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CHARACTERISTICS OF DIFFERENT CONSUMER SEGMENTS IN THE AUSTRALIAN BEEF MARKET

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ABSTRACT
Beef consumers in Australia have shown differences in their preferences for products and sensitivity to price. This can be explained by the influence on expected quality of cues related to health, production process and eating experience. Eating experience is difficult to predict as consumers generally do not have enough information to form reliable expectations. In this context, branded beef can help to signal quality and reduce the degree of uncertainty that consumers experience when shopping. Focus group research identified different segments, premiums for preferred products and potential for large-scale differentiation and branding in the Australian market.

Key words: Beef Branding, Consumer Preferences, Segmentation, Focus Groups.

1.0 POTENTIAL FOR BRANDED BEEF

Companies in agri-food supply chains are becoming more competitive through differentiating and developing new products to meet consumers' preferences from different segments, increasing the consumers' loyalty and making their demand more price-inelastic (Grunert *et al*., 2004:260). Even though the quality consistency of each cut may be guaranteed, when consumers want to buy a piece of meat they do not have much information about its characteristics, so their purchase could be far from their preferences (Moeller 1997:1 and Polkinghornes 2007:2).

Consumers can experience problems predicting the eating quality when they shop, because their inferences are based only on the appearance of the product, perceiving a high risk when they make a choice. In this situation, a new way to signal the quality and provide more information, such as branding, can effectively solve this problem and create incentives to increase the quality in the complete supply chain (Grunert *et al*., 2004:262-267). As a consequence, the brand will be associated with certain attributes at a consistent quality level (Zeithaml, 1988; cited in Owen *et al*., 2000:3).

It is possible to differentiate beef products on the basis of: i) eating quality; ii) positive health effects; iii) added convenience; and iv) process characteristics. Eating quality aspects include taste and tenderness; desirable health characteristics are safety and nutritional value; convenience has dimensions in shopping, cooking, eating and garbage disposal; and process characteristics include origin, uses of genetically modified organisms (GMO), animal welfare and organic production, among others credence quality aspects (Grunert *et al*., 2004:268-271).

Nowadays, the major retailers in Australia have a home brand for generic products and in some places they are offering branded beef products as well. Large beef companies such as

Australian Agricultural Company (AACo), Northern Australian Pastoral Company (NAPCo), Heytesbury Beef, Sidney Kidman and Company, and Twynam Agricultural Group focus on strengthening their company brand through guaranteeing the quality of their production in relation to sustainable natural resource management, safe products and approved quality standards. AACo is also developing new brands related to special breeds with different characteristics, such as 1824 Premium Beef and AACo Wagyu Beef, composed of Darling Downs Wagyu, Kobe Cuisine and Master Kobe. At the moment, it is not possible to buy these products at supermarkets or retail stores; however, this trend to offering branded beef products demonstrates that brand strategy is being considered as a way to increase the competitiveness of the large beef companies (AACo, 2008; Heytesbury, 2008; NAPCo, 2008; S. Kidman, 2008 and Twynam, 2008). Small companies have survived offering differentiated products through specialisation and personal service, oriented to a small part of the market with needs not met by larger retailers. This strategy has allowed them to achieve significant price premiums (Jacenko and Gunasekera, 2005:2-3, Polkinghornes, 2007:2 and Coorong Angus Beef, 2008).

The challenge for the Australian beef industry is whether it is feasible and profitable to develop a wider range of branded products on a larger scale, where consumers in the future could recognise brands and associate them with different attributes, uses and origins. In this context, this document is oriented to analyse the factors that influence consumer preferences, the effects of price consciousness and sensitivity to price on the choice, the perceptions about meat quality and the way consumers form their quality expectations, the main identified beef consumer segments, and the differences detected between beef consumers in Australia.

2.0 CONSUMER PREFERENCES AND PRODUCT CHARACTERISTICS

Nowadays, it is possible to find a variety of food products in the market where consumers show different attitudes, feelings and appreciation in each case. In this context, it is important to identify the reasons why one product could be more attractive for a particular group of consumers, as the expression of these preferences will constitute the demand for that good (Varian, 1992:152-154). Because products contain different kinds and amounts of attributes, consumers will maximise their utility through the characteristics of the products consumed and they will be able to rank the products in relation to the attributes they possess (Lancaster, 1966:133, Ladd and Suvannunt, 1976:504 and Jacobsen and Svensson, 2008:4).

