis measurements were calculated.

Significant skew is identified by dividing the skew value by the standard error of skew resulting with a Z score. This is also the case with identifying significant kurtosis (dividing the kurtosis value by the standard error of kurtosis). According to criteria presented by Tabachnick and Fidell (1996), for samples less than 300 the Z score must exceed 2.58 to be

considered significant (see Appendix V for SPSS tables). Table 4.8 presents the results for skew and kurtosis, having removed all outliers.

**Table 4.8: Skew and Kurtosis results**

Variable	Skew	Kurtosis
<i>Consumer perceptions of Product – physical attributes</i>	3.97 Significant skew	.50 No significant kurtosis
<i>Consumer perceptions of Product – health aspects</i>	.92 Not significantly skewed	9.91 Significant kurtosis
<i>Consumer perceptions of Price</i>	.80 Not significantly skewed	1.23 No significant kurtosis
<i>Consumer perceptions of Place</i>	3.73 Significant skew	2.25 No significant kurtosis
<i>Consumer perceptions of Marketing communications</i>	.65 Not significantly skewed	1.66 No significant kurtosis
<i>Consumer perceptions of Process</i>	4.02 Significant skew	-.02 No significant kurtosis
<i>Consumer perceptions of Physical evidence</i>	1.74 Not significantly skewed	-1.71 No significant kurtosis
<i>Consumer perceptions of people</i>	2.17 Not significantly skewed	.30 No significant kurtosis
<i>Satisfaction</i>	-5.21 Significant Negative skew	7.71 Significant kurtosis
<i>Behavioural intentions</i>	-2.42 Not significantly skewed	.23 No significant kurtosis
<i>Trust</i>	.55 Not significantly skewed	.03 No significant kurtosis

It was identified that three variables were significantly skewed and two variables displayed significant kurtosis. *Consumer perceptions of product – Health aspects*, had a high leptokurtic distribution, indicating the importance of this aspect of the product is the respondents. *Consumer perceptions of product – Physical attributes, place, and process were skewed*, while *Customer Satisfaction* was negatively skewed and kurtotic. However, due to the nature of the study of consumers, this is expected, as it is traditional for studies involving performance and satisfaction to have negative skew and a leptokurtic distribution (Danaher & Haddrell 1996; Spinks 2009). Manning and Munro (2007) state that there are no remedies for data displaying significant levels of kurtosis or for data with „ceiling“ or „floor“ effects

(where there are large amounts of cases with results of either the highest or the lowest score). Therefore, no changes have been made to this data.

### 4.3 Profile of Respondents

In addition to the perception variables, satisfaction, trust and behavioural intentions, customers were required to answer a variety of demographic items. These items allow for insight into the respondents of the study

Results to these demographic items are displayed in Table 4.9.

**Table 4.9:** Demographic variables (n=211).

Item	Frequency	Percentage
<b>D9: Age</b>		
Missing	7	3.3
18 – 24	62	29.5
25 – 30	34	16
31 – 35	25	11.8
36 – 40	19	9
41 – 45	19	8.9
46 – 50	23	10.9
51 – 55	14	3.8
56 – 60	3	4.2
61 and above	5	2.5
<b>D10: Gender</b>		
Female	97	46
Male	114	54
<b>Region</b>		
Brisbane	91	43.1
Sunshine Coast	120	56.9
<b>Income</b>		
Less than \$24,000	52	24.6
\$25,000 - \$49,000	93	44.1
\$50,000 - \$74,999	50	23.7
Over \$75,000	16	7.6
<b>D1: Have you heard of AFP (n=211)</b>		
Yes	140	66.4
No	71	33.6
<b>D2: How did you hear of AFP (n=140)</b>		
From friends and relatives	60	42.9
From retailers	36	25.7
Media	40	28.6
Other	4	2.9

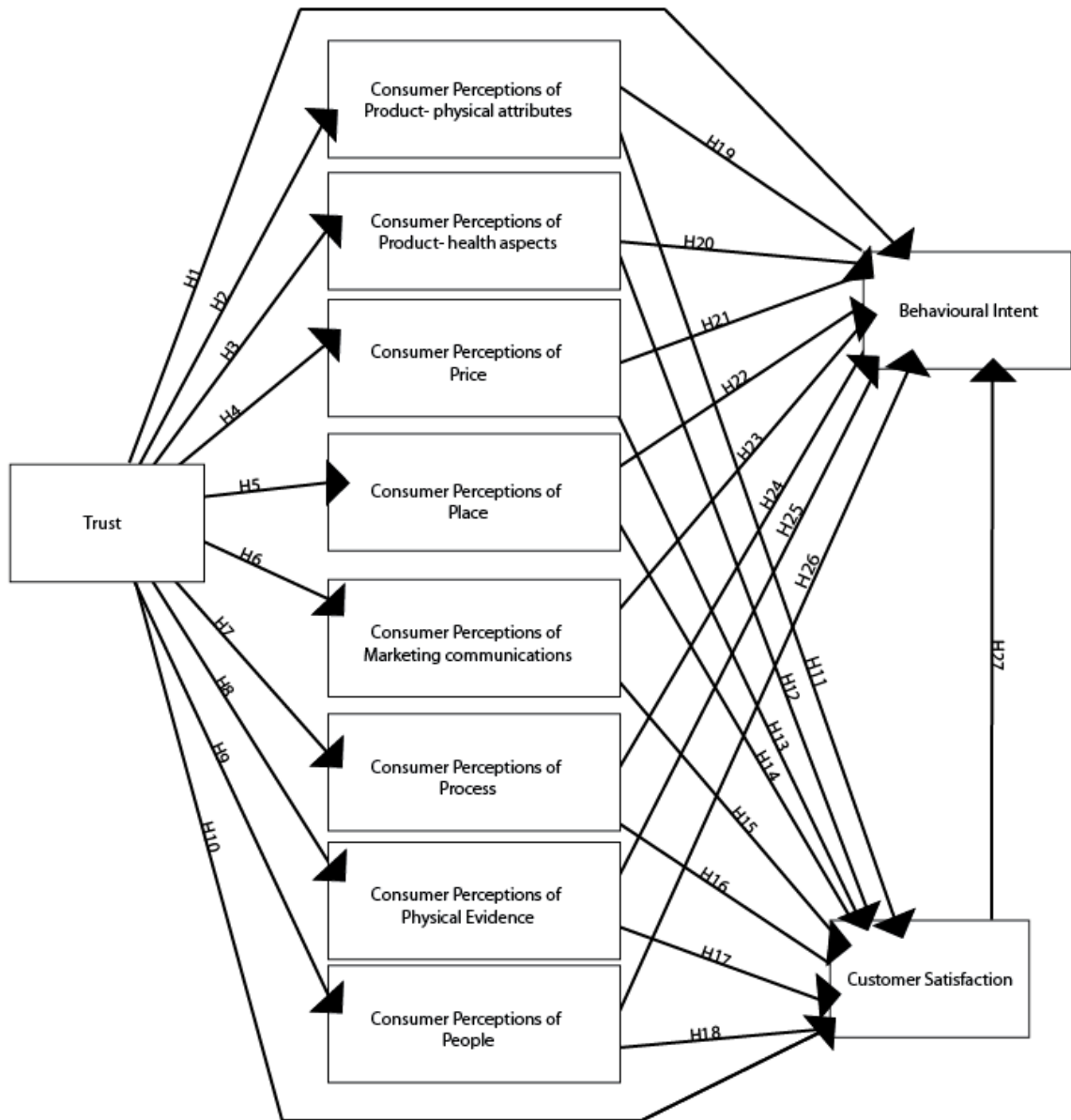
Item	Frequency	Percentage
<b>D3: Have you tried AFP (n=211)</b>		
Yes	86	40.8
No	40	19
Don't know	85	40.3
<b>D8: How many times have you been to this store?</b>		
Only Once (1)	52	24.6
Two (2) Times	46	21.8
Three (3)-Ten (10) Times	66	31.3
More than Ten (10)	44	20.9
<b>How often to you buy prawns.</b> (Times per year)		
Missing	24	11.4
0	7	3.3
1	16	7.6
2	25	11.8
3	18	8.5
4	16	7.6
5	3	1.4
6	12	5.7
7	1	.5
9	1	.5
12	59	28
23	1	.5
24	13	6.2
26	3	1.4
36	2	.9
56	9	4.3
112	1	.5

Analysis of the demographic variables identify that 97 (46%) of respondents were female and 114 (54%) were male. The largest age group was 18-24 (29.5%,  $n=62$ ) followed by 25-30 (16%,  $n=34$ ). The most frequent income group was \$25 000- \$49 000 ( $n = 81$ ), followed by both \$50 000 - \$74 999 ( $n = 46$ ) and under \$25 000 ( $n = 43$ ). Sixty of those 140 (66.4%) respondents who knew of Australian farmed prawns, claim heard of Australian farmed prawns through friends and family. Of all respondents ( $n=211$ ) while 140 had heard of Australian farmed prawns, only 86 (40.8%) had tried Australian farmed prawns, 40 (19%) have not, and 85 (40.3%) are not sure whether they have or have not. The majority of consumers were repeat customers and had been to the retail outlet three (3), to ten (10) times (20.9%,  $n=66$ ).

Contingency table analysis between age groups and frequency of purchasing identified that the larger majority of all groups identified that they purchase prawns approximately 12 times per year. However, contingency table analysis between age groups and whether they have, have not or do not know if they have tried Australian farmed prawns identified that approximately 60 percent of all respondents indicated that they have not, or are unsure of whether they have or have not tried Australian farmed prawns. The 18-24 category was the group with the largest percentage of first time patrons to the outlets, and the 61 and over category had the highest percentage of respondents having frequented the store more than 10 times, followed by 41-45 and 56-60 year olds. Through contingency table analysis it was also identified that all income categories indicated that the majority of respondents purchase prawns approximately 12 times per year (see appendix W for contingency tables).

#### **4.4 Hypothesis Testing**

Factor analysis, conducted in the previous section, identified that the variable „product“ for seafood has 2 segments, physical attributes (Product 1) and health aspects (Product 2). This alters the theoretical model as shown in figure 4.1



**Figure 4.1:** Modified theoretical model with hypothesis specified.

The modified theoretical framework identifies that the hypotheses will also change, these changes are displayed in Table 4.10.

**Table 4.10:** Hypothesis derived from theoretical framework

Hypothesis 1:	A significant positive relationship is predicted between <i>Trust</i> and <i>Behavioural intentions</i> .
Hypothesis 2:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Product- Physical attributes</i>
Hypothesis 3:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Product- Health aspects</i>
Hypothesis 4:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Price</i> .



**Table 4.10:** Hypothesis derived from theoretical framework continued.

Hypothesis 5:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Place</i> .
Hypothesis 6:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Marketing Communications</i> .
Hypothesis 7:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Process</i> .
Hypothesis 8:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Physical Evidence</i> .
Hypothesis 9:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>People</i> .
Hypothesis 10:	A significant positive relationship is predicted between <i>Trust</i> and <i>Customer Satisfaction</i>
Hypothesis 11:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Physical attributes</i> and <i>Customer Satisfaction</i> .
Hypothesis 12:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Health Aspects</i> and <i>Customer Satisfaction</i> .
Hypothesis 13:	A significant negative relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Customer Satisfaction</i>
Hypothesis 14:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Customer Satisfaction</i>
Hypothesis 15:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Promotions (Marketing Communications)</i> and <i>Customer Satisfaction</i> .
Hypothesis 16:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Customer Satisfaction</i> .
Hypothesis 17:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Customer Satisfaction</i> .
Hypothesis 18:	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Customer Satisfaction</i>
Hypothesis 19:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Physical attributes</i> and <i>Behavioural intentions</i> .
Hypothesis 20:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Health aspects</i> and <i>Behavioural intentions</i> .
Hypothesis 21:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Behavioural intentions</i> .
Hypothesis 22:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Behavioural intentions</i>
Hypothesis 23:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Marketing Communications</i> and <i>Behavioural intentions</i> .
Hypothesis 24:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Behavioural intentions</i> .
Hypothesis 25:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Behavioural intentions</i> .
Hypothesis 26:	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Behavioural intentions</i> .
Hypothesis 27:	A significant positive correlation is predicted between the <i>Customer Satisfaction</i> and <i>Behavioural Intentions</i> .
Hypothesis 28	There is a significant difference in behavioural intentions between those who have heard about Australian farmed prawns from the media and those who have heard about Australian farmed prawns from family and friends.

## 4.5 Hypothesis Testing

Hypotheses 1 to 10 and hypothesis 27 predict that one variable will affect another. Therefore Pearson r correlations will be conducted between each of the corresponding variables (i.e *Trust* and *Behavioural intent*, *Trust* and *Consumer perceptions of Product – physical attributes*, *Trust* and *Consumer perceptions of Product – health aspects*, *Trust* and *Consumer perceptions of Price*, *Trust* and *Consumer perceptions of Place*, *Trust* and *Consumer perceptions of Marketing communications*, *Trust* and *Consumer perceptions of Process*, *Trust* and *Consumer perceptions of Physical evidence*, *Trust* and *Consumer perceptions of people*, *Trust* and *Customer Satisfaction*, and, *Customer Satisfaction* and *Behavioural Intentions*).

Hypotheses 11-18 predict that each of the 8 perception variables will have an effect on *customer satisfaction*. They will therefore be tested with a multiple linear regression, with the perception variables as predictors of *customer satisfaction*.

Hypotheses 18-26 predict that each of the 8 perception variables will have an effect on *behavioural intentions*. They will therefore be tested with a multiple linear regression, with the perception variables as predictors of *behavioural intentions*.

As stated above, Hypotheses 1 to 10 and Hypothesis 27 are tested through correlations. The results for Hypotheses 1-10 are presented in Table 4.11

**Table 4.11:** Correlations: Between *Behavioural Intentions*, *the customer perception variables* and *Satisfaction* (independent variables) and *Trust* (dependant variable).

<b>Independent variables</b>	<b>Dependant variable - Trust</b>	
	<b>r</b>	<b>Sig</b>
<i>Behavioural intentions.</i> n=206	.70	.000
<i>Consumer Perception dimension Product- Physical attributes</i> n=206	.29	.000
<i>Consumer Perception dimension Product- Health aspects</i> n=206	.22	.001
<i>Consumer Perception dimension Price.</i> n=206	.59	.000
<i>Consumer Perception dimension Place.</i> n=206	.35	.000
<i>Consumer Perception dimension Marketing Communications</i> n=206.	.42	.000
<i>Consumer Perception dimension Process.</i> n=206	.38	.000
<i>Consumer Perception dimension Physical Evidence.</i> n=206	.43	.000
<i>Consumer Perception dimension People.</i> n=206	.38	.000
<i>Customer Satisfaction</i> n=87	.57	.000

**Hypothesis 1: A significant positive relationship is predicted between *Trust* and *Behavioural intentions*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and *Behavioural intentions*. A significant positive relationship was found,  $r=.70, p<.05$ , with 49 percent of the variance in *Behavioural intentions* explained by *Trust*. Hypothesis 1, which states that a significant positive relationship is predicted between *Trust* and *Behavioural intentions*, is therefore supported.

**Hypothesis 2: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Product- Physical attributes***

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Product- Physical attributes*. A significant positive relationship was found,  $r=.29, p<.05$ , with 8 percent of the variance in consumer perceptions of *Product- Physical attributes* explained by *Trust*. Hypothesis 2, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Product- Physical attributes*, is therefore supported.

**Hypothesis 3: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Product- Health aspects***

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Product- Health aspects*. A significant positive relationship was found,  $r=.22, p<.05$ , with 5 percent of the variance in consumer perceptions of *Product- Health aspects* explained by *Trust*. Hypothesis 3, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Product- Health aspects*, is therefore supported.

**Hypothesis 4: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Price*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Price*. A significant positive relationship was found,  $r=.59$ ,  $p<.05$ , with 34 percent of the variance in consumer perceptions of *Price* explained by *Trust*. Hypothesis 4, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Price*, is therefore supported.

**Hypothesis 5: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Place*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Place*. A significant positive relationship was found,  $r=.35$ ,  $p<.05$ , with 12 percent of the variance in consumer perceptions of *Place* explained by *Trust*. Hypothesis 5, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Place*, is therefore supported.

**Hypothesis 6: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Marketing Communications*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Marketing Communications*. A significant positive relationship was found,  $r=.38$ ,  $p<.05$ , with 14 percent of the variance in consumer perceptions of *Marketing Communications* explained by *Trust*. Hypothesis 6, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Marketing Communications*, is therefore supported.

**Hypothesis 7: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Process*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Process*. A significant positive relationship was found,  $r=.42$ ,  $p<.05$ , with 17 percent of the variance in consumer perceptions of *Process* explained by *Trust*. Hypothesis 7, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Process*, is therefore supported.

**Hypothesis 8: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Physical Evidence*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *Physical Evidence*. A significant positive relationship was found,  $r=.43$ ,  $p<.05$ , with 18 percent of the variance in consumer perceptions of *Physical Evidence* explained by *Trust*. Hypothesis 8, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *Physical Evidence*, is therefore supported.

**Hypothesis 9: A significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *People*.**

A Pearson Product-Moment Correlation analysis was performed between *Trust* and the Consumer Perception dimension *People*. A significant positive relationship was found,  $r=.38$ ,  $p<.05$ , with 14 percent of the variance in consumer perceptions of *People* explained by *Trust*. Hypothesis 9, which states that a significant positive relationship is predicted between *Trust* and the Consumer Perception dimension *People*, is therefore supported.

**Hypothesis 10: A significant positive relationship is predicted between *Trust* and *Customer Satisfaction***

A Pearson Product-Moment Correlation analysis was performed between *Trust* and *Customer Satisfaction*. A significant positive relationship was found,  $r=.58$ ,  $p<.05$ , with 33 percent of the variance in *Customer Satisfaction* explained by *Trust*. Hypothesis 10, which states that a significant positive relationship is predicted between *Trust* and *Customer Satisfaction*, is therefore supported.

The results for Hypothesis 27 are presented in Table 4.12.

**Table 4.12:** Correlations: Between *Behavioural Intentions* (independent variable) and *Customer Satisfaction* (dependant variable)

<i>Independent Variable</i>	<i>Dependant Variable - Customer Satisfaction</i>	
	<i>r</i>	<i>Sig</i>
<i>Behavioural Intentions.</i>	.58	.000

**Hypothesis 27: A significant positive correlation is predicted between the *Customer Satisfaction* and *Behavioural Intentions*.**

A Pearson Product-Moment Correlation analysis was performed between *Customer Satisfaction* and *Behavioural Intentions*. A significant positive relationship was found,  $r=.58$ ,  $p<.05$ , with 33 percent of the variance in *Behavioural Intentions* explained by *Customer Satisfaction*. Hypothesis 10, which states that a significant positive relationship is predicted between *Customer Satisfaction* and *Behavioural Intentions*, is therefore supported.

A summary of these results are presented in Table 4.13.

**Table 4.13:** A summary of Hypotheses (H1-H10 and H27) tested with correlations

Hypotheses		<i>r</i>	<i>Sig</i>	% of Variance	Relationship Supported/ Not Supported
H1:	A significant positive relationship is predicted between <i>Trust</i> and <i>Behavioural intentions</i> .	$r=.70$	$p<.05$	50%	<i>Hypothesis supported</i>
H2:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Product-Physical attributes</i>	$r=.29$	$p<.05$	8%	<i>Hypothesis supported</i>

Hypotheses		r	Sig	% of Variance	Relationship Supported/ Not Supported
H3:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Product-Health aspects</i>	r=.22	p<.05	5%	<i>Hypothesis supported</i>
H4:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Price</i> .	r=.59	p<.05	34%	<i>Hypothesis supported</i>
H5:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Place</i> .	r=.35	p<.05	12%	<i>Hypothesis supported</i>
H6:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Marketing Communications</i> .	r=.42	p<.05	17%	<i>Hypothesis supported</i>
H7:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Process</i> .	r=.38	p<.05	14%	<i>Hypothesis supported</i>
H8:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>Physical Evidence</i> .	r=.43	p<.05	18%	<i>Hypothesis supported</i>
H9:	A significant positive relationship is predicted between <i>Trust</i> and the Consumer Perception dimension <i>People</i> .	r=.38	p<.05	14%	<i>Hypothesis supported</i>
H10:	A significant positive relationship is predicted between <i>Trust</i> and <i>Customer Satisfaction</i>	r=.57	p<.05	39%	<i>Hypothesis supported</i>
H27	A significant positive correlation is predicted between the <i>Customer Satisfaction</i> and <i>Behavioural Intentions</i> .	r=.58	p<.05	33%	<i>Hypothesis supported</i>

SPSS tables for statistical testing of Hypotheses 1-10 and Hypothesis 27 can be found in Appendix X.

