THE SUBJECTIVE PERCEPTIONS OF CHICKEN AS A GENERIC FOOD BRAND:

A COMMUNICATION PERSPECTIVE

by

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The aim of life is
self-development.
To realise one's nature
perfectly- that is what
each of us is here for.

Oscar Wilde

Declaration

I declare that

"The subjective perceptions of chicken as a generic food brand: a communication perspective" is my work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Elane Human

November 2005

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I wish to thank

- my husband for believing in me
- my entire family for their support
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Abstract

The food industry's focus has shifted to growth, profits and efficiency through new production processes. In response, people feel they have lost control over the food they eat.

Media has a direct impact on consumer perceptions. Chicken has received extremely negative publicity compelling consumers to question the safety of chicken as a protein source.

The aim of the study is to determine the different perceptions that exist in the mind of consumers regarding chicken as a generic food brand and to assess the role of communication in a consumer-brand relationship.

Q methodology is the research methodology chosen as it is able to communicate an individual's subjectivity.

The researcher considered factor loadings of 0.37 and more as significant. The varimax rotation produced four dominant factors. The variance in the correlation matrix was calculated at 70 percent. The factor scores were determined once the total number of factors with pure loadings had been identified.

Keywords

Q methodology, chicken, brand, communication, equity, generic, media, perceptions, concourse, consumption.

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CHAPTER 1 - BACKGROUND AND INTRODUCTION

1.1 INTRODUCTION

This study investigates the dominant subjective perceptions of chicken as a generic food brand in the minds of selected consumers. A brand fulfils the real or perceived needs of consumers. It is a personality to which consumers are attracted. Consumer perception does not always occur at the conscious level and feelings about products or services are not easily articulated. They are emotional, and based on a brand relationship. Hence, brands have to address many elements of consumer perception and demand.

Chicken as a generic food brand has received ample negative media coverage as stipulated in chapter 2, 2.3.1 but is perceived to still be the dominant protein brand preferred by consumers. Hence, the study aims to determine the prevailing subjective perceptions in a selected consumer group, which could explain why chicken is the leading protein brand.

1.2 AIM OF THE STUDY

Since the aim of this study is to determine existing perceptions of chicken as a generic food brand, it is important to assess the role of communication in the emotional connection of consumers to brands.

By understanding the way in which communication influences subjective perceptions and behaviour, a valuable contribution will be made to the discipline of communication. The chicken industry will also benefit because the input should enable the industry to formulate communication messages for consumers that will ultimately increase consumption of chicken as the preferred protein brand.

1.3 THE OBJECTIVE OF THE STUDY

The objective of the study is to determine and explain the link between consumers' perceptions of chicken and the factors that influence these perceptions and consumers' purchasing behaviour. A further objective is to explore consumers' perceptions of chicken in terms of the way its qualities are communicated to consumers, as this is an important factor in creating perceptions.

1.4 NEED AND MOTIVATION FOR THE RESEARCH

The demand for chicken has increased dramatically over the past few years. This is probably due to the relatively lower price of chicken compared to other protein products such as beef and mutton (Streicher, Braithwaite & Fennell 2002:48). This study allows the researcher to identify the reasons for this growth by pinpointing the subjective perceptions that currently exist around chicken as generic food brand. This will provide an insight into the way consumers view chicken not just as a source of protein but also as a leading generic food brand on a functional and emotional level.

1.5 THE THEORETICAL APPROACH TO THE STUDY

The factors that the study identifies to determine the dominant existing subjective perceptions of chicken as a generic food brand are derived from fieldwork, the benefits of the integrated marketing communication model and the components of brand equity.

The integrated marketing communication model illustrates how perceptions are created from various brand message sources. From the consumer's point of view, integration exists when a brand does what its maker says it will do and the consumer then receives confirmation from other sources that it in fact delivers on its promise (Duncan & Moriaty 1997). Hence, the statement selection for this study from the concourse considered this theoretical approach.

The different components of brand equity are the second theoretical consideration that is included in the concourse for statement selection. According to Kohli and Leuthesser (2001: 76), brand equity consists of three components that ultimately determine brand preference and influence perceptions. These include brand differentiation, brand knowledge and customer response. Each of these components consists of different elements and the different combinations of these elements in the equation, determines the effectiveness of brand preference based on perception creation.

1.6 RESEARCH PROBLEM AND THE RESEARCH QUESTION

The research problem is to understand how consumers subjectively conceptualise chicken as a generic food brand. Since this is an exploratory study, the research question is:

"What are the dominant perceptions of chicken in the minds of selected consumers?"

1.7 REVIEW OF RELATED LITERATURE AND FIELDWORK

This study demonstrates a thorough conceptual coverage of the literature that is relevant to the research problem. This includes various South African and other global studies on the chicken industry, branding and different dimensions of branding, including aspects of generic branding. The literature study also reviews the influence of the media on subjective perceptions.

Information generated from fieldwork is included in the concourse from which statements are identified. The researcher gathered this information during her involvement as a market analyst in the chicken industry from January 2001 to May 2003.

The relevant literature does not however identify subjective perceptions of chicken as a generic food brand; it merely highlights previously identified expectations that consumers have of protein in general and specifically chicken. This study highlights the gap in the existing literature in that it demonstrates the different, existing subjective perceptions of a selected group of consumers of chicken as a generic food brand.

1.8 DEFINITION OF KEY TERMS

In order to avoid misinterpretation, the following key terms are defined as follows:

- **Brand**

  A brand is the sum of all emotions, thoughts and recognitions that people in the target audience have about a company, product or service. This definition reflects the more modern perception of brand since the emotional factor is linked to the potential consumer's viewpoint (McNamara 2001).

- **Brand equity**

  Brand equity is the set of brand assets and liabilities linked to a brand – its name and symbol that add to or subtract from the value provided by the product. The positive brand association that a brand may have with a person, lifestyle or personality may help to build brand equity (Edlin & Harkin 2003:25).

- **Brand relationships**

  Brand relationships include the process of identifying and establishing, maintaining, enhancing and when necessary, terminating relationships with customers and other stakeholders, at a profit, so that the objective of all parties involved are met, where this is done by a mutual giving and fulfilment of promises (Gronroos 2002:6).

- **Brand loyalty**

  Brand loyalty can be defined as a measure of how often a consumer will choose the same brand when purchasing in a certain product class (Kohli & Leuthesser 2001:79).

- **Branded products**

  A branded product carries a specific name or a “private label” (Do you know what is what [sa]), for example Coca-Cola.

- **Centroid factor extraction**

  Centroid factor extraction is a process of defining centres of gravity cemented in a correlation matrix and expressing them in precise terms (Brown 1980:208).

- **Concourse**

  Amin (2000:412) states that the literal meaning of concourse is assemble or gathering. In the context of Q methodology, this would represent all the gathered opinions on a particular subject.

- **Factors**

  Factors indicate clusters of persons who have ranked statements in a similar manner. Explanations of factors are advanced in terms of commonly shared attitudes or perceptions (Brown 1980:6). This definition is within the context of Q methodology.

- **Factor loading**

  Allgood (1999:217) defines factor loading as the correlation of Q sorts with a particular factor.

- **Factor rotation**

  Since there is more than one way to rotate factors, it is necessary for the researcher to focus on the main goal of the outcome and then apply the appropriate rotating method. The rotating method would have to account for as many of the sorts, in as few factors possible, permitted by the data (Stricklin & Almeida 1999).

- **Factor scores**

  Factor scores are derived from factors in the rotation process that represent conceptions held by the same participants that are loaded on a particular factor (Brown 1980:239).

- **Generic brands**

  A generic brand or a “no-name brand” is a product that does not carry a brand name and only indicates the product category and is not associated with any differentiation label (Do you know what is what [sa]), for example Pick ‘n Pay’s “no name” aluminium foil

- **Generic products**

  Generic products can be defined as goods sold with neither brand name nor advertising and promotion usually in plain, undecorated packaging (Do you know what is what [sa]).

- **Perceptions**

  Perceptions can be defined as the process by which the apprehended qualities of an object are articulated with similar or related, already existing knowledge and attitude in such a way as to be understood (Brown 1980:86).

- **Q sorting**

  The Q sorting process identifies subjective meaning. Statements around a particular subject are arranged by the participants on a Q sort diagram according to their own preferences (Allgood 1999: 213).

1.9 BRIEF EXPLANATION OF THE RESEARCH METHODOLOGY

The research methodology applied to this study is Q methodology. The main purpose of Q methodology is to generate subjective ideas from individuals on a particular topic and not to restrict ideas. Q methodology is based on two principles of subjectivity. Firstly, an individual’s subjectivity can be communicated to others. For example, when a

patient is asked an appropriate question about patient-doctor relationships, he or she should be able to express to others what he or she likes or dislikes about a specific encounter with a doctor. The second premise is that the subjectivity always advances from the point of self-reference. In other words, of importance in Q methodology is the individual's feelings or opinion as opposed to the opinions of others. These two components form the essence of Q methodology (Amin 2000:411).

Data collection for the study is based on a cross-sectional design which involves the measurement of all variables for all cases within a narrow time span so that the measurements may be viewed as contemporaneous. Data are collected at only one point in time. Hence, for the participants there is only one period for data collection. In contrast, a longitudinal design can be defined simply as one or more groups of participants studied at several points in time (Powers & Knapp 1995:67).

1.10 THE STRUCTURE OF THE DISSERTATION

Chapter 2 concentrates on the explorations and the dynamics of the chicken market. The consumption trends of chicken, the global chicken market and the chicken price fluctuation factors are also highlighted. Existing consumer expectations of chicken that have been identified and the potential power of the media on perceptions are addressed.

In chapter 3, the concept of brands and branding are discussed. This discussion includes integrated brand messages, brand equity components and different methodologies applied in rating consumer brands. Particular emphasis is placed on the generic aspect of branding as would be applied to chicken as a brand.

Chapter 4 consists of an in-depth analysis of Q methodology as it is applied in this study. Discussions on the historical aspects of this

methodology are highlighted, as are the steps involved in a Q study. Finally, the advantages and disadvantages of Q methodology are identified.

Chapter 5 is dedicated to the application of Q methodology to the research problem. Results are analysed and discussed, and the dominant subjective perceptions of chicken as a generic food brand described.

In chapter 6 conclusions are drawn and the dimensions in each of the factors identified are explored further.

1.11 SUMMARY

This chapter outlined the study. The following chapter describes the dynamics of the chicken industry and discusses previously identified expectations of chicken as a protein and a source of risk. The impact of the media, specifically with regard to its coverage of chicken as a protein source, is highlighted.

CHAPTER 2 - CHICKEN AS A GENERIC FOOD BRAND

2.1 INTRODUCTION

The conceptualisation of subjective perceptions of chicken as a generic food brand is the subject of this research. This chapter explores the dynamics in the South African and international chicken market and the available literature on consumers' expectations of chicken as a generic food brand.

This study thus investigates subjective perceptions of all chicken products from a holistic point of view with no differentiation between specific chicken brands. The impact of the media on consumer perceptions of chicken as a brand is also addressed. Only the chicken market is involved in this study and not the total poultry market that includes chicken, ostrich, turkey, duck and geese.

2.2 THE CHICKEN MARKET

2.2.1 OVERVIEW OF THE SOUTH AFRICAN CHICKEN MARKET

Food is a commodity and a luxury that people share with friends and family. People's relationship with food has changed in the sense that people are becoming increasingly removed from the origin of their food. In today's society, many people do not know how food is grown, harvested or processed. In the food industry, the producers' focus has shifted to growth, profits and efficiency. Food producers try to reduce their costs through new production patterns, new chemical processes and additives or animal drugs and stimulants. Hence, people feel they have lost touch with the food chain and lost control over the food they eat (Risk communication and government 2001).

This contributes to the public's growing awareness that food is becoming another source of risk (Risk communication and government

2001). Hence, people's perceptions of food including the perception of chicken, have changed.

The protein market, of which the chicken market is part, is significant in South Africa. Figure 2.1 below displays the total percentage consumption in the South African protein market during 2004 (Pearson, Braithwaite, Daines & Fennell 2004:12).

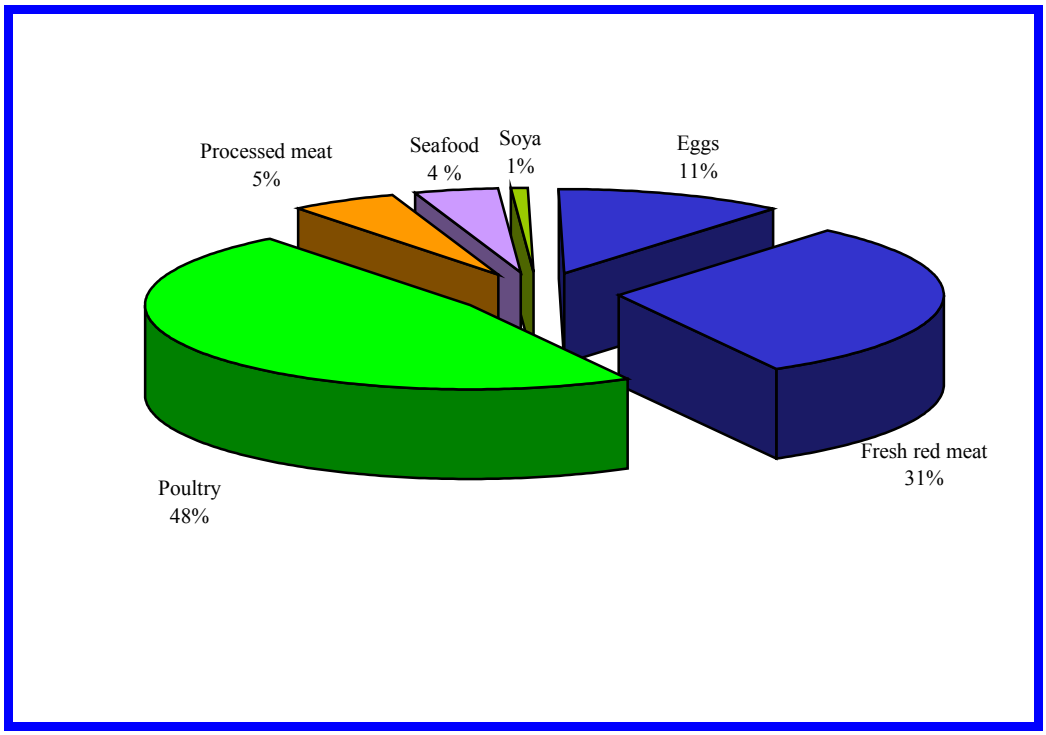


Figure 2.1: The total protein market in South Africa for 2004

Source: Pearson *et al* (2004)

Pearson, Braithwaite, Daines and Fennell (2003:39) have found the consumption of chicken for 2002 was 860 078 tons. This represents a growth rate of 1.8 percent compared with the previous year and compared to the total chicken consumption of 915 484 tons for 2004; the chicken market indicates a consistent upward growth rate.

The total South African chicken market is referred to as the retail market. The retail market consists of all supermarkets, hyper-stores and

local vendors selling food products, which are usually purchased at the site, for example Pick ‘n Pay (Streicher, Braithwaite, Daines & Fennell 2003:5).

Table 2.1 below indicates the total consumption of chicken in the South African retail market over a period of seven years with the estimated consumption figures for 2005.

Total South African retail chicken market consumption		
Year	Tons	Percentage change p.a.
1998	738 960	-
1999	770 016	4.2
2000	808 047	4.9
2001	844 682	4.5
2002	860 078	1.8
2003	897 696	4.4
2004	915 484	2.0
2005e	942 948	3.0

*e estimated

Table 2.1: Consumption of chicken for the period 1998 to 2005 in the South African retail market

Source: Pearson *et al* (2003; 2004)

In the retail chicken market there is a highly dynamic sector known as the foodservice sector. This sector includes establishments that offer away-from-home meals to individuals. With the exception of take-away foods, these meals are generally consumed at catering outlets. The consumer is thus passive and plays no part in the final preparation of the meals (Streicher *et al* 2003:18). The foodservice sector is important because of its continued positive growth. In terms of the consumption of chicken products in the foodservice sector, volumes show a growth rate of 4.6 percent in 2003. This is more than double the total growth rate of

1.8 percent for the total South African retail chicken market in 2002 (Pearson *et al* 2003:53). Again, the 2004 growth rate stands at 1.5 percent, which is less than the previous year but is moving upwards steadily (Pearson *et al* 2004:63).

Table 2.2 below illustrates the consumption of chicken in the foodservice sector in South Africa.

Total South African foodservice chicken sector consumption		
Year	Tons	Percentage change p.a.
1998	179 146	-
1999	187 370	4.6
2000	196 550	4.9
2001	202 377	2.9
2002	205 377	1.6
2003	214 825	4.6
2004	217 978	1.5
2005e	221 901	1.8

*e estimated

Table 2.2: Total South African foodservice sector consumption

Source: Pearson *et al* (2003; 2004)

2.2.2 MAIN PRODUCERS FOR THE SOUTH AFRICAN CHICKEN MARKET

Streicher *et al* (2002:48) list the 24 main licensed producers of chicken and chicken products in South Africa as follows:

- Agrichick CC Chickens
- Argyle Poultry Chubby Chick
- Cape King Foods Country Bird
- County Fair Crest Choice Chicken

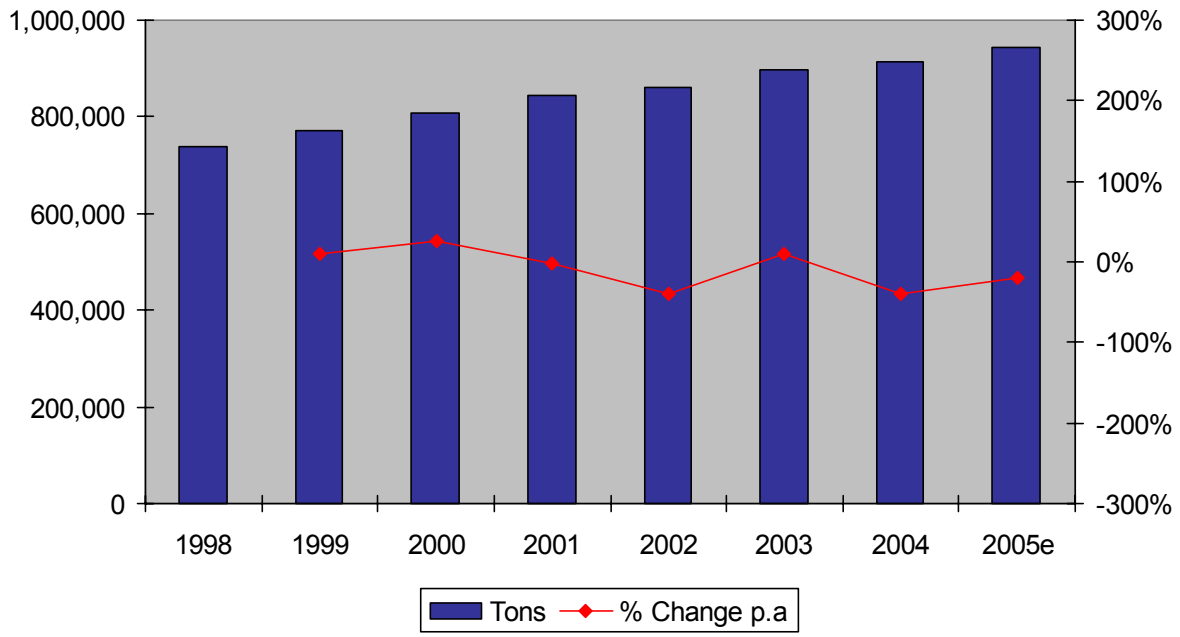
- Daybreak Farms Earlybird Farms
- Finlar Foods Fourie's Poultry
- Henwill Chickens I & J
- Kentron Chickens Mikon Marketing
- Rainbow Chicken Limited Rocklands Poultry
- Rosendal Poultry Sangiro Farms
- Spif Chicken Sunrise Poultry
- Supreme Chicken Tydstroom Farms

Of these, Rainbow Chicken Limited (incorporating Rainbow Farms) is the largest producer in South Africa. It is a fully integrated broiler producer that breeds and rears its own livestock, processes the chicken and markets fresh, frozen and value-added chicken both nationally and internationally. Rainbow Chicken has the capacity to process four million birds per week and currently captures close to 40 percent of the South African market (Rainbow Chickens at a glance: facts and figures [sa]).

2.2.3 CONSUMPTION TRENDS IN THE SOUTH AFRICAN CHICKEN MARKET

As indicated in Table 2.1, chicken remains a viable alternative to red meat as a choice for lean, high-protein meat cuts with a strong upwards curve in 2003 (Pearson *et al* 2003:2). In 2004 there was a smaller increase in the preference of chicken but the 2005 estimation indicates an ongoing upward growth rate (Pearson *et al* 2004:13).

This is also illustrated in Figure 2.2 below, which indicates the upward trend of the retail chicken market.



*e estimated

Figure 2.2: Total South African retail chicken market trends

Source: Pearson *et al* (2003; 2004)

Figure 2.3 on the next page depicts South Africa's per capita consumption from 1965 to 2004 in kilograms, indicating the dramatic growth in the total chicken market and the noticeable decline in beef consumption.

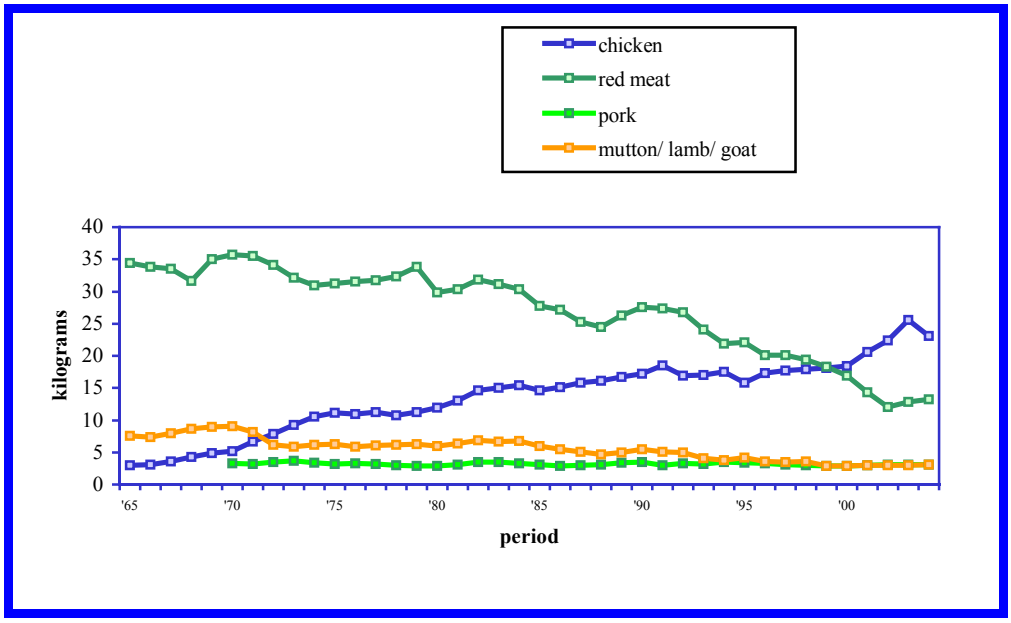


Figure 2.3: South Africa's per capita chicken consumption in kilograms versus other protein

Source: Neilson (2002.03.26; 2004.12.04)

2.2.4 THE GLOBAL CHICKEN MARKET

South Africa produces chicken locally, but also imports chicken from other countries. The increased consumption of chicken worldwide is one of the factors that led to the rapid growth of the global chicken export market.

Figure 2.4 on the next page shows the United States of America as the largest producer of chicken with a production volume of 15 050 tons in 2004. According to 2004 figures, Brazil is the world's second largest chicken producer with a volume of 7 185 tons.

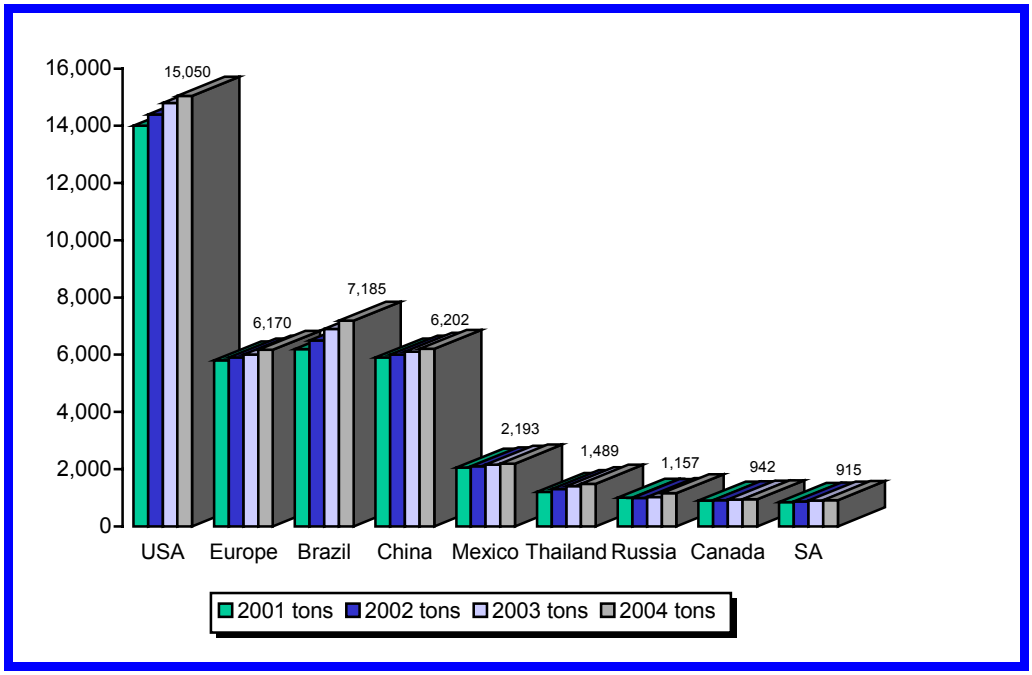


Figure 2.4: Comparison of world chicken production in tons for 2001 to 2004

Source: Neilson (2002.03.26; 2005.02.09)

The largest producer of all protein in the USA is Tyson Foods. They are the world leader in the production of beef, pork and chicken. Chicken in the USA is produced on a much larger scale than in South Africa in order to keep up with the population demand (Tyson Foods company information [sa]).