Weights associated with each characteristic are related to individual preferences; as a consequence, preferences and budget will constrain the choice of products-characteristics purchased (Lancaster, 1966:135-137). Usage context, circumstances, time, personality and demographic factors, such as age, sex and profession, can influence the preferences or the utility perceived for each product (Lichtenstein *et al*., 1993; cited in Owen *et al*., 2002:212). On the other hand, the consumers' behaviour will vary when a range of products are not considered as perfect substitutes and some of them have specific attributes, including brands (Owen, 1996:57). Therefore, the utility function of a consumer i for a beef product j from a set of z choices, can be summarised as:

$$U_{ijz} = \alpha_{ij} + \beta_i A_{ijz} + \gamma_j D_i + \varepsilon_{ijz}$$

where α_{ij} is a constant for beef product j, associated with the consumer's intrinsic preference for this type of product; A_{ijz} is a vector of attributes of j in choice set z; β_i is a vector which gives the weight of each characteristic. D_i is a vector of socio-demographic and behavioural characteristics of the individual *i*; and γ_j is the coefficient which indicates the degree of influence of this characteristic on the utility perceived by the consumer *i* from the product *j*. Finally, ε_{ijz} is a stochastic error component, assumed to be independently and identically distributed (Carlsson *et al*., 2003 and Tonser *et al*., 2005; cited in Umberger and Calkins, 2008).

Therefore, the maximum price to pay for a product will be equal to the sum of the marginal value of each characteristic of the product, influencing the consumers' demand functions (Ladd and Suvannunt, 1976:504-509). When a differentiated product has specific and interesting characteristics or in a different proportion, the substitution between products will be more difficult and the consumer will be able to pay more for goods with certain level of attributes assured, such as branded product (Lancaster, 1996:140-151).

3.0 PRICE CONSCIOUSNESS AND SENSITIVITY TO PRICE IN FRESH FOOD

Consumers face a range of different fresh food products to choose from with variations in price and quality due to seasonal and supply chain factors. For these reasons, price and quality are not necessarily correlated and consumers can be confused about the real value of each product. In this situation, they will have different reactions to face the perceived risk of choosing the wrong product, including a decrease in the sensitivity to price, reduce the quantity purchased, increase their efforts visiting more shops and increase their involvement analysing more carefully the choices available (Owen, 1996:75-76). Researches identify that price is not always the most relevant variable in the in-store choice, where groups of consumers exhibited different price awareness and sensitivity when they were interviewed. This behaviour demonstrates the existence of 'acceptable price ranges' or price thresholds within which consumers are indifferent to price changes (Owen *et al*., 2002:212-228 and Han *et al*., 2001:450). These zones of price insensitivity are influenced by the characteristics of each consumer, where people with higher reference prices, lower purchase frequency and higher brand loyalty have a wider and higher price threshold (Kalyanaram and Little (1994), cited in Han *et al*., 2001:451).

According to Gabor and Granger (1961:186-187) each consumer has an upper limit that determines the maximum willingness to pay for the product and a lower limit below which the quality of the product will be not reliable. When price limits are not known, a person can infer them by comparing prices of substitute products. Figure 1 shows a range of possible responses influenced by perceived risks and budget constraints, from consumers who are not aware to prices to those who are very budget/price conscious. As the budget has more influence in the decision, consumers will reduce the quantity purchased up to the point where they avoid the product (Owen, 1996:76).