A Standard Multiple Linear Regression was performed between *Consumer Perception dimensions Product- Physical attributes, Product- Health aspects, Price, Place, Marketing Communications, Process, Physical Evidence and People* as the independent variables and *Satisfaction* as the dependant variable. The multiple correlation coefficient ( $R = .81$ ) was significantly different from zero,  $F(8,81) = 19.51, p < .05$ , and 63 percent of the variation in the dependant variable was explained by the set of independent variables ( $R^2 = .66$ , adjusted  $R^2 = .63$ ).

The individual results for this test are presented in Table 4.14.

**Table 4.14:** Multiple Linear Regression: Between the *customer perception variables* (independent variables) and *Satisfaction* (dependant variable).

Independent Variables	Dependent Variable			
	Satisfaction			
	Sr <sup>2</sup>	Beta	t	Sig.
<i>Consumer Perception dimension Product- Physical attributes</i> n=206	.07	.31	3.47	.001

**Table 4.14:** Multiple Linear Regression: Between the *customer perception variables* (independent variables) and *Satisfaction* (dependant variable) continued.

<i>Consumer Perception dimension Product- Health aspects</i> <i>n=206</i>	.05	.23	2.89	.005
<i>Consumer Perception dimension Price.</i> <i>n=206</i>	.13	.44	4.73	.000
<i>Consumer Perception dimension Place.</i> <i>n=206</i>	.01	-.13	-1.02	.311
<i>Consumer Perception dimension Marketing Communications</i> <i>n=206.</i>	.00	.02	.184	.855
<i>Consumer Perception dimension Process.</i> <i>n=206</i>	.01	.24	1.46	.150
<i>Consumer Perception dimension Physical Evidence.</i> <i>n=206</i>	.00	-.05	-.31	.761
<i>Consumer Perception dimension People.</i> <i>n=206</i>	.00	-.03	-.22	.825

**Hypothesis 11: A significant positive relationship is predicted between the Consumer Perception dimension *Product – Physical attributes* and *Customer Satisfaction*.**

The Consumer Perception dimension *Product – Physical attributes* ( $Sr_1^2 = .07$ , Beta = .31,  $t = 3.47$ ,  $p = .001$ ) was found to significantly and uniquely contribute to *Customer Satisfaction*. Hypothesis 11, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Product – Physical attributes*, and *Customer Satisfaction*, is therefore supported.

**Hypothesis 12: A significant positive relationship is predicted between the Consumer Perception dimension *Product – Health Aspects* and *Customer Satisfaction*.**

The Consumer Perception dimension *Product – Health aspects* ( $Sr_1^2 = .05$ , Beta = .23,  $t = 2.89$ ,  $p = .00$ ) was found to significantly and uniquely contribute to *Customer Satisfaction*. Hypothesis 12, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Product – Health aspects*, and *Customer Satisfaction*, is therefore supported.



**Hypothesis 13: A significant negative relationship is predicted between the Consumer Perception dimension *Price* and *Customer Satisfaction***

The Consumer Perception dimension *Price* ( $Sr_i^2 = .13$ , Beta = .44,  $t = 4.73$ ,  $p = .000$ ) was found to significantly and uniquely contribute to *Customer Satisfaction*. Hypothesis 13, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Price*, and *Customer Satisfaction*, is therefore supported.

**Hypothesis 14: A significant positive relationship is predicted between the Consumer Perception dimension *Place* and *Customer Satisfaction***

The Consumer Perception dimension *Place* ( $Sr_i^2 = .01$ , Beta = -.13,  $t = -1.02$ ,  $p = .311$ ) was found to provide no significant or unique contributions to *Customer Satisfaction*. Hypothesis 14, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Place*, and *Customer Satisfaction*, is therefore not supported.

**Hypothesis 15: A significant positive relationship is predicted between the Consumer Perception dimension (*Marketing Communications*) and *Customer Satisfaction*.**

The Consumer Perception dimension *Marketing Communications* ( $Sr_i^2 = .00$ , Beta = .02,  $t = .184$ ,  $p = .855$ ) was found to provide no significant or unique contributions to *Customer Satisfaction*. Hypothesis 15, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Marketing Communications*, and *Customer Satisfaction*, is therefore not supported.

**Hypothesis 16: A significant positive relationship is predicted between the Consumer Perception dimension *Process* and *Customer Satisfaction*.**

The Consumer Perception dimension *Process* ( $Sr_i^2 = .01$ , Beta = .24,  $t = 1.46$ ,  $p = .150$ ) was found to provide no significant or unique contributions to *Customer Satisfaction*. Hypothesis 16, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Process*, and *Customer Satisfaction*, is therefore not supported.

**Hypothesis 17: A significant positive relationship is predicted between the Consumer Perception dimension *Physical Evidence* and *Customer Satisfaction*.**

The Consumer Perception dimension *Physical Evidence* ( $Sr_i^2 = .00$ , Beta =  $-.05$ ,  $t = -.31$ ,  $p = .761$ ) was found to provide no significant or unique contributions to *Customer Satisfaction*. Hypothesis 17, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Physical Evidence*, and *Customer Satisfaction*, is therefore not supported.

**Hypothesis 18: A significant positive relationship is predicted between the Consumer Perception dimension *People* and *Customer Satisfaction***

The Consumer Perception dimension *People* ( $Sr_i^2 = .00$ , Beta =  $-.03$ ,  $t = -.22$ ,  $p = .825$ ) was found to provide no significant or unique contributions to *Customer Satisfaction*. Hypothesis 18, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *People*, and *Customer Satisfaction*, is therefore not supported.

The equation of prediction produced by this analysis describes the relationship between the variables to be:

$$\text{Customer satisfaction} = .301 \times \text{Physical attributes of the Product} + .230 \times \text{Health aspects} + .440 \times \text{Price} - .118 \times \text{Place} + .016 \times \text{Marketing Communications} + .220 \times \text{Process} - .045 \times \text{Physical Evidence} - .027 \times \text{People}.$$

A summary of the results for Hypothesis 11-19 is presented in Table 4.15.

**Table 4.15:** A summary of Hypotheses (11-18) tested with Multiple Linear Regression

Hypothesis 11:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Physical attributes</i> and <i>Customer Satisfaction</i> .	Beta: .230 $p < .05$	<i>Hypothesis supported</i>
Hypothesis 12:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product – Health Aspects</i> and <i>Customer Satisfaction</i> .	Beta: .313 $p > .05$	<i>Hypothesis not supported</i>

**Table 4.15:** A summary of Hypotheses (11-18) tested with Multiple Linear Regression continued.

Hypothesis 13:	A significant negative relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Customer Satisfaction</i>	Beta: .440 $p < .05$	<i>Hypothesis supported</i>
Hypothesis 14:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Customer Satisfaction</i>	Beta: -.133 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 15:	A significant positive relationship is predicted between the Consumer Perception dimension ( <i>Marketing Communications</i> ) and <i>Customer Satisfaction</i> .	Beta: .020 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 16:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Customer Satisfaction</i> .	Beta: .238 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 17:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Customer Satisfaction</i> .	Beta: -.045 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 18:	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Customer Satisfaction</i>	Beta: -.032 $p > .05$	<i>Hypothesis not supported</i>

A Standard Multiple Linear Regression was performed between *Consumer Perception dimensions Product- Physical attributes, Product- Health aspects, Price, Place, Marketing Communications, Process, Physical Evidence and People* as the independent variables and *Behavioural Intentions* as the dependant variable. The multiple correlation coefficient ( $R = .69$ ) was significantly different from zero,  $F(8,197) = 19.90$ ,  $p < .05$ , and 42 percent of the variation in the dependant variable was explained by the set of independent variables ( $R^2 = .45$ , adjusted  $R^2 = .42$ ).

The results for the Multiple Linear Regression performed for hypotheses 19 to 26 are presented in Table 4.16.

**Table 4.16:** Multiple Linear Regression: Between the *customer perception variables* (independent variables) and *Behavioural Intentions* (dependant variable)

<b>Independent Variables</b>	<b>Dependent Variable</b>			
	<b>Behavioural Intentions</b>			
	<b>Sr<sub>i</sub><sup>2</sup></b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
<i>Consumer Perception dimension Product- Physical attributes</i> $n=206$	.03	.19	3.26	.001
<i>Consumer Perception dimension Product- Health aspects</i> $n=206$	.01	.23	2.89	.100
<i>Consumer Perception dimension Price.</i> $n=206$	.20	.53	8.33	.000
<i>Consumer Perception dimension Place.</i> $n=206$	.01	-.12	-1.62	.106

**Table 4.16:** Multiple Linear Regression: Between the *customer perception variables* (independent variables) and *Behavioural Intentions* (dependant variable) continued.

<i>Consumer Perception dimension Marketing Communications</i> <i>n=206.</i>	.00	.06	.77	.440
<i>Consumer Perception dimension Process.</i> <i>n=206</i>	.00	.08	.80	.424
<i>Consumer Perception dimension Physical Evidence.</i> <i>n=206</i>	.01	-.13	-1.42	.158
<i>Consumer Perception dimension People.</i> <i>n=206</i>	.01	.13	1.35	.179

**Hypothesis 19: A significant positive relationship is predicted between the Consumer Perception dimension *Product - Physical attributes* and *Behavioural intentions*.**

The Consumer Perception dimension *Product - Physical attributes* ( $Sr_i^2 = .03$ , Beta = .19,  $t = 3.26$ ,  $p = .001$ ) was found to significantly and uniquely contribute to *Behavioural Intentions*. Hypothesis 19, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Product - Physical attributes*, and *Behavioural Intentions*, is therefore supported.

**Hypothesis 20: A significant positive relationship is predicted between the Consumer Perception dimension *Product – Health aspects* and *Behavioural intentions*.**

The Consumer Perception dimension *Product – Health aspects* ( $Sr_i^2 = .01$ , Beta = .23,  $t = 1.89$ ,  $p = .100$ ) found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 20, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Product – Health aspects*, and *Behavioural Intentions*, is therefore not supported.

**Hypothesis 21: A significant positive relationship is predicted between the Consumer Perception dimension *Price* and *Behavioural intentions*.**

The Consumer Perception dimension *Price* ( $Sr_i^2 = .20$ , Beta = .53,  $t = 8.33$ ,  $p = .000$ ) was found to significantly and uniquely contribute to *Behavioural Intentions*. Hypothesis 21,

which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Price*, and *Behavioural Intentions*, is therefore supported.

**Hypothesis 22: A significant positive relationship is predicted between the Consumer Perception dimension *Place* and *Behavioural intentions***

The Consumer Perception dimension *Place* ( $Sr_i^2 = .01$ , Beta =  $-.12$ ,  $t = -1.62$ ,  $p = .106$ ) was found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 22, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Place*, and *Behavioural Intentions*, is therefore not supported.

**Hypothesis 23: A significant positive relationship is predicted between the Consumer Perception dimension *Marketing Communications* and *Behavioural intentions*.**

The Consumer Perception dimension *Marketing Communications* ( $Sr_i^2 = .00$ , Beta =  $.06$ ,  $t = .77$ ,  $p = .440$ ) was found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 23, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Marketing Communications*, and *Behavioural Intentions*, is therefore not supported.

**Hypothesis 24: A significant positive relationship is predicted between the Consumer Perception dimension *Process* and *Behavioural intentions*.**

The Consumer Perception dimension *Process* ( $Sr_i^2 = .00$ , Beta =  $.08$ ,  $t = .80$ ,  $p = .424$ ) was found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 24, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Process*, and *Behavioural Intentions*, is therefore not supported.

**Hypothesis 25: A significant positive relationship is predicted between the Consumer Perception dimension *Physical Evidence* and *Behavioural intentions*.**

The Consumer Perception dimension *Physical Evidence* ( $Sr_i^2 = .01$ , Beta = -.13,  $t = -1.42$ ,  $p = .158$ ) was found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 25, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *Physical Evidence*, and *Behavioural Intentions*, is therefore not supported.

**Hypothesis 26: A significant positive relationship is predicted between the Consumer Perception dimension *People* and *Behavioural intentions*.**

The Consumer Perception dimension *People* ( $Sr_i^2 = .01$ , Beta = .13,  $t = 1.35$ ,  $p = .179$ ) was found to provide no significant or unique contributions to *Behavioural Intentions*. Hypothesis 26, which states that a significant positive relationship is predicted between the Consumer Perception dimension, *People*, and *Behavioural Intentions*, is therefore not supported.

The equation of prediction produced by the previous analysis describes the relationship between the variables to be:

$$\text{Behavioural Intentions} = .287 \times \text{Physical attributes of the Product} + .120 \times \text{Health aspects} + .689 \times \text{Price} - .153 \times \text{Place} + .057 \times \text{Marketing Communications} + .100 \times \text{Process} - .161 \times \text{Physical Evidence} + .139 \times \text{People}.$$

However, only *Physical Attributes of the Product* and *Price* were found to be significant.

The results are summarised in Table 4.17.

**Table 4.17:** A summary of Hypotheses (19-26) tested with Multiple Linear Regression

Hypothesis 19:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product - Physical attributes</i> and <i>Behavioural intentions</i> .	<b>Beta: .193</b> <b><math>p &lt; .05</math></b>	<i>Hypothesis supported</i>
Hypothesis 20:	A significant positive relationship is predicted between the Consumer Perception dimension <i>Product - Health aspects</i> and <i>Behavioural intentions</i> .	Beta: .091 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 21	A significant positive relationship is predicted between the Consumer Perception dimension <i>Price</i> and <i>Behavioural intentions</i> .	<b>Beta: .532</b> <b><math>p &lt; .05</math></b>	<i>Hypothesis supported</i>
Hypothesis 22	A significant positive relationship is predicted between the Consumer Perception dimension <i>Place</i> and <i>Behavioural intentions</i>	Beta: -.123 $p > .05$	<i>Hypothesis not supported</i>

**Table 4.17:** A summary of Hypotheses (19-26) tested with Multiple Linear Regression continued.

Hypothesis 23	A significant positive relationship is predicted between the Consumer Perception dimension <i>Marketing Communications</i> and <i>Behavioural intentions</i> .	Beta: .056 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 24	A significant positive relationship is predicted between the Consumer Perception dimension <i>Process</i> and <i>Behavioural intentions</i> .	Beta: .081 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 25	A significant positive relationship is predicted between the Consumer Perception dimension <i>Physical Evidence</i> and <i>Behavioural intentions</i> .	Beta: -.127 $p > .05$	<i>Hypothesis not supported</i>
Hypothesis 26	A significant positive relationship is predicted between the Consumer Perception dimension <i>People</i> and <i>Behavioural intentions</i> .	Beta: .128 $p > .05$	<i>Hypothesis not supported</i>

SPSS tables for statistical testing of Hypotheses 11 to Hypothesis 26 can be found in Appendix Y.

**Hypothesis 28:** There is a significant difference in behavioural intentions between those who have heard about Australian farmed prawns from the media and those who have heard about Australian farmed prawns from family and friends.

A one-way analysis of variance was conducted with the variables of *D2 (How did you hear about Australian farmed prawns)* as the independent variable and *Behavioural Intentions* as the dependant variable. Levene's test was not significant,  $F(3,33) = .666, p < .05$ , and so the assumption of homogeneity of variances was judged to have not been violated. A significant effect was found for *D2 (How did you hear about Australian farmed prawns)*,  $F(3,33) = 4.003, p < .05$ . Post-hoc comparisons (Tukey HSD) found the *Friends and Family* category,  $M = 5.38, SD = 1.06$ , to display significantly higher mean ratings of *Behavioural Intentions* than the *Media* category  $M = 4.67, SD = 1.24$ . All other groups (*Retailers*  $M = 5.31, SD = 1.04$  and *Other*  $M = 4.44, SD = 1.66$ ) were found to be not significantly different.

See appendix Z for ANOVA tables.

**Table 4.18:** A summary of Hypotheses (28) tested with ANOVA

Hypothesis 28:	The source of communication will significantly affect the <i>Behavioural Intentions</i> of customers of Australian Farmed Prawns.	$p < .05$	<i>Hypothesis supported</i>
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#### **4.7 Conclusion**

This chapter details the initial procedures required for the statistical testing of hypothesis through SPSS, including data entry and data screening. This is followed by detailed consideration of the hypothesis to be tested and the consequential results of the tests. Interpretation and discussion of the results will ensue in chapter five.



# **CHAPTER 5**

## **Discussion**

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## 5.1 Discussion

The purpose of this research has been to discover the factors that influence customers purchase intentions of Australian farmed prawns from seafood retail outlets. Customer perceptions of product, price, place, marketing communications, people, process and physical evidence were tested to find whether links could be made between them and behavioural intentions, customer satisfaction and trust were also tested. To facilitate this, quantitative research was conducted at various sites within South East Queensland.

With regards to the literature considered in chapter 2, it was proposed that customer perceptions of product, price, place, marketing communications, people, process and physical evidence will significantly affect the customer satisfaction and purchase behaviours of customers of Australian farmed prawns. Trust was also identified as a factor that will significantly affect both customer satisfaction and purchase behaviours of customers of Australian farmed prawns, however, it was also identified as a factor that may have significant affect on the perception variables; product, price, place, marketing communications, people, process and physical evidence.

These hypotheses were statistically tested with the constructs *Trust*, *Customer Satisfaction*, *Behavioural Intentions* and the Customer Perception variables: *Product-Physical attributes*, *Product- Health aspects*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People*. Three of these (*Trust*, *Customer Satisfaction* and *Behavioural Intentions*) being well developed and previously tested constructs were found to have excellent reliabilities with Cronbach's Alpha of .88, .94, .96 respectively. The Customer Perception variables: *Product*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People*, have been tested in other industries (Spinks 2009), and were found to require slight changes to become reliable constructs for this study. Through alpha factoring it was decided that the variable, *Product*, must be divided into two different variables *Product- Physical attributes* and *Product- Health aspects*. With other minor changes to the perception variables reliabilities were calculated: *Product 1- Physical attributes* (.82), *Product 2- Health aspects* (.67), *Price* (.79), *Place* (.72), *Marketing Communications* (.70), *Process* (.89), *Physical Evidence* (.84) and *People* (.84).

## **5.2 Conclusions regarding the Research Questions**

The research problem posed in this study was: „*Which factors influence customers purchase intentions of Australian farmed prawns from seafood retail outlets*’. The findings of this research provide an answer to this by addressing the specific objectives of this research of:

RO1: To identify which factors of Customer Perceptions influence Customer Satisfaction.

RO2a: To identify which factors of Customer Perceptions influence Behavioural Intentions.

RO2b: To identify how much effect Customer Satisfaction has on Behavioural Intentions.

RO3: To identify the effect that trust has upon Customer Perceptions, Customer Satisfaction and Behavioural Intentions.

### **5.2 Conclusions regarding RO1**

RO1: To identify which factors of *Customer Perceptions* influence *Customer Satisfaction*.