Chicken is leading the way as a preferred protein source in the global production and export markets because it is a low-cost consumption alternative to other proteins. The emergence of transferable technology has made modern domestic production of chicken both feasible and cost-efficient. However, as these technological changes settle and trade barriers fall, certain dominant, low-cost chicken producers such as Tyson Foods are emerging globally. In developing countries, diminishing trade barriers and the new accessible technology provide opportunities to increase investment in this market (Abbott, Aho, Morse, Salinger & Tyner 2000:14).

2.2.5 PRICE FLUCTUATIONS IN THE SOUTH AFRICAN CHICKEN MARKET

In South Africa, the demand for chicken products has grown because of the relatively low price of chicken in comparison with other protein products such as beef and mutton (Poultry feed ingredient prices 2003:61).

According to Grunert (2003:2), the main deciding factors in purchasing food products are still the product's quality, the consumer's income and the price of the product.

The South African chicken market is extremely price sensitive. The price fluctuation of chicken meat is linked to a variety of factors. The importation of less expensive chicken, such as Brazilian chickens, is one of the factors that cause price fluctuations in the market. This threat to the survival of local producers was emphasised in an article in the *Business Day* on 20 March 2003: "Dumped products from countries including Brazil, Canada and Australia has led to a drop in chicken prices of about R3.00 a kilogram over the past few months".

Publicity has a direct impact on consumer perceptions of chicken as a generic food brand because they view imported chicken products as positive when price is considered, but may portray it as negative when quality is considered.

During November 2002, Shoprite Checkers, the largest supermarket chain group in South Africa, imported about 3.2 million chickens from Brazil. According to Shoprite Checkers' general marketing manager, Brian Weyers, the group were importing chicken at R2.50 per kilogram less than the local price of R15.20 per kilogram. In comparison, the price per kilogram for locally produced chicken was R11.00 in 2001 (Enslin 2003:43).

Since feed accounts for 55 percent of the production cost of chicken, an increase in the price of maize has a dramatic impact on the chicken

market. Brazil produces sufficient maize and is thus not subject to the same extent of volatility as the South African market (Poultry feed ingredient prices 2003:61).

Zach Coetzee, spokesperson for the chicken industry, warned that importing less expensive products by retailers could be detrimental since the local producers have to compete with the chicken products delivered by producers from the USA at less than their production cost. After the government imposed an anti-dumping duty on certain chicken exporters, this practise was discontinued (Enslin 2003:43).

Grassl (1999:1) explains that the price differential consumers are willing to accept in products in the same category is one of the primary measures of strength for one brand over others. This is a vital consideration when looking at chicken as a generic food brand.

Figure 2.5 on the next page illustrates the cost of maize per ton. Since a substantial amount of South Africa's maize is imported, this extreme fluctuation in price is a direct result of the rand's performance against the dollar. According to this figure, the rand was particularly weak during the period April 2002 and reaching a peak in September 2002 before decreasing. This caused the maize price per ton to increase, which in turn, led to an increase in the end price of chicken. This had an impact on the consumer's perception of chicken because the perception of chicken as a less expensive alternative to read meat could be altered.

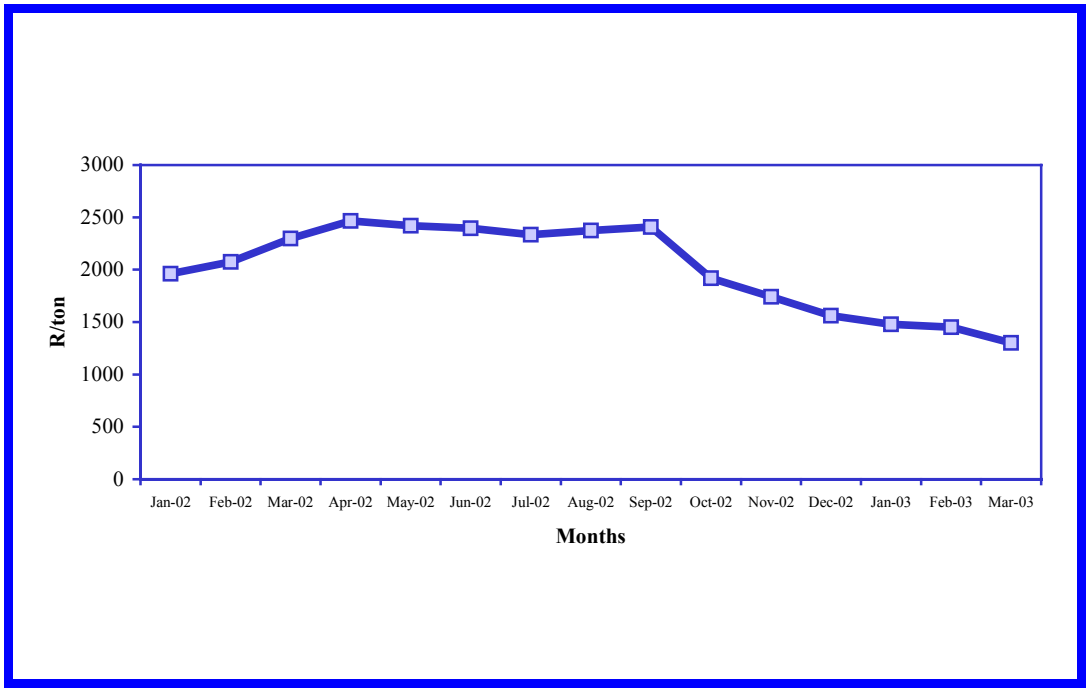


Figure 2.5: Maize prices in R/ton for the period, January 2002 to March 2003

Source: Neilson (2003.06.16)

The fact that the rand strengthened against the dollar in March 2003 helped to reduce the cost of maize production and importation, but other factors may pose challenges to the market in the years ahead, including pressure on retailers to lower the price of chicken (Streicher *et al* 2002:48).

According to Ramathatha (2003:43), Agri South Africa accused major South African retailers and wholesalers of being profit driven at the expense of consumers by increasing the price of chicken while the maize price had decreased during this period. The price of chicken continuously escalated while that of other basic foods such as maize meal gradually declined. The price of a two kilogram pack of frozen chicken pieces increased from R30.89 in February 2002, to R41.79 in September 2002, an increase of about 36 percent over seven months.

On 28 September 2004 however, a 1.8 kilogram pack of chicken portions was selling for R 22.99 as per *The Citizen* (2004) while a pack of two kilogram mixed chicken portions was selling for R 24.99 on 1 October 2004 as per *Beeld* (2004:26). In relation to the two kilogram pack of chicken price of September 2002, the price of chicken had decreased again.

Pick 'n Pay's national perishable buyer, Raymond Murray, denied that the price of chicken had increased after August 2002. He added that negotiations with suppliers were ongoing in order to secure better prices. Mr Murray further remarked that previous price increases were a direct result of the weak rand pushing up the price of maize, which is the main ingredient of chicken feed. He went on to say that the selling price of chicken varied in every region because of different characteristics in each region (Ramathatha 2003:44). However, Agri South Africa maintained that during this period, the consumer did not receive the benefit of any price reduction in the maize price.

2.2.6 DIFFERENTIATION OF CHICKEN PRODUCTS

Chicken is sold in different ways in the chicken market. Pearson *et al* (2003:35) define the different chicken products as follows:

- **Chicken portions**

  This category includes chicken portions, breasts, braaipacks and thighs in fresh and frozen portions.

- **Secondary products**

  This category incorporates the secondary products obtained from chicken carcasses, such as chicken livers and giblets. It does not include blood and feathers but if packaged for resale, incorporate a percentage of head and feet.

- **Value-added products**

  Value is added to chicken to form this category. This may range from frozen products, filleted breast graded portions without skin, chicken nuggets or fresh marinated sosaties and patties. However, this category is limited to value-added products delivered in this form to the outlet and therefore does not incorporate the percentage that would be produced in-house by local outlets such as butchers.

- **Whole birds**

  This product category includes fresh and frozen whole birds that have been slaughtered and processed.

Figure 2.6 on the next page indicates the complete chicken product breakdown in the South African retail market and each product's market share. It is apparent that chicken portions are the overall preferred chicken product, followed by whole birds and secondary chicken products.

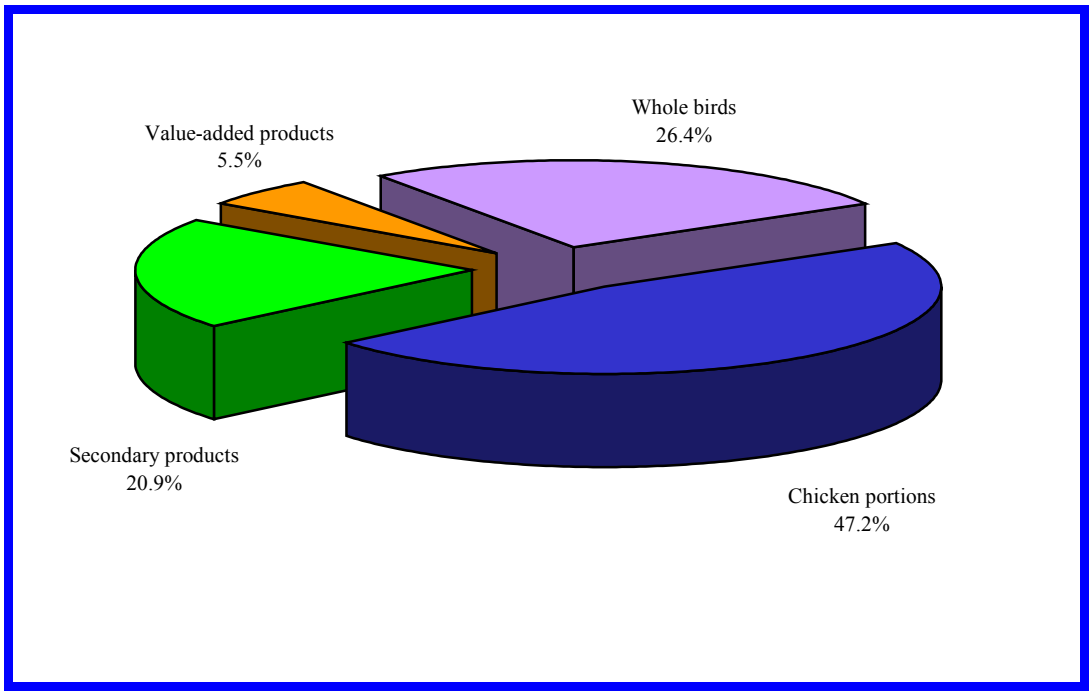


Figure 2.6: Total market share of various chicken products for 2004

Source: Pearson *et al* (2004)

2.2.7 CHICKEN CONSUMPTION IN THE FOODSERVICE SECTOR

It is vital to illustrate the consumption preferences of chicken products in the foodservice sector since the franchised fast-food outlets (outlets that belong to a group) in this sector displays phenomenal growth in chicken consumption.

Figure 2.7 on the next page indicates the market share of the various chicken products in the foodservice sector, clearly showing that portions are the preferred chicken product used in the foodservice sector, comprising 64 percent of the total chicken volume. In the foodservice sector the reason for this preference is the ability to maintain some form of standardisation in portion size and weight, which enables an outlet to prepare and serve food of similar proportions from one meal to the next. It is also an excellent measure of weight and expenditure control (Pearson *et al* 2004:36).

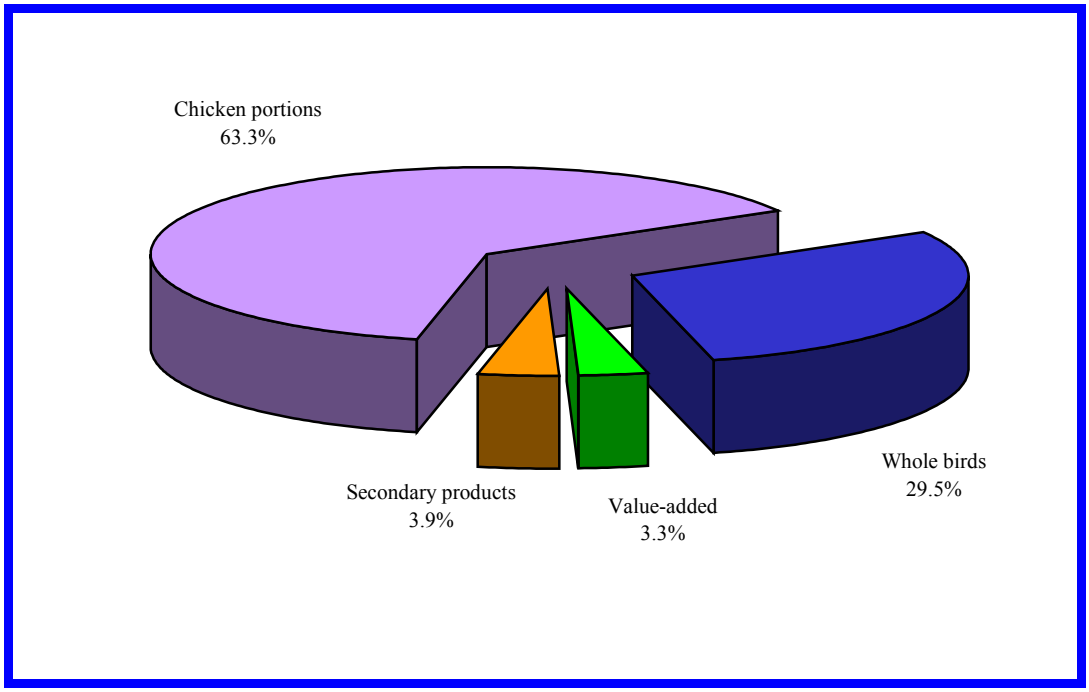


Figure 2.7: The market share of the various chicken products in the foodservice sector

Source: Pearson *et al* (2004)

Between 1998 and 2000, the franchised fast-food areas are reported to have grown by 11 to 13 percent per annum. This growth was spurred on by a change in consumer perceptions because end-users increasingly focus on home meal replacements and become more convenience driven (Streicher *et al* 2003:63). This growth rate has increased by 15 percent as recorded in 2004 (Pearson *et al* 2004:37).

When reviewing the nature of food at franchise outlets in the South African foodservice sector, it was found that 38.1 percent of all food franchisees have chicken as their main selling item as indicated in Table 2.3 on the following page.

Franchises 2004 – Number of outlets		
Franchises	Outlets	Percentage of total
Burger	570	16.1
Chicken	1 035	38.1
Coffee and light meals	60	2.0
Desserts	54	1.8
Ethnic	45	1.7
Hotdogs/chips	165	4.1
Pies	491	16.7
Pizza	339	11.5
Seafood	188	8.0
TOTAL	2 947	100.0

Table 2.3: Nature of food at franchise outlets

Source: Pearson *et al* (2004:44)

According to an article in *Rapport* on 30 March 2003, chicken is the preferred meal of 43 percent of consumers who buy take-away food from franchises. The two most popular franchises were Kentucky Fried Chicken and Chicken Licken (Ueckermann 2003:3).

Value-added chicken, although small in volume, accounts for the largest volume growth in the foodservice sector. It is convenient and saves preparation time. In 2001 there was a fair amount of product innovation by producers, delivering a greater variety of foods based on value-added chicken aimed at consumers who thrive on new and exciting food options. However, the increasing pressure on disposable income resulting from price increases of various commodities has an impact on the popularity of value-added products because it might lead to the

consumer opting for more affordable basic foods (Streicher *et al* 2002:62).

2.3 CONSUMER EXPECTATIONS OF CHICKEN

Food choices are increasingly acknowledged as a complex manifestation of consumer behaviour. Factors that play a role include social and cultural differences, symbolic interaction, personal taste, perceptions of value and personal experiences. Consumers receive large amounts of information on food regarding, health, environment and ethical issues. All of the above impact on consumer choice and food preferences (Smith & Young 1999:1107).

2.3.1 THE IMPACT OF THE MEDIA ON CONSUMER PERCEPTIONS

The media play a key role in educating and informing the public. The media can also influence the perceptions and actions of the broader public, policy makers and interest groups. One way in which the media can influence public perception is through agenda setting, drawing attention to specific issues. This implies that they cover only a few selected items at any given time (Nisbet & Lewenstein 2001:4).

According to Verbeke (2000:526), the attention consumers' focus on mass media publicity has had a highly negative influence towards consumer behaviour and decision-making processes regarding fresh meat. Consumers, who were exposed to mass media coverage of negative fresh meat issues, reported a significant decrease in meat consumption both in respect of the past, and their intentions in future purchases.

Changes in media attention can also influence public perceptions through an effect called priming. This is a process in which individuals make judgements about people or issues based on information easily available and retrievable from memory at the time when a related question is asked. Hence individuals are likely to use the issues they perceive to be most predominant or that are most abundant in media

coverage at the particular time (Nisbet & Lewenstein 2001:4). For example, if the media cover the chicken market extensively, the consumer will remember this because it is top of mind at the time.

On occasion, chicken as a generic food brand has received extremely negative publicity, warning consumers of the possible dangerous bacteria in chicken meat and compelling them to question the safety of chicken as a protein source and the supermarkets' credibility in chicken distribution in the South African market.

A case in point is the article on the front page of *The Star* newspaper on 18 September 2002 entitled: "Watch out for toxic chicken". In this article it was claimed that nearly two out of every three chickens bought are contaminated with bacteria that can cause food poisoning. The chicken samples were tested in laboratories at the University of the Witwatersrand. The article claimed that these chickens contained more than one harmful bacterium (Altenroxel 2002:1). The article explained that all three bacteria found in these chicken samples can cause food poisoning and are particularly dangerous to children, the elderly and HIV/AIDS infected people.

The electronic media are no exception when it comes to negative publicity towards protein sources. In a television insert on *Special Assignment* (2002) on 26 November 2002, general allegations were made about the use of antibiotics and growth hormones in red meat and chicken. The allegations also included statements of unregulated hormone and antibiotic usage in meat in South Africa.

Another article appeared in the *City Press* on 2 March 2003 entitled: "Shoprite red-faced over old chickens". The article reported that Shoprite sold imported Brazilian chickens of which the “best-before” expiry dates had past. The danger of bacteria and health risks were again highlighted (Monama & Sekano 2003:1).

Another example is an article appearing in the *Sowetan* (2003:6), entitled: "SA chain refuses to chicken out". The article insinuated that Shoprite did not have their customers' best interests at heart by selling chicken with expired “best-before” dates.

On 18 January 2004, there was a television insert on *Carte Blanche* (Ungerer 2004). In the insert, animal rights and abuse were investigated. General statements about chickens were made which included: “In the name of profit, we pack chickens five to a tiny cage and after they have laid three hundred eggs, we send them off to lose their heads”. Other statements about chicken abuse included allegations of burnt-off beaks and toes.

The abuse of chickens before and during slaughtering as well the by-products that were added to chicken feed were highlighted in detail on another *Carte Blanche* insert broadcast on 25 July 2004. The question was raised whether the consumer would still purchase chicken meat if they knew what goes into the feed as well as the way chickens are treated before and during slaughtering (Turner 2004).

The Star contained an article entitled: “Tears for little boy killed by bird-flu” (Noikorn 2004:4). This story covered the outbreak of bird flu in Thailand and the spread of the disease throughout Asia as well as the fact that chicken meat contains more dangerous bacteria than other meat. The article indicated that the outbreak caused wide spread panic among the Asian population. In the article, the South African government assured consumers that no shipment of chicken products would be accepted from Asia until the outbreak was under control.

The threat of bird flu infiltrating the African continent from South East Asia was highlighted in *Beeld,* entitled: “Trekvoels sal griep na Afrika bring”. The article indicates that bird flu itself is not harmful to humans but there are fears around an emerging human strain of bird flue flu that could be fatal to human beings. According to the article, Africa is one of

the main routes for bird migration and the African countries are not equipped to monitor and test poultry properly for bird flu (Brits 2005:10).

The power of the media in changing consumers' perceptions is illustrated by CBS's 60-minute programme on 17 November 1991, *The French Paradox*. The programme claimed that moderate wine consumption can lower the risk of heart disease and that red wine can reduce cancer cell activity. The topic of prevention of major illnesses always captures the reader's attention. The programme reported on the healing properties of alcohol, previously considered a health hazard. People appearing on the show were all considered to be experts in their fields, and their statements were therefore highly credible. All of these factors contributed to a dramatic increase in the consumption of red wine in particular (Dodd & Morse 1994:18). The show's credibility might have been significantly reduced had it been sales oriented (Dodd & Morse 1994:19).

Another consideration is that producers of substitute products can gain from media exposure. For example, in Dodd and Morse's (1994:19) article, conscious consumers looked to alternatives for red meat, chicken and fish producers benefited.

To gain a better perspective of consumers' perception of chicken, it is useful to investigate previous research.

2.3.2 PREVIOUS RESEARCH ON CONSUMER EXPECTATIONS OF CHICKEN AS A FOOD RISK

Since chicken as a protein source is considered to be a healthy alternative and can be adapted for a variety of dishes, it has become a popular protein source for consumers (Yeung & Yee 2002:219). According to a 1999 study by Verbeke (2000:524) in Belgium on consumer decision making regarding the purchase of fresh meat, poultry is perceived to be the healthiest and safest protein source.

According to research conducted in the UK by Yeung and Yee (2002:219), consumers have grown increasingly concerned about chicken as a protein source after a series of food scares, such as salmonella contamination and speculation about overuse of certain antibiotics in chickens. As consumer awareness and concerns about risk increase, risk calculations are likely to be a key factor in purchases.

Some consumers avoid purchasing foods they perceive to be unsafe, including imported foods. They prefer to replace it with food they perceive to be safe. Even after a problem has been resolved regarding the safety of food, consumer perceptions about the food product implicated and the supplier's or exporting country's ability to produce safe food may be slow to change, and these perceptions may have a lasting influence on food demand and global trade (Consumer food safety behaviour 2002).

In 2002, the UK conducted research on the factors that affect consumer perceptions of risk regarding food. Consumers tend to interpret highly technically messages about risk incorrectly because they do not always understand the technical terms and consequences of media or government messages about food. Also, consumers perceive the government and food industries to be unwilling to act immediately on concerns to prevent adversity. Consumer confidence is thus shaken, with a definite impact on perceptions and consumption (Yeung & Yee 2002:219).

The research identified specific losses or shortfalls arising from risk experiences of food in different areas. These include the following:

- **Financial-loss**

  Contaminated chicken meat should be disposed of. Although fresh chicken meat is less expensive than red meat, the financial loss is obvious. It was also found that, instead of returning the

contaminated product, most consumers simply do not bother to because of the inconvenience (Yeung & Yee 2002:221).

- **Health-loss**

  Consumers consider bacteria in food to be a “serious health risk”. In particular, consumers believe that the consumption of chicken meat contaminated with salmonella may cause many types of illnesses (Yeung & Yee 2002:221).

- **Lifestyle-loss**

  Lifestyle is a key issue for the health-conscious consumer. Restricted diet, the loss of freedom and physical activity are possible lifestyle losses related to food safety risks (Yeung & Yee 2002:221).

- **Psychological-loss**

  In the marketing context there is the psychological aspect of purchasing a specific brand to enhance self-image. This is more likely to occur in the context of chicken meat since the brands of fresh meat are less conspicuous (Yeung & Yee 2002:223).

- **Social-loss**

  The social aspect is an extension of the psychological aspect and involves buying a specific brand to conform with or gain the approval of family or friends. Consumers would therefore feel embarrassed and disappointed if their guests were to fall ill after serving them contaminated chicken (Yeung & Yee 2002:223).

- **Taste-loss**

  Taste is considered to be a vital aspect of food consumption, although it is unlikely to be related to food safety risk. Research, however, shows that the so-called “naïve” consumer is more concerned about taste than health. This could be contributed to the fact that these consumers are less conscious of food safety than others. Previous research has shown that consumers

complain about the loss of taste in chicken because of overcooking in the attempt to destroy bacteria (Yeung & Yee 2002:222).

- **Time-loss**

  Marketing literature urges consumers to ensure that the chicken meat they purchase is fresh by inspecting it carefully before buying it. If not, consumers risk losing time in claiming a refund for contaminated chicken products; the time spent seeking medical help to combat illness, and the time spent being housebound because of illness caused by bacteria in chicken meat (Yeung & Yee 2002:221).