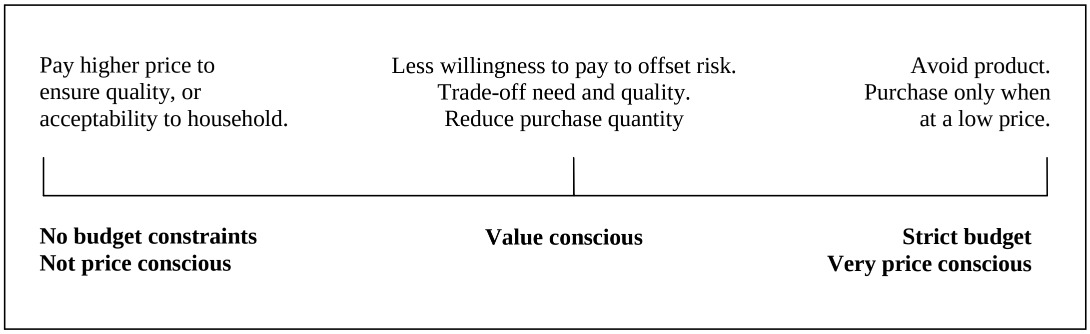

Figure 1. Strategies where there is a risk that the product is unacceptable.
Source: Adapted from Owen, 1996:76.

Consumers were segmented by Han *et al*. (2001:449-451) based on average threshold values, identifying a group with large price thresholds and another with small ones. Higher price sensitivity was found when consumers had a lower income, had more time to shop and had less loyalty to brand and stores, among other demographic and purchase characteristics. On the other hand, Wakefield and Inman (2003:207) demonstrated that consumers showed lower price sensitivity for hedonic products or when they plan to use them in a social context than products for functional purposes or private consumption.

4.0 MEAT QUALITY PERCEPTIONS

The quality in fresh products is not easy to evaluate when consumers are shopping in-store, introducing uncertainty in the purchase decision (Owen *et al*., 2002:211). Research has been conducted to establish what meat quality is for consumers and how they form their quality expectations. Grunert *et al*. (1996), cited in Grunert *et al*. (2004:260), developed the Total Food Quality Model (TFQM) framework including different visions about consumer quality perceptions and decision-making (see Figure 2).

Each person has beliefs and attitudes towards different products related to his or her culture, other psychological and personal characteristics, and previous experience. On this basis, consumers evaluate the product at the store and post purchase. There is a search quality (such as appearance of the cut) that is evaluated before the purchase; an experience quality (the taste of the meat) that is evaluated after the purchase; and a credence quality (such as the healthiness of the meat) that generally is not evaluated and consumers can only rely on the information provided by the retailer or the food company. For developing their quality expectations consumers will use quality cues, considered as pieces of information or indicators they can perceive; the quality perceived will vary from one person to another, and will affect the intention to buy or not the product (Issanchou, 1996:S7; Glitsch, 2000:184 and Grunert *et al*., 2004:261).

The quality cues can be divided into intrinsic and extrinsic factors, in relation to the physical characteristics and other attributes of the product (such as brand name, price, distribution, outlet and packaging), respectively. Table 1 classifies quality cues for beef cited by different researchers.