Eight hypotheses were developed to reach this research objective (H11-18), with variables including: *Customer Satisfaction, Product- Physical attributes, Product- Health aspects, Price, Place, Marketing Communications, Process, Physical Evidence and People*. These hypotheses were tested through the use of Multiple Linear Regression. Of the eight hypotheses tested, two were found to be supported: H11 and H13. This suggests that *Customer Satisfaction* is influenced directly by only two of the *Customer Perception* variables; the physical size, taste and texture of the product (*Product – Physical Attributes - H11*) and the economic value of the product (*Price - H13*). This complies with the beliefs of Parasuraman, Zeithaml and Berry (1985), given that goods are much easier for customers to evaluate than services due to the ability to judge the quality of goods through tangible cues such as style, hardness, color, label, feel, packaging, fit. Both of the variables identified (*Product- Physical attributes* and *Price*) are tangible aspects that immediately affect the consumer, allowing for easy evaluation of the product.

### 5.3 *Conclusions regarding RO2*

RO2a: To identify which factors of *Customer Perceptions* influence *Behavioural Intentions*.

RO2b: To identify how much effect *Customer Satisfaction* has on *Behavioural Intentions*.

This Research Objective was divided into two sections: RO2a: the relationship between the Customer Perception variables (*Product- Physical attributes, Product- Health aspects, Price, Place, Marketing Communications, Process, Physical Evidence and People*) and *Behavioural Intentions*, and RO2b: the relationship between *Customer Satisfaction* and *Behavioural Intentions*.

The first section (RO2a), *Product- Physical attributes, Product- Health aspects, Price, Place, Marketing Communications, Process, Physical Evidence and People*) and *Behavioural Intentions*, was tested through eight hypotheses (H19-26). Of the eight perception variables it was identified that just two have a significant effect on *Behavioural Intentions*, *Product-Physical attributes* (H19) and *Price* (H21). Interestingly, and as expected from the close relationship between customer satisfaction and behavioural intentions (Zeithaml, Berry & Parasuraman 1996; Lou & Homburg 2007; Spinks 2009) these are the same two variables that were found to influence *Customer Satisfaction*.

The second section for this Research Objective (RO2b) is the relationship between *Customer Satisfaction* and *Behavioural Intentions* (H27). In accordance with the extensive literature (Boulding et al. 1993; Zeithaml, Berry & Parasuraman 1996; Luo & Homburg 2007) this hypothesis was supported. Identifying that high levels of customer satisfaction significantly influence the purchasing intentions of customers within South East Queensland.

#### 5.4 *Conclusions regarding RO3*

RO3: To identify the effect that *Trust* has upon *Customer Perceptions*, *Customer Satisfaction* and *Behavioural Intentions*.

In order to test this research objective, 10 hypotheses were developed (H1-10). These hypotheses were tested through correlations using the constructs; *Trust*, *Customer Satisfaction*, *Behavioural Intentions* and the *Customer Perception* variables: *Product-Physical attributes*, *Product- Health aspects*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People*. As identified in chapter 4, each of these hypotheses were found to be supported.

There was found to be a strong correlation between *Trust* and *Behavioural Intentions (HI)*, identifying that customers within South East Queensland have more positive purchase intentions when they have high trust in a brand. This correlation was found to be higher than that between *Trust* and *Customer Satisfaction*. As found within the literature review, trust relates to consumers beliefs about reliability, safety, honesty and benevolence (Chaudhuri & Holbrook 2001), thus enhancing confidence in a brand, reducing risk perception and allowing consumers to feel safe purchasing and consuming the product (Gwinner, Gremler & Bitner, 1998) this, in turn, increases positive behavioural intentions (Chaudhuri & Holbrook 2001; Lacey 2007). It was also found within this study that customers have higher levels of satisfaction with a product when they have high levels of trust. This was also discussed within the literature, as Chaudhuri and Holbrook (2001) found, higher levels of trust reduces uncertainty, allows customers to rely on the product, often resulting in high satisfaction.

Each of the *Customer Perception* variables (*Product- Physical attributes*, *Product- Health aspects*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People*), were found to be influenced by *Trust*. An interesting observation is that, while only two of the *Customer Perception* variables have a direct influence on *Customer Satisfaction* and *Behavioural Intentions*, all of the eight variables have an indirect influence through *Trust*. As can be seen, *Trust* has an important role in shaping the *Customer Perceptions* of consumers within in South East Queensland.

## 5.5 *Conclusions to Hypotheses not arising from the theoretical framework.*

The hypothesis (H28) states that the source of communication will significantly affect the *Behavioural Intentions* of customers of Australian Farmed Prawns. This hypothesis arose from the review of current literature and pre-testing of the questionnaires. It was believed that customers that have heard of Australian farmed prawns through *family, friends or retailers* might have more positive behavioural intentions than those having heard through *media* sources. This hypothesis was tested through the use of a one-way analysis of variance test. It was found to support the hypothesis in part. Showing that the customers with knowledge of Australian farmed prawns through *family and friends* had a significantly higher mean for behavioural intentions than those having *media* as a communication source, however all other mediums (*Retailers* and *Other*) were found to have no significant difference. This corroborates with the literature review, where word of mouth communications are found to be a highly powerful source, due to the perception of the information being more reliable and unbiased than other sources (Hennig-Thurau Gwinner & Gremler 2002 Swanson Davis & Zhao 2007). Media has a negative impact on behavioural intentions, this is highly due to the public lack of knowledge regarding Australian aquaculture. The persistent negative press instigated by non-government agencies and environmental groups voicing their fears of the effects of aquaculture on the environment (Tidwell & Allen 2001), the comparisons made by the media between intensive terrestrial livestock farming and aquaculture farms from other parts of the world, as well as various food scares, has resulted with aquaculture assuming negative perception within the minds of many Australians (Verbeke et al, 2007; Kaiser & Stead, 2002), and therefore reduces the behavioural intentions of consumers toward Australian farmed prawns.

## 5.6 *Implications for Theory*

The research findings have numerous implications within the areas of trust, customer perceptions, customer satisfaction and behavioural intentions. Particularly that literature concerning these elements and the Australian aquaculture industry is minimal. This research has also identified the strong influence of trust on the behavioural intentions of customers of Australian farmed prawns within South East Queensland. This is a pilot study in this area and although some good reliable and interpretable results have been obtained, more research needs to be conducted to extend our knowledge of consumer behaviour in this area.

## 5.7 *Implications for Industry*

The current research findings have useful implications for stakeholders within the Australian prawn farming industry. First, as consumer *Trust* has such an important influence on *Customer Satisfaction*, *Behavioural Intentions*, *Customer Perceptions of Product – Physical attributes*, *Product – Health aspects*, *Price*, *Place*, *Marketing Communications*, *Process*, *Physical Evidence* and *People* of the consumers of Australian farmed prawns within South East Queensland, it is important that both producers and retailers aim to maintain or ideally increase consumer trust in Australian farmed prawns.

The measure of *Trust* included in the quality, reliability, and safety of Australian farmed prawns and a belief that it is an honest industry. It is important to maintain this trust and extend through continuation of good industry practice but also through an extensive marketing campaign outlining the quality, reliability, safety, health and ecological benefits of Australian farmed prawns. The campaign must also strongly communicate the product as an Australian farmed product, as many consumers admit that they would have positive behavioural intentions towards them, however, they have trouble distinguishing between wild caught and farmed due to the lack of labeling. For example, a suitable slogan for this product could consist of: „Australian Farmed Prawns, Prawns you can trust“, „Aussie farmed prawns, only trust the best!“

Another illuminating finding was that *Customer Perceptions of Product- Physical attributes* and *Price* were the only two variables of the eight *Customer Perception* variables that have a significant influence on both *Customer Satisfaction* and *Behavioral Intentions* of

customers of Australian farmed prawns within South East Queensland. Size, taste and texture of the prawns were found to be the most important physical attributes, although farmed prawns were presumed by consumers to be a lesser product than the wild caught. This aspect could benefit the future industry marketing campaigns by promoting the high level of similarity between the two types of prawns. It was also found that higher prices increase the trust in the product. However as farmed prawns are seen by many consumers to be a lesser product, consumers are less willing to pay high prices. The promotion of the high quality of Australian farmed prawns may heighten satisfaction, encourage consumers' willingness to pay premium prices and overall behavioural intentions toward Australian farmed prawns.

### **5.8        *Limitations of the Research***

Regardless of attempts to ensure the reliability and validity of the findings of this research it is to be anticipated that minor limitations will exist. Due to the time frame that the research was conducted within, the boundary of the study was confined to the South East Queensland region. The selection of certain areas within the region and the use of convenience sampling may result with a sample that is not representative of the population, however other methods were not deemed feasible.

These limitations are acknowledged in order to stress the importance of further study within this area, whilst recognizing the contribution of this research. Implications for further study are discussed next.

### **5.9        *Implications for Future Research Ideas***

The research conducted for this study has uncovered many opportunities for future research. These include:

- Extended research beyond the delimitations of the South East Queensland region, this can include:
  - Expanding the area of research to the entire state of Queensland.
  - Expanding to all states of Australia.
  - Expanding the research internationally.



The extension of the area of research would allow for greater diversity of the sampling frame and allow for greater generalisability (Spinks 2009).

- Extended research beyond the delimitation of Australian farmed prawns, including:
  - Testing the concepts in relation to Australian wild caught prawns.
  - Testing the concepts in relation to other forms of Australian aquaculture, e.g. salmon, tuna, oysters etc.
  - Testing the concepts in relation to imported farmed prawns.
  - Sampling of customers of other protein sources such as chicken, beef and lamb.

Modification of the product will identify differences between customer perceptions and the influence of trust between the different industries.

- A final opportunity for future research, stemming from hypothesis 28, is to determine the influence that retailers have on the perceptions of their customers in regards to Australian farmed prawns. This would include collecting data from both retailers and customers of retail outlets in order to test correlations.

## **5.10 Conclusion**

This chapter is concerned with the discussion of the findings of this research in regards to the research question: *Which factors influence customers purchase intentions of Australian farmed prawns from seafood retail outlets*, and objectives:

RO1: To Identify the effect that trust has upon Customer Perceptions, Customer Satisfaction and Behavioural Intentions

RO2: To identify which factors of Customer Perceptions have on Customer Satisfaction.

RO3: To identify the effect that Customer Perceptions have on Behavioural intentions.

These objectives were answered through both primary and secondary data. Secondary including extensive examination of literature relating to Trust, Customer Perceptions, Customer Satisfaction and Behavioural Intentions. Whilst primary data included in this study comprised of in-depth interviews and a customer survey. Through the statistical analysis of

the customer data collected in the survey it was possible to determine the strength and direction of relationships between the variables.

Perhaps the most important finding presented is that *Trust* was found to have a high influence on both *Customer Satisfaction* and *Behavioural Intentions*, and, while all eight variables of *Customer Perceptions* were found to be influenced by *Trust*, only *Customer Perceptions of Product- Physical attributes* and *Price* were found to directly affect *Customer Satisfaction* and *Behavioral Intentions* of customers of Australian farmed prawns within South East Queensland

Also discussed were the theoretical and practical implications of the research. Limitations of the research were acknowledged and finally implications for future research were discussed.

## REFERENCES

- Aaker, D. A., Kumar, V., Day, G. S., Lawley, M. & Stewart, D. 2007, *Marketing Research: the Second Pacific Rim Edition*, John Wiley & Sons, Milton, Queensland.
- Aarset B, Beckmann S, Bigne E, Beveridge M, Bjorndal T, Bunting J, McDonagh p. Mariojouis C, Muir J, Prothero A, Reisch L, Smith A, Tveteras R and Young J. 2004. The European consumers' understanding and perceptions of the "organic" food regime. *British Food Journal*. Vol 106. No 2. Pp93-105.
- Allen P. and Bennett K. 2010. PASW Statistics by SPSS. Cengage Learning. Melbourne.
- Andersen I, Bowater R, Burford M, Callinan R, Chong R, Coco J, Dick A, Foster D, Gosavi K, Harrison J, Hawkesford T, Johnson B, Kenway M, Lewis W, Logegeiger R, McNamara D, Owens, Palmer PJ, Pearson D, Pohlner B, Read P,Robertson C, Slattery S, Zipf S. 2006. *Australian Prawn Farming Manual: Health Management for Profit*. State of Queensland. Department of Primary Industries and Fisheries.
- Anderson, E. W., Fornell, C. & Mazvancheryl, S. K. 2004, „Customer satisfaction and shareholder value“, *Journal of Marketing*, vol. 68, iss. 4, pp. 172 – 185.
- Anderson, E. W. & Sullivan, M. W. 1993, „The antecedents and consequences of customer satisfaction for firms“, *Marketing Science*, vol.12, iss. 2, pp. 125 – 143.
- Athanasopoulou, P., 2009, Relationship quality: a critical literature review and research agenda. *European Journal of Marketing*,. Vol 43. No 5/6: p. 583-610.
- Australian Bureau of Statistics 2009, Household Income and Income Distribution. 6523.0
- Baker, DA and JL Crompton. 2000, Quality, Satisfaction and Behavioural Intentions. *Annals of Tourism Research*. Vol 27, no 3, pp.785-804
- Ball, D. Caelho and Vilares, 2006, Service Personalisation and loyalty. *Journal of Service Marketing*,. Vol 20. No. 6. p. 391-403.
- Belk, RW. An Exploratory Assessment of Situational Effects in Buyer Behavior. *Journal of Marketing Research*. Vol 11, No 2. Pp. 156-163.
- Belonax JJ, Newell SJ and Plank RE. 2006. Gender Differences in Buyer perceptions of Source Credibility and conflict in Business-to-Business Relationships. *Marketing Management Journal*. Vol 16, No 2. Pp 116-124.
- Bitner, M. J. 1991 the evolution of services marketing and its relationship to service quality,. (Brown, Gummesson, Edvardsson, Gustavsson. Service Quality multidisciplinary and multinational perspectives. 1991. Lexington Books. New York.)

- Blattberg, R.C. and J. Deighton, 1996, Manage Marketing by the Customer Equity Test. *Harvard Business Review*, July-August. p. 136-144.
- Blodgett, J.G., K.L. Wakefield, and J.H. Barnes, 1995, The effects of Customer service on consumer complaining behaviour. *Journal of Services Marketing*, 9(4): p. 31-43
- Boulding, K., K. Kalhara, Staelin and Zeithaml. 1993. A Dynamic Process Model of Service Quality: From Expectations of Behavioural Intentions. *Journal of Marketing Research*. Vol. 30. No. 1. Pp7-27.
- Bourre JME. 2006. Effects of Nutrients (in Food) on the Structure and Function of the Nervous System: Update on Dietary Requirements for Brain. Part 2: Macro Nutrients. *Journal of Nutrition, Health and Aging*. Vol. 12. No. 3.
- Bourre JME and Paquette PM. March 2008a. Seafood (wild and Farmed) for the Elderly: Contribution to the Dietary Intakes of Iodine, Selenium, DHA and Vitamins B12 and D. *Journal of Nutrition, Health and Aging*. Vol. 12. No. 3.
- Bourre JME and Paquette PM September 2008b. Contributions (in 2005) of Marine and Fresh Water Products (finfish and Shellfish, Seafood, Wild and Farmed) to the French Dietary Intakes of Vitamin D and B12, Selenium, Iodine and Docosahexaenoic Acid: Impact on Public Health. *International Journal of Food Sciences and Nutrition*. Vol. 59. No. 6.
- Boyd CE and Clay JW. 1998. Shrimp Aquaculture and the Environment. *Scientific American inc*. June. Vol 278. No 6. Pp6-102.
- Brunner EJ, Jones PJS, Friel S and Bartley M. 2009. Fish, Human Health and Marine Ecosystem Health: Policies in Collision. *International Journal of Epidemiology*. Vol 38. Pp93-100.
- Chaudhuri, A. and M.B. Holbrook, 2001, The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing*. 65(2 ): p. 81-93.
- Churchill Jr., G. A. & Suprenant, C. 1982, „An investigation into the determinants of customer satisfaction“, *Journal of Marketing Research*, vol. 19, iss. 4, pp. 491 – 504.
- Cronin JJ and Taylor SA. 1992. Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*. Vol 56. No 3. Pp 55-68
- Cronin JJ, MK Brady and GTM Hult. 2000. Assessing the Effects of Quality, Value and Customer Satisfaction on Consumer Behavioural Intentions in Service Environments. *Journal of Retailing*. Vol 76. No 2. Pp 193-218.
- Crosby, L., K. Evans, and C. D Cowles, 1990, Relationship quality in service selling: an interpersonal influence perspective. *The Journal of Marketing*,

- Currall S C, Hammer T H, Baggett L. S and Doniger G M. 1999. Combining Qualitative and Quantitative Methodologies to Study Group Processes: An Illustrative Study of corporate Board of Directors, *Organizational Research Methods*. Vol 2. No 1. Pp 5-36.
- Danaher, P.J. and Haddrell, V. 1996, „A Comparison of Question Scales for Measuring Customer Satisfaction“, *International Journal of Service Industry Management*, vol. 7, no.4. pp.4-26.
- Delgado-Ballester E. and Manuera-Aleman JL. 2001. Brand Trust in the context of Consumer Loyalty. *European Journal of Marketing*. Vol 35. No. 11/12. Pp 1238-1258.
- Evans G and Cox DN. 2006. Australian consumers“ antecedents of attitudes towards food produces by novel technologies. *British Food Journal*. Vol 108 No 11. Pp 916-930.
- FAO Electronic Publishing Policy and Support Branch (The). 2008. The State of World Fisheries and Aquaculture. FAO. Rome, Italy.
- Fisk, R.G., S. Hume, M. Gountas, J. Grove, S. John, J., 2007, *Services Marketing*. Milton John Wiley and Sons.
- Gagliano KB and Hathcote J. 1994. Customer Expectations and Perceptions of Service Quality in Retail Apparel Specialty Stores. *Journal of Services Marketing*. Vol 8. No 1. Pp 60-69
- Gagliano KB and Hathcote J. 1994. Customer Expectations and Perceptions of Service Quality in Retail Apparel Specialty Stores. *Journal of Services Marketing*. Pp 60-69.
- Ganesan-Lim C, Russell-Bennett R and Dagger T. 2008. The impact of service contac type and demograpic characteristics on service quality perceptions. *Journal of Services Marketing*. Vol 22. No 7. Pp550-561
- Garbarino E and M Johnson. 1999. The Different Roles of Satisfaction, Trust and Commitment in Customer Relationships. *Journal of Marketing*. Vol 63. No 2. Pp70-87.
- Garbarino E and Lee O. 2003. Dynamic pricing in Internet retail: Effects on consumer trust. *Psychology and Marketing*. Vol 20. No 6. Pp 495-531.
- Gempshaw, Bacon, Wessells and Manalo, 1995. Consumer Perceptions of Aquaculture Products. *American Journal of Agricultural Economics*,. Vol 77, December. Pp 1306-1312.
- Graetz, B. 2002, „Principal Components and Factor Analysis“, *Course Notes 9<sup>th</sup> ACSPRI Winter Program*, LaTrobe University, Melbourne.