Of the above components of perceived risk, the possible loss of health was by far the most serious loss, even if only for a short while. This was in line with the exploratory findings of the study that showed that consumers are most concerned about the health risk of consuming contaminated chicken meat (Yeung & Yee 2002:223).

On average, psychological loss ranked second, and on the whole, financial and time losses ranked third and fourth respectively. The results showed that taste loss is important to the consumer but that they would sacrifice taste by overcooking the meat to destroy bacteria rather than risk illness (Yeung & Yee 2002:224). To place this into context, the perceptions regarding protein should be considered.

2.3.3 CONSUMER EXPECTATIONS OF PROTEIN

Cook, Crang and Thorpe (1998:164) remark that customers have wide-ranging socially differentiating knowledge of the origin of food. These are compiled from childhood memories, travel experiences, the booming media coverage of various aspects of food, even geography lessons at school and word-of-mouth experiences that contribute to the individual construct of food perceptions.

Although meat safety concerns are still paramount, according to Verbeke (2000:525), another factor that plays a role in consumer perception of meat is animal welfare. As discussed in the previous examples on negative publicity, these include feed and product-processing procedures.

Verbeke (2000:526) further indicates that over time, consumers have become more critical towards meat quality labels as indicated in a 1999 consumer decision-making study conducted in Belgium.

The rational support that consumers seek when making meat-purchasing decisions can be provided through the establishment of a consistent system of product identification, traceability and control which implies that labels must lead to instant recognition and provide additional assurance (Verbeke 2000:526).

In 1994, the US Food Safety and Inspection Services conducted a study on the handling procedure of products according to the food label instructions. Of the 1000 respondents, 59 percent stated that they had seen the labels while 43 percent indicated that they had changed their handling behaviour as a result. The change was most frequently cited by meat and chicken preparers who answered the food safety survey (Ralston & Lin 2001:1).

Since chicken can be prepared in many different ways, safe handling of the meat is essential to avoid any contamination. According to Cook et al (1998:163), convenience of food preparation is a vital consideration in food planning and choice that ran parallel with concern for transforming foods in some way. In other words, consumers want to incorporate the food into their preferred way of preparation.

A study conducted in the UK in 1999 after the BSC scare (Mad-cow breakout) also indicated that consumers are concerned about animal welfare and beef processing methods. Another highlighted concern was

the role of government and their control measures for food safety and quality. The study revealed that consumers did not have much faith in government after the BSC scare (Smith & Young 1999). In South Africa, since disease can affect any source of protein just as easily the above-mentioned consumer concerns could also be relevant in the local chicken market.

According to Yeung and Morris (2001:274), there are five main classifications on reducing risk in chicken production. These are as follows:

- **Place of purchase**

  Customers prefer to purchase chicken meat from a safe, reputable source. This may include any “family shop”, butchery or place familiar to the customer.

- **Post-purchase control**

  Customers believe that microbiological risk is regarded as the main source of risk in chicken. This can be controlled by inspecting the chicken meat carefully before purchasing as well as keeping chicken meat separate from other meat, storing the meat in the freezer or fridge and cooking chicken meat well before consumption.

- **Price**

  Customers are willing to pay more for better quality chicken products. They perceive more expensive chicken products to be of a better quality and less expensive chicken to be of an inferior quality.

- **Product information**

  Information on the production and processing of chicken meat is important to customers. Guidelines on the cooking and storage of

chicken products as well as the “best before” date are also vital considerations.

- **Product quality**

  Assurance about chicken product quality is essential. A “quality mark” or information on the origin of the chicken is therefore necessary.

All of the above factors indicate that consumers are constantly aware of and concerned about their choices of food. The role of the media, especially the negative publicity about chicken, can influence consumer perceptions. Although chicken is perceived as a popular alternative protein source, the risk element associated with it can influence perceptions. These risks would include high bacterial counts associated with the unsafe handling of chicken meat in the kitchen, the presence of handling instructions on the packaging, the quality of the meat purchased as well as the credibility of the store at which the meat is purchased. This indicates that consumer perceptions are based on information received from a variety of sources. Certain foods are therefore perceived to be either a risk or a safe alternative.

2.4 SUMMARY

In this chapter chicken as a generic food brand is discussed, as are the trends in South African and international chicken consumption. The price fluctuations in the South African chicken market are addressed as well as the dynamics of the foodservice sector.

The influence of the media on consumer perceptions is addressed and references to media attention in the chicken market are highlighted. Previous research on consumer expectations of chicken meat is discussed and other general ideas of protein sources.

In chapter 3, consumer perceptions of brands and the perceptual dimension of brands will be explored. The difference between and relevance of generic products and branded products will also be examined.

CHAPTER 3 - BRANDS AND THEIR EVALUATION

3.1 INTRODUCTION

This chapter explores the concept of brands and the elements that contribute to brand preferences. Differentiation points between generic and branded products are investigated, as well as the consumer's perceptions of each. The theoretical aspects of communication related to the brand and the methodologies utilised to evaluate brands are examined.

3.2 BRAND DEFINITION AND VIEWPOINTS

According to Prendergast and Marr (1997:94), the brand name of any product has always been considered important. Branding has enabled producers to develop consumer loyalty, emphasise consumer awareness and develop extensions of the brand itself. This implies that branding is an element of the marketing strategy to enhance the brand. In this study brands, as opposed to the branding components linked to brands, are investigated.

Since the earliest times, producers of goods have used brands to distinguish their products. Pride in their products has undoubtedly played a role in this. More particularly, they provided consumers with a means of recognising and specifying their products, in the event of wanting to repurchase or recommend the products to other people. Particularly in the last century, the use of brands by producers developed dramatically. This development took place at three levels: firstly, legal systems recognised the value of brands to both consumer and producer. Most countries now recognise the intellectual property of trademarks, patents, designs and copyrights. Secondly, the concept of branded goods was successfully extended to embrace services. Hence the financial, retail or other services could generally be treated as branded products. Thirdly, the ways in which branded products or

services are distinguished rely increasingly on non-tangible factors including emotions such as loyalty and pride (Murphy 1992:1).

Wheeler (2003:2) defines a brand as a huge idea, the promise, the reputation and expectations that reside in the minds of consumers about a product, service and/or a company. This is a somewhat broad definition and does not mention any tangible elements in a brand.

Another point of view is that brands represent a name, term, design, symbol or any other feature that identifies one seller's goods or service from another's. The legal term for a brand is "trademark" (Aaker 2001). This represents an extremely traditional and rigid perspective of a brand. It is seen only as a logo with no emotional leverage.

McNamara (2001) defines a brand as the sum of all emotions, thoughts and recognitions that people in the target audience have about a company, product or service. This definition reflects the more modern perception of brand since the emotional factor is linked to the potential consumer's viewpoint.

Brands are powerful, yet intangible assets. People trust brands, develop strong loyalties towards them and believe in their superiority. The brand is shorthand – it stands for something and demonstrates it every day. Although brands used to be the exclusive purview of large consumer products and institutions, these days even the smallest business knows the brand imperative. Individuals such as Tiger Woods, the golfer, and Nike are already established brands (Wheeler 2003:2).

Since the aim of this study is to determine perceptions that exist in the mind of the consumer regarding chicken as a generic food brand, it is important to assess the role of communication in the emotional connection of consumers in a brand relationship.

The traditional communication model (Lasswell 1948:37) consists of a source, which encodes a message, a channel or medium through which the message is transmitted, noise that interferes with the communication processing, a receiver who decodes the message and feedback that sends the receiver's response back to the source. Gronroos (1998:4) remarks that traditional marketing communication does not provide any substantial potential for development of customer relations because it acts only as a one-way message, as depicted in Lasswell's model.

3.3 INTEGRATED BRAND MESSAGES

According to Duncan and Moriarty (1997), the integrated marketing communication model, as depicted in Figure 3.1 on the following page, illustrates how perceptions are created from the various brand message sources. From a customer's perspective, integration exists when a brand does what its maker says it will do and the customer then receives confirmation from others that it in fact delivers on its promises. This model can highlight inconsistencies in a brand's communication messages.

Schultz (1996), states that the relevance of consumer behavioural intentions and positive word-of-mouth provides a substantial reason for adding a behavioural component to the integrated triangle.

According to Schultz (1996), integrated marketing communication implies that, in every dimension of marketing, a message is sent out to the parties involved, in other words, messages cannot be contained or controlled through planned communication such as advertising, public relations or brochures alone.

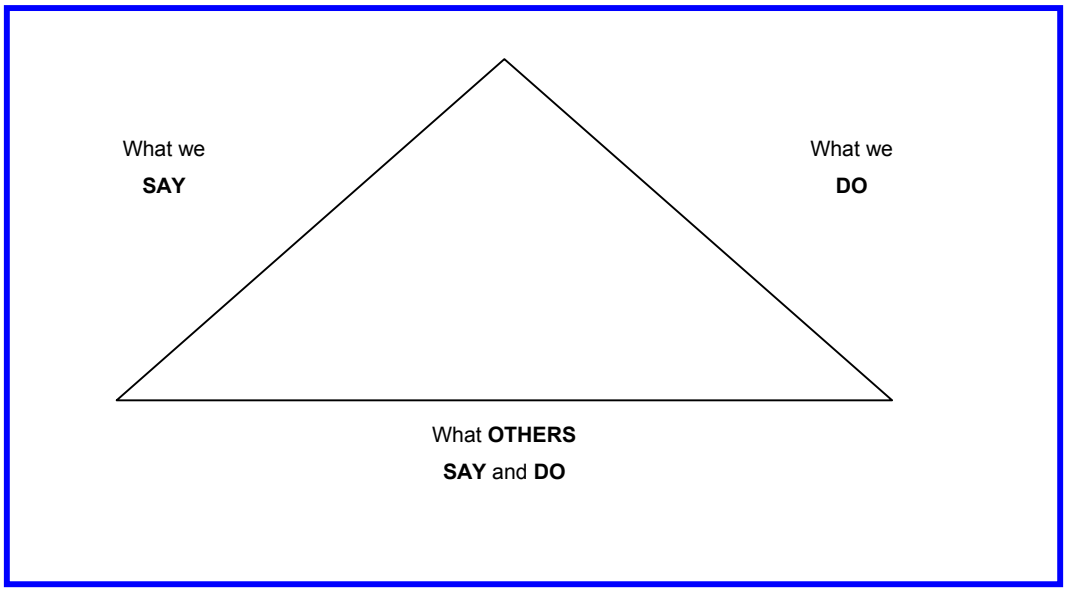


Figure 3.1: An extended integrated marketing communication triangle

Source: Duncan & Moriarty (1997)

The extension of the integrated triangle is related to the "what others do" component of the triangle. "What others say" refers to word-of-mouth behaviour, whereas the new aspect, "what others do", reflects the communicative effects of fellow customers in service processes (Gronroos 1998:10). This is simply because there are factors other than communication that drive brand value (Duncan & Moriarty 1997).

When looking at brands that value communication interactiveness with their customers, the Walt Disney Company is a case in point. This company values an ongoing dialogue with its customers from all age groups in order to build and sustain long-term customer relationships. Theme parks were erected to create a platform for face-to-face communication with their customers. Walt Disney also ensured that they send out strategically consistent brand messages, which lead to a secure relationship with various stakeholders (Gronroos 1998:10).

3.4 CONSISTENCY IN BRAND MESSAGES

According to Duncan and Moriarty (1997), there should be consistency in all communication messages. This provides the opportunity to build long-term relationships with customers. They state that the following four sources of brand messages influence perceptions:

3.4.1 TRADITIONAL MARKETING COMMUNICATION

These consist of planned messages that communicate a promise of what a particular brand, company or service will offer and include factors such as advertisements, sales promotions and personal sales. The main characteristics of these brand messages lie in the fact that, although they are well executed, they have a low level of credibility in the customer's mind.

3.4.2 PRODUCT MESSAGES

This includes messages that the customer receives from a brand, company or service relating to factors such as performance, appearance, durability, pricing, design and distribution. These messages are normally communicated through direct experience or word-of-mouth communication.

3.4.3 UNPLANNED MESSAGES

Messages in this category are brand or company related news stories, gossip and word-of-mouth communication that should confirm the other brand messages. These messages, in contrast to traditional messages, are the least expensive and frequently portray the highest credibility (Duncan & Moriarty 1997).

According to Duncan and Moriarty (1997), these unplanned messages should confirm all other brand messages. A holistic view is required of all communication sources, planned and unplanned, and their effects to create a coherent message for the consumer. Successful total communication management requires that as many of the possible communication messages be planned.

3.4.4 SERVICE MESSAGES

These messages occur when there is interaction between the consumer and the organisation's customer service. This is a real-time interface between brand and consumer (Duncan & Moriarty 1997).

3.5 BRAND RELATIONSHIPS

Rusbult (1983) argues that customers' relationships with brands are so powerful that if they are satisfied with a brand, they view the alternative brand options as being of poor quality. They place a high value on their investment in their chosen brand and thus become increasingly committed to the relationship. Here, commitment represents long-term orientation towards the relationship, including psychological attachment and the intent to sustain the relationship. This would then include cognitive components. It has been demonstrated that commitment is the critical element of brand relationship stability.

Gronroos (2002:6) states that a strategy of creating a relationship with the customer is the best approach to establish value for the customer and he goes on to define a valued relationship as follows: "The process of identifying and establishing, maintaining, enhancing and when necessary, terminating relationships with customers and other stakeholders, at a profit, so that the objective of all parties involved are met, where this is done by a mutual giving and fulfilment of promises". The existence of products and services as proper and satisfying solutions to customers' problems is therefore the basic driver of value.

Gronroos (2002:6) further points out that brand value is both generated and perceived by customers in their own internal processes. These processes are embedded in everyday lifestyle, such as preparing meals and managing finances. Customers utilise these internal value generating processes to interact with brands.

According to McEwen (2004:2), the process of forming emotional relationships with brands begins even before the customers have purchased the brand. Prospects are attached to brands that show promise of uniquely meeting the customer's emotional needs. A brand relationship is sometimes formed on the basis of word of mouth instead of the brand's portrayed promise. Hence a long-term brand relationship can only be built with customers if the brand proves its ability to deliver consistently on its core, differentiating brand promise.

Bogart and Lehman (1973:17) state that if a brand is reputable, it implies that it is familiar. Brand familiarity is based on the assumption that familiarity translates into acceptance and preference.

According to Edlin and Harkin (2003:25), familiarity of the brand is essential if the brand is to become part of the customer's consideration set. Without this the brand has little chance of being selected.

Davis (2000:4) states that although customers generally do not have a relationship with a product or a service, they do have a relationship with a brand. The reason for this would be the fact that, as discussed earlier, a brand represents a set of promises and implies trust, consistency and a defined set of expectations. A brand has the ability to differentiate products or services that at face value appear similar in features and attributes to other products or services.

Davis (2000:6) identifies the following nine main criteria applied by customers when it comes to differentiating brands, regardless of industry:

- Ability to solve customer's problems
- Advertising
- Availability and convenience
- Consistent performance

- Customer service
- Familiarity
- Fit with customer personality
- High quality and reliability
- Price

All of the above are of varying importance in the mind of the customer. The essence of a good brand is that customers trust it. Trust implies that the customer knows exactly what he or she is going to receive when the purchase takes place. It also implies experience with the brand, especially with regard to high quality and reliability, consistent performance and familiarity (Davis 2000:6).

According to Wyner (2003:6), there are five main questions to ask which will promote the creation of a relationship with a brand by customers. These are as follows:

- Does the customer know about the brand?
- Does the customer believe that the brand can provide the desired benefits?
- How well does the brand deliver on its promise of desired benefits?
- Does the brand have any point of differentiation compared with that of competitors?
- Is the brand the best alternative overall?

The customer's relationship with the brand deepens as he or she passes through the progressive filtering of these questions. For a positive answer to all these questions, a brand must have a clear message, positive product or service experience as well as a competitive price. Based on this, consumers will perceptually award superiority to one brand over the other (Wyner 2003:7).

3.6 BRAND EQUITY COMPONENTS

Brands consist of different elements or components, and on the basis of the combination of these elements, a brand can be viewed as having strong equity or not. Brands are identifiable clusters of functional and emotional values. Although the values of brands can partially be established through communication, an understanding of brand equity will provide for a much stronger strategic drive (Chernatony 2001:17).

Edlin and Harkin (2003:25) define brand equity as the set of brand assets and liabilities linked to a brand – its name and symbol that add to or subtract from the value provided by the product. The positive brand association that a brand may have with a person, lifestyle or personality may help to build brand equity.

According to Kohli and Leuthesser (2001:75), brand equity can be defined as the differential effect of brand knowledge on customer response. Brand equity is established when these three elements exist. Each element consists of different components in the equation. The most critical element is the factor of differentiation. Without this, no brand is different from the next, and it can therefore never seek a premium of any sort. The next element is brand knowledge. The customers should be aware of the differentiation elements and appreciate that this differentiator has meaning for them.

The last key element of this definition is customer response. Customers should respond favourably to the differentiator. This response should be reflected in their desire to demonstrate some loyalty to a particular product or brand and therefore be willing to pay a premium for the product.

Figure 3.2 on the next page illustrates these three elements as well as the components related to each. Each element is linked to the next element and if all three elements are present, brand equity is created.

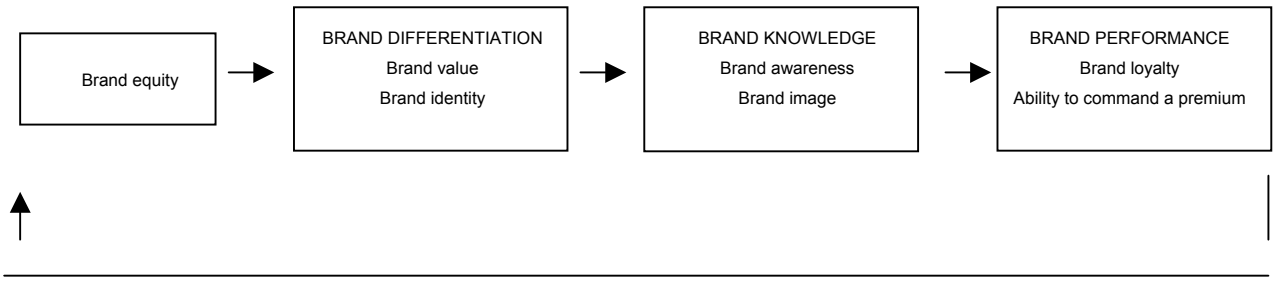


Figure 3.2: Elements of brand equity

Source: Kohli & Leuthesser (2001)

3.6.1 BRAND DIFFERENTIATION

A brand's vision presents something important and relevant to its target market. The core values of a brand and its tangible embodiment will determine the vision. Strong brands are those that consistently reinvent themselves. They meet the expectations of their customers constantly at the highest level and have exceptional abilities to anticipate and exceed expectations (Kohli & Leuthesser 2001:76).

Duncan and Moriarty (1997) point out that managing consistency in all communication efforts relating to brands is significant in building relationships with customers. This will create value for a brand since the customer generates a relationship with the brand based on trust.

The clarity and consistency of strong brands are key elements in a solid brand vision. Clarity implies communicating a true sense of what makes the value distinctive and relevant and implies knowing that the brand's promise is a goal, never quite completely attainable, and knowing that loyalty to the brand is never completely earned. Consistency in a brand's communication is equally important. However, there is a difference in consistency in a product versus consistency in a vision. Products may often change, but the product's relevance to its target audience and the value it represents must remain consistent (Kohli & Leuthesser 2001:76).

Brand identity includes all the elements through which the brand communicates to the customer. A brand identity is created through an established image that is consistent with the brand's vision and aspirations (Kohli & Leuthesser 2001:76).

3.6.2 BRAND KNOWLEDGE

Brand knowledge consists of two dimensions that include brand awareness (brand recognition and recall achieved through marketing stimuli) and brand image (Kohli & Leuthesser 2001:78).

Brand awareness connects a brand to its product category. If the customer is unable to place a brand in an appropriate purchasing context, then the advantage of recall and recognition are greatly minimised. Consumers might be aware of a brand but their association with it is not positive (Kohli & Leuthesser 2001:78).

According to Shimp (2000:6), brand awareness indicates whether a brand name comes to mind when consumers think about a particular product category. The more easily the name is recalled, the greater the brand awareness will be.

Brand awareness consists of two parts: brand recognition and brand recall. Brand recognition represents a relatively superficial level of awareness whereas brand recall reflects a deeper form of awareness. Consumers might be able to identify a brand if it is represented to them on a list or as an option. However, fewer consumers are able to recall a brand name from memory without any reminders or prompts (Kohli & Leuthesser 2001:78).

The image of a brand can be defined as a set of associations, organised to produce a global impression. In other words, the brand image is not simply a combination of all the brand elements; it is a highly generalised synthesis of particular brand elements. Brand image

is enhanced through a large number of brand-related experiences by the consumer.

A distinction needs to be made between brand image and brand positioning. These are similar, but brand positioning is limited to competition. The strength and uniqueness of brand image are directly related to the ability to extend the brand, widening its scope of influence and therefore enhancing the brand's equity (Kohli & Leuthesser 2001:79).

3.6.3 RESPONSE TO BRAND PERFORMANCE

Edlin and Harkin (2003:25) emphasise that a branded product will project a certain level of quality. If the product is perceived to be of a higher quality, it will support a premium price. High product quality can also support future brand extension and business growth. They state there are two indicators that determine a consumer's response to a brand's performance. They are brand loyalty and the ability to command a price or quality premium.

Brand loyalty can be defined as a measure of how often a consumer will choose the same brand when purchasing in a certain product class. If most consumers are indifferent to brand names, and purchase primarily on the basis of features, price and convenience, then little brand equity exists. Brand loyalty is not simply present or absent, it is present in varying strengths. Even the most loyal customers will switch brands if their preferred brand fails them (Kohli & Leuthesser 2001:79).

Brand loyalty is a key indicator of brand equity. Brand loyalty is built on positive experiences. However, in any relationship, a single negative experience can offset a lifetime of positive experiences if trust and credibility are lost (Kohli & Leuthesser 2001:79).

There is extensive literature on the importance of brand loyalty as a key determinant of brand choices and brand equity. According to Aaker

(1991), in most cases, consumers' brand loyalty is the core of a brand's equity.

Loyalty to a particular brand is usually measured in the form of repeat buying patterns. In most literature, brand loyalty can be measured through behaviour, either as a share of requirement, indicating that consumer regards the product as an absolute necessity, or alternatively, that he or she regards the brand as first choice and nothing else will do (Baldinger & Rubinson 1996:23).

According to Dick, Jain and Richardson (1996:20), consumers make food quality judgement decisions on the basis of direct and indirect indicators. The direct indicators include items such as product composition, taste and texture which all relate to the physical properties of the product. Indirect indictors are those product-related aspects, which are not part of the physical product, and these include price and brand name.

3.7 GENERIC PRODUCTS AND BRANDED PRODUCTS

It is necessary to distinguish between the different terms of branded products, generic brands and generic products in order to understand what is applicable in this research. A branded product carries a specific name or a "private label" (eg Coca-Cola). A generic brand or a "no-name brand" is a product that does not carry a brand name and only indicates the product category and is not associated with any differentiation label (eg Pick 'n Pay's "no name" aluminium foil) (Do you know what is what? [sa]).

Different consumers have different perceptions of the various generic branded products. Research indicates that, more often than not, consumers perceive more expensive generic products to be of superior quality, and vice versa (Prendergast & Marr 1997:95).

Generic products can be defined as goods sold with neither brand name nor advertising and promotion, usually in plain, undecorated packaging. Often referred to as brand X, generic products represent a response to criticism, especially in the USA, about too much money being spent on marketing and that “no frills” products will result in a substantial price reduction.

According to Prendergast and Marr (1997:94), generic products are usually packaged in larger sizes for pricing purposes. This caters directly to the need of consumers from larger households. Even good quality and lower priced generic products might struggle to cross the barrier of consumer perception of unreliability against their branded counterparts.

Generic product packaging was the brainchild of French retailer, Carrefour, who introduced a line of 50 generic brand grocery products throughout his 38 stores on 1 April 1976. At the time, own-label products only accounted for 7,5 percent of the packaged grocery sold by Carrefour, which made the new range timely. He called these generic products *produit libres,* which literally means “free products”. Wrapped in plain white packaging and labelled with nothing more than the compositions inside, they were positioned at a comparable quality level – but were offered at substantially more competitive prices (Prendergast & Marr 1997:94).

Buzzell and Gale (1987:103) identify two types of quality, conformance quality and perception quality. Although conformance quality (meeting a set of specifications or standards) is significant, perception quality (quality from the customer’s perspective) is even more important. Perception quality drives customer behaviour and is often influenced by hidden or implied communication dimensions. Brand loyalty can then be measured through behaviour created by perception quality.

Prendergast and Marr (1997:96) concluded that consumer perceptions of the quality of generic food have changed dramatically. Consumers also recognise a price differential between a generic and the branded product. Burck (1979:71) reported in *Fortune* magazine that the price of a typical generic product ranges between 31 to 74 percent of that of its branded counterpart. Consumers recognise that this price differential is made possible by the absence of expensive packaging, labelling and advertising costs for the marketing of these products, but these products are still reputable and good value for money.

This study evaluates chicken in general. This implies that chicken is viewed as a holistic brand and no distinction is made between different chicken label names.