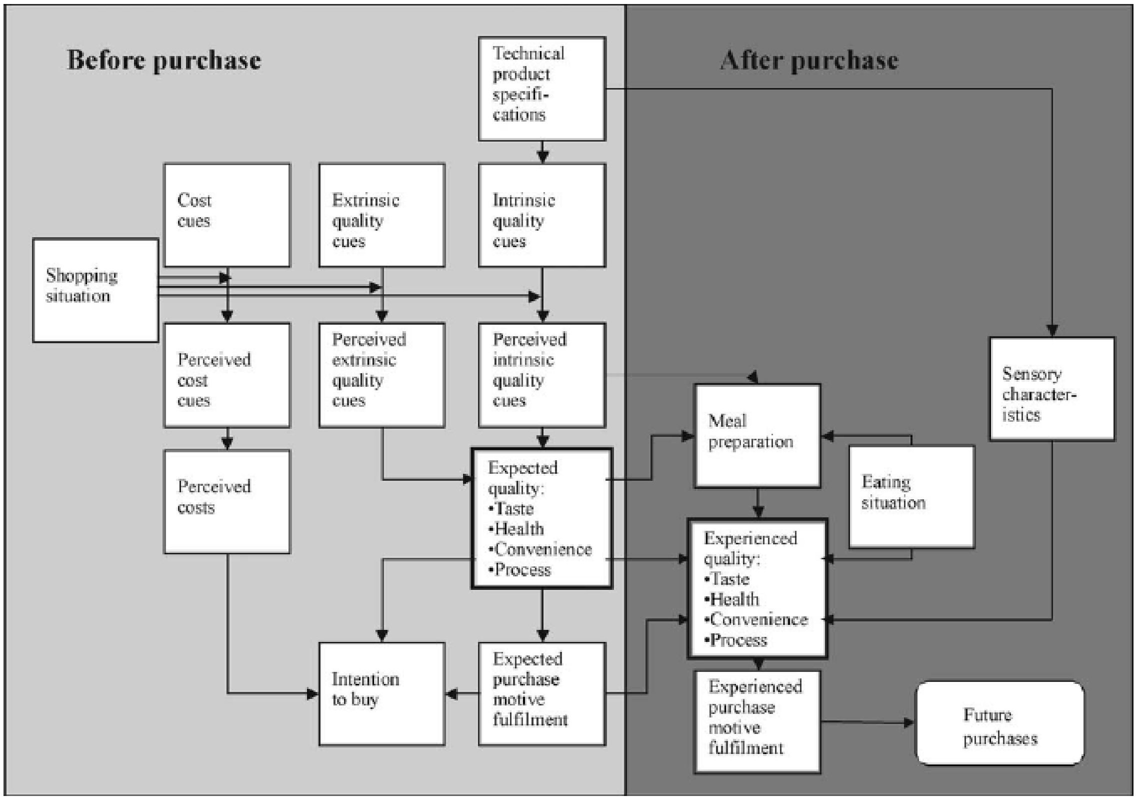

Figure 2. The Total Food Quality Model
Source: Grunert *et al*., 2004:260.

Table 1. Intrinsic and extrinsic quality cues.

Intrinsic quality cues	Extrinsic quality cues
• Cut.	• Price.
• Colour.	• Origin.
• Appearance.	• Information about animal production.
• Fat lumps (for steak, roast, and cubed only).	• Quality labels.
• Fat rim (for steak and roast only).	• Brand name.
• Marbling (for steak and roast only).	• Place of purchase.
• Fat content (for minced only).	• Package/presentation.

Source: Adapted from Issanchou, 1996:S7; Glitsch, 2000:184 and Grunert *et al*., 2004:261-262.

Grunert *et al*. (2004:261) found that consumers indicated taste, tenderness, juiciness, freshness, leanness, healthiness and nutrition as the most important quality dimensions to be evaluated. For Glitsch (2000:184-193) colour is one of the most important characteristics used by consumers in Europe, while price is one of the least helpful. Freshness is the most important safety indicator, while the place of purchase and the origin or environmental aspects of the product are becoming more important.

The experienced quality of a beef product may be far from the expected quality since consumers use quality cues which have a low degree of predictive power, as Grunert *et al*. (2004:261) found that the expected quality was strongly related to visual appearance of the product. On the other hand, consumers cited as important characteristics health-related cues (such as fat content and presence of pesticide residues) or process-related cues (such as animal welfare), but they did not mention any characteristic related to eating experience; this can be explained as they do not have attributes with a reliable predictive value for this concept (Grunert *et al*., 2004:264). In this context, it will be hard for consumers to predict the eating quality at all times with the cues available in each store, increasing the perceived risk about the product; for this reason, branded beef could effectively help them to reduce the degree of uncertain when they shopping (Issanchou, 1996:S9). As the perceived risk increases, the willingness to pay for a branded product will be bigger.

5.0 BEEF CONSUMER SEGMENTS

Díez *et al*., (2006:674-675) found two main beef segments of consumers in Spain with opposite preferences. Consumers in the first segment preferred meat with low levels of fat, while the second group was more interested in cuts with high levels of fat, generally from rustic breeds. On the other hand, Verbeke and Vackier (2004:159-166) said that involvement, defining it as the level of perceived importance plays a key role in explaining consumer behaviour as it influences different parts of the consumer decision-making process. Food products have shown a high degree of involvement, because there is a perceived risk to choose the wrong product with possible adverse health implications. In this way, Verbeke and Vackier identified four beef consumer segments in Belgium, classified as: i) 'straightforward meat lovers'; ii) 'indifferent meat consumers'; iii) 'cautious meat lovers'; and iv) 'concerned meat consumers'.