- Grey J and Griffin B. 2009. Eggs and Dietary Cholesterol: Dispelling the Myth. *Nutrition Bulletin*. Vol 34. Pp 66-70.
- Gummesson, E., 1994. Making Relationship Marketing Operational. *International Journal of Service Industry Marketing*, 5(5): p. 5-20.
- Gupta, S., D.R. Lehmann, and J.A. Stuart, 2004, Valuing Customers. *Journal of Marketing Research*,. XLI(February): p. 7-18.
- Gwinner, K.P., D.D. Gremler, and M.J. Bitner, 1998, Relational Benefits in Services Industries: The Customer's Perspective *Journal of the Academy of Marketing Science*,. 26(2): p. 101-114.
- Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. 2006, *Multivariate Analysis*, 6<sup>th</sup> edn, Pearson Education Inc., New Jersey.
- He K, Song Y, Daviglius ML, Liu K, Van Horn L, Dyer AR and Greenland P. 2004. Accumulated Evidence on Fish Consumption and Coronary Heart Disease Mortality: A Meta-Analysis of Cohort Studies. *Circulation*. Vol 109. No 22.
- Hennig Thurau, T. & Klee, A. 1997, „The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development“, *Psychology and Marketing*, vol. 14, iss. 18, pp. 737 – 764.
- Hennig-Thurau, T., K.P. Gwinner, and D.D. Gremler, 2002, Understanding Relationship Marketing Outcomes: An Integration of Relational Benefits and Relationship Quality. *Journal of Service Research*. 4(3): p. 230-247.
- Homburg C, N Koschate and WD Hoyer. 2005. Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to pay. *Journal of Marketing*. Vol 69. April. Pp 84-96.
- Homburg C, N Koschate and WD Hoyer. 2006. The Role of Cognition and Affect in the formation of Customer Satisfaction: a dynamic Perspective. *Journal of Marketing*. Vol 67. July. Pp 84-96
- IBISWorld, 2009. Fish and Seafood Farming in Australia: A0420.
- Judd VC. 2002. Achieving a Customer Orientation using „People-power“ the „5<sup>th</sup> P“. *European Journal of Marketing*. Vol 37. No 10. Pp1301-1313
- Kaiser M and SM Stead. 2002. Uncertainties and Values in European Aquaculture: Communication, Management and Policy issues in times of „Changing Public Perceptions“. *Aquaculture International*. Vol 10. Pp 469-490.
- Knowles T, Moody R, and McEachern MG. 2007. European Food Scares and their impact on EU Food Policy. *British Food Journal*. Vol 109. No 1. Pp 43-67.

- Kong M and Jogaratnam G. 2007. The Influence of Culture on Perceptions of Service Employee Behavior. *Managing Service Quality*. Vol 17. No 3. Pp 275-297
- Lacey, R., 2007, Relationship Drivers of Customer Commitment. *Journal of Marketing Theory and Practice*, 15(4): p. 315-333.
- Leek S, Maddock S and Foxall G. 2000. Situational determinants of fish consumption. *British Food Journal*. Vol 102. No. 1. Pp 18-39.
- Leverin, A. and V. Liljander, 2006, Does relationship marketing improve customer relationship satisfaction and loyalty? *International Journal of Bank Marketing*, 24(4): p. 232-251.
- Luo, X. & Homburg, C. 2007, „Neglected outcomes of customer satisfaction“, *Journal of Marketing*, vol. 71, iss. 2, pp. 133 – 149.
- Love G, Langenkamp D and Galeano D. 2004. Australian Aquaculture Statistics: Information sources for Status and Trends Reporting. Abare. FAO Fisheries Department and the Fisheries Resource Research Fund.
- Manning M. L., and Munro, D. 2005. Operationalising Constructs as Variables and Specifying the Theoretical Framework [unpublished manuscript] in *MKG301 Advanced Research Methods 2009*, University of the Sunshine Coast, Queensland, Australia, Reading 1.2, pp. 1 – 16.
- Manning, M. L. & Munro, D. 2007. *The Survey Researcher's Cookbook*. Pearson Education, Sydney, NSW.
- Mazur NA and Curtis AL. 2006. Risk Perceptions, Aquaculture and Issues of Trust: Lessons from Australia. *Society and Natural Resources*. Vol 19. Pp 791-808.
- Mazur NA, Aslin H and Byron I. 2005. Community Perceptions of Aquaculture: Final Report. *Bureau of Rural Sciences*.
- Mittal, V. & Kamakura, W. A. 2001, „Satisfaction, repurchase intent, and repurchase behaviour: Investigating the moderating effects of customer characteristics“, *Journal of Marketing Research*, vol. 38, iss. 1, pp. 131 – 142.
- Moorman, C., G. Zaltman, and R. Deshpande, 1992, Relationships between Providers and Users of Market Research; The Dynamics of Trust within and between Organisations. *Journal of Marketing Research*, 29(3): p. 314-328
- Morgan, R. and S. Hunt, 1994, The commitment-trust theory of relationship marketing. *The Journal of Marketing*,

- Ndubisi, N.O. and C.K. Wah, 2005. Factorial and discriminant analysis of the underpinnings of relationship marketing and customer satisfaction. *International Journal of Bank Marketing*, 23(7): p. 542-557.
- National Health and Medical Research Council (NHMRC), Australian Research Council (ARC) and Australian Vice Chancellors Committee (AVCC). 2007. National Statement on Ethical Conduct in Human Research.
- Oliver, R. L. 1980, „A cognitive model of the antecedents and consequences of satisfaction decisions“, *Journal of Marketing Research*, vol. 17, iss. 4, pp. 460 – 469.
- Oliver, R. L. & DeSarbo, W. S. 1988, „Response determinants in satisfaction judgments“, *Journal of Consumer Research*, vol. 14, iss. 4, pp. 495 – 507.
- Olson SO. 2002. Comparative Evaluation and the Relationship Between Quality, Satisfaction and Repurchase Loyalty. *Academy of Marketing Science*. Journal. Vol 30. No 3. Pp 240 – 248.
- Olson, Wilcox and Olsson. 2005. Consequences of Ambivalence on Satisfaction and Loyalty. *Psychology and Marketing*. Vol 22. No 3. Pp247-269.
- Parasuraman, Zeithaml and Berry, 1985. A Conceptual Model of Service Quality and its implications for Future Research. *Journal of Marketing*. Vol 49. Fall. Pp 41-50.
- Parasuraman, A., Berry, L.L. and Zeithaml, V.A. 1991, „Perceived service quality as a customer-based performance measure: An empirical examination of organizational barriers using an extended service quality model“, *Human Resource Management*, vol. 30, iss. 3, pp. 335 – 364.
- Parasuraman, A, Zeithaml, V.A and Berry, L.L. 1994. Reassessment of Expectations as a comparison Standard in Measuring Service Quality: Implications for Further Research. *Journal of Marketing*. Vol 58. No 1. Pp 111-124.
- Peshanoff L and Jaensch J. 2009. Consumer Research Australian Prawn Farmers Association. *Marketing Practicum Project*. University of South Australia.
- Preston N, Jackson C, Thompson P, Austin M, Burford M, Rothlisburg P. 2005. Prawn Farm Effluent: Composition, Origin and Treatment. CRC for Aquaculture, CSIRO, Fisheries Research and Development corporation.
- Pride WM, Elliot G, Rundle-Thiele S, Waller D, Paladino A and Ferrel OC. 2006. *Marketing: Core concepts and Applications*. John Wiley and Sons Australia Ltd. Milton, QLD.
- Ravald, A. and C. Gronroos, 1996, *The value concept and relationship marketing*. *European Journal of Marketing*,. 30(2): p. pg. 19.

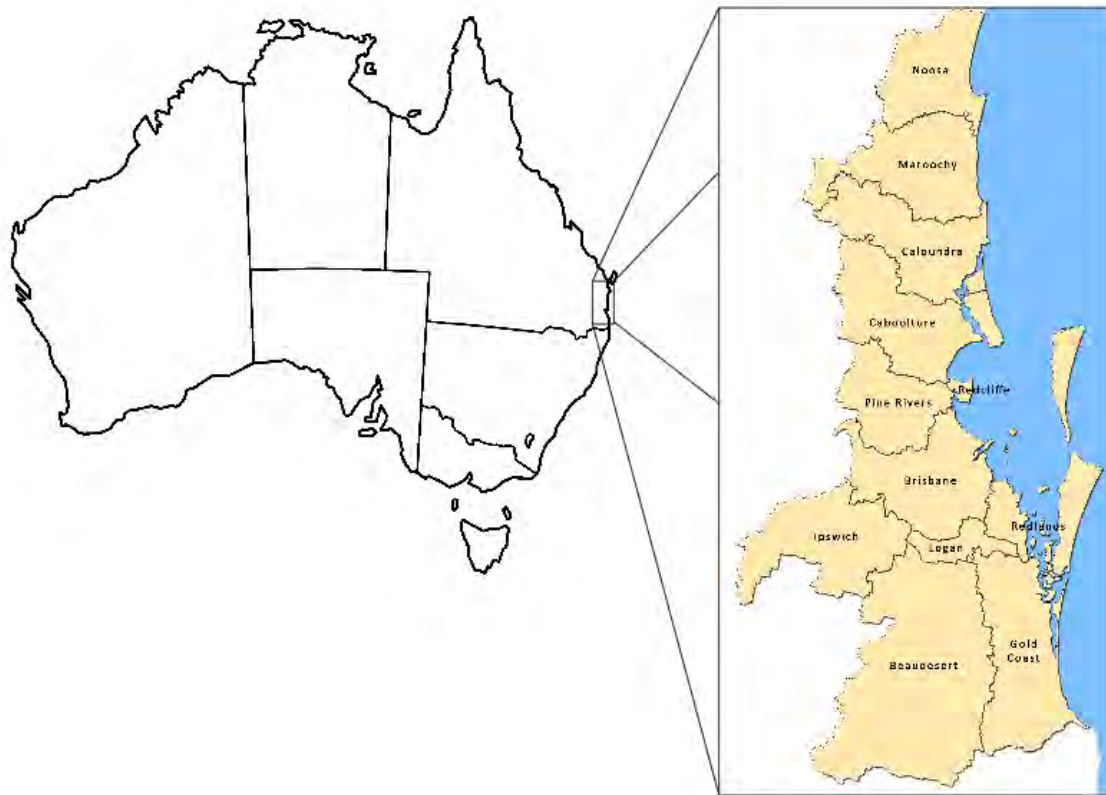


- Reichheld, F.F. and W.E. Sasser Jr, 1990. *Zero Defections: Quality Comes to Service*. *Harvard Business Review*, (September/ October): p. 105-111.
- Rogelberg SG and Stanton JM, 2007, Introduction : Understanding and Dealing With Organizational Survey Nonresponse. *Organizational Research Methods*, Vol. 10, Pp 195-209.
- Rust, R.T. and T.S. Chung, 2006. Marketing Models of Service and Relationships. *Marketing Science*,. 25(6, November-December): p. 560-580.
- Sarshar, M., B. Seryesilisik, and P. Parry, 2009. The Extent of use of relationship marketing in the UK FM sector 28: p. 64-87.
- Shaffer BS and Riordan CM. 2003. A review of Cross-Cultural Methodologies for Organizational Research: A Best Practices Approach. *Organizational Research Methods*. Vol 6. No 2. Pp169-215
- Sheth, J. and A. Parvativar, 1995. Relationship marketing in consumer markets: Antecedents and consequences. *Journal of the Academy of marketing science*.
- Shimp, T.A., 2007, *Advertising, Promotion and Othe aspects of Integrated Marketing Communications*. 7 ed. Mason, OH, USA.: Thomson.
- Sirdeshmukah D, Singh J, Sabol B. 2002. Consumer Trust, Value and Loyalty in Relational Exchanges. *Journal of Marketing*. Vol 66. No 1. Pp 15-37
- Spinks, W. 2009, „Baby boomers and beyond: Customer evaluation of health and wellbeing services“, PhD Thesis, University of the Sunshine Coast, Queensland, Australia.
- Spinks, W., Lawley, M. & Richins, H. 2005, „Satisfaction with Sunshine Coast tourist attractions: The influence of individual visitor characteristics“, *Journal of Tourism Studies*, vol. 16, no. 1, pp. 12 – 23.
- Swanson, S.R., J.C. Davis, and Y. Zhao, 2007 Motivations and Relationship Outcomes: The Mediating Role of Trust and Satisfaction. *Journal of Nonprofit and Public Sector Marketing*,. 18(2): p. 1-25.
- Tabachnick, B. and Fidell, L. 1996, *Using Multivariate Statistics*. Harper Collins. New York.
- Tidwell JH and Allen GL. 2001. Fish as Food: Aquaculture“s contribution – Ecological and economic impact and contributions of fish farming and capture fisheries. European Molecular Biology Organization: reports. Vol. 2 No 11

- Veal, A. J. 2005, *Business Research Methods: A Managerial Approach*, 2nd edn, Pearson Education Australia, Frenchs Forest.
- Verbeke W, Sioen I, Pieniak Z, Van Camp J and De Henauw. 2004. Consumer Perception Versus Scientific Evidence About Health Benefits and Safety Risks from Fish Consumption. *Public Health Nutrition*. Vol 8. No 4.
- Verbeke W, Sioen I, Pieniak Z, Van Camp J and De Henauw. 2007. Consumer Perception Versus Scientific Evidence of farmed and wild fish; Exploratory insights from Belgium. *Aquaculture International*. Vol. 15. No. 2.
- Verhoef PC, Franses PH and Hoekstra JC. 2002. The Effect of Relational Constructs on Customer Referrals and Number of Services Purchased from a Multiservice Provider: Does Age of Relationship Matter?. *Academy of Marketing Science*. Vol 30. No 3. Pp 202-216.
- Von Freymann JW. Age and Generational Cohort Effects in Store Assessments and Choice; A Case Study. *Marketing Management Journal*. Vol 16, No 2. Pp 203-222
- Widing R, Sheth JN, Pulendran S, Mittal B, Newman BI. 2003. *Customer Behaviour; Consumer Behaviour and Beyond*. Pacific Rim Edition. Thomson. Victoria, Australia.
- Woodside, Frey and Daly. 1989, Linking Service Quality, Customer Satisfaction, and Behavioural Intention. *Journal of Health Care Marketing*. Vol.9 No.4. pp5-17
- Wu CHJ. The Impact of Customer-to-Customer Interaction and Customer Homogeneity on Customer Satisfaction in Tourism Service – The Service Encounter Prospective. *Tourism Management*. Vol 28. Pp1518-1528
- Yauch CA and Steudel HJ. 2003. Complementary Use of Qualitative and Quantitative Cultural Assessment Methods, *Organizational Research Methods*, Vol. 6. Pp 465-481.
- Zeithaml, VA. Berry, L.L. and Parasuraman, A. 1996. The Behavioural Consequences of Service Quality. *Journal of Marketing*. Vol 60. No 2. Pp 31-46.
- Zikmund, W.G. 2003. Sample designs and Sampling Procedures, in *Business Research Methods*, (7<sup>th</sup> edn), Ohio: South Western Thomson. Pp. 368-400. (in *MKG301 Advanced Research Methods* 2009, University of the Sunshine Coast, Queensland, Australia, Reading 8.1)
- Zikmund, W. Ward S. Lowe, B. Winzar, H. Babin BJ. 2011. *Marketing Research*. Second Asia Pacific Edition. Cengage Learning. Victoria.
- Zineldin, M., 2006. The Royalty of Loyalty: CRM, Quality and Retention. *Journal of Consumer Marketing*, **23**(7): p. 430-437

# APPENDICES

## Appendix A: South East Queensland Map and Urban/Rural locations



According to Queensland Government, the South East Queensland (SEQ) region, is made up about 1.9 million hectares or 85% of rural land, much of which is managed by farmers. Urban areas are indicated in the below image.



Source: Queensland Government. Transport and Main Roads. [http://www.tmr.qld.gov.au/~/-/media/61de4dd8-6d99-46d3-9b21-86c54c239b7e/pdf\\_queensland\\_aug\\_05.pdf](http://www.tmr.qld.gov.au/~/-/media/61de4dd8-6d99-46d3-9b21-86c54c239b7e/pdf_queensland_aug_05.pdf)

## Appendix B: Summary of In-Depth Interviews

<b>Q1: what do you think that people look for when purchasing prawns?</b>
A: They taste great, that's really about it, they are difficult to eat, cook and store, they are also rather expensive in comparison to other protein sources. So taste is the real draw card.
<b>Q2: what do you think encourages people to purchase Australian farmed prawns?</b>
A: Appealing to their patriotic duty, everybody should buy from their own country or area, they talk about people that like to purchase from the local regions, and local producers. Queenslanders are very patriotic people. I think now we are getting a much better run for our money by people knowing that they can buy Australian seafood. We import so much into this country, we import nearly 80% of the seafood we eat into this country, because we just don't produce enough. And that's a travesty really, we should produce a lot more than we do. So pushing the country of origin label has made a big difference to sales. Australian people really do like eating Australian seafood. One good thing about the imports, and depressing the price has increased the amount of prawn consumption within Australia quite dramatically. There is certainly more prawns eaten now than what there was 10 years ago, no doubt. Because they are a cheaper available option, they are not as expensive. They are not necessarily a treat anymore, like chicken used to be 20 years ago, it is quite affordable. The ones that suffered the most unfortunately is the trawler guys, because they have a finer resource they can catch, and their cost of production has always gone up with wages and fuel. And they have been squeezed out of a lot of areas so they have to go further afield, whereas farms don't really have that type of constraint, they can grow more and if they produce a larger tonnage, then they can produce it for a cheaper price, hence farmers can maintain their margin and still sell at a price that the market will accept. The acceptance of prawns in the market place has been exceptionally good in the last few years, as more people have been able to try them because they are no longer afraid of the price, that's what started it. Where the customer has a little more perception changed is they realise that there wasn't just the overseas, the imported option, there is an option of Australian product. But Australians need to come back to meet the market and the price. Education is very important, many people seem to have preconceived ideas of farmed prawns, this could be due to the older techniques of farming, where the farmed prawns had a distinct taste, this has changed dramatically over the years with advancements in technology. Media also seems to give such a bad reputation to farmed products and Australians have to be able to trust these products before they will feel comfortable to purchase them.
<b>Q3: what pricing strategies do you use?</b>
A: We at the mercy of the market, you cant charge more than the market is willing to pay. When the imports came along 5 or 6 years ago or more than that now but they started becoming very popular. It depressed the market price so much that we had to come back to meet the market, you cant just put up the prices, if the overheads go up, you have to keep your margins by farming smarter rather than putting prices up, because the market just wont pay it. However, Australian farmed prawns are priced at a premium level.
<b>Q4: what marketing methods do you currently use?</b>
A: We advertise obviously and we do demonstrations. We do basically everything you can think of to get a product out into the market at the moment, including brochures and the website.
<b>Q5: do you have a strong base of regular customers?</b>
A: Most of the people are well known to us, since the seafood industry in Australia is not particularly big, and the players have been around for a long time, sometimes the names change and the companies change. But yes, we do have a great customer base, very good return business as well. Many of the customers are regulars, they will come usually on the same day every week, and often purchase the same products. This gives us the ability to pre-order and ensure less waste.

## Appendix C: Questionnaire

### CONFIDENTIAL QUESTIONNAIRE PERCEPTIONS and SATISFACTION with Australian Farmed Prawns



<b>Contact</b>	<b>Hannah O'Brien</b>
Telephone	(07) 5430 1245
Facsimile	(07) 5430 1231
E-mail	HO'Brien1@usc.edu.au

This questionnaire asks your perceptions of Australian Farmed Prawns and your satisfaction with the product. This is about your personal opinions of the product, so there are no right or wrong answers. Your participation in completing this questionnaire is voluntary and you may withdraw from participating at any time. Your individual response will be treated in the strictest confidence with full anonymity assured.

