



Relevance of brands and beef quality differentials for the consumer at the time of purchase

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ABSTRACT - The objective of this study was to identify the purchase habits and preferences of beef consumers, their level of knowledge on brands and products with quality differentials (certifications, packaging, premium lines), and the relevance of different attributes in the purchase decision, and to group consumers according to the profile of purchase decision. The methodology consisted of using an information-collecting instrument applied to 271 beef consumers. The data collected were analyzed using descriptive statistical analyses, chi-square analysis, and correspondence analysis, relating socio-demographic profile of the respondents with the other variables collected. Chi-square and correspondence analyses showed that younger consumers with lower levels of income and education are influenced by posters and advertisements at the point of sale, unaware of differentiated and branded products, and that they do not choose branded beef at the time of purchase. Consumers over 60 years showed a more conservative purchase profile, with no influence. The most valued attributes are appearance, price, and type of cut, being brand and certifications little relevant as tools to help decide the product purchase.

Key Words: beef, consumer, purchase decision, meat brands, quality

Introduction

Understanding the behavior of an individual at the moment of food purchase, especially beef, has become complex and essential for the marketing and strategic planning of companies. This behavior is closely related to the involvement during the selection of a product. The act of being involved in the purchase is linked to the level of interest and knowledge about a particular product (Verbeke and Vackier, 2004). Furthermore, with a greater knowledge of the final consumer, companies can formulate feasible strategies in accordance with their human and financial resources and specific interests, making them more competitive and increasing their advantage in the market (De Barcellos, 2007).

The consumer may show distinct behaviors depending on the circumstances. Besides defining the target audience through market segmentation, identification, and

selection of relatively homogeneous consumer groups, understanding their behavior and identifying distinct desires and expectations is vital.

As to the improvement of product quality, many actions have been carried out; however, the questions to be made are: what attributes are considered important, relevant, and fundamental for the current consumer? How to decide what and when to buy? And how this movement is understood as it has been leveraged by the different chain links related to the product diversity and new purchase options on the shelves?

Although the modern marketplace shows differentiation initiatives, such as adding value to products and market segmentation, there is no guarantee of loyalty of the consumer, culminating in the issue of products with quality differential being marketed together with lower quality ones, and affecting the credibility of the chain as a whole.

In the southern region of Brazil, beef is a product strongly linked to the eating habits of consumers, being part of their tradition; however, little information was found on the relevance of intrinsic and extrinsic attributes, among them brand and certification, in beef purchase decision of this consumer and how the informative signs (seals, certifications quality differentials) given by the industries are perceived.

The main objective of this study was to identify the purchase habits and preferences of the beef consumers,

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their knowledge on the brands and products with quality differentials (certifications, packaging and premium lines), and the most relevant attributes in the purchase decision, and group consumers according to the purchase decision profile.

Material and Methods

The study was divided into two phases: exploratory - the factors influencing the decision of beef purchase - and descriptive - the research sample, with 271 beef purchasers, who, at the moment of the approach, were at the points of sale, close to the meat sector. An initial question was used to select only the individuals who consumed beef and were purchasing this product.

We considered special or premium meat cut, the product with some attributes different from other competitors, generating a sense of reward to the individual who acquires it, and whose basic premise is the high-quality level (Pompeu et al., 2011). Such attributes may be a brand, certification, or seal, which allows the company to practice prices higher than the competitors (Ozório, 2003). In general, the consumer can have the information on the packing and/or seals, or quality clues (standardized appearance, price, among others).

A map of Porto Alegre, Rio Grande do Sul, Brazil (latitude -30.0277 and longitude -51.2287 30°1'40" South, 51°13'43" West), was used and, according to its macroregions (North, East, Center, South), the application points were defined uniformly, covering all regions. Establishments were chosen within each macroregion, including butcheries, meat markets, meat supermarkets, supermarkets, and small, medium, and large hypermarkets, besides the public market, totaling sixteen establishments. The data collection period lasted three consecutive months.

The questionnaire consisted of 19 questions (Table 1), merging open and closed questions, aiming to obtain qualitative and quantitative data (Neuman, 2009). To enable the associations between the variables, the open questions were classified seeking a pertinent grouping.