First, the 'straightforward meat lovers' segment included mostly men and daily fresh meat consumers, looking for taste and pleasure when eating meat, who prefer to buy meat from short supply market channels. The 'indifferent meat consumers' group was composed of more young people (under 25 years) with low enjoyment from eating meat, low concerns about meat quality and safety, low involvement in fresh meat and high price sensitivity. The 'cautious meat lovers' segment included consumers who have a family with children, showing a high concern about pleasure from eating meat and its perceived risk. Finally, the 'concerned meat consumers' group incorporated persons with high concerns about meat safety, with intentions to decrease the consumption of fresh meat. They preferred to eat less fresh meat, but with a higher quality; as a consequence, they generally shopped in butcher stores (Verbeke and Vackier 2004:166).

6.0 FOCUS GROUP RESEARCH IN AUSTRALIA

New product development analysis generally starts with qualitative research to analyse the attitudes, feelings, impressions and motivations of different persons and, after that, it continues with quantitative research to identify statistically significant differences between users (Mc Daniel and Gates 2007:127-128, Burns and Bush 1999:230 and Bellenger *et al*. 1976:2). Focus groups is a quantitative technique specially useful for analysing: i) consumer perceptions about a product; ii) consumer segments; iii) characteristics about different brands; iv) process of decision; v) purchase and use behaviour; and vi) consumers' expectation useful for improving the offer (Wilson 2006:105-106).

On this basis, our study conducted three focus group discussions with the aim to identify different consumer segments and the potential for large-scale differentiation and branding in the Australian beef market. The groups composed on average of eight persons were interviewed during September 2008 to detect differences in attitudes, feelings and characteristics of consumers who shop in the South Melbourne area and usually buy beef products in: a) supermarkets, b) butcher stores and c) specialised stores (where they only buy branded beef). The South Melbourne area was chosen because it has a zone of around two blocks where there are located Safeway and Coles supermarkets, the South Melbourne Market (including around 10 butcher stores), butcher stores on main streets and specialised stores (such as Polkinghornes Pty Ltd). Another relevant aspect of the area under study is that the supermarkets, some butcher stores and specialised stores are offering branded beef products.

The discussions were run by a consultant group located in Melbourne, following different questioning routes for each group. The interviews were assisted on-line from the University of New England and extra questions were sent when it was necessary. The discussion process was divided into the following six parts based on the route suggested by Krueger (1994:54-55):

i. General questions.
ii. Beef purchase process questions.
iii. Awareness of branded beef.
iv. Perceived differences.
v. Propensity to buy.
vi. Ending questions.

The focus group analysis identified different characteristics, preferences and sensitivity to price between the groups interviewed, which included a range of beef consumers with different lifestyles, interests, concerns and roles of meat in their lives, so they were seeking different attributes when shopping and for that reason, they visited different places to buy beef. Table 2 summarises the main concerns of each group of consumers that influence their decision to buy beef products.

Table 2. Main Concerns for Buying Beef Products

	Main Concerns			
Group of Customers	**Price**	**Freshness - Healthiness**	**Quality Consistency**	**Shopping Convenience**
Supermarket	X	-	-	X
Butcher Stores	X	X	-	X
Specialised Stores	-	X	X	X

Source: Developed by the authors.

In the table above, it is clear that all the groups were concerned about shopping convenience. This situation explains why some consumers go to the supermarkets and buy there branded beef products (such as King Island beef products), even though it is possible for them to go to butchers or specialised stores in the area. On the other hand, some beef consumers who generally shopping in butchers and specialised stores, never visit the meat section when they go to supermarkets. This can be a consequence of lack of trust in supermarkets' offer or social aspects that influence the behaviour of some customers who visit local butcher and specialised stores as a sense of belonging and community, so many of them will continue visiting these places even if were possible to buy branded beef at supermarkets across Australia.

Analysing the main purchase behaviours and concerns exhibited for the customers interviewed it is possible to identify five consumer segments in the Australian beef market, which exhibited some characteristics of the groups found by Verbeke and Vackier (2004:166).