#### THANK YOU VERY MUCH FOR YOUR ASSISTANCE WITH THIS SURVEY

D1	Have you heard about Australian Farmed Prawns?	Yes <input type="checkbox"/> <sub>1</sub> Continue to D2	No <input type="checkbox"/> <sub>2</sub> Continue to PRD1
D2	If Yes, How did you hear about Australian Farmed Prawns?		
	From friends and relatives <input type="checkbox"/> <sub>1</sub>	From retailers <input type="checkbox"/> <sub>2</sub>	Media <input type="checkbox"/> <sub>3</sub>
	Other. Please specify		<input type="checkbox"/> <sub>4</sub>
D3	Have you used Australian Farmed Prawns?	Yes <input type="checkbox"/> <sub>1</sub> Continue to A1	No <input type="checkbox"/> <sub>2</sub> Continue to Q1
		Not sure <input type="checkbox"/> <sub>2</sub> Continue to Q1	
Q1	If no, Why?		Continue to PRD1

#### YOUR OVERALL SATISFACTION WITH Australian Farmed Prawns

The following questions about your overall satisfaction with Australian Farmed Prawns. Please indicate your disagreement or agreement with each statement by selecting the appropriate response on the 7 point scale, where 1 = Strongly Disagree.		1 = Strongly Disagree	2 = Disagree	3 = Tend to Disagree	4 = Neutral	5 = Tend to Agree	6 = Agree	7 = Strongly Agree
A1	I think that it is worthwhile using Australian Farmed Prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
A2	I am pleased to use Australian Farmed Prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
A3	Using Australian Farmed Prawns has been a good experience.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
A4	Overall, I am satisfied with Australian Farmed Prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>

#### PERCEIVED PERFORMANCE OF Australian Farmed Prawns

The following questions ask about <u>your perception</u> of Australian Farmed Prawns and the retailer that you usually purchase seafood from. For each of the following attributes, please indicate <u>your perception</u> by checking one of the boxes. <u>There are no right or wrong answers</u>		1 = Strongly Disagree	2 = Disagree	3 = Tend to Disagree	4 = Neutral	5 = Tend to Agree	6 = Agree	7 = Strongly Agree
Prd1	I prefer to buy Australian products.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd2	Australian Farmed Prawns are a high quality product.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd3	Farmed Prawns are <u>more tender</u> than wild caught prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd4	Farmed Prawns are often smaller than wild caught prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd5	Farmed Prawns have a better texture than wild caught prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd6	Farmed Prawns taste better than wild caught prawns.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd7	Prawns are usually for special occasions.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd8	I try to buy environmentally friendly products.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd9	Australian Farmed Prawns are an environmentally friendly product.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd10	Prawns are high in good cholesterol.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>
Prd11	Prawns are high in bad cholesterol	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>7</sub>

Prd12	Prawns are a healthy product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pr1	Australian Farmed Prawns are expensive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pr2	Australian Farmed Prawns are worth the effort to get them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pr3	Australian Farmed Prawns are worth the price.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MC1	I was made aware of the country of origin of the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MC2	I was made aware of whether the Prawns were farmed or wild caught.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MC4	The retailer recommended a product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pla1	I could easily access Australian Farmed Prawns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pla2	This location was convenient for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peo1	The staff knew their seafood well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peo2	The staff were courteous and helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PhE1	The prawns were displayed in a visually appealing manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PhE2	The retail outlet looked clean and hygienic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pro1	The retailer is efficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pro2	The retailer is quick to respond to enquiries and requests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T1	I trust the quality of Australian Farmed Prawns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2	Australian Farmed Prawns are a reliable product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T3	The Australian Farmed Prawn industry is an honest industry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T4	Australian Farmed Prawns are a safe product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**THE FINAL SECTION**

**The following questions ask more about you as an individual.**  
Please indicate your agreement or disagreement with each statement by selecting the appropriate box

	1 = Strongly Disagree	2 = Disagree	3 = Tend to Disagree	4 = Neutral	5 = Tend to Agree	6 = Agree	7 = Strongly Agree
D4	If I needed to purchase prawns, I would use Australian Farmed Prawns.						
D5	I will say positive things about Australian Farmed Prawns.						
D6	I would encourage my friends and relatives to try Australian Farmed Prawns.						
D7	If someone asked me, I would recommend Australian Farmed Prawns.						
D8	How many times have you used this service provider? Once only <input type="checkbox"/> 2 times <input type="checkbox"/> 3 – 10 times <input type="checkbox"/> More than 10 <input type="checkbox"/> .						
D9	Please write the year in which you were born: _____		D10	Please indicate your gender		Male <input type="checkbox"/>	Female <input type="checkbox"/>
D11	Please indicate where you normally live:		Country _____		State _____		Postcode _____
D12	How often do you buy prawns?		D13	Please select your average yearly individual income <b>below</b> .			
		Less than \$25,000 <input type="checkbox"/>	\$25 000-\$49,999 <input type="checkbox"/>	\$50 000 -\$74,999 <input type="checkbox"/>	Over \$75,000 <input type="checkbox"/>		

**Thank you very much for your participation!** Do you have any comments or suggestions?

## Appendix D: Potential Demographic variables

Some characteristics of individuals and organisations	
Individual characteristics	Gender
	Age
	Status in organisation
	Economic status
	Occupation
	Social class
	Previous employment history
	Income
	Education
	Marital or family status
	Household type and family size
	Life cycle
	Ethnic group/country of birth
	Residential location
	Mobility – drivers licence/public transport
Organisation characteristics	Number of employees
	Turnover/sales
	Number of clients
	Products
	Number of sites
	Organisational structure
	Establishment date

Source: Veal 2005 pp154.

**Appendix E: data collection locations, dates and times and number of customer surveys completed**

Locations	Date and Time	Number of Surveys collected.
Colmslie	06.11.2010 11am-2pm	20
Hendra	06.11.2010 4pm-7pm	20
Taringa	07.11.2010 11am-2pm	20
Newstead	07.11.2010 4pm-7pm	15
Brakenbridge	05.11.2010 4pm-7pm	16
Chancellor Park	12.11.2010 – 4pm-7pm	30
Caloundra	13.11.2010 – 4pm – 7pm	20
Kawana	12.11.2010 – 11am-2pm	30
Mooloolaba	13.11.2010 - 11am-2pm	20
Noosa	14.11.2010 – 11am – 2pm	30



## Appendix F: Letter: Ethics approval.



3 November 2010

**Barbara Palmer**  
Manager, Office of Research  
Tel: +61 7 5459 4574  
Fax: +61 7 5459 4727  
Email: [humanethics@usc.edu.au](mailto:humanethics@usc.edu.au)

F13907

Miss Hannah O'Brien  
21 Mt Mellum Road  
Mt Mellum Qld 4550

Dr Wendy Spinks  
Dr Mark Manning  
Faculty of Business

Dear Hannah, Wendy and Mark

**Expedited ethics approval for research project: Factors that contribute to strong marketing relationships within the supply chain of Australian Farmed Prawn Industry (S/10/244)**

This letter is to confirm that on 2 November 2010, following review of the application for ethics approval of the research project, *Factors that contribute to strong marketing relationships within the supply chain of Australian Farmed Prawn Industry (S/10/244)*, the Chairperson of the Human Research Ethics Committee of the University of the Sunshine Coast granted expedited ethics approval for the project.

The Human Research Ethics Committee will review the Chairperson's grant of approval and the conditions of approval at its next meeting and, should there be any variation of the conditions of approval, you will be informed as soon as practicable.

The period of ethics approval is from 2 November 2010 to 28 November 2010.

Could you please note that the ethics approval number for the project is HREC: S/10/244. This number should be quoted in your Research Project Information Sheet and in any written communication when you are recruiting applicants.

The standard conditions of approval for this project are that you:

1. conduct the research project strictly in accordance with the research proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee (except as subsequently amended and approved by the Committee or approved by delegated authority exercised by the Chairperson or a Sub-committee)

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Sippy Downs Qld 4556  
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2. inform the Human Research Ethics Committee immediately of anything which may warrant review of ethics approval of the research project, including: serious or unexpected adverse effects on participants; proposed changes in the protocol; unforeseen events that might affect continued ethical acceptability of the project; and a written report of any adverse occurrence or unforeseen event that might affect the continued ethical acceptability of the research project must be submitted to the Chairperson of the Human Research Ethics Committee by no later than the next working day after recognition of an adverse occurrence/event
3. provide the Committee with a written Annual Report on the research project by completion of the project on 28 November 2010 using the proforma "Annual Report on Approved Research Project Involving Humans"
4. If the research project is discontinued, advise the Committee in writing within 24 hours of the discontinuation
5. make no change to the project as approved in its entirety by the Committee, including any wording in any document approved as part of the project, without prior written approval of the Committee for any change
6. comply with each and all of the above conditions of approval and any additional conditions or any modification of conditions which may be made subsequently by the Human Research Ethics Committee.

You are advised that failure to comply with the conditions of approval and the National Statement on Ethical Conduct in Research Involving Humans may result in withdrawal of approval for the project. You are required to advise the Committee in writing within 24 hours if this project does not proceed for any reason.

Should you require an extension of ethics approval, please submit a written request for this purpose using the proforma 'Annual Report on Approved Research Project Involving Humans' (see Section 9). An Annual Report on this activity will be due by no later than 28 November 2010. An electronic version of 'Annual Report on Approved Research Project Involving Humans' may be accessed on the University of the Sunshine Coast portal at: Research and Research Training>Research Ethics> Human Research Ethics>Forms>Annual Report Form.

If you have any queries in relation to this ethics approval or if you require further information please contact the Research Ethics Officer by email at [humanethics@usc.edu.au](mailto:humanethics@usc.edu.au) or by telephone on +61 7 5459 4574.

Yours sincerely



Barbara Palmer  
**Manager, Office of Research**

## **Appendix G: Ethical Guidelines for Research**

### **Research merit and integrity**

1.1 Research that has merit is:

- a) justifiable by its potential benefit, which may include its contribution to knowledge and understanding, to improved social welfare and individual wellbeing, and to the skill and expertise of researchers. What constitutes potential benefit and whether it justifies research may sometimes require consultation with the relevant communities;
- b) designed or developed using methods appropriate for achieving the aims of the proposal;
- c) based on a thorough study of the current literature, as well as previous studies. This does not exclude the possibility of novel research for which there is little or no literature available, or research requiring a quick response to an unforeseen situation;
- d) designed to ensure that respect for the participants is not compromised by the aims of the research, by the way it is carried out, or by the results;
- e) conducted or supervised by persons or teams with experience, qualifications and competence that are appropriate for the research; and
- f) conducted using facilities and resources appropriate for the research.

1.2 Where prior peer review has judged that a project has research merit, the question of its research merit is no longer subject to the judgement of those ethically reviewing the research.

1.3 Research that is conducted with integrity is carried out by researchers with a commitment to:

- a) searching for knowledge and understanding;
- b) following recognised principles of research conduct;
- c) conducting research honestly; and
- d) disseminating and communicating results, whether favourable or unfavourable, in ways that permit scrutiny and contribute to public knowledge and understanding.

### **Justice**

1.4 In research that is just:

- a) taking into account the scope and objectives of the proposed research, the selection, exclusion and inclusion of categories of research participants is fair, and is accurately described in the results of the research;
- b) the process of recruiting participants is fair;
- c) there is no unfair burden of participation in research on particular groups;
- d) there is fair distribution of the benefits of participation in research;
- e) there is no exploitation of participants in the conduct of research; and
- f) there is fair access to the benefits of research.

1.5 Research outcomes should be made accessible to research participants in a way that is timely and clear.

beneficence

1.6 The likely benefit of the research must justify any risks of harm or discomfort to participants. The likely benefit may be to the participants, to the wider community, or to both.

1.7 Researchers are responsible for:

- (a) designing the research to minimise the risks of harm or discomfort to participants;
- (b) clarifying for participants the potential benefits and risks of the research; and
- (c) the welfare of the participants in the research context.

1.8 Where there are no likely benefits to participants, the risk to participants should be lower than would be ethically acceptable where there are such likely benefits.

1.9 Where the risks to participants are no longer justified by the potential benefits of the research, the research must be suspended to allow time to consider whether it should be discontinued or at least modified. This decision may require consultation between researchers, participants, the relevant ethical review body, and the institution. The review body must be notified promptly of such suspension, and of any decisions following it (see paragraphs 5.5.6 to 5.5.9, page 91–92).

### **Respect**

1.10 Respect for human beings is a recognition of their intrinsic value. In human research, this recognition includes abiding by the values of research merit and integrity, justice and beneficence. Respect also requires having due regard for the welfare, beliefs, perceptions, customs and cultural heritage, both individual and collective, of those involved in research. used to supplement it when this is necessary for the ethical review of a research proposal.

1.11 Researchers and their institutions should respect the privacy, confidentiality and cultural sensitivities of the participants and, where relevant, of their communities. Any specific agreements made with the participants or the community should be fulfilled.

1.12 Respect for human beings involves giving due scope, throughout the research process, to the capacity of human beings to make their own decisions.

1.13 Where participants are unable to make their own decisions or have diminished capacity to do so, respect for them involves empowering them where possible and providing for their protection as necessary.

Source: National Statement on Ethical Conduct in Human Research (2007)

**Appendix H: Items with Missing Values and Dealing with Them.**

Case deleted.	<b>Case 35</b> <b>Case 55</b> <b>Case 93</b> <b>Case 117</b>
Replaced with averages	<b>Case 37</b> <b>Case 95</b> <b>Case 118</b> <b>Case 122</b> <b>Case 130</b> <b>Case 131</b> <b>Case 136</b> <b>Case 202</b>
Descriptive: no change	<b>Case 33</b> <b>Case 43</b> <b>Case 62</b> <b>Case 69</b> <b>Case 71</b> <b>Case 80</b> <b>Case 95</b> <b>Case 118</b> <b>Case 136</b> <b>Case 148</b>

**Appendix I: Univariate outliers for nominal data**

D1

**D1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	140	66.4	66.4	66.4
	NO	71	33.6	33.6	100.0
Total		211	100.0	100.0	

D2

**D2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	From friends and relatives	60	28.4	42.9	42.9
	From retailers	36	17.1	25.7	68.6
	Media	40	19.0	28.6	97.1
	Other	4	1.9	2.9	100.0
	Total	140	66.4	100.0	
Missing	System	71	33.6		
Total		211	100.0		

D3

**D3**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	86	40.8	40.8	40.8
	NO	40	19.0	19.0	59.7
	DONT KNOW	85	40.3	40.3	100.0
Total		211	100.0	100.0	

Appendix I: Univariate outliers for nominal data continued

D8

**D8**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Only Once (1)	52	24.6	24.8	24.8
	Two (2) Times	46	21.8	21.9	46.7
	Three (3)-Ten (10) Times	66	31.3	31.4	78.1
	More than Ten (10)	44	20.9	21.0	99.0
	6.00	1	.5	.5	99.5
	7.00	1	.5	.5	100.0
	Total	210	99.5	100.0	
Missing	System	1	.5		
Total		211	100.0		

59=6

68=7

Gender

**D10**

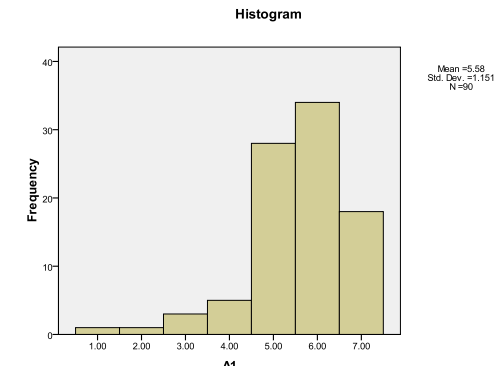
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	112	53.1	53.3	53.3
	Female	97	46.0	46.2	99.5
	3.00	1	.5	.5	100.0
	Total	210	99.5	100.0	
Missing	System	1	.5		
Total		211	100.0		

114=3

78=0

**Appendix J: Univariate outliers for interval data**

**Descriptives**

		Statistic	Std. Error		
A1	Mean	5.5778	.12135	 <p><b>Histogram</b></p> <p>Mean = 5.58 Std. Dev. = 1.151 N = 90</p>	
	95% Confidence Interval for Mean	Lower Bound	5.3367		
		Upper Bound	5.8189		
	5% Trimmed Mean		5.6790		
	Median		6.0000		
	Variance		1.325		
	Std. Deviation		1.15124		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-1.234		.254
	Kurtosis		2.674		.503
	A2	Mean	5.6444		.12169
95% Confidence Interval for Mean		Lower Bound	5.4026		
		Upper Bound	5.8862		
5% Trimmed Mean			5.7593		
Median			6.0000		
Variance			1.333		
Std. Deviation			1.15448		
Minimum			1.00		
Maximum			7.00		
Range			6.00		
Interquartile Range			1.00		
Skewness			-1.594	.254	
Kurtosis			3.548	.503	



Appendix J: Univariate outliers for interval data continued

A3	Mean	5.5333	.12462	<p><b>Histogram</b></p> <p>Mean = 5.53 Std. Dev. = 1.182 N = 90</p>
	95% Confidence Interval for Mean	5.2857		
	Lower Bound	5.7810		
	Upper Bound	5.6481		
	5% Trimmed Mean	6.0000		
	Median	1.398		
	Variance	1.18227		
	Std. Deviation	1.00		
	Minimum	7.00		
	Maximum	6.00		
	Range	1.00		
	Interquartile Range	-1.646	.254	
	Skewness	4.004	.503	
Kurtosis				
A4	Mean	5.5667	.12447	<p><b>Histogram</b></p> <p>Mean = 5.57 Std. Dev. = 1.181 N = 90</p>
	95% Confidence Interval for Mean	5.3193		
	Lower Bound	5.8140		
	Upper Bound	5.6852		
	5% Trimmed Mean	6.0000		
	Median	1.394		
	Variance	1.18084		
	Std. Deviation	1.00		
	Minimum	7.00		
	Maximum	6.00		
	Range	1.00		
	Interquartile Range	-1.691	.254	
	Skewness	4.228	.503	
Kurtosis				

Appendix J: Univariate outliers for interval data continued

Prd1	Mean	6.3556	.09120	
	95% Confidence Interval for Mean	6.1743		
	Lower Bound	6.5368		
	Upper Bound	6.4444		
	5% Trimmed Mean	7.0000		
	Median	.749		
	Variance	.86520		
	Std. Deviation	4.00		
	Minimum	7.00		
	Maximum	3.00		
	Range	1.00		
	Interquartile Range	-1.191	.254	
	Skewness	.531	.503	
Kurtosis				
Prd2	Mean	5.6222	.10668	
	95% Confidence Interval for Mean	5.4103		
	Lower Bound	5.8342		
	Upper Bound	5.6975		
	5% Trimmed Mean	6.0000		
	Median	1.024		
	Variance	1.01204		
	Std. Deviation	2.00		
	Minimum	7.00		
	Maximum	5.00		
	Range	1.00		
	Interquartile Range	-1.107	.254	
	Skewness	1.631	.503	
Kurtosis				

Appendix J: Univariate outliers for interval data continued

Prd3	Mean		4.2889	.11530	
	95% Confidence Interval for Mean	Lower Bound	4.0598		
		Upper Bound	4.5180		
	5% Trimmed Mean		4.3025		
	Median		4.0000		
	Variance		1.197		
	Std. Deviation		1.09385		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.074	.254	
	Kurtosis		1.512	.503	
Prd4	Mean		4.3602	.07120	
	95% Confidence Interval for Mean	Lower Bound	4.2198		
		Upper Bound	4.5005		
	5% Trimmed Mean		4.3657		
	Median		4.0000		
	Variance		1.070		
	Std. Deviation		1.03424		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		.041	.167	
	Kurtosis		.554	.333	

Appendix J: Univariate outliers for interval data continued

Prd5	Mean		4.1333	.11525	
	95% Confidence Interval for Mean	Lower Bound	3.9043		
		Upper Bound	4.3623		
	5% Trimmed Mean		4.1543		
	Median		4.0000		
	Variance		1.196		
	Std. Deviation		1.09339		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.112	.254	
	Kurtosis		1.702	.503	
Prd6	Mean		4.0333	.13357	
	95% Confidence Interval for Mean	Lower Bound	3.7679		
		Upper Bound	4.2987		
	5% Trimmed Mean		4.0741		
	Median		4.0000		
	Variance		1.606		
	Std. Deviation		1.26713		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		2.00		
	Skewness		-.369	.254	
	Kurtosis		.229	.503	