3.8 METHODOLOGIES OF BRAND EVALUATION

The relationship between brands and their consumers has become much more complex than in the past. The reason for this is simply because consumers are more informed than they used to be. Knowledge is easily obtainable through a variety of sources such as the Internet. Consumers demand more from their favourite brands than factors such as reliability. Consumers want their brands to become a form of self-expression. Hence brands are evaluated far more seriously than before by consumers (Moerdyk 2004:1).

It is necessary to distinguish between validation, assessment and evaluation of brands. Aaker (2001) defines validation of brands as a set of assets or liabilities linked to a brand's name and symbol that adds to or subtracts from the value provided by a product or service in financial terms. Validation can also be defined as a method utilised to declare a just aspect or make something legally valid. This implies that the soundness of something is established.

Assessment can be defined as the act of assessing or appraising. This normally includes a money value or an amount that is appraised. Brands can therefore be evaluated in terms of the monetary value attached to their brand name. The definition of the term “evaluate” is to ascertain or fix the value or worth of an object or concept through careful examination of various factors (Your dictionary [sa]).

Evaluation can therefore be applied to all methodologies since the judgement can be based on a wide variety of factors such as emotional factors or money value. Some of these methodologies include the following:

- Strategic brand assessment
- Most admired South African brands
- Interbrand Corporation’s measurement of brands

3.8.1 STRATEGIC BRAND ASSESSMENT

Strategic brand assessment is a web-based tool (an electronic means of measuring) created to combine technology and proven research principles to measure a brand. Companies conduct a wide variety of interviews on subjective perceptions of a brand. The system is administered via online questionnaires and yields results within days. This tool identifies perceptual gaps between internal and external audiences on key aspects of the brand such as brand positioning and emotional brand connotation. It also illustrates the alignment of perceptions and attitudes of management, employees and distributors (Baird & Rieches 2002:26).

The system is designed to make recommendations on specific areas in which businesses and marketing communication practices need to be improved if the brand is to realise its potential. The result is a "brand snapshot" which identifies vulnerabilities to be addressed and opportunities to be explored (Baird & Rieches 2002:26).

3.8.2 MOST ADMIRED SOUTH AFRICAN BRANDS

Markinor, an independent research company, has been conducting its brand survey annually since 1992 to provide businesses, investors and the public with a brand health measurement. Nationwide personal interviews are conducted with respondents residing in urban and rural areas. Table 3.1 depicts the results over the last three years with regards to most admired South African brands as follows:

	Name	2003 %	Name	2004 %	Name	2005 %
1	Coca-Cola	20	Coca-Cola	19	Coca-Cola	17
2	Telkom	15	Eskom	14	SAB	15
3	Eskom	13	Telkom	11	Vodacom	12
4	SAB	11	Absa	10	KOO	10
5	Shoprite/Checkers	9	Shoprite/Checkers	10	Castle Lager	10
6	Absa	8	SAB	10	Toyota	9
7	Pick ‘n Pay	7	Pick ‘n Pay	7	Nike	8
8	Vodacom	7	Standard Bank	7	Nokia	8
9	Toyota	6	SABC	6	Telkom	6
10	Standard Bank	4	Vodacom	6	Pick ‘n Pay	5

Table 3.1: The ten most admired South African brands for 2003, 2004 and 2005

Source: Moerdyk (2003; 2004; 2005)

3.8.3 INTERBRAND CORPORATION’S MEASUREMENT OF BRANDS

A brand, like any other asset, is valued by analysts based on expected earnings. Projected profits are then discounted to a present value, based on the risks involved (The 100 Top Brands 2003:48).

Interbrand Corporation, an internationally based company, ranks the world's 100 most valuable brands and provides valuable insight into the power of certain brands. This methodology is based on the ranking of brands from a financial perspective.

To be ranked by Interbrand, a brand should have a brand value greater than US$1 billion, be global (derive at least a third of its sales from outside its home countries) and have significant distribution throughout the Americas, Europe and Asia. Furthermore, its marketing and financial data must be publicly available (The 100 Top Brands 2003:48).

The top 10 brands as calculated by Interbrand for 2003 to 2005 are listed in Table 3.2 below.

	2003	**2004**	**2005**
1	Coca-Cola	Coca-Cola	Coca-Cola
2	Microsoft	Microsoft	Microsoft
3	IBM	IBM	IBM
4	General Electric	General Electric	General Electric
5	Intel	Intel	Intel
6	Nokia	Walt Disney	Nokia
7	Walt Disney	McDonald’s	Walt Disney
8	McDonald’s	Nokia	McDonald’s
9	Marlboro	Toyota	Toyota
10	Mercedes	Marlboro	Marlboro

Table 3.2: The top 100 brands

Source: The 100 Top Brands (2003; 2004; 2005)

There are many methodologies available to assess and measure different elements of brands. In this study, the methodology applied to

assess chicken as a generic food brand is Q methodology, which focuses on subjective perceptions.

3.9 SUMMARY

This chapter focuses on the concept of brand. The differences between branded products, generic brands and generic products as well as the different characteristics of each are examined. The aspects of brand messages as well as the influence of consistency in brand messages are highlighted. Brand relationships are discussed and the way in which these relationships are formulated and sustained. The different elements of brand equity are outlined and this provides insight into how consumers determine brand differentiation and preference.

Brand measuring methodologies as well as the differences between brand evaluation, brand validation and assessment are explained. In these methodologies, the 10 most admired South African brands as well as the top global brands are listed.

Chapter 4 deals with the research methodology used in this study.

CHAPTER 4 - Q METHODOLOGY

4.1 INTRODUCTION

In this chapter, Q methodology, as the research method adopted in this study, is discussed covering both the historical and technical elements. Q methodology was selected for this study because of its ability to reveal the individual subjective perceptions of chicken as a generic food brand. The important phases of Q methodology are addressed and the main advantages and disadvantages of the methodology also highlighted.

4.2 THE ORIGIN AND DEVELOPMENT OF Q METHODOLOGY

The main purpose of Q methodology is to generate subjective ideas from individuals on a particular topic and not to restrict ideas. Q methodology is based on two principles of subjectivity. Firstly, an individual's subjectivity can be communicated to others. For example, when a patient is asked an appropriate question about patient-doctor relationships, he or she should be able to express to others what he or she likes or dislikes about a specific encounter with a doctor. The second premise is that the subjectivity always advances from the point of self-reference. In other words, of importance in Q methodology is the individual's feelings or opinion as opposed to the opinions of others. These two components form the essence of Q methodology (Amin 2000:411).

William Stephenson (1935) first introduced Q methodology in the 1930s. He studied both psychology and physics and was also a student of the statistical theorist, Charles Spearman. Stephenson became concerned about the amount of reductionism in research in the social sciences and psychology. He wanted to find out what made an individual unique rather than what characteristics could be found across large populations of individuals (Corr 2001:293).

Stephenson (1935) was interested in providing a way to reveal the subjectivity involved in any situation, for example poetic interpretation or appraisals of health care. He wished to study life as it is lived from the view of the person living it. According to Stephenson (1935), this is typically passed over by a quantitative procedure. Furthermore, it is subjectivity in this sense that Q methodology is designed to examine that frequently engages the attention of the qualitative researcher interested in more than just measurements and statistics (Brown 1996:561).

The qualitative dimension of Q methodology allows participants to express their subjective opinions, while the quantitative aspect uses factor analytic data reduction and induction to provide insights into opinion formation and to generate measurable hypotheses (Valenta & Wigger 1997:501).

Today, Q methodology is widely adopted in the social sciences and there is evidence that younger generations of psychologists are rediscovering it and becoming acquainted with the vision, which William Stephenson promoted for more than half a century.

4.3 THE MAIN PHASES IN A Q STUDY

A Q study consists of five phases, which include the following: collecting data for the concourse; selecting statements representative of the concourse for the Q sample; selecting the person sample and administering the Q-sort based on the condition of instruction supplied to participants; comparing the arrangements by participants by means of factor analysis; and analysing and interpreting data. Within these phases there are several application steps to follow in order to finally interpret the data accurately (Corr 2001:293).

These phases are explained as follows:

4.3.1 COLLECTING DATA FOR THE CONCOURSE

The first phase in the Q study involves gathering data to establish a concourse. The collection of statements from different sources including any literature or word-of-mouth opinions is called the concourse. According to Goldman (1999:592), the Q technique begins with a discourse that is compiled from a variety of sources on a subject. This allows for the representation of all forms of communication by statistical quantities of statements about any concept, idea or object. In other words, the concourse must be as large as possible to contain all possible opinions on the subject.

Amin (2000:412) states that the literal meaning of concourse is *assemble* or *gathering.* In the context of Q methodology, this would represent all the gathered opinions on a particular subject. These opinions can be collected from a variety of sources such as interviews, news media, magazines, the Internet or professional journals, in other words, primary or secondary information sources. In the above-mentioned example of a patient-doctor relationship, ideas can be collected on the ideal patient-doctor relationship by asking individuals what they liked or disliked about a specific encounter with a doctor. Such a request would probably generate opinions like: “I like my doctor because he explained everything to me”; “I did not like my doctor because he did not prepare me for what is coming next”; or “I like my doctor because I was treated with respect”. This wide range of statements forms the concourse.

According to Brown (1991), new ideas and meanings arise from the concourse and new discoveries are therefore made. He states that the concourse is the wellspring of creativity and identity formation in individuals, and it is Q methodology’s task to reveal the inherent structure of a concourse.

Two types of statements can be selected for the concourse, namely naturalistic or ready-made statements.

4.3.1.1 Naturalistic statements

These are compiled from oral or written information from the participants themselves. A major advantage of naturalistic statements is that they are derived from the persons who perform the Q-sort. In other words, the participant's opinions are mirrored and the naturalistic statements expedite both the sorting process and attributions of meaning because the statements are based directly on the participant's communication (Sexton, Snyder, Wadsworth, Jardine & Ernest 1998:95).

According to McKeown and Thomas (1988:25), naturalistic statements greatly reduce the risk of missing the participants' meanings or confusing them with alternative meanings deriving from an external frame of reference. Naturalistic statements can be derived in several ways. Interviewing participants, however, is the most consistent with the principle of self-reference. It also facilitates single case studies. During the interviewing process, events, symbols, people and objects can be identified and incorporated into the concourse. When interviews are not feasible, statements can be collected from written narratives including newspaper editorials, letters, television, and radio talk shows. These are all relevant information sources for naturalistic statements since they are taken from real-world communication contexts.

4.3.1.2 Ready-made statements

These are compiled from sources other than the communication of participants (primary information source) such as literature sources (secondary information sources). One such example is the items contained in existing instruments such as attitude scales. The major advantage of utilising ready-made statements would be their efficiency in the sense that data do not have to be clarified or rewritten. They are

taken directly from literature sources. The danger in using ready-made statements lies in the fact that they might not represent the full range of personal perspectives held by participants on the topic or situation of interest. For example, when data are collected from literature journals they might exclude respondents' opinions about a topic, which is not formally documented anywhere (Sexton *et al* 1998:95).

Other subtypes of sampling can be applied. These include quasi-naturalistic statements, statements drawn from conventional rating scales, standardised statements and a hybrid category. The latter consists of combined statements from the naturalistic and ready-made statement concourse (McKeown & Thomas 1988:26).

4.3.2 SELECTING STATEMENTS FROM THE CONCOURSE FOR THE Q SAMPLE

The next phase in a Q study is to select suitable statements that are representative of the communicated ideas from the concourse for the Q sample.

According to McKeown and Thomas (1988:26), it is impossible to measure the complete concourse because of the vast amount of information contained in the concourse. Hence, statements relevant to the research problem are presented in "miniature" format and this is known as a "sample". In other words, statements are now selected from the overall concourse that was gathered and will be sorted in the Q sort by participants. The Q sample statements are therefore completely representative of the range of communicated ideas in the concourse.

According to Amin (2000:412), the large number of statements referred to as the concourse can now be examined and one is able to find statement repetitions - some statements may be too ambiguous and others may not be completely relevant to the topic at hand. Some statements might even have to be rewritten for clarity, and some similar ideas might be combined into one meaningful statement. After this scrutiny, a number of value-free statements are selected that are

representative and capture the essence of the topic. This set of statements forms the initial Q sample.

This Q sample has to be subsequently tested with a small group of participants to verify significant aspects such as whether the statements capture all the important viewpoints on the chosen topic, the need for further clarification and the ease of interpretation of participants. Once this pilot testing phase has been executed, the Q study is ready for final application (Amin 2000:412).

Stephen (1985) also suggests several methods to pilot the statements being considered for a Q sample. This could include statements submitted to colleagues or other parties conducting research in the same field of interest. Another strategy to improve the Q sample is to submit the statements to a technical writer or literacy specialist to investigate clarity and readability levels. A small number of participants can also be asked to sort the Q sample and then be interviewed to ascertain their interpretation of the statements before the final Q sort commences.

According to Donner (2001:26), selecting the statements from the concourse is the most challenging part of the Q sample: it should be significantly broad enough and clear. Once all the statements have been sorted and analysed, the researcher should gain insight in the subjective views of participants. Statements do not need to be lengthy sentences and there is also no limitation on the number of statements. In selecting statements for the Q sample from the concourse, statements must not be duplicated in any way and double negatives in statements should be avoided.

Two basic design formats can be applied to the Q sample, namely an unstructured or structured format.

4.3.2.1 An unstructured design format

Carr (1992:135) states that the researcher may “randomly sample” the desired number of statements used in a Q sort. When randomly selected statements are used, this is called an unstructured design format.

An unstructured design thus consists of statements, presumed to be relevant to the topic at hand. These are selected without undue effort made to ensure that all sub-issues are included. This sample therefore provides a reasonably accurate “survey” of standpoints adopted or likely to be adopted on a particular topic (McKeown & Thomas 1988:28).

Kerlinger (1986) defines an unstructured design as, “a set of statements assembled without specific regard to the variables or factors underlying the items”. An unstructured format would be appropriate when statements are thought to represent one dimension, say, attitudes about inclusion. Statements included in this sample are usually perceived to be representative of a universe of statements that might be used.

According to Sexton *et al* (1998:95) past research may guide statement selection, or various content validation approaches. For example, knowledgeable individuals might be used to verify the representativeness of an unstructured format.

The risk of unstructured samples is that some topical factors will be either under or over-sampled and hence, that bias of some sort could be inadvertently incorporated into the final Q sample (McKeown & Thomas 1988:28).

4.3.2.2 A structured design format

Structured design formats are utilised when researchers have theoretical expectations about underlying dimensions or a specific set of hypotheses to build into the Q sample. An example would be if a

researcher creates a hypothetical situation and states that attitudes about inclusion consist of affectionate, cognitive and behavioural dimensions. Analysis of variance design principles could be applied to ensure that each attitude dimension was equally representative in the Q sample. Hence a structured design would include 60 statements, with 20 statements associated with each of the three attitude dimensions stated above (Sexton *et al* 1998:96).

Fisher's balanced block design may be utilised in the factorial analysis component of Q methodology, whereby Q sample statements are assigned to conditions designated and defined by the researcher. With the introduction of Fisher's experimental design block, the researcher could select a Q sample theoretically, and there would be no need for dependence on large statement numbers (Brown 1980:30).

According to McKeown and Thomas (1988:28) the normal practice in a structured design is for the researcher to compile the factorial design to determine the number of statements and factors statistically, before the final Q sort is conducted. Statements are placed in the factorial design on theoretical grounds. The factorial design deals with more than one independent variable or factor.

When two independent variables are researched, this is referred to as a two-factor design, three independent variables, a three-factor design, and so on. Individual factors may have more than one level (Du Plooy 1997:182). This can be explained as follows:

The number of factors is indicated by the quantity of individual numbers, which are given in the specific description. Therefore:

A 2 x 14 x 6 factorial design comprises three factors or variables (the individual numbers two, 14 and six each represent a single factor consisting of various levels, say, two levels, 14 levels and six levels respectively). They represent the "levels" of the factor. For example, in

establishing memory and recall it may be hypothesised that smell, sight and touch affect memory. One factor is therefore smell, another sight and another touch. Smell could have three levels – strong, faint and neutral; sight could have four levels – dark, barely light, normal and bright. Touch could have three levels – smooth, hard and very soft. This is depicted in Table 4.1 below.

Factor	**Level**
Smell	Strong
	Faint
	Neutral
Sight	Dark
	Barely light
	Normal
	Bright
Touch	Smooth
	Hard
	Very soft

Table 4.1: The number of levels related to factors

The structure for this Q study is 36 (three x four x three). Three categories or factors were specified implying a structured sample of three x 36 = 108 statements in total which the participants had to sort. According to Brown (1980:196), it is important to note that the factors that result are not hypothetical entities but operant categories that can be replicated and directly observed. If the researcher is challenged to produce the “operational definitions of positive affect”, the researcher is in the favourable position to pinpoint the exact actual behavioural operations by the participants that produced a high loading on a particular factor.

Hence a three x two x two factorial design is a three factor design. It has three factors or independent variables, the first of which has three

levels, the second two levels and the third, also, two levels (Du Plooy 1997:183).

According to Stephenson (1935) all Q samples should have at least minimal structuring in terms of positive and negative statements to allow for balance in the final Q sort. He furthermore opposes antonyms such as honest and dishonest at the two poles of the Q sort since their obvious polarity might lead the participant to treat them logically. For example, if one statement were to receive a score of +3, the other should logically be sorted at –3 in the participant's mind. This would influence the kind of possibilities that tests for similarity, and this would be in violation of a major assumption of variance analysis.

McKeown and Thomas (1988:28) remark that structured Q sample formats are composed more systematically and seek to avoid weaknesses found in an unstructured format. Structured formats promote theory testing by incorporating hypothetical considerations into the statement sample. This application may be deductive or inductive:

Deductive application

A deductive approach is based on prior theoretical considerations. This means that existing theory can provide a template or context in which statements are classified (Wolfe 2000:1441).

An example of a deductive application can be found in Carlson and Hyde's (1984) study on the impact of political party activists. Statements were collected from published sources and then structured in a Q sample. These statements were reproduced along two dimensions in creating six possible combinations. To allow for variety of expressions, each combination was reproduced seven times, again producing a statement number of 42. The main goal was to establish whether and to what extent a sample of party activists' portrayed patterns of subjectivity

were consistent with such category distinctions (McKeown & Thomas 1988:29).

Inductive application

An inductive approach implies that statements are based on observations of emerging patterns (Wolfe 2000). According to McKeown and Thomas (1988:29) the inductive application would only differ from the example applied in the deductive approach by the degree of theoretical elaboration that resembles the sampling scheme.

4.3.2.3 The size of the Q sample

Opinions on the size of a Q sample differ. Kerlinger (1986) recommends that the sample should have fewer than 60 and not exceed 140 statements. The optimal range is between 60 and 90 items whereas; according to Dennis (1986:10), the number of statements should vary between 40 and 80.

Given the centrality of subjectivity with regard to all aspects of human life, the possibilities for sampling Q statements are endless, bounded only, as indicated above, by the researcher's imagination and the nature of the problem under investigation (McKeown & Thomas 1988:28).

4.3.3 SELECTING THE PERSON SAMPLE AND THEIR PERFORMANCE OF THE Q SORT

The next phase is to select participants and request them to arrange the selected Q sample statements in their preferred order of importance.

According to Brown (1980:191), participants who are asked to sort the statements are called the person sample or P sample. Participant selection can be governed by theoretical considerations (persons are chosen because of their special relevance to the goals of the study) or

pragmatic considerations (anyone will suffice, or a convenience sample) (Valenta & Wigger 1997).

McKeown and Thomas (1988:37) remark that studies can also be categorised as an intensive person sample, a single person sample or an extensive person sample.

4.3.3.1 An intensive person sample

McKeown and Thomas (1988:37) indicate that an intensive analysis is a logical extension of the basic Q methodological principles. The purpose of an intensive study is to explore the dynamics of intrapersonal subjectivity discovered in the extensive analysis.

"Intensive" means that the participants can be examined in detail. In other words, they sort statements many times under different conditions of instruction. In the intensive person sample, there are systematic ways to select participants. The selected participants must represent the kind of subjectivity the researcher wishes to examine. Hence an extensive person sample can first be utilised in the sorting process in order to identify specific participants that load purely on a factor. These participants (now called the intensive person sample) can be pin-pointed for more in-depth analysis. According to McKeown and Thomas (1988:40), the procedure involves the following:

- **Step 1**. Here a group of participants is requested to sort an identical Q sample under the same conditions of instruction. This is an extensive person sample and still needs to be transformed into an intensive sample. For example, Thomas (1979) asked 53 participants to complete a "political ideology-themed" Q sort by ranking N = 48 statements. This Q sort was correlated and factor analysed. Four principal factors were rotated to a simple structure position and factor scores were computed. This was examined to

determine the most “radical” and most “conservative” factor out of the four. Two factors where then identified for further studies.

- **Step 2**. The next step is to identify participants representing the point of views revealed in the extensive analysis for a further intensive analysis. In principles, any participant loading on a factor could be a candidate since they all can “speak the language” of the factors on political ideology. It is apparent, however, that some participants are more representative of a given viewpoint than others. Hence the best candidates for intensive analysis are those whose factor loadings are the “purest” or “strongest” of all participants who agreed to some extent with a particular viewpoint. (This is where participants are selected for the intensive person sample). Participant selection is operant - in other words, definitions of viewpoints are those of the participant’s own subjective standpoint rather than intuitive or arbitrary.
- **Step 3**. This step involves the intensive analysis itself. The subjects have already been selected and probes appropriate to the study administered. Additional Q sorts may be provided, including the original Q sample used in the extensive stage, but this is now sorted under new condition of instruction.

4.3.3.2 Single case person sample

In Q methodology, P samples consisting of single cases are also psychometrically acceptable since the observational perspective is the participant’s own. In other words, even if one person is studied, he or she is worth studying simply because he or she has his or her own subjective perception that can be extracted. For example, a mother enrolling her child in a school for disabled children could be asked to Q sort a set of attitude statements at three different time intervals with different condition of instruction - for example, thinking of children in general, thinking of her child’s specific needs, and lastly, sorting the statements at a different time, again with one of above-mentioned in

mind to determine whether her subjective perception has changed or remained static over time (Sexton *et al* 1998:96).

According to Brown (1996), the ranked statements that have been subjected to Q-factor analysis, and the resulting factors, indicate segments of subjectivity that exist in individuals. Since the interest of Q methodology is in the nature of the segments and the extent to which they are similar or dissimilar, the issue of a large participant group is deemed relatively unimportant.

4.3.3.3 An extensive person sample

In the extensive person sample, no special effort is made to ensure complete representativeness across participant characteristics since the purpose is to explore attitudes in the population. Participants will therefore perform Q sorts with the same Q sample under an identical condition of instruction (McKeown & Thomas 1988:37). In other words, all participants will receive the same instructions on how to conduct the Q sorting process.

Brown (1996) notes that identified Q factors can be viewed as generalisations of attitudes, held by participants defining a given factor. Thus direct comparison is possible of attitudes as attitudes, no matter what the number of participants subscribing to them. For this reason, mere availability is one criterion for creating an extensive person sample.

4.3.3.4 The process of Q sorting

The Q sorting process identifies subjective meaning. Statements around a particular subject are arranged by the participants on a Q sort diagram according to their own preferences. The Q sorting process is the data collection technique in Q methodology and the qualitative part of this methodology (Allgood 1999:213). A participant reads through the sample of statements and accesses and records how each statement

feels “like me” or “not like me” thus communicating the “feeling” part of his or her thoughts. This process creates a factual representation of the participant’s subjectivity.

Dennis (1986:11) contends that Q methodology focuses on the perspective of participants whose responses are neither more or less, nor wrong or right. The responses are simple but undeniably those of the participants’ own viewpoint. In Q methodology, participants are given specific statements to which to respond, the emerging categories are derived statistically and these categories have statistical significant differences between them.

According to Donner (2001:26) the statements are often presented as multiple possible answers to a central umbrella question. Establish, for example, what kind of restaurant consumers prefer on a Friday after work. The umbrella question is: Which elements best describe a restaurant you would like to visit after work on a Friday? Statements, covering, for example, cost, location and attributes around the umbrella question will be compiled.

Condition of instruction

A condition of instruction is a guide that directs participants on the procedure to be followed when sorting Q sample statements.

Condition of instruction can be utilised to operationalise hypothetical constructs and categories. In other words, the subjective perceptions that are retrieved on a particular topic from participants can be applied to redefine the topic all over again if it differs dramatically from the results. Theory is thus tested at the sorting stage (McKeown & Thomas 1988:30).

Stating that the hypothetical construct implies the testing of theory in the sorting stage means that participants could be requested to sort

statements they think define a professional political candidate or political amateur candidate or a candidate running for public office. The results of this condition in the scenarios (ie condition of instruction) can then be compared with the definitions of the professional, amateur and candidate running for public office (McKeown & Thomas 1988:30).

Hypothetical constructs are useful in single case studies where the condition can act as surrogates for behavioural hypothesis – that is, the participant is asked to perform the Q sort under different conditions of instruction because of the expectation that the participant will behave in a particular way. In other words, the researcher utilises the condition of instruction as a tool for behaviour predictions. Hence the “utility” of a given condition of instruction depends on the pattern of findings revealed in the factor structure (McKeown & Thomas 1988:30).

Two main condition of instruction can be applied in a Q study. These are the forced-choice and free-sort condition of instruction, as discussed below.