The first segment includes consumers who generally buy beef at supermarkets and are mainly concern about price, especially those who are on a budget. In general, they are not sophisticated and want to buy products with an acceptable quality, so the lack of service is not an issue for the majority of them and their answers demonstrate that the cost of time and money involved in buying higher quality products exceeds their perceived benefits. Their eating quality is primarily tenderness; while flavour is not very important, because they tend to add other flavours in the cooking process or afterwards. This segment showed some characteristics and similar behaviour to the group 'indifferent meat consumers', found by Verbeke and Vackier (2004:166). They were not totally convinced about buying branded beef, because some of them consider these products would be too expensive and others were not sure about the benefits they would obtain.

The second segment is composed by consumers who often buy beef at supermarkets for shopping convenience reasons. They have an appreciation for higher quality products, but they do not have time to visit butchers or specialised stores, for this reason when they shopping they prefer differentiated or branded products when they are available at the supermarket. This segment exhibited a mixture of characteristics of the groups 'straightforward meat lovers', 'cautious meat lovers', and 'concerned meat consumers'; analysed by Verbeke and Vackier (2004:166).

The third segment groups consumers who buy beef in butcher stores and are concerned about price-quality relationship as they exhibited a high level of involvement, including knowledge about types of cuts, producing and processing conditions, origins, prices per kilogram and quality consistency. They go to butcher stores as a part of the meal preparation process to select their raw material or "ingredients" and sometimes obtain better prices than supermarkets. This segment showed similar characteristics and behaviour to the group 'straightforward meat lovers'; described by Verbeke and Vackier (2004:166). These persons have a high level of confidence about their skills to choose beef products with the quality characteristics they are looking for; as a consequence, the perceived benefits of branded beef products were not high and they showed a low interest in buying this type of products.

The fourth segment includes consumers who buy beef in butcher stores and are mainly concerned about freshness and healthiness of the products, especially related to chemical content or presence of toxic components. Most of them have a family with children at home, fact that explained their high level of involvement and request for information about origin, producing and processing conditions. They put a lot of faith in the butcher where they shop and, even though they could not recognise many brands, they were interested in branded beef as a way to receive products with the quality they expect. This segment exhibited similar characteristics and behaviour to the group 'cautious meat lovers'; found by Verbeke and Vackier (2004:166).

Finally, the fifth segment is composed by people who usually buy beef in specialised store and buy there branded beef products, because they are very concerned and passionate about beef quality dimensions, including consistency, animal conditions and processing; convenience and personal service. For them, other attributes of the product were also important such as the purchase environment (store conditions and customer service). In general, they put a lot of faith in the store and were more concerned about the quality than the price, so they showed a more price-inelastic demand, paying up to 55 dollars per kilogram of beef. This is explained because part of this group are persons who have family with children at home, while for others beef represents an important part of their lives, even though they do not have a high income, so they prefer to decrease the consumption and eat only beef with the best quality possible. This segment showed characteristics of the groups 'concerned meat consumers', 'cautious meat lovers', and 'straightforward meat lovers'; described by Verbeke and Vackier (2004:166).

Summarising, consumers who buy beef at supermarkets for shopping convenience reasons and the group of people who do not buy beef at supermarkets because they are very concern about quality consistency, freshness and healthiness are the potential target segments for selling branded beef at supermarkets and other retailers. This possibility will allow them to become branded beef customers or increase the frequency or quantity of branded beef purchased. Figure 3 shows the different segments identified analysing the main beef consumers' behaviour and concerns in Australia.