Appendix J: Univariate outliers for interval data continued

Prd7	Mean	4.8000	.14924	<p><b>Histogram</b></p> <p>Mean = 4.80 Std. Dev. = 1.416 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.5035	
		Upper Bound	5.0965	
	5% Trimmed Mean	4.8457		
	Median	5.0000		
	Variance	2.004		
	Std. Deviation	1.41580		
	Minimum	1.00		
	Maximum	7.00		
	Range	6.00		
	Interquartile Range	2.00		
	Skewness	-.657	.254	
	Kurtosis	-.204	.503	
Prd8	Mean	5.3667	.11112	<p><b>Histogram</b></p> <p>Mean = 5.37 Std. Dev. = 1.054 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	5.1459	
		Upper Bound	5.5875	
	5% Trimmed Mean	5.4136		
	Median	5.0000		
	Variance	1.111		
	Std. Deviation	1.05415		
	Minimum	2.00		
	Maximum	7.00		
	Range	5.00		
	Interquartile Range	1.00		
	Skewness	-.493	.254	
	Kurtosis	.354	.503	

Appendix J: Univariate outliers for interval data continued

Prd9	Mean		4.9889	.12085	
	95% Confidence Interval for Mean	Lower Bound	4.7488		
		Upper Bound	5.2290		
	5% Trimmed Mean		5.0123		
	Median		5.0000		
	Variance		1.314		
	Std. Deviation		1.14651		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		2.00		
	Skewness		-.298	.254	
	Kurtosis		.619	.503	
	Prd10	Mean		4.9556	
95% Confidence Interval for Mean		Lower Bound	4.7315		
		Upper Bound	5.1796		
5% Trimmed Mean			4.9506		
Median			5.0000		
Variance			1.144		
Std. Deviation			1.06961		
Minimum			3.00		
Maximum			7.00		
Range			4.00		
Interquartile Range			2.00		
Skewness			.203	.254	
Kurtosis			-.821	.503	



Appendix J: Univariate outliers for interval data continued

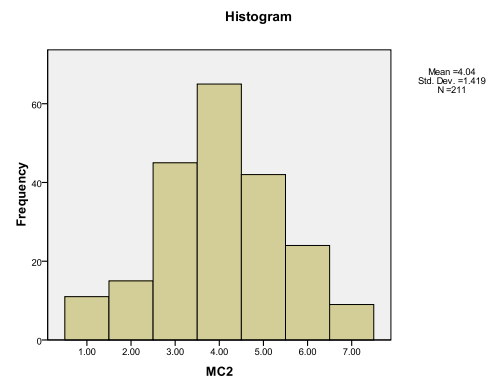
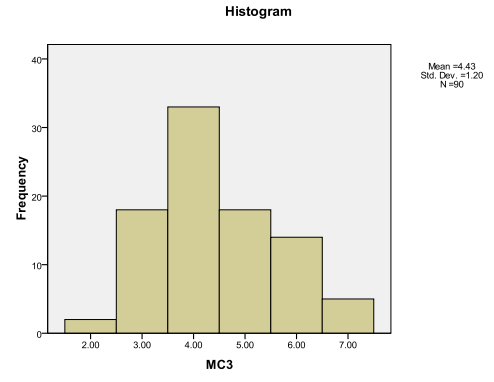
Pri1	Mean		5.0000	.09994	
	95% Confidence Interval for Mean	Lower Bound	4.8014		
		Upper Bound	5.1986		
	5% Trimmed Mean		4.9938		
	Median		5.0000		
	Variance		.899		
	Std. Deviation		.94809		
	Minimum		3.00		
	Maximum		7.00		
	Range		4.00		
	Interquartile Range		2.00		
	Skewness		.162	.254	
	Kurtosis		-.129	.503	
Pri2	Mean		4.9333	.11909	
	95% Confidence Interval for Mean	Lower Bound	4.6967		
		Upper Bound	5.1700		
	5% Trimmed Mean		4.9938		
	Median		5.0000		
	Variance		1.276		
	Std. Deviation		1.12978		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		2.00		
	Skewness		-1.014	.254	
	Kurtosis		2.245	.503	



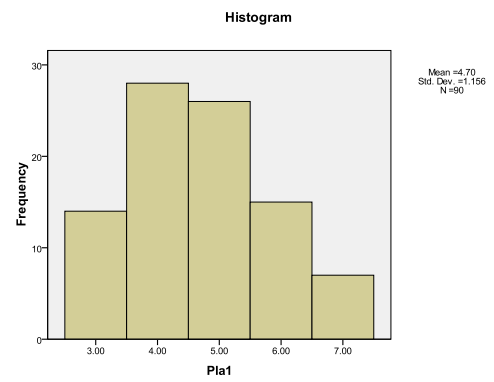
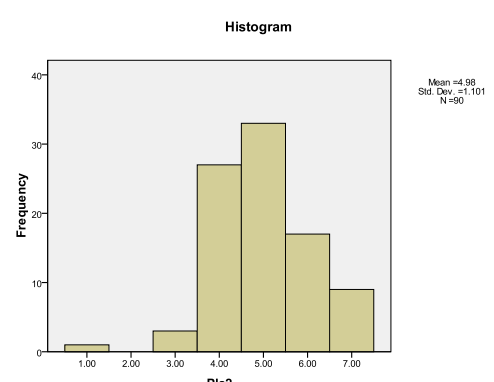
Appendix J: Univariate outliers for interval data continued

Pri3	Mean		4.6889	.12900	
	95% Confidence Interval for Mean	Lower Bound	4.4326		
		Upper Bound	4.9452		
	5% Trimmed Mean		4.7531		
	Median		5.0000		
	Variance		1.498		
	Std. Deviation		1.22378		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.921	.254	
	Kurtosis		1.210	.503	
MC1	Mean		5.3556	.10637	
	95% Confidence Interval for Mean	Lower Bound	5.1442		
		Upper Bound	5.5669		
	5% Trimmed Mean		5.3951		
	Median		5.0000		
	Variance		1.018		
	Std. Deviation		1.00907		
	Minimum		3.00		
	Maximum		7.00		
	Range		4.00		
	Interquartile Range		1.00		
	Skewness		-.567	.254	
	Kurtosis		.188	.503	

Appendix J: Univariate outliers for interval data continued

MC2	Mean		4.4667	.14756	 <p><b>Histogram</b></p> <p>Mean = 4.04 Std. Dev. = 1.419 N = 211</p>
	95% Confidence Interval for Mean	Lower Bound	4.1735		
		Upper Bound	4.7599		
	5% Trimmed Mean		4.4753		
	Median		4.5000		
	Variance		1.960		
	Std. Deviation		1.39984		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		3.00		
	Skewness		-.106	.254	
	Kurtosis		-.634	.503	
MC3	Mean		4.4333	.12646	 <p><b>Histogram</b></p> <p>Mean = 4.43 Std. Dev. = 1.20 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.1821		
		Upper Bound	4.6846		
	5% Trimmed Mean		4.3951		
	Median		4.0000		
	Variance		1.439		
	Std. Deviation		1.19972		
	Minimum		2.00		
	Maximum		7.00		
	Range		5.00		
	Interquartile Range		1.00		
	Skewness		.380	.254	
	Kurtosis		-.490	.503	

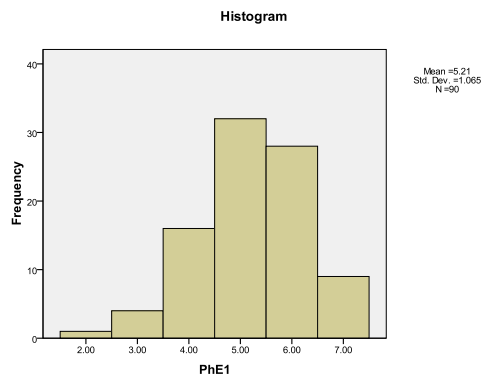
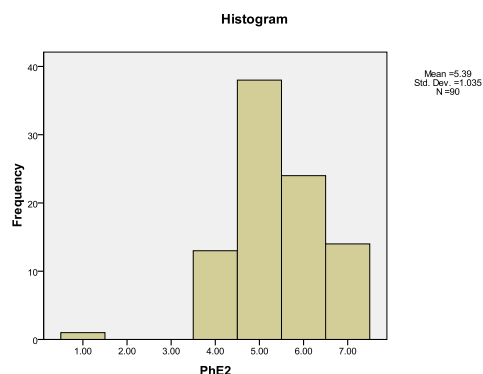
Appendix J: Univariate outliers for interval data continued

Plal	Mean		4.7000	.12184	 <p><b>Histogram</b></p> <p>Mean = 4.70 Std. Dev. = 1.156 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.4579		
		Upper Bound	4.9421		
	5% Trimmed Mean		4.6667		
	Median		5.0000		
	Variance		1.336		
	Std. Deviation		1.15584		
	Minimum		3.00		
	Maximum		7.00		
	Range		4.00		
	Interquartile Range		1.25		
	Skewness		.301	.254	
	Kurtosis		-.662	.503	
Plal2	Mean		4.9778	.11609	 <p><b>Histogram</b></p> <p>Mean = 4.98 Std. Dev. = 1.101 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.7471		
		Upper Bound	5.2085		
	5% Trimmed Mean		4.9938		
	Median		5.0000		
	Variance		1.213		
	Std. Deviation		1.10136		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		2.00		
	Skewness		-.162	.254	
	Kurtosis		.899	.503	

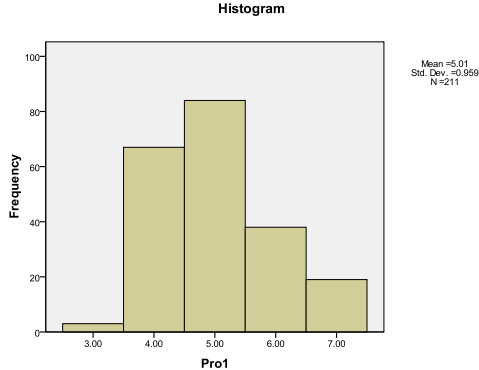
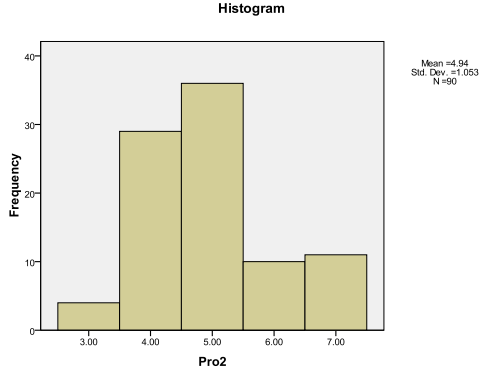
Appendix J: Univariate outliers for interval data continued

Peo1	Mean		4.8333	.13149
	95% Confidence Interval for Mean	Lower Bound	4.5721	
		Upper Bound	5.0946	
	5% Trimmed Mean		4.8642	
	Median		5.0000	
	Variance		1.556	
	Std. Deviation		1.24747	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		2.00	
	Skewness		-.316	.254
	Kurtosis		.163	.503
	Peo2	Mean		5.0444
95% Confidence Interval for Mean		Lower Bound	4.8161	
		Upper Bound	5.2728	
5% Trimmed Mean			5.0494	
Median			5.0000	
Variance			1.189	
Std. Deviation			1.09042	
Minimum			3.00	
Maximum			7.00	
Range			4.00	
Interquartile Range			2.00	
Skewness			.017	.254
Kurtosis			-.584	.503

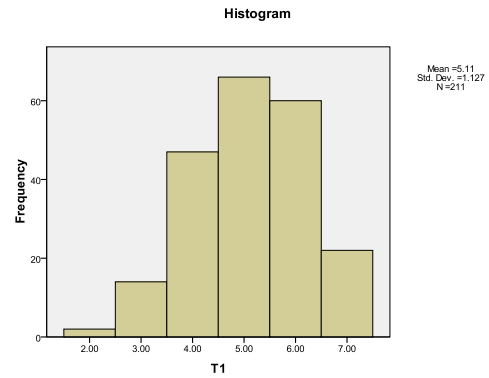
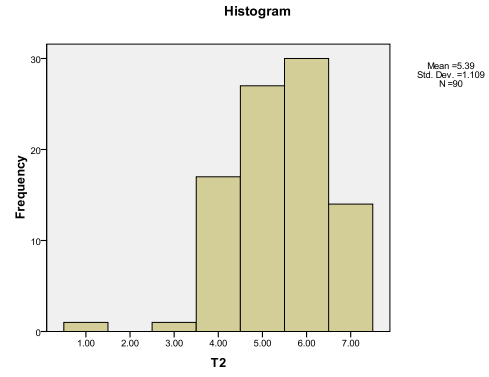
Appendix J: Univariate outliers for interval data continued

PhE1	Mean		5.2111	.11228	 <p><b>Histogram</b></p> <p>Mean = 5.21 Std. Dev. = 1.065 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.9880		
		Upper Bound	5.4342		
	5% Trimmed Mean		5.2469		
	Median		5.0000		
	Variance		1.135		
	Std. Deviation		1.06523		
	Minimum		2.00		
	Maximum		7.00		
	Range		5.00		
	Interquartile Range		1.00		
	Skewness		-.378	.254	
	Kurtosis		.065	.503	
PhE2	Mean		5.3889	.10913	 <p><b>Histogram</b></p> <p>Mean = 5.39 Std. Dev. = 1.035 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	5.1721		
		Upper Bound	5.6057		
	5% Trimmed Mean		5.4136		
	Median		5.0000		
	Variance		1.072		
	Std. Deviation		1.03527		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.596	.254	
	Kurtosis		2.316	.503	

Appendix J: Univariate outliers for interval data continued

Pro1	Mean		5.1778	.10550	 <p><b>Histogram</b></p> <p>Mean = 5.01 Std. Dev. = 0.999 N = 211</p>
	95% Confidence Interval for Mean	Lower Bound	4.9681		
		Upper Bound	5.3874		
	5% Trimmed Mean		5.1543		
	Median		5.0000		
	Variance		1.002		
	Std. Deviation		1.00087		
	Minimum		3.00		
	Maximum		7.00		
	Range		4.00		
	Interquartile Range		2.00		
	Skewness		.389	.254	
	Kurtosis		-.626	.503	
Pro2	Mean		4.9444	.11102	 <p><b>Histogram</b></p> <p>Mean = 4.94 Std. Dev. = 1.053 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	4.7239		
		Upper Bound	5.1650		
	5% Trimmed Mean		4.9321		
	Median		5.0000		
	Variance		1.109		
	Std. Deviation		1.05320		
	Minimum		3.00		
	Maximum		7.00		
	Range		4.00		
	Interquartile Range		1.00		
	Skewness		.526	.254	
	Kurtosis		-.280	.503	

Appendix J: Univariate outliers for interval data continued

T1	Mean		5.5333	.10970	 <p><b>Histogram</b></p> <p>Mean = 5.11 Std. Dev. = 1.127 N = 211</p>
	95% Confidence Interval for Mean	Lower Bound	5.3154		
		Upper Bound	5.7513		
	5% Trimmed Mean		5.6049		
	Median		6.0000		
	Variance		1.083		
	Std. Deviation		1.04074		
	Minimum		2.00		
	Maximum		7.00		
	Range		5.00		
	Interquartile Range		1.00		
	Skewness		-.916	.254	
	Kurtosis		1.178	.503	
T2	Mean		5.3889	.11686	 <p><b>Histogram</b></p> <p>Mean = 5.39 Std. Dev. = 1.109 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	5.1567		
		Upper Bound	5.6211		
	5% Trimmed Mean		5.4259		
	Median		5.0000		
	Variance		1.229		
	Std. Deviation		1.10864		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.674	.254	
	Kurtosis		1.400	.503	

Appendix J: Univariate outliers for interval data continued

T3	Mean		4.8778	.11376	
	95% Confidence Interval for Mean	Lower Bound	4.6517		
		Upper Bound	5.1038		
	5% Trimmed Mean		4.8457		
	Median		5.0000		
	Variance		1.165		
	Std. Deviation		1.07920		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		2.00		
	Skewness		.194	.254	
	Kurtosis		.919	.503	
T4	Mean		5.4889	.12467	<p style="text-align: center;"><b>Histogram</b></p> <p style="text-align: right;">Mean = 5.49 Std. Dev. = 1.183 N = 90</p>
	95% Confidence Interval for Mean	Lower Bound	5.2412		
		Upper Bound	5.7366		
	5% Trimmed Mean		5.5617		
	Median		6.0000		
	Variance		1.399		
	Std. Deviation		1.18269		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-.786	.254	
	Kurtosis		1.120	.503	



Appendix J: Univariate outliers for interval data continued

D4	Mean	5.2111	.14177	
	95% Confidence Interval for Mean	4.9294		
	Lower Bound	5.4928		
	Upper Bound	5.3148		
	5% Trimmed Mean	5.5000		
	Median	1.809		
	Variance	1.34494		
	Std. Deviation	1.00		
	Minimum	7.00		
	Maximum	6.00		
	Range	1.00		
	Interquartile Range	-1.104	.254	
	Skewness	1.287	.503	
Kurtosis				
D5	Mean	5.3333	.11719	
	95% Confidence Interval for Mean	5.1005		
	Lower Bound	5.5662		
	Upper Bound	5.4074		
	5% Trimmed Mean	5.0000		
	Median	1.236		
	Variance	1.11174		
	Std. Deviation	1.00		
	Minimum	7.00		
	Maximum	6.00		
	Range	1.00		
	Interquartile Range	-1.048	.254	
	Skewness	2.252	.503	
Kurtosis				

Appendix J: Univariate outliers for interval data continued

D6	Mean		5.1889	.11492	
	95% Confidence Interval for Mean	Lower Bound	4.9605		
		Upper Bound	5.4172		
	5% Trimmed Mean		5.2531		
	Median		5.0000		
	Variance		1.189		
	Std. Deviation		1.09025		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-1.237	.254	
	Kurtosis		2.202	.503	
D7	Mean		5.3889	.13286	
	95% Confidence Interval for Mean	Lower Bound	5.1249		
		Upper Bound	5.6529		
	5% Trimmed Mean		5.4938		
	Median		6.0000		
	Variance		1.589		
	Std. Deviation		1.26041		
	Minimum		1.00		
	Maximum		7.00		
	Range		6.00		
	Interquartile Range		1.00		
	Skewness		-1.086	.254	
	Kurtosis		1.559	.503	

**Appendix K: Correlations, Factor Analysis and Reliability Results for Product**

**Correlations**

		Prd1	Prd2	Prd3	Prd4	Prd5	Prd6	Prd7	Prd8	Prd9	Prd10	Product 11 RS	Prd12	Product_score
Prd1	Pearson Correlation	1	.218**	.137*	.088	.159*	.098	-.029	.415**	.179**	.103	.107	.149*	.459**
	Sig. (2-tailed)		.001	.047	.202	.021	.155	.671	.000	.009	.135	.120	.031	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd2	Pearson Correlation	.218**	1	.382**	.002	.261**	.315**	-.013	.060	.378**	.111	.002	.312**	.500**
	Sig. (2-tailed)	.001		.000	.976	.000	.000	.851	.386	.000	.106	.972	.000	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd3	Pearson Correlation	.137*	.382**	1	.034	.642**	.510**	.008	.228**	.323**	.094	-.106	.090	.531**
	Sig. (2-tailed)	.047	.000		.620	.000	.000	.908	.001	.000	.174	.123	.195	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd4	Pearson Correlation	.088	.002	.034	1	.018	-.065	.015	.065	-.028	-.013	-.083	.045	.358**
	Sig. (2-tailed)	.202	.976	.620		.793	.348	.826	.350	.681	.846	.228	.520	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd5	Pearson Correlation	.159*	.261**	.642**	.018	1	.648**	.063	.164*	.165*	.081	-.103	.044	.496**
	Sig. (2-tailed)	.021	.000	.000	.793		.000	.359	.017	.016	.244	.135	.526	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd6	Pearson Correlation	.098	.315**	.510**	-.065	.648**	1	-.017	.084	.297**	.220**	-.062	.071	.480**
	Sig. (2-tailed)	.155	.000	.000	.348	.000		.809	.223	.000	.001	.374	.301	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd7	Pearson Correlation	-.029	-.013	.008	.015	.063	-.017	1	.247**	.074	.000	-.066	-.014	.282**
	Sig. (2-tailed)	.671	.851	.908	.826	.359	.809		.000	.284	.994	.339	.839	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd8	Pearson Correlation	.415**	.060	.228**	.065	.164*	.084	.247**	1	.286**	.147*	.076	.091	.524**
	Sig. (2-tailed)	.000	.386	.001	.350	.017	.223	.000		.000	.033	.273	.188	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd9	Pearson Correlation	.179**	.378**	.323**	-.028	.165*	.297**	.074	.286**	1	.270**	.199**	.251**	.575**
	Sig. (2-tailed)	.009	.000	.000	.681	.016	.000	.284	.000		.000	.004	.000	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211