Forced-choice condition of instruction

A forced-choice condition of instruction requires participants to sort statements into a fixed number of categories or columns in a set distribution. In this format the participants retain complete freedom in placing the statements on a Q sort diagram as well as changing their minds to move statements around at any time. This is of vital importance, especially when comparing this with conventional ranking methods where statements are scored serially and contextual definition is thereby constrained. In other words, other ranking methods do not allow for flexibility in terms of interpretation variety (McKeown & Thomas 1988:34).

As a result, the participants are introduced to the statements and requested to first read through them in order to gain an overall

impression of the statements range. At the same time, the participants are instructed to begin the sorting process by initially dividing the statements into three piles, those statements experienced as agreeable in one pile, those that are disagreeable in a second pile and the remainder in a third pile (Brown 1991).

When the statements have been placed in three piles, the instruction could be to place them in the provided distribution format for agreement and disagreement as follows: “Sort the items according to those which you most agree with (+4) and those which you most disagree with (-4).” Positive scores are normally placed in ascending order to the right of 0, and the negative statements to the left. It does not matter if they are reversed, as long as all Q sorts in the study are consistent (McKeown & Thomas 1988:31).

Although the range and number of statements allocated under each number are predetermined in the forced-choice format, the participant alone determines the meaning of the continuum. In other words, the participant controls the specific rank and therefore the contextual significance of each statement (Donner 2001:26).

According to Brown (1980:201), to reveal a heartbeat, the doctor would instruct the patient to engage in artificial behaviour such as on-the-spot running and this would produce the desired response of a noticeable heartbeat. The same principle applies to Q methodology in that the participant has preferences and is instructed to engage in the artificiality of Q sorting, artificial in range (eg +4 to –4) and in distribution shape (eg quasi-normal) therefore forcing the preferences to the surface.

The quasi-normal distribution format is recommended in the Q sorting of statements simply because it is a device for encouraging participants to consider the statements more systematically than they otherwise might. This implies the placement of more statements in the middle than in the tail. Hence quasi-normal distributions help ensure that between-person

analysis will be based on statements that evoked meaningful reactions because test stimuli holding little meaning for the respondent are likely to be placed or sorted near the middle of the distribution (Sexton et al 1998:97). In other words, the middle represents the "grey zone" or almost neutral reaction to statements (Valenta & Wigger 1997).

Table 4.2 below displays the forced-choice condition of instruction that was followed in the Q sort diagram with the statement number.

-4	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**
2	3	3	4	6	4	3	3	2
4	2	1	1	1	3	1	1	1
5	1	7	2	9	8	1	6	1
	2	2	2	2	2	1	2	
			1	2	2			
				2				
				3				

Table 4.2: Example of sorting statements in a forced-choice condition of instruction

Source: Donner (2001)

The same statements are used for all participants to arrange in the same format and this is why one can compare these subjective perceptions with more precision than normal qualitative methods (Donner 2001:26).

Free-sort condition of instruction

According to Brown (1980:200), in the free-sort condition of instruction, no restrictions are imposed on the participants. Often, difficulty adhering to a prescribed distribution is related to kurtosis, which implies the degree of flatness or steepness of the distribution as well as the range (the width of the Q sort scale) in the Q sort.

In a Q study where the participants are expected to be relatively uninformed on the subject matter, a distribution approaching “normal”, like the free-sort condition of instruction application, is suitable. In such a Q study, participants are expected not to have opinions about most statements. Hence more room is provided on the Q sort diagram in the middle area (score 0) and there is thus more room for error. However, in more controversial subject matter to which participants are more sensitised, they would be eager to agree or disagree with statements. The forced-choice condition of instruction is therefore implemented where there are relatively fewer statements they feel neutral about and a more flattened distribution is employed. This provides more opportunities for responses at the extremes of the distribution and reduces those numbers in the centre (Brown 1980:200).

From a purely statistical perspective, it usually makes little or no difference whether a forced-choice or a free-sort distribution is applied within broad measures - the results are normally consistent within each application (Brown 1980:202).

In the next section instructions for Q sorting in a forced-choice condition of instruction are explained.

Instructions for Q sorting in a forced-choice condition of instruction

The umbrella question is revealed to the participants and the procedure to follow in the Q study is explained. The participants are then handed the Q sample, and instructed to read through all the statements in order to gain an overall impression of the range of statements.

The participants are requested to sort the statements into three piles as discussed earlier. Those with which they agree, those with which they disagree, and the last pile, must consist of all the statements about

which they feel either neutral or uncertain. This process allows for statement comparison and statement conceptuality.

Participants are now requested to study the items again from the “agree” pile, select the required number of statements that reflects their views most strongly and place them under +4 in the blocks provided in the Q sort diagram. The order of the statements under +4 is not important. All of these statements receive the same score when the data are recorded.

Turning to the opposite side, the participants are instructed to perform the same action with the required number of statements with which they disagree the most, and place them under –4 in the blocks provided on the Q sort diagram.

Returning to the “agree” pile again, according to instruction, the participants now select the next number of statements required with which they also agree but not as significantly strongly, as the previous statements that they have already placed in the blocks. The participants might decide that some of the statements they selected are now more according to their agreement than some of the statements they selected first. The participants are free to rearrange these at any time and then place their final selections in the blocks.

Attention is reverted to the left side and the process is repeated here as well. The participants are required to work towards the middle 0 position until all the Q sort statements are positioned from left to right into all the blocks. Statements placed in the middle 0 blocks are often the ones left over after all the positive and negative positions have been filled. Once all the statements have been placed, everything should be reviewed, and the participants are allowed to make adjustments to any marker.

Finally, statement scores for the completed Q sort are recorded by writing down the statement number that appears in each block on a

score sheet that duplicates the Q sort diagram (McKeown & Thomas 1988).

4.3.4 COMPARING THE PARTICIPANT ARRANGEMENTS BY FACTOR ANALYSIS

This next step involves comparing the different arrangements of statements by factor analysis. According to McKeown and Thomas (1988:51), the factoring process commences as soon as a matrix of Q-sort correlations is provided. It makes no difference whether the coefficients in the correlation matrix are Pearson's *r*, Spearman's *rho* or any other measure of association. These authors contend that it makes no difference whether the specific factoring routine is the primary component, centroid or any other method. The main concern here is with the principles and products of factor analysis as applied in the Q study and not with the statistical means or methods by which principles or products are discovered.

This process consists of three main steps, which include factor extraction, factor loading, and factor rotation as explained below.

4.3.4.1 Centroid factor extraction

The factoring process begins with the correlation matrix. An important characteristic of the final set of factors is that they should account for as much of the variability in the original correlation matrix as possible. This is dependant primarily on the importance of the column totals which again depends on the size of individual correlations themselves. Hence prior to factoring, it is important to render the entire matrix with positive scores and ensure that no column has a negative sum. This involves the manipulation of figures but what is done at the outset is compensated for by being arbitrarily undone at the conclusion. These maximum positive scores can be achieved through a process of "reflection" by reversing all the signs (+ and -) in the columns and rows associated with specific variables. A -1.02 will therefore become a +1.02. This reflection affects other column totals as well, some

positively and some negatively, but the overall outcome is now a maximum positive correlation matrix from which factors can be extracted (Brown 1980:207).

In Q methodology, little attention is paid to the correlation matrix itself simply because it represents only the phase between the raw data and factor analysis and at any stage, this is normally too large for any form of examination. For example, if *N* = 50 statements are in a Q sort, 1 225 unique statements would have to be inspected. Correlation is useful only because it indicates which pairs of Q sorts bear resemblance to one another. Factor analysis ultimately searches for groups of Q sorts that are the same and not just pairs.

Centroid factor extraction follows. It is a process of defining centres of gravity cemented in a correlation matrix and expressing them in precise terms. It was the first method to be fully utilised in factor analysis largely because of its computational ease. Other factor extraction methods such as principle axes are also available but all of these tend to produce the same precision results (Brown 1980:208).

A centroid can be viewed as an overall average of the relationships between all the sorts as they are represented by their correlation coefficients. Centroid factoring serves an important purpose in the Q methodology framework because it provides a means of discovering which sorts have the most in common. The principle of integration in Q methodology is an important quality of the centroid factor extraction. The use of centroid factor extraction differentiates Q methodology from the practice in more common “R” factor analysis, which uses the principle, more conventional factor method of factor extraction (Stricklin & Almeida 1999).

According to McKeown and Thomas (1988:46), Q methodology calls for the correlation and factoring of individuals, while factor analysis concentrates on tests and traits as statistical data over populations.

While both Q and R methodologies are methods in their own right, they answer widely differentiating questions and produce different results. Opinion surveys investigate the participant's relationship with the categories of the researcher and the instruments used, whereas Q methodology allows the participant to establish the categories for analysis and to portray his or her own relationship with these categories (Robbins & Krueger 2000:640).

One of Q methodology's strengths is its analytical possibilities. Kerlinger (1986) feels strongly about this strength and states that it is impossible to discuss Q methodology without referring to factor analysis.

Primarily as a consideration to factor analysis, it is important to clarify what is being factored. In R factor analysis, correlation summarises the relationship among "*N*" traits, and the factors denote the clusters of these traits. Of significance in this connection, is the fact that units of measurements for the *N* traits are single centred by column. For example, trait A will be regarded as a measurement of intelligence. Hence all values in column A are expressed in terms of IQ intelligence scores (McKeown & Thomas 1988:48).

Factor analysis is fundamental to Q methodology since it comprises the statistical means by which participants group themselves through the process of Q sorting. Once Q sorts have been correlated, the mathematics of the factoring process is virtually identical to the applications of factor analysis. It is in the statistical areas that Q and R are most similar, despite the notions that they represent rival analytical procedures (McKeown & Thomas 1988:48).

According to Brown (1980:40), in factor analysis it is thought that the significance of a factor is related to its "strength" as measured by its importance in terms of percentage of total variance accounted for. Q

sorts fall into natural groupings by being similar to or dissimilar from one another. If two participants share similar feelings about a topic, their Q sort will be similar and they will be associated with the same factor. This factor will emerge as strong and should therefore have eigenvalues greater that 1.00.

It is therefore critical to look at the reliability of factors. Although there are different ways to obtain reliability of factors, in the application of Q methodology, it was found that the test-retest reliability coefficient method supplied satisfactory results since it provides an operational measure which allows a participant to be consistent with himself or herself. A response is reliable if, under stable conditions, behaviour at some point in time is the same as at some later point in time. The composite reliability of a factor is greater than the reliability of the persons composing it and is a function of the number of defining variants. The more persons defining a factor, the higher the reliability i.e. the more participants that render a viewpoint, the more confident the researcher has in the scores of the items composing it. The higher a factor's reliability, the lower the magnitude of error associated with that factor's score (Brown 1980:245).

According to Brown (1980:245) a factor should have at least five participants defining it that will generate a factor reliability of 0,95 percent. He further states that the reliability coefficient of a participant, with himself or herself, normally range from 0,80 upward.

As demonstrated above, according to Dennis (1986:10), if all participants partake in a Q sort and sort the statements in a similar way, the correlation coefficient will be higher and only one factor (viewpoint) will be identified. Normally, more than one but fewer than seven factors (viewpoints) are identified in Q studies. After factor extraction, a column of numbers is generated representing one column for each Q sort.

4.3.4.2 Factor loading

Allgood (1999:217) defines factor loading as the correlation of Q sorts with a particular factor. However, the degree of correlation may differ. According to Brown (1980:211), Q sorts with loadings smaller than 37 are not statistically significant and therefore disregarded once measured against this criterion.

According to Stenner, Cooper and Skevington (2003:2164) for a Q factor to be interpretable it must apply to two criteria's, namely its eigenvalue must be greater than 1.0, and secondly, it must have a minimum of one Q sort that loads significantly upon it alone. Q sort loadings at 0.5 or over are statistically significant at the <0.01 level. Such Q-sorts are called factor exemplars.

The factor loading is therefore a value expressing a sort's relationship with the centroid. Each factor loading represents a sort's contribution to the body length of the centroid, thus represented as the correlation of a particular sort with the centroid. In this process, the numerical relationship between the sorts is factored. The results are recorded in a table of numerical relationships and this process is called factor loading. Since all sorts are related, each sort has a loading for each factor (Stricklin & Almeida 1999).

A factor loading is regarded as a "pure loading" when participants do not load significantly onto more than one factor. "Mixed loadings" are detected when participants share strong opinions in more than one factor (Nelson, Simic, Beste, Vukovic, Bjegovic & Van Rooyen 2003:10).

4.3.4.3 Factor rotation

Since there is more than one way to rotate factors, it is necessary for the researcher to focus on the main goal of the outcome and then apply

the appropriate rotating method. The rotating method would have to account for as many of the sorts, in as few factors possible, permitted by the data (Stricklin & Almeida 1999).

The fundamental idea of rotation in factor analysis can best be explained by means of an example. Imagine a person strolling along a beach and encountering a transparent sphere with a number of little black dots embedded in it. Some of the dots are clustered together but some are spread out randomly. Imagine some of the dots are near the surface and others more embedded near the core. Suppose the surface consists of a substance that would allow for the insertion of dowel rods, which are referred to as X, Y and Z. All three of these intersections are at the core of the sphere and situated at similar angles to one another. Lines can now be drawn on the surface of the sphere connecting the poles of the three rods in terms of latitude and longitude. It would now be possible to specify the location of dots in terms of exact position. Some dots cluster around X, Y and Z separately. A certain position is now pinpointed and we call this position B. This position is situated in the centre between rod X and Z (Brown 1980:225).

If we now tilt our heads slightly say, approximately 30 degrees, we might imagine Z to change to a new position that passes through position B. X will therefore also change position but the Y rod will maintain its position.

It is precisely this shift in perspective that is provided by rotation. The vectors X, Y and Z represent the factors and the dots the different Q-sorts. Their location in conceptual space is specified by positions expressed in terms of factor loadings. In other words, by simply rotating the factors, a new perspective on reality is provided (Brown 1980:226).

Two main rotation methods can be utilised, varimax and graphical. These are explained as follows:

The varimax rotating method is strictly mathematical. Hence variance is distributed across the factor structure in such a way that each sort has the highest degree of association with only one factor, taking into account all factors and sorts. This implies that a maximum number of cycles can be set. The default number of 200, however, should be adequate for most situations. It is advisable to utilise the varimax method first in order to achieve the mathematical solution (Stricklin & Almeida 1999).

According to Stenner *et al* (2003:164), the varimax factor rotation method is applied to an exploratory study since it is an automatic routine for rotating a factor solution to a simple structure.

The graphical rotation method, also known as judgemental rotation, is used when the researcher has specific theoretical goals in mind when conducting a communication experiment. By following this route of rotation, the theory is taken into account. For example, the graphical rotation method can be illustrated by suggesting that a group of nurses is asked to provide sorts, including the chief of nursing. Since the researcher is particularly interested in the chief nurse's input, the rotation can be adjusted to maximise the particular results since the researcher decides on the method of rotation (Stricklin & Almeida 1999).

According to Allgood (1999:214), graphical rotation allows the researcher to obtain a simpler structure solution of objective, statistical procedure. The simplest structure is the one that is most compatible with the data and consists of the greatest power of interpretation or understanding because it includes all possible combinations of the factors. In other words, it includes as much of the "wholeness" of subjective experience as possible.

Brown (1980:225) holds that when many expressions of subjectivity are analysed, they tend to cluster in meaningful, limited patterns of factors, usually two to four.

The rotation of factors in Q methodology can be illustrated by Table 4.4 below, which consists of rotated and unrotated factors after the correlation process has been completed.

	Un-rotated factors							Rotated factors		
	a	b	c	d	e	f	g	A	B	C
1	43	08	-26	14	-28	21	13	11	00	(57)
2	50	-42	13	06	-07	01	-17	10	(63)	21
3	47	13	25	01	07	00	01	(48)	18	17
4	06	37	-27	36	-09	02	09	07	-38	32
5	35	-72	36	38	29	15	-31	00	(94)	09
6	44	42	51	28	-16	06	-04	(79)	06	10
7	38	-02	-34	19	29	16	25	-03	00	(61)

( ) $p < .01$

Table 4.3: Unrotated and rotated factors

Source: Miller & Whicker (1999:616)

Table 4.3 above indicates that at least the first three of the unrotated factors contain significant loadings (higher that 37), and some of the loadings on the fourth factor are also substantial. One can therefore assume that there would probably be three to four different viewpoints between the two participants (Miller & Whicker 1999:616).

Since the unrotated loadings have been extracted from the correlation matrix, in most cases they do not provide the best view of what is transpiring. Hence the unrotated loadings are superseded by an

alternative set of loadings which is accomplished through the process of factor rotation (Miller & Whicker 1999:616).

When viewing Table 4.3 on the previous page, it is apparent that Q sort number 1 has a loading on factor (a) of .43 and on factor (c) of -.26. From these seven factors that were extracted as per table 4.4, (a) and (c) were chosen because of interest in Q sort 1 with a high loading of .43 on factor (a), but almost none (.08) on factor (b). There is a degree of variability (-.26) on factor (c). However, the relocation or rotation of vectors (a) and (c) could serve to isolate all of Q-sort 1's variability onto a single factor (Miller & Whicker 1999:617).

When judgmental rotation occurs in this example, the original vectors are rotated counter-clockwise at an angle; new locations are assigned to factors (a) and (c). Where factor (a) had a loading of .43, the new factor has increased to .50 and factor (c) is down to .08 from the previous -.26. These two sets of coefficients, unrotated and rotated, are mathematically equivalent as viewed when the respective loadings are squared and summarised as follows:

- Unrotated:.43 2 + (-.26) 2 = .2525;
- Rotated:.50 2 + (.08) 2 = .2564;

Source: Miller & Whicker (1999:617)

4.3.5 ANALYSING AND INTERPRETING Q DATA

Q data analysis and interpretation as the final phase in a Q study are achieved by analysing the factor scores and interpreting them. According to Brown (1980:239), in Q methodology, interpretation is based on the factor scores. Factor scores of the statements are averages of the scores that the statements were given in the contributing Q sorts which is similar to factor loadings.

Factor loadings are in effect correlation coefficients, which imply it indicates the extent to which each Q sort is similar or dissimilar to the composite factor array. With Q methodology interpretation, the presence of several orthogonal (independent) factors is evidence of different points of view in the participant sample. A participant's positive loading on a factor indicates his or her shared subjectivity with others on that factor and a negative loading on a factor indicates rejection of the factor's perspective (McKeown & Thomas 1988:92).

Focht (2002:1311) maintains that factor scores or factor "structures" suggest that clusters of persons have grouped the statements in fundamentally the same way. Interpretation of factors is advanced in terms of commonly held frameworks of meaning. The guiding principle here is that new ideas are formed in relation to concourses, not by logic, but by way of feelings and self-reference. Meaning arises out of the configuration of statements that are structured in feelings.

Brown (1980: 23) states that factor interpretation progress through an examination of statements, which characterise factors and differentiate each factor from the others. In Q methodology, the relationship between person and test is reversed to some extend: subjects are variables and statements are sample elements drawn, by design rather than by random selection. The greatest interest is in the sample elements, the statements, since the factor scores they receive reflect an attitude in operation. Hence, the interest is in the attitudes as attitudes independently of whoever may have provided them. There is no set strategy for interpreting the factor array. It depends foremost on what the researcher is trying to accomplish.

In a Q study there may be statements that differentiate one factor from another. This provides an indication of strong differentiation on viewpoints in a particular factor. Consensus statements, on the other hand, indicate there is strong conformity between factors. Consensus can however be negative as well as positive and even neutral for

example when all participants agree that something is irrelevant (Brown 1980:27).

Factor scores are derived from factors in the rotation process that represent conceptions held by the same participants that are loaded on a particular factor. The purpose of obtaining factor scores is to allow for closer examination of what these conceptions look like. The estimation of a factor is achieved by merging together Q sorts associated with it. Before the separate Q sorts are merged together, each Q sort must be assigned a weight as a reflection that some Q sorts are closer in approximation to a factor than other Q sorts. The factor weight is applied by dispensing decimals with only a small loss of precision. Normally, the decimals are moved one place to the right allowing for rounding to the nearest whole number (Brown 1980:239).

This can be illustrated by viewing Table 4.3 above. Q sorts 3 and 6 share a common outlook, and what they have in common, can be approximated by combining the two factors. This is accomplished by calculating factor scores, which are the scores from (-4 to +4), in the original Q sort where statements are sorted by participants. The two responses first have to be weighted to take into account that Q sort 3 (with a loading of .48), is further from factor A than Q-sort 6 with a loading of .79. Weighting is calculated by the formula w = f/(1 – f 2), where “f” represents the factor loading. Q sort 3’s weight is therefore w(3) = .48/(1 - .48 2) = .62 and by the same calculation w(6) = 2.10. Hence the latter is magnified more than three times the former (2.10/.62 = 3.39) when the two responses are merged (Miller & Whicker 1999:617).

4.4 THE ADVANTAGES AND DISADVANTAGES OF Q METHODOLOGY

Following the above discussion on the utilisation of Q methodology it is necessary at this stage to scrutinise the advantages and disadvantages of this methodology.

4.4.1 THE ADVANTAGES

Q methodology allows the researcher to explore a complex problem from a subject's point of view. In a Q sort, respondents' weight statements to a question, in accordance with the way they see the issue at hand (Donner 2001:24).

In a Q study, because statements are prioritised, one of Q methodology's main strengths is the fact that the pattern or logic arising from the weight of a particular statement versus another does not need to be known or even hypothesised in advance; nor do the elements have to be mutually exclusive, nor completely exhaustive of all the possible concepts that could apply (Donner 2001:25).

According to Dennis (1986:11), because Q sorting requires the active involvement of the participant, it is rare to have missing data and undecided responses. In addition, the ranking of the information requires the participants to make fine discriminations that they might otherwise not make. Also, compared with other research, the participant has to identify his or her own level of agreement to statements in relation to all the other statements. It also helps the researcher to clarify the range of constructs present in viewpoints on the research topic.

In Q methodology, the participants derive the content validity of each statement from the rank order in which it is placed and its vicinity to other statements. The face validity of Q methodology is linked to the degree of satisfaction a participant feels about how accurately his or her

ranking of the statements reflects his or her personal feelings (Corr 2001:296).

Corr (2001:297) remarks that another advantage of this methodology is that only a small number of participants are required. It also reveals how many viewpoints are present in the group of participants. Q methodology, which is similar to other qualitative research methods, generates qualitative data but also provides a method to quantify and analyse the information.

Q methodology has the ability to cross any cultural barrier such as language or literature in research. A case in point would be the research undertaken on child nutrition and growth, where 100 pictures of food were used instead of written statements and the respondents had to sort them. This overcame the language barrier that existed between the participants and the researcher (Simpson 1989:289).

The reliability of Q methodology has been proven through test-retest studies and assessment of reliable schematics. Studies have shown that administering the same instrument (Q sample) to the same individuals at two points in time has typically resulted in correlation coefficients. Q methodology has also produced consistent findings in two more types of study comparisons: first when administering the same set of statements to a different set of samples; and secondly, when pursuing the same research topic, but using different sets of statements and different person samples. For reliability and stability of identified opinion clusters, findings were consistent when the instrument was administered to different person samples and even when different Q samples and person samples were used (Valenta & Wigger 1997).

According to Sexton *et al* (1998:96), Q methodology can provide vital information in developing and testing theories. Results from Q sorts can be useful in testing people's beliefs and perceptions, the way attitudes change over time, and so on. Taking into account the nature of this

methodology, it is likely to bring about change more easily that any other traditional methodology. Instead of relying on differences in groups of people regarding a trait, trend or dimension being measured, one can examine changes in the underlying structure of the participants' perspectives.

4.4.2 THE DISADVANTAGES

Kerlinger (1972) mentions that Q methodology is criticised mostly in the area of participant sampling and the difficulties associated with certain measurements. The small sample size required in Q methodology is often questioned when the aspect of generalisation is touched upon.

The statistical aspects of Q methodology have also being criticised. One characteristic of collected data is that the standard differences for all participants are similar. In fact these properties are known before any data are collected because they are outcomes of the distribution rather than a participant's response. Furthermore, ranking statement results in data that lack independence, which could lead to unreliable internal consistency (Sexton *et al* 1998:99).

Another disadvantage of Q methodology is the time factor. Time is required for each participant to complete the Q sort and this can add up especially if a large number of participants are involved. Also, explaining the process of the study to the participants can be time consuming since the instructions are comprehensive. It is necessary to invest this time if the participants are to represent their perspectives accurately (Corr 2001:297).

Q methodology does not show how many people in a study have a specific viewpoint. Also, as Corr (2001:297) points out, no claim is made that other viewpoints do not exist in the broader population. Although it is stated that validity is present, this could be affected if a participant does not completely understand the Q sort task. This would lead to a misrepresentation of the participant's viewpoint.

Another area of concern in Q methodology would be the possibility that participants make mechanical rather than conceptual choices to complete the process, particularly if they find the process too long-winded. Furthermore, the fact that the researcher provides meaning to factors could influence the bias itself (Barbosa, Willoughby, Rosenburg & Mrtek 1998:1037).

Sexton *et al* (1998:99) argue that these negative assumptions are caused by a fundamental misunderstanding of the purpose of Q methodology. The main goal of Q methodology is not to determine how many people believe something but rather *why* and *how* they believe what they do.