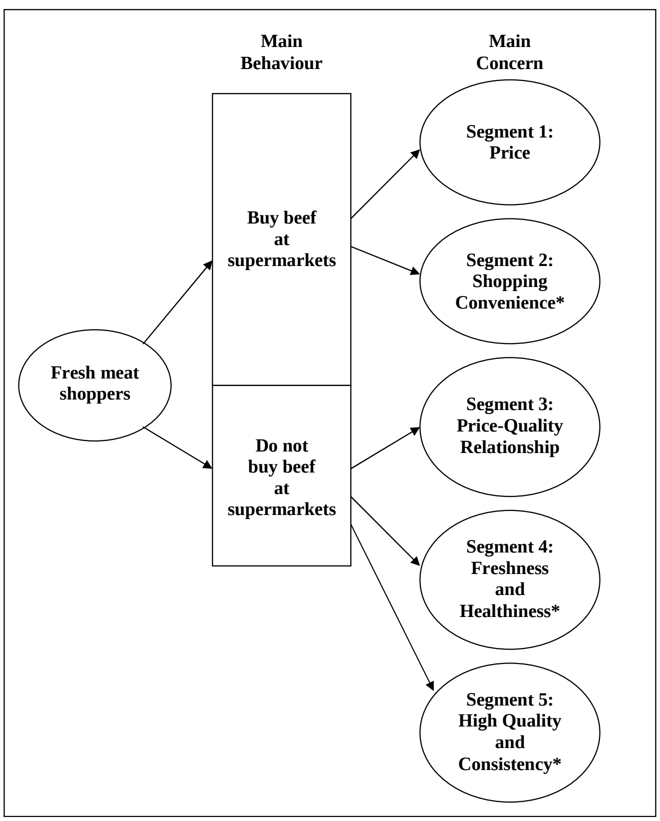

Figure 3. Consumer Segments in the Australian Beef Market.
* = This segment is willing to pay a price premium for branded beef products.
Source: Elaborated by the authors.

The potential target market for selling branded beef at supermarkets and other retailers are consumers who are not on a budget and have an appreciation for meat quality. To be successful, branded products would have to be sufficiently differentiated from unbranded supermarket beef. This initiative will create the possibility to introduce branded beef products across Australia, where two thirds of beef purchased by Australian consumers is acquired from supermarkets and two chains dominate the sector (Gong *et al.* 2007). The introduction of this kind of products into some supermarkets and other retail stores can be considered as the first step in the development of a more sophisticated beef offer. Nowadays, beef products are differentiated by origin, breed or production process, and the relation with a main company brand. Now we can analyse if is possible to introduce other branded beef products with more precise characteristics, which are currently available at specialised stores and restaurants, but not at supermarkets and other retail stores.

7.0 NEXT STEPS

The objectives of this study are to identify the characteristics of the demand for branded beef products and the potential for large-scale differentiation/branding in the Australian beef marketing system; while the specific aims are to decompose the domestic beef consumer market into appropriate segments, measure their scale, and estimate the propensity to buy and the willingness to pay for differentiated beef products.

The next steps in this research will be to conduct a survey across Australia of consumers who visit supermarkets and, after that, use multivariate data analysis to test the focus group’s conclusions and quantify the relationship between consumers’ characteristics and beef attributes, including brands. In this way, the research will identify: i) characteristics of branded beef offer in Australia; ii) characteristics of target market segments and estimated size; iii) groups of attributes relevant for different segments and influence the decision to buy; and iv) effects of consumer and product characteristics on willingness to pay.

Finally, the results should indicate the size of relevant beef consumer segments willing to pay a premium for products with identified preferred characteristics, the role of each part of the supply chain, incentives and other conditions necessary to implement a successful large-scale branded beef strategy in Australia.

8.0 CONCLUSIONS

Different consumer’s characteristics such as demographic factors, lifestyle and time restrictions, and the perceived risk of choosing the wrong product with possible adverse health implications can influence the preferences and sensitivity to price for beef products.

To predict the quality of a beef product is not easy for consumers using quality cues available in-store. They will perceive a high risk when these pieces of information have a low degree of predictive power, increasing the probability of a huge difference between the expected quality and the experienced quality. As the perceived risk about the beef product increases, the willingness to pay for a branded product will be bigger.

Using focus group research, five beef consumer segments were found in Australia: i) consumers who buy beef at supermarkets and are concerned about price; ii) consumers who buy beef at supermarkets for shopping convenience reasons; iii) consumers who do not buy beef at the supermarkets, because they are concerned about price-quality relationship; iv) consumers who do not buy beef at the supermarkets, because they are concerned about freshness and healthiness; and v) consumers who do not buy beef at the supermarkets, because they are concerned about high quality and consistency.

Consumers who are not on a budget and have an appreciation for meat quality, specifically those who buy beef at supermarkets for shopping convenience reasons and the group of people who do not buy beef at supermarkets because they are very concern about quality consistency, freshness and healthiness are the potential target segments for selling branded beef at supermarkets and other retailers.

To be successful, branded products would have to be sufficiently differentiated from unbranded supermarket beef while incentives for suppliers and main retailers among other conditions in the supply chain would be required to allow the channel to support the brand innovation.

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