Appendix K: Correlations, Factor Analysis and Reliability Results for Product continued

Prd10	Pearson Correlation	.103	.111	.094	-.013	.081	.220**	.000	.147*	.270**	1	.436**	.418**	.491**
	Sig. (2-tailed)	.135	.106	.174	.846	.244	.001	.994	.033	.000		.000	.000	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Product 11 RS	Pearson Correlation	.107	.002	-.106	-.083	-.103	-.062	-.066	.076	.199**	.436**	1	.361**	.305**
	Sig. (2-tailed)	.120	.972	.123	.228	.135	.374	.339	.273	.004	.000		.000	.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Prd12	Pearson Correlation	.149*	.312**	.090	.045	.044	.071	-.014	.091	.251**	.418**	.361**	1	.487**
	Sig. (2-tailed)	.031	.000	.195	.520	.526	.301	.839	.188	.000	.000	.000		.000
	N	211	211	211	211	211	211	211	211	211	211	211	211	211
Product_score	Pearson Correlation	.459**	.500**	.531**	.358**	.496**	.480**	.282**	.524**	.575**	.491**	.305**	.487**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	211	211	211	211	211	211	211	211	211	211	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

Pattern Matrix<sup>a</sup>

	Factor			
	1	2	3	4
Prd6	.812			
Prd3	.769			
Prd5	.741			
Prd2	.449			
Product 11 RS		.747		
Prd10		.595		
Prd12		.580		
Prd9	.330	.373		
Prd1			.428	
Prd4				.836
Prd8				.317
Prd7				

Extraction Method: Alpha Factoring.  
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Product 11 RS	53.3934	35.992	.123	.299	.596
Prd12	52.3839	33.904	.347	.303	.554
Prd1	51.6967	34.212	.314	.246	.560
Prd2	52.7109	33.445	.351	.323	.551
Prd3	53.6398	34.060	.419	.509	.547
Prd4	53.3270	34.078	.013	.035	.674
Prd5	53.7346	34.253	.374	.577	.553
Prd6	53.8531	34.012	.340	.508	.555
Prd7	52.8531	36.088	.053	.104	.618
Prd8	52.3886	32.667	.364	.319	.546
Prd9	53.0711	32.419	.439	.315	.534
Prd10	53.0190	33.628	.343	.334	.553

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.592	.672	12

Appendix K: Correlations, Factor Analysis and Reliability Results for Product continued

Product 1- Specific product attributes																				
<b>Correlations</b>						<table border="1"> <thead> <tr> <th colspan="2">Factor Matrix<sup>a</sup></th> </tr> <tr> <th></th> <th>Factor</th> </tr> <tr> <th></th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Prd3</td> <td>.818</td> </tr> <tr> <td>Prd5</td> <td>.764</td> </tr> <tr> <td>Prd6</td> <td>.746</td> </tr> <tr> <td>Prd2</td> <td>.411</td> </tr> </tbody> </table> <p>Extraction Method: Alpha Factoring. a. 1 factors extracted. 9 iterations required.</p>	Factor Matrix <sup>a</sup>			Factor		1	Prd3	.818	Prd5	.764	Prd6	.746	Prd2	.411
Factor Matrix <sup>a</sup>																				
	Factor																			
	1																			
Prd3	.818																			
Prd5	.764																			
Prd6	.746																			
Prd2	.411																			
		Prd6	Prd3	Prd5	Prd2	Product1_composite														
Prd6	Pearson Correlation	1	.510**	.648**	.315**	.803**														
	Sig. (2-tailed)		.000	.000	.000	.000														
	N	211	211	211	211	211														
Prd3	Pearson Correlation	.510**	1	.642**	.382**	.802**														
	Sig. (2-tailed)	.000		.000	.000	.000														
	N	211	211	211	211	211														
Prd5	Pearson Correlation	.648**	.642**	1	.261**	.810**														
	Sig. (2-tailed)	.000	.000		.000	.000														
	N	211	211	211	211	211														
Prd2	Pearson Correlation	.315**	.382**	.261**	1	.665**														
	Sig. (2-tailed)	.000	.000	.000		.000														
	N	211	211	211	211	211														
Product1_composite	Pearson Correlation	.803**	.802**	.810**	.665**	1														
	Sig. (2-tailed)	.000	.000	.000	.000															
	N	211	211	211	211	211														
**. Correlation is significant at the 0.01 level (2-tailed).																				
<b>KMO and Bartlett's Test</b>			<b>Item-Total Statistics</b>																	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.710																		
Bartlett's Test of Sphericity		Approx. Chi-Square	267.288																	
	df	6																		
	Sig.	.000																		
				Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted												
			Prd2	12.2464	5.768	.372	.168	.815												
			Prd3	13.1754	5.498	.650	.468	.663												
			Prd5	13.2701	5.331	.652	.553	.657												
			Prd6	13.3886	5.067	.613	.449	.673												

Appendix K: Correlations, Factor Analysis and Reliability Results for Product continued

Pro2 removed:

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.815	.818	3

Product factor 2

**Correlations**

		Prd10	Product 11 RS	Prd12	Product2_composite
Prd10	Pearson Correlation	1	.436**	.418**	.793**
	Sig. (2-tailed)		.000	.000	.000
	N	211	211	211	211
Product 11 RS	Pearson Correlation	.436**	1	.361**	.790**
	Sig. (2-tailed)	.000		.000	.000
	N	211	211	211	211
Prd12	Pearson Correlation	.418**	.361**	1	.746**
	Sig. (2-tailed)	.000	.000		.000
	N	211	211	211	211
Product2_composite	Pearson Correlation	.793**	.790**	.746**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	211	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Appendix K: Correlations, Factor Analysis and Reliability Results for Product continued

Total Variance Explained							Reliability Statistics		
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %			
1	1.811	60.360	60.360	1.227	40.897	40.897	.670	.671	3
2	.640	21.328	81.687						
3	.549	18.313	100.000						

Extraction Method: Alpha Factoring.

KMO and Bartlett's Test			Factor Matrix <sup>a</sup>	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.658		Factor
Bartlett's Test of Sphericity	Approx. Chi-Square	94.039		1
	df	3	Prd10	.709
	Sig.	.000	Product 11 RS	.614
			Prd12	.589

Extraction Method: Alpha Factoring. a. 1 factors extracted. 9 iterations required.

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Prd10	9.8720	3.284	.518	.268	.527
Product 11 RS	10.2464	3.139	.474	.229	.589
Prd12	9.2370	3.639	.458	.214	.606

Appendix K: Correlations, Factor Analysis and Reliability Results for Product continued

Product factor 3						
<b>Correlations</b>			<b>Factor Matrix<sup>a</sup></b>			
		Prd7	Prd8	Product3_composite		
Prd7	Pearson Correlation	1	.247**	.831**		
	Sig. (2-tailed)		.000	.000		
	N	211	211	211		
Prd8	Pearson Correlation	.247**	1	.744**		
	Sig. (2-tailed)	.000		.000		
	N	211	211	211		
Product3_composite	Pearson Correlation	.831**	.744**	1		
	Sig. (2-tailed)	.000	.000			
	N	211	211	211		
** . Correlation is significant at the 0.01 level (2-tailed).						
<b>Total Variance Explained</b>						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.247	62.353	62.353	.493	24.634	24.634
2	.753	37.647	100.000			
Extraction Method: Alpha Factoring.						
<b>KMO and Bartlett's Test</b>				<b>Reliability Statistics</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				Cronbach's Alpha		
Bartlett's Test of Sphericity		Approx. Chi-Square		Based on		
				Standardized Items		
		df		N of Items		
		Sig.				
		.500		.391		
		13.132		.396		
		1		2		
		.000				



## Appendix L: Correlations, Factor Analysis and Reliability Results for Price

Correlations					
		Pri1	Pri2	Pri3	Price_score
Pri1	Pearson Correlation	1	.204**	-.009	.532**
	Sig. (2-tailed)		.003	.900	.000
	N	211	211	211	211
Pri2	Pearson Correlation	.204**	1	.648**	.860**
	Sig. (2-tailed)	.003		.000	.000
	N	211	211	211	211
Pri3	Pearson Correlation	-.009	.648**	1	.772**
	Sig. (2-tailed)	.900	.000		.000
	N	211	211	211	211
Price_score	Pearson Correlation	.532**	.860**	.772**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	211	211	211	211

\*\* Correlation is significant at the 0.01 level (2-tailed).

Total Variance Explained			
Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	1.677	55.909	55.909
2	1.005	33.499	89.408
3	.318	10.592	100.000

Extraction Method: Alpha Factoring.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.455
Bartlett's Test of Sphericity	Approx. Chi-Square	129.964
	df	3
	Sig.	.000

Reduced to Q2 and 3

Correlations				
		Pri2	Pri3	price3_composite
Pri2	Pearson Correlation	1	.648**	.495**
	Sig. (2-tailed)		.000	.000
	N	211	211	211
Pri3	Pearson Correlation	.648**	1	.558**
	Sig. (2-tailed)	.000		.000
	N	211	211	211
price3_composite	Pearson Correlation	.495**	.558**	1
	Sig. (2-tailed)	.000	.000	
	N	211	211	211

\*\* Correlation is significant at the 0.01 level (2-tailed).

Factor Matrix <sup>a</sup>		KMO and Bartlett's Test	
	Factor	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.500
	1	Bartlett's Test of Sphericity	Approx. Chi-Square
Pri3	.805		113.727
Pri2	.805		df
			1
			Sig.
			.000

Extraction Method: Alpha Factoring.  
a. 1 factors extracted. 8 iterations required.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.786	.787	2

**Appendix M: Correlations, Factor Analysis and Reliability Results for Marketing Communications**

Correlations					
		MC1	MC2	MC3	MC_score
MC1	Pearson Correlation	1	.204**	.064	.571**
	Sig. (2-tailed)		.003	.356	.000
	N	211	211	211	211
MC2	Pearson Correlation	.204**	1	.525**	.836**
	Sig. (2-tailed)	.003		.000	.000
	N	211	211	211	211
MC3	Pearson Correlation	.064	.525**	1	.731**
	Sig. (2-tailed)	.356	.000		.000
	N	211	211	211	211
MC_score	Pearson Correlation	.571**	.836**	.731**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	211	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Total Variance Explained			
Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	1.587	52.907	52.907
2	.957	31.908	84.815
3	.456	15.185	100.000

Extraction Method: Alpha Factoring.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.503
Bartlett's Test of Sphericity	Approx. Chi-Square	76.599
	df	3
	Sig.	.000

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MC1	8.1659	5.120	.161	.044	.680
MC2	9.2133	2.959	.498	.305	.120
MC3	9.1327	4.116	.405	.278	.334

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.528	.519	3

Appendix M: Correlations, Factor Analysis and Reliability Results for Marketing Communications continued.

Remove Q 1

**Correlations**

		MC2	MC3	MC2_composite
MC2	Pearson Correlation	1	.525**	.898**
	Sig. (2-tailed)		.000	.000
	N	211	211	211
MC3	Pearson Correlation	.525**	1	.846**
	Sig. (2-tailed)	.000		.000
	N	211	211	211
MC2_composite	Pearson Correlation	.898**	.846**	1
	Sig. (2-tailed)	.000	.000	
	N	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.500
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	67.330
	1
	.000

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.525	76.267	76.267	1.049	52.436	52.436
2	.475	23.733	100.000			

Extraction Method: Alpha Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
MC3	.724
MC2	.724

Extraction Method: Alpha Factoring.

a. 1 factors extracted. 8 iterations required.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.680	.689	2

**Appendix N: Correlations, Factor Analysis and Reliability Results for Place**

Place				
<b>Correlations</b>				
		Pla1	Pla2	Pla_score
Pla1	Pearson Correlation	1	.535**	.880**
	Sig. (2-tailed)		.000	.000
	N	211	211	211
Pla2	Pearson Correlation	.535**	1	.873**
	Sig. (2-tailed)	.000		.000
	N	211	211	211
Pla_score	Pearson Correlation	.880**	.873**	1
	Sig. (2-tailed)	.000	.000	
	N	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

<b>Correlation Matrix<sup>a</sup></b>			
		Pla1	Pla2
Correlation	Pla1	1.000	.535
	Pla2	.535	1.000

a. Determinant = .714

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	70.378
	df	1
	Sig.	.000

<b>Factor Matrix<sup>a</sup></b>		<b>Reliability Statistics</b>		
	Factor	Cronbach's Alpha		N of Items
	1	Based on	Standardized Items	
Pla1	.731	.697	.697	2
Pla2	.731			

Extraction Method: Alpha Factoring.

a. 1 factors extracted. 8 iterations required.

**Appendix O: Correlations, Factor Analysis and Reliability Results for People**

People

**Correlations**

		Peo1	Peo2	Peo_score
Peo1	Pearson Correlation	1	.721**	.934**
	Sig. (2-tailed)		.000	.000
	N	211	211	211
Peo2	Pearson Correlation	.721**	1	.921**
	Sig. (2-tailed)	.000		.000
	N	211	211	211
Peo_score	Pearson Correlation	.934**	.921**	1
	Sig. (2-tailed)	.000	.000	
	N	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	152.716
	df	1
	Sig.	.000

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.721	86.030	86.030	1.440	71.982	71.982
2	.279	13.970	100.000			

Extraction Method: Alpha Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
Peo1	.848
Peo2	.848

Extraction Method: Alpha Factoring.

a. 1 factors extracted. 8 iterations required.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.836	.838	2

**Appendix P: Correlations, Factor Analysis and Reliability Results for Physical Evidence.**

PhE						
<b>Correlations</b>						
		PhE1	PhE2	PhE_score		
PhE1	Pearson Correlation	1	.724**	.930**		
	Sig. (2-tailed)		.000	.000		
	N	211	211	211		
PhE2	Pearson Correlation	.724**	1	.927**		
	Sig. (2-tailed)	.000		.000		
	N	211	211	211		
PhE_score	Pearson Correlation	.930**	.927**	1		
	Sig. (2-tailed)	.000	.000			
	N	211	211	211		
**. Correlation is significant at the 0.01 level (2-tailed).						
<b>KMO and Bartlett's Test</b>						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.500		
Bartlett's Test of Sphericity		Approx. Chi-Square		154.544		
				df		
				1		
				Sig.		
				.000		
<b>Total Variance Explained</b>						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.724	86.175	86.175	1.445	72.273	72.273
2	.276	13.825	100.000			
Extraction Method: Alpha Factoring.						
<b>Factor Matrix<sup>a</sup></b>				<b>Reliability Statistics</b>		
	Factor			Cronbach's Alpha Based on Standardized Items		
	1			N of Items		
PhE2	.850			.839		
PhE1	.850			.840		
Extraction Method: Alpha Factoring.				2		
a. 1 factors extracted. 8 iterations required.						

**Appendix Q: Correlations, Factor Analysis and Reliability Results for Process.**

Process						
<b>Correlations</b>						
		Pro1	Pro2	Pro_score		
Pro1	Pearson Correlation	1	.803**	.947**		
	Sig. (2-tailed)		.000	.000		
	N	211	211	211		
Pro2	Pearson Correlation	.803**	1	.952**		
	Sig. (2-tailed)	.000		.000		
	N	211	211	211		
Pro_score	Pearson Correlation	.947**	.952**	1		
	Sig. (2-tailed)	.000	.000			
	N	211	211	211		
**. Correlation is significant at the 0.01 level (2-tailed).						
<b>KMO and Bartlett's Test</b>						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.500		
Bartlett's Test of Sphericity				Approx. Chi-Square		
				215.782		
				df		
				1		
				Sig.		
				.000		
<b>Total Variance Explained</b>						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.803	90.148	90.148	1.605	80.234	80.234
2	.197	9.852	100.000			
Extraction Method: Alpha Factoring.						
<b>Factor Matrix<sup>a</sup></b>				<b>Reliability Statistics</b>		
	Factor			Cronbach's Alpha		
	1			Based on		
Pro1	.896			Standardized Items		
Pro2	.896			N of Items		
				.890		
				.891		
				2		
Extraction Method: Alpha Factoring.						
a. 1 factors extracted. 8 iterations required.						

**Appendix R: Correlations, Factor Analysis and Reliability Results for Trust.**

Trust						
Correlations						
		T1	T2	T3	T4	Trust_score
T1	Pearson Correlation	1	.679**	.510**	.645**	.836**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	211	211	211	211	211
T2	Pearson Correlation	.679**	1	.687**	.704**	.898**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	211	211	211	211	211
T3	Pearson Correlation	.510**	.687**	1	.612**	.812**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	211	211	211	211	211
T4	Pearson Correlation	.645**	.704**	.612**	1	.871**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	211	211	211	211	211
Trust_score	Pearson Correlation	.836**	.898**	.812**	.871**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	211	211	211	211	211
KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.812			
Bartlett's Test of Sphericity			Approx. Chi-Square		439.783	
			df		6	
			Sig.		.000	
Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.923	73.083	73.083	2.585	64.631	64.631
2	.493	12.335	85.417			
3	.331	8.263	93.680			
4	.253	6.320	100.000			
Extraction Method: Alpha Factoring.						
Factor Matrix <sup>a</sup>				Reliability Statistics		
	Factor			Cronbach's Alpha Based on Standardized Items		
	1					
T2	.902			Cronbach's Alpha	.877	N of Items 4
T4	.829					
T1	.744					
T3	.729					
Extraction Method: Alpha Factoring.						
a. 1 factors extracted. 7 iterations required.						



**Appendix S: Correlations, Factor Analysis and Reliability Results for Customer Satisfaction.**

Correlations						
		A1	A2	A3	A4	Sat_score
A1	Pearson Correlation	1	.765**	.762**	.765**	.889**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	90	90	90	90	90
A2	Pearson Correlation	.765**	1	.816**	.858**	.929**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	90	90	90	90	90
A3	Pearson Correlation	.762**	.816**	1	.876**	.934**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	90	90	90	90	90
A4	Pearson Correlation	.765**	.858**	.876**	1	.947**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	90	90	90	90	90
Sat_score	Pearson Correlation	.889**	.929**	.934**	.947**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	90	90	90	90	90

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.854
Bartlett's Test of Sphericity	Approx. Chi-Square	339.269
	df	6
	Sig.	.000

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.422	85.559	85.559	3.236	80.898	80.8
2	.278	6.962	92.522			
3	.185	4.635	97.156			
4	.114	2.844	100.000			

Extraction Method: Alpha Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
A4	.941
A3	.916
A2	.908
A1	.829

Extraction Method: Alpha Factoring.

a. 1 factors extracted. 4 iterations required.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	
	Standardized Items	N of Items
.944	.944	4

**Appendix T: Correlations, Factor Analysis and Reliability Results for Behavioural intentions.**

Correlations						
		D4	D5	D6	D7	BI_score
D4	Pearson Correlation	1	.798**	.824**	.821**	.916**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	211	211	211	211	211
D5	Pearson Correlation	.798**	1	.910**	.892**	.951**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	211	211	211	211	211
D6	Pearson Correlation	.824**	.910**	1	.886**	.957**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	211	211	211	211	211
D7	Pearson Correlation	.821**	.892**	.886**	1	.953**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	211	211	211	211	211
BI_score	Pearson Correlation	.916**	.951**	.957**	.953**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	211	211	211	211	211

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	996.305
	df	6
	Sig.	.000

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.568	89.191	89.191	3.429	85.723	85.723
2	.228	5.709	94.901			
3	.117	2.935	97.835			
4	.087	2.165	100.000			

Extraction Method: Alpha Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
D6	.954
D7	.943
D5	.942
D4	.860

Extraction Method: Alpha Factoring.

a. 1 factors extracted. 5 iterations required.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.959	4

**Appendix U: Mahalanobis distances.**

Mahalanobis Calculation = *Consumer perceptions of Product – physical attributes, Consumer perceptions of Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people, and Behavioural intentions*

Cases Identified with Mahalanobis distance exceeding the critical chi-square ( $X^2$ ) value for  $df=k$  (i.e. the number of independent variables) at  $\alpha=.001$ . The critical  $X^2$  for  $df=8$  at  $\alpha=.001$  is 26.125.