Stephen (1985:206) argues that in most Q sort applications, questions of internal consistency are not a concern because the Q sample is a means for each participant to express personal opinions rather than a test of a predetermined trait.

4.5 SUMMARY

Q methodology, as explained in this chapter, is a method identifying the subjective perceptions of individuals. The methodology's extreme flexibility is highlighted, as is the application of quantitative and qualitative measurements in a systematic framework. Q methodology is also discussed in terms of its advantages and disadvantages.

Chapter 5 examines the actual research project - the subjective perception of chicken as a generic food brand. The convenience of data analysis by means of the PCQ software program is also explained.

CHAPTER 5 - METHODOLOGY AND FINDINGS

5.1 INTRODUCTION

This chapter concentrates on the application and findings of Q methodology in the study. Q methodology is applied because of its ability to reveal existing dominant subjective perceptions. The Q study is described and discussed in this chapter. Chicken is viewed as a holistic brand based on the concept of the generic brand as discussed in chapter 3. No distinction is therefore made between the different chicken brands in the market.

5.2 STRUCTURE OF THE Q STUDY

An unstructured design format is utilised in this study. The statements for the Q study are selected from the concourse, which includes the literature as discussed in chapters and 3 as well as fieldwork interpretations and comments.

A combination of ready-made and naturalistic Q samples was constructed in this Q study. Statements were compiled from oral or written communication on the topic. This Q sample is thus a balanced representation of the broad concourse. The study utilises an inductive approach in which statements are generated on the basis of the emerging patterns that were identified in all the sources used to highlight perceptions of chicken.

5.3 FIRST PILOT STUDY

As discussed in chapter 4, it is necessary to conduct a pilot study before the final Q study is implemented. This contributes to the credibility of the Q study and the researcher can ensure that all the statements in the final Q sample are understood and therefore sorted

with total conviction by the participants in order to produce favourable results.

The first pilot study was conducted on the basis of 45 statements derived from the concourse. Participants were limited to a group of researchers who could critically assess the study. Appointments were made with each of the participants at their convenience, and the statements sorted in conditions of their choice.

Each participant was supplied with the same condition of instruction on how to perform the Q sort. The condition of instruction incorporated into this Q study was based on the forced-choice method in which participants place 45 statements onto 45 blocks. Hence every block contained a statement (see chapter 4). Although the participants still had the freedom to place statements according to their preferences, each statement had to be allocated to a block, and the participant alone could therefore determine the meaning of the continuum.

The quasi-normal distribution format was incorporated into the Q sort diagram where more statements were placed in the middle than in the tail. After the participants had read the condition of instruction, they sorted the statements subjectivity on the data board provided. In the Q study, participants were requested to sort items from +4 (most agree) to -4 (disagree most). This means that they could not answer outside of the set perimeters. The study consisted of nine piles (+4 to - 4) in total, together with the neutral zone in the centre.

The researcher sat with the participants while they conducted the Q sort to ensure that the process was followed correctly. On completion of the Q sort, they were questioned on the clarity of the condition of instruction and the statements.

A number of problems were encountered in the pilot study. The clarity of specific statements was raised as an issue of concern and the

relevant statements altered accordingly. Clarification was required on the fact that no hierarchy of importance existed vertically between statements and this amendment was integrated into the condition of instruction.

It was further found that only one factor emerged when the results were analysed. This was deemed to be inadequate and meaningless to the study. To resolve this problem, the piles on the data board diagram were increased from 9 (+4 to -4) to 11 (+5 to -5) and the statements were increased from 45 to 49. This increased the variety and the possibility of more factors emerging. Secondly, a more heterogeneous participating pool from the broader population was selected for the next pilot study.

5.4 SECOND PILOT STUDY

After the above-mentioned adjustments had been made, a second pilot study was conducted. The participants understood the statements and the condition of instruction and the Q study was conducted again in locations selected by the participants. The second pilot study was successful, generating nine sorts that were accounted for in five factors. See Appendixes 1 and 2 for statements and condition of instruction.

Table 5.1 on the following page illustrates the Q sort diagram utilised in the second pilot and final Q study.

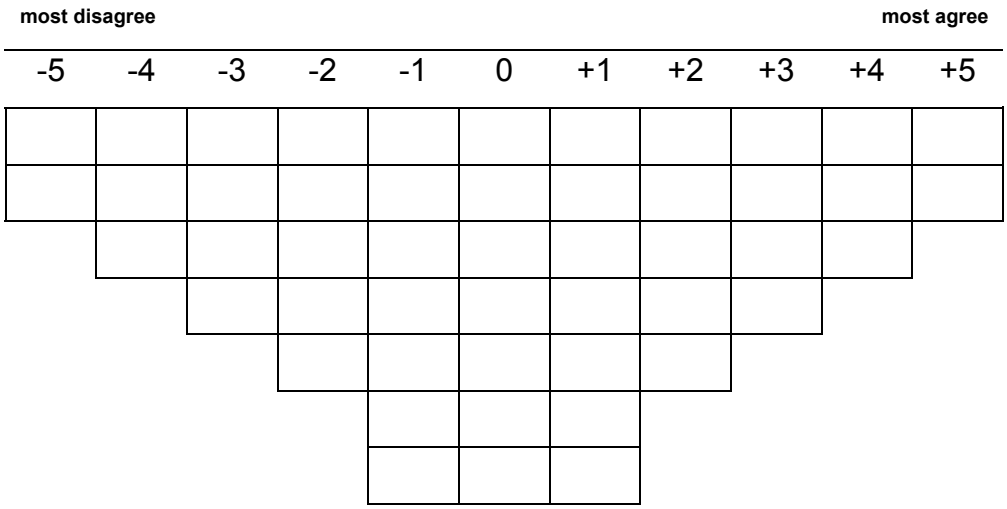


Table 5.1: The Q sort diagram

5.5 DERIVATION OF THE CONCOURSE AND SELECTION OF STATEMENTS

The 49 statements that were selected for the final Q study are a sample of the broader theoretical content regarding perceptions of chicken as represented in the broader concourse. The statements were divided into 24 negative and 25 positive statements. These statements and their sources in the supporting literature are listed below.

1. **Chicken is not a luxury item**
   Food is a commodity and a luxury that people share with friends and family (Risk communication and government 2001).

2. **Chicken is not expensive**
   In today's society, few people know how food is grown, harvested and processed. In the food industry the producers' focus has shifted to growth, profits and efficiency. Food producers try to reduce their costs through new production patterns, new chemical processes and additives or animal drugs and stimulants. People thus feel they have lost touch with the food chain and lost control over the food they eat (Risk communication and government 2001).

3. **Eating chicken is a health risk**
People feel that they have lost touch with the food chain and lost control over the food they eat. This contributes to the public's increasing impression that food is becoming another source of risk (Risk communication and government 2001). People's perceptions of food have thus changed, and this also includes the perception of chicken.

4. **I prefer chicken to beef**
The increased consumption of chicken worldwide is one of the factors that led to the rapid growth of the global chicken export market.

5. **When eating chicken, I experience it as a dry protein**
Fieldwork – "dry protein" refers to the actual "dry" texture of chicken meat.

6. **I prefer other protein foods to chicken**
According to research conducted in the UK by Yeung and Yee (2002:219), consumers have grown increasingly concerned about chicken as a protein source after a series of food scares, such as salmonella contamination and speculation of overuse of certain antibiotics in chickens. As consumer awareness and concerns of risk increase, risk calculations are likely to be central to purchases. Some consumers avoid purchasing foods they perceive as unsafe, including imported foods. They prefer to replace it with food they perceive to be safe (Consumer food safety behaviour 2002).

7. **Chicken is a poor quality product**
According to Grunert (2003:2) most deciding factors in purchasing food products are still the product's quality, the consumer's income and the price of the product.

8. **Chicken is unaffordable**
The rand was particularly weak during the period April 2002 to September 2002. This caused the maize price per ton to increase, with an automatic increase in the end price of chicken. This would

impact on the consumer's perception of chicken since the perception of chicken as a less expensive alternative to red meat could be altered (Neilson 2003).

9. **When chicken is cooked, the final product is always tasty**
   Fieldwork

10. **I refuse to pay more for chicken than other protein**
    Grassl (1999) states that the price difference consumers are willing to accept in products in the same category is one of the primary measures of strength for one brand over others. This is an important consideration when viewing chicken as a generic food brand.

11. **I prefer chicken because of the variety of portion options**
    Chicken is sold in different ways in the chicken market. Pearson et al (2003:35) define the different chicken products.

12. **I find chicken convenient because it is quick to prepare**
    It is convenient and saves preparation time (Streicher *et al* 2002:62).

13. **Chicken is my favourite take-away meal**
    According to an article in Rapport on 30 March 2003, chicken is the preferred meal of 43 percent of consumers who buy take-away food from franchises. The two most popular franchises were Kentucky Fried Chicken and Chicken Licken (Ueckermann 2003:3).

14. **Chicken does not offer that many exciting food ideas**
    In 2001 there was a fair amount of product innovation by producers, providing a greater variety of foods based on value-added chicken aimed at consumers who thrive on new and exciting food options (Streicher *et al* 2002:62).

15. **My perception of chicken is not influenced by the media**
    Producers of substitute products benefit from media exposure. For example, when health conscious consumers looked for

alternatives for red meat, chicken and fish producers benefited from media coverage on the topic (Dodd & Morse 1994:19).

16. **I enjoy exchanging chicken recipes with my friends**
Fieldwork.

17. **I only buy chicken if I know how it was produced**
Information on the production and processing of chicken meat is important to customers (Young & Morris 2001:274).

18. **I am very knowledgeable about chicken because of media reports**
The media play an important role in educating and informing the public. The media can also influence the perceptions and the actions of the broader public, policy makers and interest groups. One way that the media may influence public perception is through agenda setting, drawing attention to specific issues (Nisbet & Lewenstein 2001:4).

19. **I prefer fish to chicken**
According to research conducted in the UK by Yeung and Yee (2002:219), consumers have grown increasingly concerned about chicken as a protein source after a series of food scares, such as salmonella contamination and speculation of overuse of certain antibiotics in chickens. As consumer awareness and concerns of risk increase, risk calculations are likely to be central to purchases. Some consumers avoid purchasing foods that they perceive as unsafe. They prefer to replace it with food they perceive to be safe (Consumer food safety behaviour 2002).

20. **Chicken is safer to eat than other protein**
According to a 1999 study by Verbeke (2000:524) conducted in Belgium on consumer decision making regarding the purchase of fresh meat, poultry is perceived to be the healthiest and safest protein source.

21. **Chicken spoils very quickly once cooked**
Fieldwork.

22. Before buying chicken, I inspect it carefully to determine the quality

Marketing literature urges consumers to ensure that the chicken meat they purchase is fresh by inspecting it carefully before buying it (Yeung & Yee 2002:221).

23. I do not associate chicken with a high-quality lifestyle

Lifestyle is a critical issue for the health-conscious consumer (Yeung & Yee 2002:221).

24. The country of origin has no influence on the quality of chicken

Assurance must be provided of chicken quality. A "quality mark" or information on the origin of the chicken is therefore important (Young & Morris 2001:274).

25. I purchase chicken for the taste

Fieldwork.

26. I think a meal is incomplete without chicken

Fieldwork.

27. Eating chicken makes me feel good about myself

In the marketing context, there is the psychological aspect of purchasing a specific brand to enhance self-image. This is more likely to occur in the context of chicken meat since individual brands of fresh meat are less conspicuous (Yeung & Yee 2002:223).

28. I prefer to buy chicken whose packaging displays quality labels

Verbeke (2000:526) indicates that over time, consumers have become more critical towards meat quality labels as indicated in a 1999 consumer decision-making study conducted in Belgium.

29. Chicken is flexible because it can be prepared in any preferred way

According to Cook *et al* (1998:163), convenience of food preparation is an important consideration in food planning and

choice. Consumers want to incorporate the food into their preferred method of preparation.

30. I like to experiment with chicken when cooking

According to Cook *et al* (1998:163), convenience of food preparation is an important consideration in food planning and choice. Consumers want to incorporate the food into their preferred method of preparation.

31. A "best before" date on chicken indicates a safe product

Guidelines on cooking and storage of chicken products as well as the "best before" date are vital (Young & Morris 2001:274).

32. Chicken advertised on promotions is a poor quality product

More expensive chicken products are perceived to be of a better quality and less expensive chicken of lower quality (Young & Morris 2001:274).

33. I only purchase chicken from a reputable outlet

Customers prefer to purchase chicken meat from a safe, reputable source. This can include any "family shop", butchery or place familiar to the customer (Young & Morris 2001:274).

34. Chicken does not offer everything that I expect from a protein source

According to research conducted in the UK by Yeung and Yee (2002:219), consumers have grown increasingly concerned about chicken as a protein source after a series of food scares. As consumer awareness and concerns of risk increase, risk calculations are likely to be central to purchases. They prefer to replace it with food they perceive to be safe (Consumer food safety behaviour 2002).

35. Chicken is the most nutritious protein I feed to my pets

Fieldwork.

36. Chicken is reliable because it is available from any food outlet

Davis (2000) identifies the main criteria applied by customers when it comes to differentiating brands, regardless of the industry. Availability and convenience are included in these criteria.

37. The texture of chicken is not very appealing

According to Dick et al (1996:20), consumers make food quality judgement decisions based on direct and indirect indicators. The direct indicators include items such as product composition, taste and texture which all relate to the physical properties of the product. Indirect indictors are those product-related aspects that are not part of the physical product, and these include price and brand name.

38. Chicken does not contribute to a healthy diet

When health-conscious consumers looked for alternatives to red meat, chicken and fish producers benefited (Dodd & Morse 1994:19).

39. I always eat chicken when I want to lose weight

When health-conscious consumers looked for alternatives to red meat, chicken and fish producers benefited (Dodd & Morse 1994:19).

40. Chicken cannot be served with just any dish

Fieldwork.

41. Chicken can be consumed during any meal of the day

Chicken is leading the way as a preferred protein source since it is a low-cost consumption alternative to other proteins in many countries (Abbott *et al* 2000:14).

42. Chicken is not that filling compared with other proteins

Fieldwork.

43. Chicken is not packaged conveniently

Fieldwork.

44. I think chicken is nutritious enough to be a meal on its own
Fieldwork.

45. I only prepare chicken on special occasions
Fieldwork.

46. Even if I have a negative experience with chicken, I will eat it again
Brand loyalty is a vital indicator of brand equity. Brand loyalty is built on positive experiences (Kohli & Leuthesser 2001:79).

47. Chicken does not appear to be as clean as other proteins
Fieldwork

48. I think there are harmful elements in chicken meat
Assessed chicken contained harmful bacteria (Altenroxel 2002:1).

49. Chicken is my first choice if I have to prepare an unexpected meal
Fieldwork.

5.6 PCQ SOFTWARE UTILISATION

The PCQ software program was utilised to analyse the data collected in the study. The PCQ program provides the following sequence for data analysis (Stricklin & Almeida 1999):

1 Enter parameters.
2 Enter and edit Q sort data.
3 Enter and edit Q sample statements.
4 Extract centroid factors.
5 Choose centroid rotation schemes.
6 Generate a final log report.

The format for the Q-sort diagram was inserted in the PCQ software by entering the number of sorts (30), statements (49) and piles (11). A correlation matrix of the Q-sorts was then generated. Eight factors were

extracted using centroid factor analysis. The factors extracted were then rotated using the varimax method.

5.7 THE FINAL Q SORT

After the second pilot study was conducted, the final Q sort commenced, using the same condition of instruction and 49 statements. The same quasi-normal distribution format was applied with 11 piles ranging from +5 (most agree) to - 5 (disagree with most) (see table 5.1). The researcher processed the results in one continuous session to ensure accuracy of data input.

The participants in this study are not representative of the broader South African population. The participants were selected from the ages of 25 to 55 to include only the population segment with the most active buying power in the retail sector in the urban areas around Johannesburg and Pretoria (Tshwane). The study was conducted with an equal representation of male and female participants and reflected the racial composition of the South African population. 30 Participants were drawn from a sample that is representative of the South African population and generated by a South African research house.

Participants are not representative of all South Africans. However, this is not a requirement for this research because Q methodology seeks the dominant perceptions present in a population, not representation of these perceptions in a population. An extensive person sample was utilised. According to McKeown and Thomas (1988:37), no special effort is made in an extensive person sample to ensure complete representativeness across participant characteristics since the purpose of Q methodology is to explore attitudes in the population (see chapter 4).

5.8 FINDINGS

The overall findings of the Q study will be discussed in this section. Specific attention is given to the overall findings and to the significant individual factors that were derived in the study.

5.8.1 OVERALL FINDINGS

The varimax rotation produced four dominant factors. The variance in the correlation matrix was calculated at 70 percent, which indicated relatively stable perception clusters (see Appendix 3).

The criteria used to calculating factor scores include the following:

- **Eigenvalues**. The eigenvalues associated with the factors must be assessed. A strong factor will have an eigenvalue greater than 1.00, which all eight factors displayed.

- **Factor loading**. A factor loading is regarded as a “pure loading” when participants do not load significantly on more than one factor. “Mixed loadings” are detected when a participant shares strong opinions in more than one factor (Nelson et al 2003:10). The researcher considered factor loadings of 0.37 and more as significant. As mentioned earlier, eight pure factor loadings were identified. The factor scores were determined once the total number of factors with pure loadings had been identified. Four factors were identified with significant participant association. Hence, these four dominant factors will be analysed and reported on.

Figure 5.1 on the next page depicts the different factor loadings of the 30 participants on the four dominant factors as well as the variance associated with each factor. A star next to a Q sort indicates the Q sort utilised in calculating the factor scores. The percentage variance for factors 1 and 2 is 15 percent; factor 3 is 11 percent; and factor 4 is eight percent.

Q-sort	1	2	3	4
1	0.17	0.14	-0.72*	-0.11
2	0.15	0.26	-0.40*	-0.45*
3	0.14	0.08	-.0.37*	-0.26
4	0.33	-0.05	-0.60*	-0.20
5	0.05	0.12	-0.65*	-0.16
6	0.22	0.25	-0.13	-0.07
7	0.18	0.28	-0.68*	-0.13
8	0.31	0.62*	-0.22	-0.21
9	0.16	0.35	-0.02	-0.18
10	0.39*	0.60*	-0.25	-0.09
11	0.32	0.34	-0.33	-0.21
12	0.28	0.24	-0.35	-0.22
13	0.17	0.65*	-0.06	-0.19
14	0.25	0.62*	-0.17	-0.40*
15	0.11	0.42*	-0.23	-0.12
16	0.90*	0.12	-0.11	-0.12
17	0.11	0.01	0.00	0.00
18	0.32	0.39*	-0.16	-0.22
19	0.47*	0.37*	-0.32	-0.23
20	0.84*	0.15	-0.14	-0.04
21	0.21	0.21	-0.36	-0.58*
22	0.80*	0.25	-0.15	-0.26
23	0.29	0.33	-0.23	-0.70*
24	0.19	0.31	-0.24	-0.61*
25	0.02	0.78*	-0.17	-0.08
26	0.14	0.83*	-0.07	-0.08
27	0.42*	0.31	-0.38*	-0.23
28	0.47*	0.12	-0.27	-0.12
29	0.56*	0.24	-0.22	-0.25
30	0.39*	0.34	-0.33	-0.42*
% variance	15	15	11	8

Figure 5.1: Factor loadings

Figure 5.2 on the next page depicts the number of participants that loaded on factor 1 (4), factor 2 (5) factor 3 (4) and factor 4 (3). The average reliability of each factor is determined as 94 percent for factor

1; 95 percent for factor 2; for factor 3, 94 percent; and factor 4, 92 percent. As indicated in the criteria, the greater the number of participants associated with a factor, the more reliable the results of its interpretation. The eigenvalues of the four significant factors are for factor 1; 4.45, for factor 2; 4.59, for factor 3; 3.43 and factor 4; 2.53.

The standard errors for the factors are 0.62 for factor 1; 0.55 for factor 2; 0.62 for factor 3; and 0.72 for factor 4.

Factors	**1**	**2**	**3**	**4**
Number of significant sorts	4	5	4	3
Reliability of each factor	0.94	0.95	0.94	0.92
Eigenvalues of each factor	4.45	4.59	3.43	2.53
Standard errors of each factor	0.62	0.55	0.62	0.71

Figure 5.2: Factor characteristics

5.8.2 INDIVIDUAL FACTORS

The individual factors that emerged from the Q study will now be described and discussed.

5.8.2.1 Factor 1: chicken quality and convenience

Four participants loaded on this factor and all significant loadings exceeded 0.37. The variance is 15 percent with the factor reliability emerging at 94 percent. This indicates a strong and credible factor. The factor array is displayed in Table 5.2 on the following page.

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
7	17	14	3	8	2	1	10	9	29	12
45	32	24	5	20	4	11	16	13	31	30
	38	37	18	23	6	15	25	36	44	
		48	22	27	21	19	28	41		
			35	40	39	26	34			
				43	42	33				
				49	46	47				

Table 5.2: Factor array for factor 1

Statements that contributed significantly to factor 1 loaded on +5, -5, +4 and -4 include the following:

- I find chicken convenient because it is quick to prepare (+5, statement 12).
- I like to experiment with chicken when cooking (+5, statement 30).
- Chicken is a poor quality product (-5, statement 7).
- I only prepare chicken on special occasions (-5, statement 45).
- Chicken is flexible because it can be prepared in any preferred way (+4, statement 29).
- A “best-before” date on chicken indicates a safe product (+4, statement 31).
- I only buy chicken if I know how it was produced (-4, statement 17).
- Chicken advertised on promotions is a poor quality product (-4, statement 32).

The factor is labelled *chicken quality and convenience* since it indicates strong association with chicken as a good quality product and the convenience of freedom in chicken preparation. The highly agreed and disagreed statement allocations indicate that participants view chicken to be flexible in preparation preferences and it can therefore be

prepared more often, this probably being based on the perception of chicken as a good quality product. The factor opposes statements that portray chicken as a poor quality product that is restricted to occasional preparation.

The factor indicates a strong association with chicken as a popular protein choice and reveals no risk factors associated with chicken. This is achieved through continuous positive experiences with chicken, which indicates brand satisfaction and loyalty.

The following statements can be classified as reasonably agreed or disagreed with:

- When chicken is cooked, the final product is always tasty (+3, statement 9).
- Chicken is my favourite take-away meal (+3, statement 13).
- Chicken is reliable because it is available from any food outlet (+3, statement 36).
- Chicken can be consumed during any meal of the day (+3, statement 41).
- Chicken does not offer that many exciting food ideas (-3, statement 14).
- The country of origin has no influence on the quality of chicken (-3, statement 24).
- The texture of chicken is not very appealing (-3, statement 37).
- I think there are harmful elements in chicken meat (-3, statement 48).

The following statements received extremely low ratings:

- I refuse to pay more for chicken than other protein (+2, statement 10).

- I enjoy exchanging chicken recipes with my friends (+2, statement 16).
- I purchase chicken for the taste (+2, statement 25).
- I prefer to buy chicken whose packaging displays quality labels (+2, statement 28).
- Chicken does not offer everything that I expect from a protein source (+2, statement 34).
- Eating chicken is a health risk (-2, statement 3).
- When eating chicken, I experience it as a dry protein (-2, statement 5).
- I am very knowledgeable about chicken because of media reports (-2, statement 18).
- Before buying chicken, I inspect it carefully to determine the quality (-2, statement 22).
- Chicken is the most nutritious protein I feed to my pets (-2, statement 35).
- Chicken is not a luxury item (+1, statement 1).
- I prefer chicken because of the variety of portion options (+1, statement 11).
- My perception of chicken is not influenced by the media (+1, statement 15).
- I prefer fish to chicken (+1, statement 19).
- I think a meal is incomplete without chicken (+1, statement 26).
- I only purchase chicken from a reputable outlet (+1, statement 33).
- Chicken does not appear to be as clean as other proteins (+1, statement 47).
- Chicken is unaffordable (-1, statement 8).
- Chicken is safer to eat than other protein (-1, statement 20).
- I do not associate chicken with a high-quality lifestyle (-1, statement 23).
- Eating chicken makes me feel good about myself (-1, statement 27).
- Chicken cannot be served with just any dish (-1, statement 40).
- Chicken is not packaged conveniently (-1, statement 43).

- Chicken is my first choice if I have to prepare an unexpected meal (-1, statement 49).

The low rating of statement 49 is fairly surprising in the light of the strong preference that this factor portrays towards chicken as a well-accepted protein source. Chicken is perceived as a practical quality protein source but is not associated with a high-quality lifestyle. According to the low ratings of statements 15 and 18 which state that the media play a role in the perception of chicken, the participants do not seem to regard the media as important in perception creation.

The following statements were rated in the neutral column:

- Chicken is not expensive (statement 2).
- I prefer chicken to beef (statement 4).
- I prefer other protein foods to chicken (statement 6).
- Chicken spoils very quickly once cooked (statement 21).
- I always eat chicken when I want to lose weight (statement 39).
- Chicken is not that filling compared with other proteins (statement 42).
- Even if I have a negative experience with chicken, I will eat it again (statement 46).

Statements 30 and 45 strongly distinguish factor 1 from all the other factors. These statements are significantly different because they distinguish themselves in terms of convenience and therefore regular preparation of chicken. This is illustrated in Table 5.3 on the following page.

		Rank order			
Statement number	Statement	Factor 1	Factor 2	Factor 3	Factor 4
30	I like to experiment with chicken when cooking	5	-1	0	-4
45	I only prepare chicken on special occasions	-5	0	-1	1

Table 5.3: Distinguishing statements

Experimenting with chicken while cooking is ranked as extremely important. This highlights the factor's emphasis on chicken as a convenient protein source, which can also be linked to the aspect of "quick" preparation time as indicated by statement 12 and flexibility in statement 29. As shown in the table, the participants in factor 4 almost display the exact opposite opinion to factor 1.

Disagreeing strongly with the statement on preparing chicken only on special occasions again highlights the fact that chicken is perceived as good quality and therefore prepared regularly which is aligned with the interpretation of statement 32.

5.8.2.2 Factor 2: quality indicators and healthy living

Five participants loaded on this factor and all significant loadings exceeded 0.37. The variance is 15 percent with a factor reliability of 95 percent, indicating that this is the strongest factor. The factor array is displayed in Table 5.4 on the following page

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
43	7	1	14	5	4	10	2	6	28	22
47	8	3	21	17	18	13	9	12	33	29
	37	23	26	19	24	15	11	31	39	
		38	40	30	32	16	20	36		
			42	34	44	25	41			
				35	45	27				
				48	46	49				

Table 5.4: Factor array for factor 2

Statements that contributed significantly to factor 2 loaded on +5, -5, +4 and -4, include the following:

- Before buying chicken, I inspect it carefully to determine the quality (+5, statement 22).
- Chicken is flexible because it can be prepared in any preferred way (+5, statement 29).
- Chicken is not packaged conveniently (-5, statement 43).
- Chicken does not appear to be as clean as other proteins (-5, statement 47).
- I prefer to buy chicken whose packaging displays quality labels (+4, statement 28).
- I only purchase chicken from a reputable outlet (+4, statement 33).
- I always eat chicken when I want to lose weight (+4, statement 39).
- Chicken is a poor quality product (-4, statement 7).
- Chicken is unaffordable (-4, statement 8).
- The texture of chicken is not very appealing (-4, statement 37).

The factor is labelled *quality indicators and healthy living* because of the participants' strong preference for quality labels on chicken, and the fact that chicken is inspected before purchasing. The aspect of purchasing

chicken at a reputable outlet also indicates that quality is significant for the participants. The importance of healthy living in this factor is emphasised by the inclusion of statement 39, which concentrate on weight loss. This could be linked back to quality. With the high ranking of statement 29, it illustrates that preparation options for chicken are viewed as another quality indicator.

The following statements can be classified as reasonably agreed or disagreed with:

- I prefer other protein foods to chicken (+3, statement 6).
- I find chicken convenient because it is quick to prepare (+3, statement 12).
- A “best-before” date on chicken indicates a safe product (+3, statement 31).
- Chicken is reliable because it is available from any food outlet (+3, statement 36).
- Chicken is not a luxury item (-3, statement 1).
- Eating chicken is a health risk (-3, statement 3).
- I do not associate chicken with a high-quality lifestyle (-3, statement 23).
- Chicken does not contribute to a healthy diet (-3, statement 38).

The aspect of healthy living is further enhanced by the ranking of statements 1 and 23, which deal with lifestyle and luxuries, and there is moderate agreement from participants that chicken is perceived to represent a high-quality lifestyle. In terms of chicken as part of a healthy diet, as captured by statement 38, there is moderate agreement that chicken does contribute to a healthy diet.

The following statements received extremely low rankings:

- Chicken is not expensive (+2, statement 2).

- When chicken is cooked, the final product is always tasty (+2, statement 9).
- I prefer chicken because of the variety of portion options (+2, statement 11).
- Chicken is safer to eat than other protein (+2, statement 20).
- Chicken can be consumed during any meal of the day (+2, statement 41).
- Chicken does not offer that many exciting food ideas (-2, statement 14).
- Chicken spoils very quickly once cooked (-2, statement 21).
- I think a meal is incomplete without chicken (-2, statement 26).
- Chicken cannot be served with just any dish (-2, statement 40).
- Chicken is not that filling compared with other proteins (-2, statement 42).
- I refuse to pay more for chicken than other protein (+1, statement 10).
- Chicken is my favourite take-away meal (+1, statement 13).
- My perception of chicken is not influenced by the media (+1, statement 15).
- I enjoy exchanging chicken recipes with my friends (+1, statement 16).
- I purchase chicken for the taste (+1, statement 25).
- Eating chicken makes me feel good about myself (+1, statement 27).
- Chicken is my first choice if I have to prepare an unexpected meal (+1, statement 49).
- When eating chicken, I experience it as a dry protein (-1, statement 5).
- I only buy chicken if I know how it was produced (-1, statement 17).
- I prefer fish to chicken (-1, statement 19).
- I like to experiment with chicken when cooking (-1, statement 30).
- Chicken does not offer everything that I expect from a protein source (-1, statement 34).

- Chicken is the most nutritious protein I feed to my pets (-1, statement 35).
- I think there are harmful elements in chicken meat (-1, statement 48).

When reviewing the factor label it is quite surprising that statement 27 is ranked so low because this statement is closely related to healthy living. However, the low ranking of statement 13 enhances the healthy living consideration since take-away meals are not in line with a balanced, healthy diet and lifestyle.

The following statements were rated in the neutral column:

- I prefer chicken to beef (statement 4).
- I am very knowledgeable about chicken because of media reports (statement 18).
- The country of origin has no influence on the quality of chicken (statement 24).
- Chicken advertised on promotions is a poor quality product (statement 32).
- I think chicken is nutritious enough to be a meal on its own (statement 44).
- I only prepare chicken on special occasions (statement 45).
- Even if I have a negative experience with chicken, I will eat it again (statement 46).

There were no statements that strongly distinguish factor 2 from any other factor.

5.8.2.3 Factor 3: inflexibility and distrust of chicken

Four participants loaded on this factor and all significant loadings exceeded 0.37. The variance is 11 percent with the factor reliability at 94 percent. The factor array is displayed in Table 5.5 below.

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
13	11	5	9	2	1	8	10	3	6	40
28	27	16	20	7	4	17	15	14	22	43
	44	31	25	12	18	19	34	26	37	
		46	33	29	23	21	35	48		
			49	36	24	38	39			
				41	30	42				
				47	32	45				

Table 5.5: Factor array for factor 3

Statements that contributed significantly to factor 3 loaded on +5, -5, +4 and -4 include the following:

- Chicken cannot be served with just any dish (+5, statement 40).
- Chicken is not packaged conveniently (+5, statement 43).
- Chicken is my favourite take-away meal (-5, statement 13).
- I prefer to buy chicken whose packaging displays quality labels (-5, statement 28).
- I prefer other protein foods to chicken (+4, statement 6).
- Before buying chicken, I inspect it carefully to determine the quality (+4, statement 22).
- The texture of chicken is not very appealing (+4, statement 37).
- I prefer chicken because of the variety of portion options (-4, statement 11).
- Eating chicken makes me feel good about myself (-4, statement 27).
- I think chicken is nutritious enough to be a meal on its own (-4, statement 44).

The factor is labelled *inflexibility and distrust of chicken*. This is because of the negative perceptions that participants have of chicken as a preferred generic food brand. Inflexibility is linked to the strong agreement on restricted chicken serving possibilities, perceived limited chicken packaging options and the strong agreement on limited chicken portion options. With regard to participants' distrust of chicken in this factor, the placement of statements 6, 13 and 28 indicates that chicken is simply not preferred and even if there were quality labels on chicken packaging, it would still not remove existing distrust.

The following statements can be classified as reasonably agreed with or disagreed with:

- Eating chicken is a health risk (+3, statement 3).
- Chicken does not offer that many exciting food ideas (+3, statement 14).
- I think a meal is incomplete without chicken (+3, statement 26).
- I think there are harmful elements in chicken meat (+3, statement 48).
- When eating chicken, I experience it as a dry protein (-3, statement 5).
- I enjoy exchanging chicken recipes with my friends (-3, statement 16).
- A "best-before" date on chicken indicates a safe product (-3, statement 31).
- Even if I have a negative experience with chicken, I will eat it again (-3, statement 46).

The element of distrust of chicken as a preferred generic food brand is confirmed by the placement of statements 3, 31 and 48, which concentrate on the risk elements associated with chicken. The dislike of chicken is also confirmed by statement 46, which indicates experience linked to chicken as a food brand. The placement of statement 14

confirms the perception of chicken as “inflexible” food. The placement of statements 5 and 26 under moderate agreement and disagreement was surprising since it reveals a degree of approval of chicken as a generic food brand.

The following statements received extremely low rankings:

- I refuse to pay more for chicken than other protein (+2, statement 10).
- My perception of chicken is not influenced by the media (+2, statement 15).
- Chicken does not offer everything that I expect from a protein source (+2, statement 34).
- Chicken is the most nutritious protein I feed to my pets (+2, statement 35).
- I always eat chicken when I want to lose weight (+2, statement 39).
- When chicken is cooked, the final product is always tasty (–2, statement 9).
- Chicken is safer to eat than other protein (-2, statement 20).
- I purchase chicken for the taste (-2, statement 25).
- I only purchase chicken from a reputable outlet (-2, statement 33).
- Chicken is my first choice if I have to prepare an unexpected meal (-2, statement 49).
- Chicken is unaffordable (+1, statement 8).
- I only buy chicken if I know how it was produced (+1, statement 17).
- I prefer fish to chicken (+1, statement 19).
- Chicken spoils very quickly once cooked (+1, statement 21).
- Chicken does not contribute to a healthy diet (+1, statement 38).
- Chicken is not that filling compared with other proteins (+1, statement 42).
- I only prepare chicken on special occasions (+1, statement 45).
- Chicken is not expensive (-1, statement 2).
- Chicken is a poor quality product (-1, statement 7).

- I find chicken convenient because it is quick to prepare (-1, statement 12).
- Chicken is flexible because it can be prepared in any preferred way (-1, statement 29).
- Chicken is reliable because it is available from any food outlet (-1, statement 36).
- Chicken can be consumed during any meal of the day (-1, statement 41).
- Chicken does not appear to be as clean as other proteins (-1, statement 47).

The placement of statement 20, which centres on the safety aspect of chicken, is placed surprisingly low compared with the indication of distrust of the other placed statements in this factor.

The following statements were rated in the neutral column:

- Chicken is not a luxury item (statement 1).
- I prefer chicken to beef (statement 4).
- I am very knowledgeable about chicken because of media reports (statement 18).
- I do not associate chicken with a high-quality lifestyle (statement 23).
- The country of origin has no influence on the quality of chicken (statement 24).
- I like to experiment with chicken when cooking (statement 30).
- Chicken advertised on promotions is a poor quality product (statement 32).

There were no statements that strongly distinguish factor 3 from any other factor.

5.8.2.4 Factor 4: risk elements and lack of nutrition in chicken

Three participants loaded on this factor, and all significant loadings exceeded 0.37 and the variance is eight percent. The factor reliability is 92 percent. The factor array is displayed in table 5.6 below.

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
4	13	9	2	1	18	5	8	7	14	3
29	30	15	11	12	22	6	23	10	38	34
	44	41	16	17	24	19	32	21	42	
		49	25	20	28	35	47	26		
			39	27	33	37	48			
				31	40	45				
				36	43	46				

Table 5.6: Factor array for factor 4

Statements that contributed significantly to factor 4 loaded on +5, -5, +4 and -4 include the following:

- Eating chicken is a health risk (+5, statement 3).
- Chicken does not offer everything that I expect from a protein source (+5, statement 34).
- I prefer chicken to beef (-5, statement 4).
- Chicken is flexible because it can be prepared in any preferred way (-5, statement 29).
- Chicken does not offer that many exciting food ideas (+4, statement 14).
- Chicken does not contribute to a healthy diet (+4, statement 38).
- Chicken is not that filling compared with other proteins (+4, statement 42).
- Chicken is my favourite take-away meal (-4, statement 13).
- I like to experiment with chicken when cooking (-4, statement 30).

- I think chicken is nutritious enough to be a meal on its own (-4, statement 44).

The factor is labelled *risk elements and lack of nutrition in chicken* because there seems to be a strong indication that participants view chicken as a health risk and it therefore does not meet their expectations of a protein source. This indicates a clear preference for beef over chicken. Hence the question of chicken preparation flexibility and exciting food ideas is not even considered by participants in this factor. The indication that chicken does not offer satisfactory nutrition is strongly indicated by the placement of statement 44. This is reinforced by strong disagreement with statement 38, which states that chicken contributes to a healthy diet.

The following statements can be classified as reasonably agreed with or disagreed with:

- Chicken is a poor quality product (+3, statement 7).
- I refuse to pay more for chicken than other protein (+3, statement 10).
- Chicken spoils very quickly once cooked (+3, statement 21).
- I think a meal is incomplete without chicken (+3, statement 26).
- When chicken is cooked, the final product is always tasty (-3, statement 9).
- My perception of chicken is not influenced by the media (-3, statement 15).
- Chicken can be consumed during any meal of the day (-3, statement 41).
- Chicken is my first choice if I have to prepare an unexpected meal (-3, statement 49).

Statement 7 can be linked to the risk elements of chicken where poor quality would reinforce this perception, as well as statement 21, which

indicates that chicken spoils quickly once cooked. These two statements are aligned with perceptions of risk in chicken as a generic food brand. However, the placement of statement 26, which indicates a positive association with chicken, is surprising in this factor.

The placement of statement 15 indicating a moderate agreement that the media do in fact play a role in perception formulation might be an indication of how the perceived risk element of chicken was established.

The following statements received extremely low rankings:

- Chicken is unaffordable (+2, statement 8).
- I do not associate chicken with a high-quality lifestyle (+2, statement 23).
- Chicken advertised on promotion is a poor quality product (+2, statement 32).
- Chicken does not appear to be as clean as other proteins (+2, statement 47).
- I think there are harmful elements in chicken meat (+2, statement 48).
- Chicken is not expensive (-2, statement 2).
- I prefer chicken because of the variety of portion options (-2, statement 11).
- I enjoy exchanging chicken recipes with my friends (-2, statement 16).
- I purchase chicken for the taste (-2, statement 25).
- I always eat chicken when I want to lose weight 9-2, statement 39).
- When eating chicken, I experience it as a dry protein (+1, statement 5).
- I prefer other protein food to chicken (+1, statement 6).
- I prefer fish to chicken (+1, statement 19).
- Chicken is the most nutritious protein I feed to my pets (+1, statement 35).

- The texture of chicken is not very appealing (+1, statement 37).
- I only prepare chicken on special occasions (+1, statement 45).
- Even if I have a negative experience with chicken, I will eat it again (+1, statement 46).
- Chicken is not a luxury item (-1, statement 1).
- I find chicken convenient because it is quick to prepare (-1, statement 12).
- I only buy chicken if I know how it was produced (-1, statement 17).
- Chicken is safer to eat that other protein (-1, statement 20).
- Eating chicken makes me feel good about myself (-1, statement 27).
- A “best-before” date on chicken indicates a safe product (-1, statement 31).
- Chicken is reliable because it is available from any food outlet (-1, statement 36).

The following statements were rated in the neutral column:

- I am very knowledgeable about chicken because of media reports (statement 18).
- Before buying chicken, I inspect it carefully to determine the quality (statement 22).
- The country of origin has no influence on the quality of chicken (statement 24).
- I prefer to buy chicken whose packaging displays quality labels (statement 28).
- I only purchase chicken from a reputable outlet (statement 33).
- Chicken cannot be served with just any dish (statement 40).
- Chicken is not packaged conveniently (statement 43).

Based on the placement of statement 15, it is surprising that statement 18 was placed in the neutral column. The interpretation of the statement could have differed from that of statement 15. The placement of all the

other statements in the neutral column indicates that chicken is not the preferred food brand when protein options are considered.

There were no statements that strongly distinguish factor 4 from any other factor.

In terms of statement placements, it is vital to also investigate patterns of similar statement placement in similar positions. In this Q study, the repeated placement of the following statements was recorded in the neutral columns:

Statement 4: I prefer chicken to beef (factors 1, 2 and 3).
Statement 24: The country of origin has no influence on the quality of chicken (factors 2, 3 and 4).

The positioning of these two statements, which occurs in three factors, indicates that the preference for chicken over beef does differ in the population where some individuals have strong preferences for either beef or chicken. Although statement 24 is placed in a moderate position win factor 1, which indicates that those participants are concerned with the origin of chicken, in general, the country of origin does not seem to play a role in the quality of chicken for the majority of participants in this Q study.

Based on the analysed results of chicken as a generic food brand, the following subjective perceptions appear to dominate in the South African population:

- Chicken is a high quality product and is favoured for the preparation flexibility it offers.

- Chicken is regarded as inflexible and not trusted by consumers as a safe protein source. Quality indicators on chicken product packaging are also important to consumers.

- Chicken is associated with a high-level lifestyle as a luxury item and contributes to a healthy diet.

- Chicken is perceived as a source of risk with low nutritional value by some consumers and the media do contribute to these perceptions.

It is evident that in the four dominant factors there is more than just one perceptual dimension. All the dimensions in the factors are, however, aligned and not in conflict with one another.

5.9 SUMMARY

This chapter explains the practical research elements utilised in this Q study on chicken as a generic food brand, as well as the participant selection process. The findings of the actual Q study are also highlighted, analysed and discussed. In the next and final chapter, the dimensions from all factors will be discussed as well as the success and limitations of the research.

Chapter 6 - DISCUSSION AND CONCLUSION

6.1 INTRODUCTION

This study was undertaken to identify dominant perceptions of chicken amongst an identified segment of the South African population in and around the urban areas of Johannesburg and Pretoria (Tshwane). After a concourse was derived from the literature and fieldwork, Q methodology was utilised to identify the dominant perceptions of chicken as a generic food brand.

In this chapter the various factors identified are analysed in more depth to examine the dimensions that emerged in each factor and their related subjective perceptions. The study will then be reviewed in its entirety.

6.2 DISCUSSION ON FACTOR DIMENSIONS

All dimensions within the dominant factors are discussed as follows:

6.2.1 FACTOR 1: CHICKEN QUALITY AND CONVENIENCE

According to the statements that contributed significantly to the establishment of factor 1, the following dimensions can be identified:

- **Convenience of chicken**. The convenience aspect of chicken is defined by participants as the quick preparation time of chicken and the freedom to prepare chicken in their preferred way. Another aspect contributing to the perception of chicken as convenient would be the ease of experimentation with chicken. Therefore participants whose opinions contributed to factor 1 perceive chicken as a trusted protein brand.

- **Preparation freedom**. When reviewing the two distinguishing statements that emerged in factor 1 and concentrating on the experimental or preparation freedom of chicken, as well as the

indication that chicken preparation is not restricted to special occasions, the emphasis is that participants in this factor are convenience driven.

- **Quality and flexibility**. The quality of chicken is highlighted as suiting participants' needs and meeting their expectations and this leads to participants preparing chicken on a regular basis as part of their lifestyle and diet; there is also reasonable preference for chicken as a favourite take-away meal, with taste playing a definite role. This is confirmed by the very low agreement that chicken is not a luxury item but can be incorporated into everyday living. This group of participants seems to favour quick but tasty meals and this could be because of their active lifestyle.

- **Low price sensitivity**. Chicken advertised on promotion is not perceived as being a poor quality product, which implies that the participants purchase chicken advertised on promotion because they perceive all chicken to be of good quality. The very low disagreement with the fact that chicken is unaffordable implies that the selling price of chicken is not a consideration for these participants.

- **Production methods and origin**. The fact that there is strong agreement that the production method of chicken is not important indicates that this group of participants has faith in the chicken industry's production standards. In contrast to this, the reasonable agreement that the country of origin plays a role in the quality of chicken implies that imported chicken might not be trusted as much as locally produced chicken.

- **Information labels**. The strong agreement on the importance of a "best-before" date on chicken products indicates that, although there is faith in production standards, this group of participants tend to rate the quality of chicken on the "best-before" date.

6.2.2 FACTOR 2: QUALITY INDICATORS AND HEALTHY LIVING

According to the statements that contributed significantly to the establishment of factor 2, the following dimensions can be identified:

- **Quality indicators**. Again, convenience in terms of chicken preparation freedom seems to be very important to this group of participants; however it is apparent that they rely a great deal on quality indicators before accepting or rejecting a protein source. Chicken is accepted as a high quality protein source because it can be measured using quality labels. The personal inspection of chicken in terms of quality, cleanliness and texture helps them meet their expectations of a high quality protein source.

- **Chicken as a luxury item**. This group of participants is very selective about where they purchase chicken and it seems that only reputable outlets will suffice. With a strong disagreement that chicken is unaffordable, it would seem that price is of no importance, while quality is. Therefore, with reasonable agreement, chicken is regarded as a luxury item.

- **Chicken's association with health**. A healthy lifestyle seems very important to this group of participants and chicken is regarded as a safe protein source when wanting to lose weight. With reasonable agreement, chicken is regarded as playing an important part of a healthy diet.

- **Packaging preferences and lifestyle association**. Chicken is only purchased from reputable outlets and participants regard the convenient packaging of chicken as very important. As price is not an aspect they worry about, they do not care that the more convenient and attractive the chicken packaging, the more expensive it will be. With reasonable agreement, chicken is associated with a high-quality lifestyle. Therefore this group of participants view chicken as a superior brand of protein.

6.2.3 FACTOR 3: INFLEXIBILITY AND DISTRUST OF CHICKEN

According to the statements that contributed significantly to the establishment of factor 3, the following dimensions can be identified:

- **Practical restrictions**. The participants strongly agree on the fact that chicken as a generic food brand has a lot of restrictions, which does fit into their lifestyle. These restrictions include preparation limitations, portion variety and packaging convenience. These aspects, which emphasise practical components, are viewed as restrictions that are important to this group of participants.

- **Texture perceptions**. These participants indicate definite reasons for not preferring chicken as a generic food brand, which include the texture of chicken. This is why chicken is also excluded as take-away preference.

- **Self-inspection and distrust**. When these participants are forced to purchase chicken, reasons unclear, they inspect it carefully to determine quality. They have a general distrust of chicken since they do not rely on quality labels to indicate quality but on personal inspection. This distrust of chicken is further emphasised by participants' reasonable agreement that chicken contains harmful elements and eating chicken is a health risk.

- **Personal experiences**. The current perceptions of inflexibility and distrust of chicken as a generic food brand could be because of negative personal experiences, since all participants who contributed to this factor reasonably agree with this statement. The aspect of negative experiences with chicken as a reason for rejecting chicken as a preferred food brand can be further explained by the low ranking and agreement of participants that the media is not the reason for their current subjective perceptions.

6.2.4 FACTOR 4: RISK ELEMENTS AND LACK OF NUTRITION IN CHICKEN

According to the statements that contributed significantly to the establishment of factor 4, the following dimensions can be identified:

- **Direct rejection**. Although the previous factor displayed some strong negative perceptions of chicken as a preferred generic food brand, this factor displays even stronger rejection of chicken.

- **Chicken as a risk factor**. This group of participants has strong beliefs that chicken simply is not safe to consume and is a serious risk to health. Therefore chicken is not found to offer what is expected from a protein source.

- **Nutrition and restrictions**. Again, this group displays perceptions that chicken restricts preparation freedom and does not offer many exciting food ideas, is not that filling and is simply not nutritious enough to be a meal on its own, as well as not being essential for a healthy diet. Therefore chicken is not perceived to be a quality food brand at all.

- **Media influence**. Within this factor the participants display reasonable agreement that the media does in fact influence their perceptions. If one reviews the negative media publicity given to chicken discussed in Chapter 2, which portrayed chicken as a protein with many risks, one can begin to understand why some consumers have dominant negative perceptions of chicken.

6.3 REVIEW OF THE STUDY

This study identifies four dominant subjective perceptions of chicken in the South African context. Aspects of each have not previously been identified in research.

The central perception is the importance of convenience for South Africans when it comes to food. The study identifies perceptions, which

indicate that product quality and quality indicators are utilised as measures of convenience and acceptance. The emphasis on convenience may also indicate lifestyle trends and the identified need for healthy living, with chicken being perceived as being part of this. With the dominant perceptions emerging around the lack of versatility in the use of chicken, the study identifies the reasons for this point of view and includes perceptions of chicken preparation limitations, lack of portion variety and restrictions on chicken packaging options to suit personal requirements.

There are, however, parallel expectations of chicken, which confirm existing research. These include the fear some consumers have of chicken being a health risk and hence the displays of distrust in chicken as a generic food brand.

Although the study managed to identify significant positive and negative dominant perceptions of chicken as a generic food brand, it could not successfully identify the role that communication plays in the creation of these perceptions. The main reason for this limitation is the fact that the statements drawn from the concourse may not adequately represent perceptions related to the influence of media communication in this study. This may be because the influence of media communication was perceived as a secondary question, not directly related to perceptions of chicken, and may therefore have received less attention.

Although there was reasonable agreement by participants who contributed to factor 4 that the media does influence perceptions of chicken, it did not emerge as strongly as was anticipated. The reason for believing that the media play an important role in the creation of perceptions was highlighted in Chapter 2, which showed that the chicken industry has received prominent negative publicity. Again, the statement selection from the concourse might not have had enough media perception-related representation. Hence, the exact role of the media and the overall influence of media communication on the

formulation of perceptions of chicken as a generic food brand require further assessment.