40	33.25105
44	38.85171
94	45.33645
117	36.56719
192	48.70587

Mahalanobis Calculation = *Consumer perceptions of Product – physical attributes, Consumer perceptions of Product – health aspects, Consumer perceptions of Price, Consumer perceptions of Place, Consumer perceptions of Marketing communications, Consumer perceptions of Process, Consumer perceptions of Physical evidence, Consumer perceptions of people, and Satisfaction*

Cases Identified with Mahalanobis distance exceeding the critical chi-square ( $X^2$ ) value for  $df=k$  (i.e. the number of independent variables) at  $\alpha=.001$ . The critical  $X^2$  for  $df=8$  at  $\alpha=.001$  is 26.125.

40	33.25105
44	38.85171
94	45.33645
117	36.56719
192	48.70587

**Appendix V: SPSS tables for Skew and Kurtosis.**

Product health

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Product_Health_Composite	206	3.00	7.00	4.8867	.84975	.671	.169	.169	.337
Valid N (listwise)	206								

Product physical

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Product_Physical_Composite	206	1.00	7.00	4.1149	.75242	.155	.169	3.338	.337
Valid N (listwise)	206								

Price

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
price2_composite	206	2.00	7.00	4.5947	.86646	.136	.169	.416	.337
Valid N (listwise)	206								

Place

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pla_score	206	2.50	7.00	4.4684	.90134	.630	.169	.757	.337
Valid N (listwise)	206								

Appendix V: SPSS tables for Skew and Kurtosis continued.

Marketing Communications

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
MC2_composite	206	1.00	7.00	4.0922	1.09933	.110	.169	.558	.337
Valid N (listwise)	206								

Process

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pro_score	206	3.00	7.00	4.8908	.91142	.680	.169	-.008	.337
Valid N (listwise)	206								

Phys evidence

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PhE_score	206	3.00	7.00	5.1092	.88426	.294	.169	-.575	.337
Valid N (listwise)	206								

People

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Peo_score	206	2.00	7.00	4.7451	1.03446	.366	.169	.118	.337
Valid N (listwise)	206								

Appendix V: SPSS tables for Skew and Kurtosis continued.

Trust

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Trust_score	206	2.00	7.00	4.9430	.90733	.093	.169	.009	.337
Valid N (listwise)	206								

Satisfaction

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Sat_score	87	1.75	7.00	5.6839	.89122	-1.345	.258	3.941	.511
Valid N (listwise)	87								

Behavioural intentions

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BI_score	206	1.75	7.00	5.0777	1.12322	-.409	.169	.095	.337
Valid N (listwise)	206								

**Appendix W: Contingency table analysis**

Correlation between Age and D3: have you tried Australian farmed prawns

age * D3 Crosstabulation							Chi-Square Tests			
			D3			Total	Value	df	Asymp. Sig. (2-sided)	
			YES	NO	DONT KNOW					
age	18-24	Count	24	10	27	61	12.214 <sup>a</sup>	16	.729	
		% within age	39.3%	16.4%	44.3%	100.0%				
	25-30	Count	14	6	13	33	13.903	16	.606	
		% within age	42.4%	18.2%	39.4%	100.0%				
	31-35	Count	6	2	9	17	1.852	1	.174	
		% within age	35.3%	11.8%	52.9%	100.0%				
	36-40	Count	9	6	8	23	199			
		% within age	39.1%	26.1%	34.8%	100.0%				
	41-45	Count	5	2	9	16				
		% within age	31.3%	12.5%	56.3%	100.0%				
	42-50	Count	12	6	6	24				
		% within age	50.0%	25.0%	25.0%	100.0%				
	51-55	Count	5	4	3	12				
		% within age	41.7%	33.3%	25.0%	100.0%				
	56-60	Count	3	2	3	8				
		% within age	37.5%	25.0%	37.5%	100.0%				
	61 and above	Count	3	2	0	5				
		% within age	60.0%	40.0%	.0%	100.0%				
Total		Count	81	40	78	199				
		% within age	40.7%	20.1%	39.2%	100.0%				

a. 13 cells (48.1%) have expected count less than 5. The minimum expected count is 1.01.

Appendix W: Contingency table analysis continued.

Correlation between Age and D12: Frequency of purchasing prawns

age \* D12 Crosstabulation

			D12													Total		
			0	1	2	3	4	5	6	7	12	23	24	26	36		56	112
age	18-24	Count	4	10	10	3	3	0	4	1	11	0	2	0	0	5	0	53
		% within age	7.5%	18.9%	18.9%	5.7%	5.7%	.0%	7.5%	1.9%	20.8%	.0%	3.8%	.0%	.0%	9.4%	.0%	100.0%
	25-30	Count	2	3	3	4	5	0	0	0	11	0	0	0	1	1	0	30
		% within age	6.7%	10.0%	10.0%	13.3%	16.7%	.0%	.0%	.0%	36.7%	.0%	.0%	.0%	3.3%	3.3%	.0%	100.0%
	31-35	Count	1	1	2	0	0	1	3	0	6	0	3	0	0	0	0	17
		% within age	5.9%	5.9%	11.8%	.0%	.0%	5.9%	17.6%	.0%	35.3%	.0%	17.6%	.0%	.0%	.0%	.0%	100.0%
	36-40	Count	0	0	2	6	2	0	0	0	7	0	2	1	0	1	0	21
		% within age	.0%	.0%	9.5%	28.6%	9.5%	.0%	.0%	.0%	33.3%	.0%	9.5%	4.8%	.0%	4.8%	.0%	100.0%
	41-45	Count	0	0	2	1	0	1	2	0	4	0	1	1	1	1	0	14
		% within age	.0%	.0%	14.3%	7.1%	.0%	7.1%	14.3%	.0%	28.6%	.0%	7.1%	7.1%	7.1%	7.1%	.0%	100.0%
	42-50	Count	0	0	1	3	2	0	2	0	9	1	3	1	0	0	0	22
		% within age	.0%	.0%	4.5%	13.6%	9.1%	.0%	9.1%	.0%	40.9%	4.5%	13.6%	4.5%	.0%	.0%	.0%	100.0%
	51-55	Count	0	0	3	0	1	1	1	0	3	0	0	0	0	1	0	10
		% within age	.0%	.0%	30.0%	.0%	10.0%	10.0%	10.0%	.0%	30.0%	.0%	.0%	.0%	.0%	10.0%	.0%	100.0%
	56-60	Count	0	1	2	0	0	0	0	0	2	0	1	0	0	0	0	6
		% within age	.0%	16.7%	33.3%	.0%	.0%	.0%	.0%	.0%	33.3%	.0%	16.7%	.0%	.0%	.0%	.0%	100.0%
	61 and above	Count	0	1	0	0	0	0	0	0	2	0	1	0	0	0	1	5
		% within age	.0%	20.0%	.0%	.0%	.0%	.0%	.0%	.0%	40.0%	.0%	20.0%	.0%	.0%	.0%	20.0%	100.0%
Total		Count	7	16	25	17	13	3	12	1	55	1	13	3	2	9	1	178
		% within age	3.9%	9.0%	14.0%	9.6%	7.3%	1.7%	6.7%	.6%	30.9%	.6%	7.3%	1.7%	1.1%	5.1%	.6%	100.0%



Appendix W: Contingency table analysis continued.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	141.760 <sup>a</sup>	112	.030
Likelihood Ratio	125.396	112	.183
Linear-by-Linear Association	3.648	1	.056
N of Valid Cases	178		

Correlation between Age and D8: Repeat purchase

age \* D8 Crosstabulation

			D8				
			Only Once (1)	Two (2) Times	Three (3)-Ten (10) Times	More than Ten (10)	Total
age	18-24	Count	22	18	17	4	61
		% within age	36.1%	29.5%	27.9%	6.6%	100.0%
	25-30	Count	8	7	11	7	33
		% within age	24.2%	21.2%	33.3%	21.2%	100.0%
	31-35	Count	3	5	6	3	17
		% within age	17.6%	29.4%	35.3%	17.6%	100.0%
	36-40	Count	1	4	11	7	23
		% within age	4.3%	17.4%	47.8%	30.4%	100.0%
	41-45	Count	4	2	4	6	16
		% within age	25.0%	12.5%	25.0%	37.5%	100.0%
	42-50	Count	5	4	8	7	24
		% within age	20.8%	16.7%	33.3%	29.2%	100.0%
	51-55	Count	4	2	3	3	12

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.168 <sup>a</sup>	24	.253
Likelihood Ratio	31.756	24	.133
Linear-by-Linear Association	11.251	1	.001
N of Valid Cases	198		

a. 19 cells (52.8%) have expected count less than 5. The minimum expected count is .85.

Appendix W: Contingency table analysis continued.

	% within age	33.3%	16.7%	25.0%	25.0%	100.0%
56-60	Count	1	2	2	3	8
	% within age	12.5%	25.0%	25.0%	37.5%	100.0%
61 and above	Count	0	1	1	2	4
	% within age	.0%	25.0%	25.0%	50.0%	100.0%
Total	Count	48	45	63	42	198
	% within age	24.2%	22.7%	31.8%	21.2%	100.0%

Correlation between frequency of purchasing prawns and D12: Income

D13 \* D12 Crosstabulation

		D12															Total	
		0	1	2	3	4	5	6	7	9	12	23	24	26	36	56		112
D13	Less than Count	0	8	8	3	4	0	1	0	0	15	0	2	1	0	1	0	43
	\$24,999 % within D13	.0%	18.6%	18.6%	7.0%	9.3%	.0%	2.3%	.0%	.0%	34.9%	.0%	4.7%	2.3%	.0%	2.3%	.0%	100.0%
	\$25,000 - Count	6	6	14	12	2	2	6	0	0	19	1	5	1	1	6	0	81
	\$49,000 % within D13	7.4%	7.4%	17.3%	14.8%	2.5%	2.5%	7.4%	.0%	.0%	23.5%	1.2%	6.2%	1.2%	1.2%	7.4%	.0%	100.0%
	\$50,000 - Count	1	1	3	2	8	0	3	1	1	17	0	6	1	0	1	1	46
	\$74,999 % within D13	2.2%	2.2%	6.5%	4.3%	17.4%	.0%	6.5%	2.2%	2.2%	37.0%	.0%	13.0%	2.2%	.0%	2.2%	2.2%	100.0%

Appendix W: Contingency table analysis continued.

Over \$75,000	Count	0	1	0	1	0	1	2	0	0	5	0	0	0	1	1	0	12
	% within D13	.0%	8.3%	.0%	8.3%	.0%	8.3%	16.7%	.0%	.0%	41.7%	.0%	.0%	.0%	8.3%	8.3%	.0%	100.0%
Total	Count	7	16	25	18	14	3	12	1	1	56	1	13	3	2	9	1	182
	% within D13	3.8%	8.8%	13.7%	9.9%	7.7%	1.6%	6.6%	.5%	.5%	30.8%	.5%	7.1%	1.6%	1.1%	4.9%	.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	64.869 <sup>a</sup>	45	.028
Likelihood Ratio	66.720	45	.019
Linear-by-Linear Association	3.053	1	.081
N of Valid Cases	182		

a. 53 cells (82.8%) have expected count less than 5. The minimum expected count is .07.

**Appendix X: Correlations testing Hypotheses 1-10 and Hypothesis 27.**

Hypothesis 1

**Correlations**

		Trust_score	BI_score
Trust_score	Pearson Correlation	1	.701**
	Sig. (2-tailed)		.000
	N	206	206
BI_score	Pearson Correlation	.701**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 2

**Correlations**

		Trust_score	Product_Physical_ Composite
Trust_score	Pearson Correlation	1	.290**
	Sig. (2-tailed)		.000
	N	206	206
Product_Physical_Composite	Pearson Correlation	.290**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 3

**Correlations**

		Trust_score	Product_Health_C omposite
Trust_score	Pearson Correlation	1	.224**
	Sig. (2-tailed)		.001
	N	206	206
Product_Health_Composite	Pearson Correlation	.224**	1
	Sig. (2-tailed)	.001	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 4

**Correlations**

		Trust_score	price2_composite
Trust_score	Pearson Correlation	1	.586**
	Sig. (2-tailed)		.000
	N	206	206
price2_composite	Pearson Correlation	.586**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 5

Appendix X: Correlations testing Hypotheses 1-10 and Hypothesis 27 continued.

**Correlations**

		Trust_score	MC2_composite
Trust_score	Pearson Correlation	1	.415**
	Sig. (2-tailed)		.000
	N	206	206
MC2_composite	Pearson Correlation	.415**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 6

**Correlations**

		Trust_score	Pla_score
Trust_score	Pearson Correlation	1	.353**
	Sig. (2-tailed)		.000
	N	206	206
Pla_score	Pearson Correlation	.353**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 7

**Correlations**

		Trust_score	Peo_score
Trust_score	Pearson Correlation	1	.379**
	Sig. (2-tailed)		.000
	N	206	206
Peo_score	Pearson Correlation	.379**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 8

**Correlations**

		Trust_score	PhE_score
Trust_score	Pearson Correlation	1	.432**
	Sig. (2-tailed)		.000
	N	206	206
PhE_score	Pearson Correlation	.432**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Appendix X: Correlations testing Hypotheses 1-10 and Hypothesis 27 continued.

Hypothesis 9

**Correlations**

		Trust_score	Pro_score
Trust_score	Pearson Correlation	1	.384**
	Sig. (2-tailed)		.000
	N	206	206
Pro_score	Pearson Correlation	.384**	1
	Sig. (2-tailed)	.000	
	N	206	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 10

**Correlations**

		Trust_score	Sat_score
Trust_score	Pearson Correlation	1	.570**
	Sig. (2-tailed)		.000
	N	206	87
Sat_score	Pearson Correlation	.570**	1
	Sig. (2-tailed)	.000	
	N	87	87

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 27

**Correlations**

		Sat_score	BI_score
Sat_score	Pearson Correlation	1	.578**
	Sig. (2-tailed)		.000
	N	87	87
BI_score	Pearson Correlation	.578**	1
	Sig. (2-tailed)	.000	
	N	87	206

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix Y: Multiple Linear Regression testing Hypotheses 11-26.

### Hypothesis 11-18

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 <sup>a</sup>	.538	.490	.63615

a. Predictors: (Constant), Pro\_score, Product\_Health\_Composite, Product\_Physical\_Composite, price2\_composite, MC2\_composite, Pla\_score, Peo\_score, PhE\_score

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.742	8	4.593	11.349	.000 <sup>a</sup>
	Residual	31.565	78	.405		
	Total	68.307	86			

a. Predictors: (Constant), Pro\_score, Product\_Health\_Composite, Product\_Physical\_Composite, price2\_composite, MC2\_composite, Pla\_score, Peo\_score, PhE\_score

b. Dependent Variable: Sat\_score

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	.628	.645		.973	.333			
	Product_Health_Composite	.256	.089	.230	2.886	.005	.322	.311	.222
	Product_Physical_Composite	.301	.087	.313	3.467	.001	.517	.365	.267
	MC2_composite	.016	.085	.020	.183	.855	.275	.021	.014
	price2_composite	.459	.097	.440	4.726	.000	.626	.472	.364
	Pla_score	-.118	.116	-.133	-1.019	.311	.206	-.115	-.078
	Peo_score	-.027	.120	-.032	-.222	.825	.208	-.025	-.017
	PhE_score	-.045	.147	-.045	-.305	.761	.281	-.034	-.023
	Pro_score	.220	.151	.238	1.455	.150	.285	.163	.112

a. Dependent Variable: Sat\_score

Appendix Y: Multiple Linear Regression testing Hypotheses 11-26 continued.

Hypothesis 19-26

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.668 <sup>a</sup>	.447	.424	.85215

a. Predictors: (Constant), Pro\_score, Product\_Health\_Composite, Product\_Physical\_Composite, price2\_composite, MC2\_composite, Pla\_score, PhE\_score, Peo\_score

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.580	8	14.447	19.896	.000 <sup>a</sup>
	Residual	143.053	197	.726		
	Total	258.632	205			

a. Predictors: (Constant), Pro\_score, Product\_Health\_Composite, Product\_Physical\_Composite, price2\_composite, MC2\_composite, Pla\_score, PhE\_score, Peo\_score

b. Dependent Variable: BI\_score

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	.263	.548		.481	.631			
	Product_Health_Composite	.120	.073	.091	1.651	.100	.207	.117	.087
	Product_Physical_Composite	.287	.088	.193	3.260	.001	.418	.226	.173
	MC2_composite	.057	.074	.056	.774	.440	.294	.055	.041
	price2_composite	.689	.083	.532	8.334	.000	.623	.511	.442
	Pla_score	-.153	.095	-.123	-1.624	.106	.211	-.115	-.086
	Peo_score	.139	.103	.128	1.350	.179	.270	.096	.072
	PhE_score	-.161	.114	-.127	-1.416	.158	.214	-.100	-.075
	Pro_score	.100	.125	.081	.801	.424	.224	.057	.042

a. Dependent Variable: BI\_score



## Appendix Z: ANOVA

### Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.666	3	133	.574

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
BI_score	Between Groups	15.219	3	5.073	4.003	.009
	Within Groups	168.537	133	1.267		
	Total	183.756	136			

### Multiple Comparisons

#### Tukey HSD

Dependent Variable	(I) D2	(J) D2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
BI_score	From friends and relatives	From retailers	.07112	.23885	.991	-.5503	.6926
		Media	.71695*	.23311	.013	.1104	1.3235
		Other	.94612	.58193	.368	-.5680	2.4602
	From retailers	From friends and relatives	-.07112	.23885	.991	-.6926	.5503
		Media	.64583	.26018	.067	-.0311	1.3228
		Other	.87500	.59330	.456	-.6686	2.4186
	Media	From friends and relatives	-.71695*	.23311	.013	-1.3235	-.1104
		From retailers	-.64583	.26018	.067	-1.3228	.0311
		Other	.22917	.59101	.980	-1.3085	1.7669
	Other	From friends and relatives	-.94612	.58193	.368	-2.4602	.5680
		From retailers	-.87500	.59330	.456	-2.4186	.6686
		Media	-.22917	.59101	.980	-1.7669	1.3085

\*. The mean difference is significant at the 0.05 level.

Appendix Z: ANOVA continued.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
BI_score	From friends and relatives	58	5.3836	1.05674	.13876	5.1058	5.6615	3.00	7.00
	From retailers	36	5.3125	1.04262	.17377	4.9597	5.6653	2.50	7.00
	Media	39	4.6667	1.24120	.19875	4.2643	5.0690	1.75	6.50
	Other	4	4.4375	1.66302	.83151	1.7913	7.0837	2.00	5.75
	Total	137	5.1332	1.16239	.09931	4.9368	5.3296	1.75	7.00