6.4 THE UTILISATION OF Q METHODOLOGY IN THE STUDY

Since this study explored the dominant perceptions of chicken as a generic food brand, Q methodology proved to be extremely suitable in generating the findings of this study, because the methodology reveals realistic individual perceptions that participants have of the subject. The participants were actively involved and Q methodology was found to be an easily understandable methodology to apply. Since subjective perceptions are complex and difficult to uncover, Q methodology allowed the researcher to identify dominant perceptions with a multitude of underlying dimensions in each perception. This added valuable information, which assisted the researcher in drawing conclusions and making interpretations.

Because Q methodology is flexible it can be applied to a multitude of research problems. Subjective perceptions of simple or complex problems can be identified since the methodology incorporates qualitative and quantitative analysing measures. It is therefore unique in the sense that it incorporates the “human” element in a systematic calculation process.

6.5 CONCLUSION

When the number of participants responsible for all factors is reviewed it is apparent that the majority of participants do perceive chicken as a preferred generic food brand. Looking at the study from a holistic point of view it is clear that participants have very definite expectations of brands and these expectations are lifestyle-driven. If a brand is able to be flexible in adapting to almost any lifestyle, there is a greater chance of creating acceptance and loyalty towards the brand. This is illustrated by, for example, the perceived freedom and flexibility in preparation that chicken offers individual participants.

In light of the findings of this study on the existence of prominent negative perceptions of chicken as a generic food brand, it may be in the interests of the chicken industry to address these negative perceptions and provide adequate information that could debunk many of the myths and allay the fears that surround the consumption of chicken.

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APPENDIX 1: Statements

24 negative and 25 positive

1 Chicken is not a luxury item
2 Chicken is not expensive
3 Eating chicken is a health risk
4 I prefer chicken to beef
5 When eating chicken, I experience it as a dry protein
6 I prefer other protein foods to chicken
7 Chicken is a poor quality product
8 Chicken is unaffordable
9 When chicken is cooked, the final product is always tasty
10 I refuse to pay more for chicken than other protein
11 I prefer chicken because of the variety of portion options
12 I find chicken convenient because it is quick to prepare
13 Chicken is my favourite take-away meal
14 Chicken does not offer that many exciting food ideas
15 My perception of chicken is not influenced by the media
16 I enjoy exchanging chicken recipes with my friends
17 I only buy chicken if I know how it was produced
18 I am very knowledgeable about chicken because of media reports
19 I prefer fish to chicken
20 Chicken is safer to eat than other protein
21 Chicken spoils very quickly once cooked
22 Before buying chicken, I inspect it carefully to determine the quality
23 I do not associate chicken with a high-quality lifestyle
24 The country of origin has no influence on the quality of chicken
25 I purchase chicken for the taste

26 I think a meal is incomplete without chicken
27 Eating chicken makes me feel good about myself
28 I prefer to buy chicken whose packaging displays quality labels
29 Chicken is flexible because it can be prepared in any preferred way
30 I like to experiment with chicken when cooking
31 A “best-before” date on chicken indicates a safe product
32 Chicken advertised on promotions is a poor quality product
33 I only purchase chicken from a reputable outlet
34 Chicken does not offer everything that I expect from a protein source
35 Chicken is the most nutritious protein I feed to my pets
36 Chicken is reliable because it is available from any food outlet
37 The texture of chicken is not very appealing
38 Chicken does not contribute to a healthy diet
39 I always eat chicken when I want to lose weight
40 Chicken cannot be served with just any dish
41 Chicken can be consumed during any meal of the day
42 Chicken is not that filling compared with other proteins
43 Chicken is not packaged conveniently
44 I think chicken is nutritious enough to be a meal on its own
45 I only prepare chicken on special occasions
46 Even if I have a negative experience with chicken, I will eat it again
47 Chicken does not appear to be as clean as other proteins
48 I think there are harmful elements in chicken meat
49 Chicken is my first choice if I have to prepare an unexpected meal

APPENDIX 2: Instructions for sorting the statements

All 49 statements that you are about to read contain positive and negative opinions regarding chicken meat. Please sort these statements on the data board according to the instructions that are given directly below:

- Please read through all the statements first to familiarise yourself with all the statements.

- Before placing the statements onto the data board, first sort all the statements into three piles: those you agree with, those you disagree with and those you are uncertain about or which are of no relevance to you. Please do this on the rough sorting sheet that has been supplied.

- It does not matter at this stage if one pile has more cards than the others.

- After you have finished with the rough sorting on the sorting sheet – you may wish to go through all the statements again to ensure that you are satisfied with the placements of all statements in the different piles.

- **You are now ready to start sorting the statements onto the data board.**

- Since this data board is a forced-choice format it means that the board indicates exactly how many statements must be placed in each column. For example, only 2 statements can be placed under +5.

- Please note that there is no vertical order of importance between statements. For example the two statements placed under +5 have both equal importance.

- Statements that you agree with (all plus columns) must be sorted to the right of the 0 on the data board and all the statements that you disagree with (all minus columns) must be sorted to the left of the 0 on the data board.

- You may change your mind about any statement at any time and move the statement around on the data board.

- From the three piles that you originally sorted roughly, start with the pile containing the statements you agreed with most. Now, place the statements with which you **most agree** under the +5 column (remember there is only enough space for 2 statements).

- Go to the rough pile of statements that you disagreed with, choose the 2 statements that you **disagree with most** and place them under the -5 column (remember there is also only enough space for 2 statements).

- Now continue this process with the rest of the statements with which you agree and disagree on each side of the 0 (centre).

- As you move from +5 to +4, +3 etc, statements will be placed on the blocks that you still agree with but to a lesser extend. For example, a statement placed on +5 is a statement that you strongly agree with. A statement placed on +4 is a statement that you still agree with but to a lesser extend.

- The same must be applied in the -5 to -1 area.

- All the statements, about which you have no opinion, that you feel uncertain about or which are of no interest to you, should be placed in the 0 column.

- Once again, statements can be moved around on the data board until you are satisfied with the placement of all statements.

APPENDIX 3: Final Study Results

C:\PROGRAM FILES\PCQWIN\studies\actual study 01.LOG - Based upon actual study 01.sty (8/27/05 5:37:51 PM)

Correlation Table - Actual study 01.sty (8/27/05 5:37:51 PM)

Sort	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	0	42	39	62	57	32	66	36	14	40	56	56	20	32	18	34	3	38	41	34	50	36	47	36	33	27	53	30	38	43
2	42	0	49	56	55	39	53	44	49	56	54	56	45	57	39	38	24	51	51	34	60	52	65	76	43	39	48	32	43	48
3	39	49	0	47	48	57	47	28	12	35	36	40	24	35	6	38	12	39	54	28	41	44	44	54	20	22	35	33	34	36
4	62	56	47	0	56	23	48	25	21	39	50	56	11	27	27	47	15	34	50	49	53	48	46	41	23	19	48	44	45	43
5	57	55	48	56	0	31	57	31	36	35	41	50	24	44	46	23	6	35	35	19	46	30	35	46	32	32	53	37	28	33
6	32	39	57	23	31	0	33	38	32	50	49	39	31	34	8	40	-8	36	26	38	28	36	36	43	34	38	39	28	30	26
7	66	53	47	48	57	33	0	51	16	52	47	44	26	42	31	34	6	39	43	28	45	38	47	47	41	35	52	32	38	49
8	36	44	28	25	31	38	51	0	32	60	50	46	56	63	38	47	-5	50	48	45	49	45	51	43	56	63	62	40	35	49
9	14	49	12	21	36	32	16	32	0	55	36	38	39	47	51	31	10	43	27	28	35	44	42	47	45	52	43	22	48	30
10	40	56	35	39	35	50	52	60	55	0	56	50	64	64	48	56	7	48	53	57	36	65	54	61	60	67	56	39	54	41
11	56	54	36	50	41	49	47	50	36	56	0	93	49	40	34	51	18	57	48	48	57	54	61	53	53	54	53	49	57	56
12	56	56	40	56	50	39	44	46	38	50	93	0	36	37	39	49	23	61	52	48	63	53	62	55	52	52	54	47	56	56
13	20	45	24	11	24	31	26	56	39	64	49	36	0	65	48	28	8	34	45	23	39	41	43	45	56	63	35	30	38	42
14	32	57	35	27	44	34	42	63	47	64	40	37	65	0	49	44	-3	51	55	43	47	55	63	66	52	62	54	31	38	52
15	18	39	6	27	46	8	31	38	51	48	34	39	48	49	0	23	9	34	27	21	39	31	31	36	44	44	39	27	28	31
16	34	38	38	47	23	40	34	47	31	56	51	49	28	44	23	0	21	56	57	93	45	88	51	42	27	35	57	56	66	53
17	3	24	12	15	6	-8	6	-5	10	7	18	23	8	-3	9	21	0	28	23	15	9	33	6	17	16	16	5	17	34	26
18	38	51	39	34	35	36	39	50	43	48	57	61	34	51	34	56	28	0	62	47	45	60	56	52	52	56	61	40	45	44
19	41	51	54	50	35	26	43	48	27	53	48	52	45	55	27	57	23	62	0	52	52	68	56	47	49	49	47	43	56	61
20	34	34	28	49	19	38	28	45	28	57	48	48	23	43	21	93	15	47	52	0	37	82	43	37	28	35	55	48	56	49
21	50	60	41	53	46	28	45	49	35	36	57	63	39	47	39	45	9	45	52	37	0	48	76	68	40	37	56	45	44	56
22	36	52	44	48	30	36	38	45	44	65	54	53	41	55	31	88	33	60	68	82	48	0	61	56	37	45	62	56	73	66
23	47	65	44	46	35	36	47	51	42	54	61	62	43	63	31	51	6	56	56	43	76	61	0	80	44	51	62	39	55	61
24	36	76	54	41	46	43	47	43	47	61	53	55	45	66	36	42	17	52	47	37	68	56	80	0	48	53	59	38	48	54
25	33	43	20	23	32	34	41	56	45	60	53	52	56	52	44	27	16	52	49	28	40	37	44	48	0	90	49	20	38	46
26	27	39	22	19	32	38	35	63	52	67	54	52	63	62	44	35	16	56	49	35	37	45	51	53	90	0	56	28	47	46
27	53	48	35	48	53	39	52	62	43	56	53	54	35	54	39	57	5	61	47	55	56	62	62	59	49	56	0	67	49	45
28	30	32	33	44	37	28	32	40	22	39	49	47	30	31	27	56	17	40	43	48	45	56	39	38	20	28	67	0	49	35
29	38	43	34	45	28	30	38	35	48	54	57	56	38	38	28	66	34	45	56	56	44	73	55	48	38	47	49	49	0	68
30	43	48	36	43	33	26	49	49	30	41	56	56	42	52	31	53	26	44	61	49	56	66	61	54	46	46	45	35	68	0

Note: Leading decimals have been omitted.

Factor loadings

Actual study 01.sty (8/27/05 5:37:53 PM)

Sort	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Factor 1	58	74	54	60	57	50	62	67	53	77	77	77	58	71	49	70	20	71	72	64	71	79	77	76	64	69	77	57	70	71
Factor 2	-8	8	-7	-29	10	5	2	24	29	29	-12	-19	36	36	33	-39	-25	-2	-20	-31	-7	-30	-1	10	36	39	1	-17	-28	-18
Factor 3	-38	-25	-34	-29	-36	-12	-26	12	13	14	-11	-16	21	10	10	35	15	10	13	32	-23	36	-12	-17	14	29	1	6	22	5
Factor 4	18	-10	16	12	12	19	20	11	-15	14	-16	-24	-12	1	-8	32	-31	-5	0	35	-15	12	-14	-12	-24	-18	23	18	-9	-15
Factor 5	23	-16	-22	8	22	-13	16	4	-8	-8	16	26	-8	-23	11	-13	3	9	-2	-7	-3	-21	-26	-32	21	17	22	11	-5	-6
Factor 6	-8	10	3	11	10	9	-15	-28	35	11	8	17	-5	-17	11	11	22	0	-14	10	-16	9	-23	-1	-12	-9	-5	6	7	-21
Factor 7	2	13	-11	16	30	-40	8	-13	15	-11	-24	-17	-7	4	25	-4	6	-7	-4	-6	14	10	7	12	-21	-18	16	6	10	8
Factor 8	13	4	20	12	6	0	24	-10	-12	7	-10	-16	3	-1	-4	-13	28	-9	25	-10	-23	4	-21	-6	14	4	-28	-15	11	11
Factor 9	22	-3	-27	9	-6	-12	8	9	-1	12	23	17	10	0	14	8	-14	-25	-3	14	5	-1	0	-15	-5	-11	-22	-3	6	15

Note: Leading decimals have been omitted.

Varimax Rotation

Actual study 01.sty (8/27/05 5:38:33 PM)

Sort	Label	Factor	1	2	3	4	5	6	7	8	9	h2
1			17	14	-72*	4	-11	-1	-11	-24	0	66
2			15	26	-40*	-16	-45*	32	-28	-12	-2	69
3			14	8	-37*	-13	-26	1	-60*	3	-5	62
4			33	-5	-60*	-18	-20	10	-15	-18	-3	62
5			5	12	-65*	-6	-16	31	-11	-5	-24	65
6			22	25	-13	5	-7	2	-58*	-19	-4	52
7			18	28	-68*	-1	-13	-1	-14	-3	-3	62
8			31	62*	-22	19	-21	0	-9	-12	-11	66
9			16	35	-2	-14	-18	59*	-8	-11	-8	59
10			39*	60*	-25	1	-9	31	-28	-9	6	78
11			32	34	-33	-11	-21	8	-15	-62*	-2	81
12			28	24	-35	-20	-22	14	-11	-70*	-13	91
13			17	65*	-6	-3	-19	20	-7	-7	7	55
14			25	62*	-17	6	-40*	21	-17	8	0	73
15			11	42*	-23	-2	-12	44*	14	-6	-5	48
16			90*	12	-11	-6	-12	7	-17	-14	-8	93
17			11	1	0	-60*	0	6	0	-7	0	38
18			32	39*	-16	-21	-22	9	-23	-19	-36	61
19			47*	37*	-32	-32	-23	-11	-17	-6	-2	68
20			84*	15	-14	0	-4	7	-14	-13	-3	80
21			21	21	-36	-1	-58*	11	-3	-28	-17	70
22			80*	25	-15	-30	-26	15	-15	-1	-4	95
23			29	33	-23	0	-70*	8	-14	-17	-8	82
24			19	31	-24	-13	-61*	27	-32	-4	-8	79
25			2	78*	-17	-19	-8	4	-11	-20	-11	76
26			14	83*	-7	-15	-8	11	-10	-14	-20	85
27			42*	31	-38*	6	-23	19	-11	-10	-56*	86
28			47*	12	-27	-2	-12	12	-8	-16	-26	45
29			56*	24	-22	-39*	-25	10	-2	-14	0	68
30			39*	34	-33	-24	-42*	-6	3	-15	7	66

* Denote a loading significant at 37

Factors	1	2	3	4	5	6	7	8	9	Totals
eigens	4.45	4.59	3.43	1.12	2.53	1.23	1.39	1.45	0.75	20.96
% variance	15	15	11	4	8	4	5	5	3	70

Factor scores
Actual study 01.sty (8/27/05 5:39:03 PM)

Actual study 01.sty file name

30 sorts
49 items
11 piles
9 centroids

2 3 4 5 7 7 7 5 4 3 2 frequencies
6.57142857142857 variance

scores edited scores edited 5:37:25 PM,8/27/05
factored
varimax
last opened at

Summary (varimax)
Actual study 01.sty (8/27/05 5:39:03 PM)

21 sorts have been accounted for in 8 factors.

n	fac	sorts contributing to each factor				
[4]	A	16	20	22	28	
[5]	B	8	13	18	25	26
[4]	C	1	4	5	7	
[1]	D	17				
[3]	E	21	23	24		
[1]	F	9				
[1]	G	6				
[2]	H	11	12			

Factors
I, have no loadings greater or equal to 37

---

[9] Confounded: 2, 3,10,14,15,19,27,29,30,
[0] Not significant:

Factor A for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
7	17	14	3	8	2	1	10	9	29	12
45	32	24	5	20	4	11	16	13	31	30
	38	37	18	23	6	15	25	36	44	
		48	22	27	21	19	28	41		
			35	40	39	26	34			
				43	42	33				
				49	46	47				

Sort with significant loadings:

--label--	sort	load	--label--	sort	load
	16	0.91		20	0.84
	22	0.81		28	0.47

Factor B for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
43	7	1	14	5	4	10	2	6	28	22
47	8	3	21	17	18	13	9	12	33	29
	37	23	26	19	24	15	11	31	39	
		38	40	30	32	16	20	36		
			42	34	44	25	41			
				35	45	27				
				48	46	49				

Sort with significant loadings:

--label--	sort	load	--label--	sort	load
	8	0.63		13	0.65
	18	0.39		25	0.79
	26	0.84			

Factor C for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
13	11	5	9	2	1	8	10	3	6	40
28	27	16	20	7	4	17	15	14	22	43
	44	31	25	12	18	19	34	26	37	
		46	33	29	23	21	35	48		
			49	36	24	38	39			
				41	30	42				
				47	32	45				

Sort with significant loadings:

--label--	sort	load	--label--	sort	load
	1	-0.72		4	-0.61
	5	-0.66		7	-0.69

Factor D for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
29	12	7	2	1	5	10	9	8	19	3
41	23	22	30	6	11	14	13	20	27	4
	28	42	31	21	15	17	37	26	46	
		44	38	24	16	25	45	36		
			43	33	18	32	49			
				34	39	35				
				40	48	47				

Sort with significant loadings:

--label--	sort	load
	17	-0.61

Factor E for actual study 01.sty (varimax)
Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
4	13	9	2	1	18	5	8	7	14	3
29	30	15	11	12	22	6	23	10	38	34
	44	41	16	17	24	19	32	21	42	
		49	25	20	28	35	47	26		
			39	27	33	37	48			
				31	40	45				
				36	43	46				

Sort with significant loadings:

--label--	sort	load	--label--	sort	load
	21	-0.59		23	-0.70
	24	-0.62			

Factor F for actual study 01.sty (varimax)
Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
14	19	5	3	6	1	2	16	17	9	15
47	37	7	8	11	4	12	20	24	27	36
	42	35	32	18	10	13	23	33	41	
		49	38	25	28	21	31	48		
			43	29	39	22	44			
				34	40	26				
				46	45	30				

Sort with significant loadings:

--label--	sort	load
	9	0.60

Factor G for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
4	28	2	3	8	6	5	14	15	1	7
44	36	27	13	11	10	9	29	17	19	47
	39	30	33	12	16	21	35	24	37	
		46	43	20	18	22	38	45		
			49	23	26	32	40			
				25	34	42				
				31	41	48				

Sort with significant loadings:

--label--	sort	load
	6	-0.58

Factor H for actual study 01.sty (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

-5	-4	-3	-2	-1	0	1	2	3	4	5
39	12	1	9	4	2	10	6	7	40	3
44	18	16	11	13	5	17	23	8	47	45
	28	33	27	15	19	20	26	14	48	
		41	29	30	21	22	34	43		
			46	31	24	25	38			
				36	32	35				
				49	37	42				

Sort with significant loadings:

--label--	sort	load	--label--	sort	load
	11	-0.62		12	-0.71

Item scores (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

	Factors	A	B	C	D	E	F	G	H
1	Chicken is not a luxury item	1	-3	0	-1	-1	0	4	-3
2	Chicken is not expensive	0	2	-1	-2	-2	1	-3	0
3	Eating chicken is a health risk	-2	-3	3	5	5	-2	-2	5
4	I prefer chicken to beef	0	0	0	5	-5	0	-5	-1
5	When eating chicken, I experience it as a dry protein	-2	-1	-3	0	1	-3	1	0
6	I prefer other protein foods to chicken	0	3	4	-1	1	-1	0	2
7	Chicken is a poor quality product	-5	-4	-1	-3	3	-3	5	3
8	Chicken is unaffordable	-1	-4	1	3	2	-2	-1	3
9	When chicken is cooked, the final product is always tasty	3	2	-2	2	-3	4	1	-2
10	I refuse to pay more for chicken than other protein	2	1	2	1	3	0	0	1
11	I prefer chicken because of the variety of portion options	1	2	-4	0	-2	-1	-1	-2
12	I find chicken convenient because it is quick to prepare	5	3	-1	-4	-1	1	-1	-4
13	Chicken is my favourite take-away meal	3	1	-5	2	-4	1	-2	-1
14	Chicken does not offer that many exciting food ideas	-3	-2	3	1	4	-5	2	3
15	My perception of chicken is not influenced by the media	1	1	2	0	-3	5	3	-1
16	I enjoy exchanging chicken recipes with my friends	2	1	-3	0	-2	2	0	-3
17	I only buy chicken if I know how it was produced	-4	-1	1	1	-1	3	3	1
18	I am very knowledgeable about chicken because of media reports	-2	0	0	0	0	-1	0	-4
19	I prefer fish to chicken	1	-1	1	4	1	-4	4	0
20	Chicken is safer to eat than other protein	-1	2	-2	3	-1	2	-1	1
21	Chicken spoils very quickly once cooked	0	-2	1	-1	3	1	1	0
22	Before buying chicken, I inspect it carefully to determine the quality	-2	5	4	-3	0	1	1	1
23	I do not associate chicken with a high-quality lifestyle	-1	-3	0	-4	2	2	-1	2
24	The country of origin has no influence on the quality of chicken	-3	0	0	-1	0	3	3	0
25	I purchase chicken for the taste	2	1	-2	1	-2	-1	-1	1
26	I think a meal is incomplete without chicken	1	-2	3	3	3	1	0	2

27	Eating chicken makes me feel good about myself	-1	1	-4	4	-1	4	-3	-2
28	I prefer to buy chicken whose packaging displays quality labels	2	4	-5	-4	0	0	-4	-4
29	Chicken is flexible because it can be prepared in any preferred way	4	5	-1	-5	-5	-1	2	-2
30	I like to experiment with chicken when cooking	5	-1	0	-2	-4	1	-3	-1
31	A "best-before" date on chicken indicates a safe product	4	3	-3	-2	-1	2	-1	-1
32	Chicken advertised on promotion is a poor quality product	-4	0	0	1	2	-2	1	0
33	I only purchase chicken from a reputable outlet	1	4	-2	-1	0	3	-2	-3
34	Chicken does not offer everything that I expect from a protein source	2	-1	2	-1	5	-1	0	2
35	Chicken is the most nutritious protein I feed to my pets	-2	-1	2	1	1	-3	2	1
36	Chicken is reliable because it is available from any food outlet	3	3	-1	3	-1	5	-4	-1
37	The texture of chicken is not very appealing	-3	-4	4	2	1	-4	4	0
38	Chicken does not contribute to a healthy diet	-4	-3	1	-2	4	-2	2	2
39	I always eat chicken when I want to loose weight	0	4	2	0	-2	0	-4	-5
40	Chicken cannot be served with just any dish	-1	-2	5	-1	0	0	2	4
41	Chicken can be consumed during any meal of the day	3	2	-1	-5	-3	4	0	-3
42	Chicken is not that filling compared with other proteins	0	-2	1	-3	4	-4	1	1
43	Chicken is not packaged conveniently	-1	-5	5	-2	0	-2	-2	3
44	I think chicken is nutritious enough to be a meal on its own	4	0	-4	-3	-4	2	-5	-5
45	I only prepare chicken on special occasions	-5	0	1	2	1	0	3	5
46	Even if I have a negative experience with chicken, I will eat it again	0	0	-3	4	1	-1	-3	-2
47	Chicken does not appear to be as clean as other proteins	1	-5	-1	1	2	-5	5	4
48	I think there are harmful elements in chicken meat	-3	-1	3	0	2	3	1	4
49	Chicken is my first choice if I have to prepare an unexpected meal	-1	1	-2	2	-3	-3	-2	-1

Consensus statements (varimax)

actual study 01.sty (8/27/05 5:39:03 PM)

There are no consensus item for actual study 01.sty Q-study

Differentiating statements (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

2 items distinguish Factor A from all other factors

	Factors	A	B	C	D	E	F	G	H
30	I like to experiment with chicken when cooking	5	-1	0	-2	-4	1	-3	-1
45	I only prepare chicken on special occasions	-5	0	1	2	1	0	3	5

No items distinguish Factor B

No items distinguish Factor C

1 item distinguishes Factor D from all other factors

	Factors	A	B	C	D	E	F	G	H
4	I prefer chicken to beef	0	0	0	5	-5	0	-5	-1

No items distinguish Factor E

No items distinguish Factor F

No items distinguish Factor G

No items distinguish Factor H

Factor correlations (varimax)

Actual study 01.sty (8/27/05 5:39:03 PM)

Factors	A	B	C	D	E	F	G	H
A	0	44	-40	-24	-51	33	-43	-55
B	44	0	-37	-20	-53	48	-41	-57
C	-40	-37	0	3	46	-24	37	57
D	-24	-20	3	0	10	-10	-8	23
E	-51	-53	46	10	0	-45	37	62
F	33	48	-24	-10	-45	0	-32	-36
G	-43	-41	37	-8	37	-32	0	43
H	-55	-57	57	23	62	36	43	0

reliabilities	94	95	94	80	92	80	80	88
std. errors	62	55	62	114	71	114	114	85