Regarding the brand attributes, considered the most important on beef purchase, a list with the following terms was provided: "packaging", "certification", "inspection", "brand", "breed", "production system", "origin", "easy to prepare", "price", "type of cut", "nutritional composition", and "product appearance". The consumers could choose one or more attributes and, after data collection, each variable was changed into binary, justifying percentages higher than 100% in the total sum of attributes.

The questionnaire was evaluated by four researchers in the area of meat quality to analyze the content and validate the tool and a pre-test was applied to verify the need of improvement and adjustments. The training of the interviewer team consisted on the reading and interpretation of all questions from the collection tool, besides a simulation approach with the consumers. This step was very important to standardize the approach to make it as uniform as possible.

At first, a descriptive analysis of the population sample according to gender, age, income, education, and family profile (number of persons at home and children under 14) was developed, including means and frequencies of database.

From the frequency distribution, the Chi-square method was used to compare the categorical variables to associate the socio-demographic characteristics of the respondents with the other variables collected (Bernués et al., 2012).

To study the relation between two categorical variables, a correspondence analysis was applied to the associations with significant differences in Chi-square test (Bernués et al., 2012). Through that methodology, we aimed at grouping the consumers interviewed according to the similarity of choices made at the time of purchase. When the value of the Chi-square test results in the rejection of null hypothesis of the independence of two variables, the frequency analysis hardly reveals the behavior observed in the data when there are various categories. In this case, the use of correspondence analysis is interesting, because it allows to represent the nature of existing relations graphically, wherein similar categories are placed close to each other. That method allows the graphical visualization of the most relevant relations of a large variable set (Carvalho and Struchiner, 1992). The association between the categories is given by their graphical proximity (Greenacre, 1981). The SPSS Statistics software, version 22, was used in the statistical analysis.

Results

The profile of the population sample was predominantly female (55%), age group between 31 and 60 years (62.7%), and monthly family income between four and seven minimum wages (34.2%). As to education, higher level prevailed (47.6%). In relation to household profile, most of them were composed of three or more members (63.5%) and no children under 14 years old (78.6%) (Table 2).

Regarding the habits and preferences of the individuals interviewed, 64.6% consume beef four or more times a week, most of them have no preference for the day of

Table 1 - Questionnaire applied to beef consumers during the purchase at the point of sale

Purchase habits and consumption preferences	
Variable	Category
Beef consumption frequency ¹	Four times a week or more Three times a week or less
Preferred moment of the week to purchase beef ¹	Weekend Week day No preference
Habit of reading the label of the product being acquired ¹	No Yes
Most important attributes at the moment of beef purchase	Packaging Certification Inspection Brand Animal race Production system Origin Convenience in the preparation Price Type of cut Nutritional composition Product appearance
Habit of purchasing always the same cut of beef ¹	Yes No It depends on the occasion
How much would you pay more for a cut with quality guarantee? ¹	Nothing From 1 to 10% 11% or more
Knowledge and acceptance of beef brands and differentiated products	
Knowledge of the certified beef concept ¹	No Yes
Satisfaction with the beef packaging you have found at the sale point ¹	No Yes
Level of understanding of information available on the label ¹	Understands all the information on the label Understands part the information on the label Does not understand the information on the label
Number of beef brands the respondent knows ²	None One brand More than one brand
What makes you choose a certain beef brand? ²	Nothing (Does not choose a brand) Price Quality/product appearance Others ³
Knows what special or premium ¹ cuts are	No Yes
Influence of posters, ads, and promotions at the sale point on the purchase decision	
Influence of the point of sale on the purchase decision ¹	Never Rarely Frequently Always
Additional variables	
Gender	Men and Women
Age	Group 1: up to 30 Group 2: 31 to 60 Group 3: 61 to 89

Continues...

Table 1 (Continued)

Variable	Category
Monthly family income	Up to 3 minimum wages ¹ From 4 to 10 minimum wages Above 11 minimum wages
Education	Elementary school High school College
Household profile	
Number of persons in the household	Number of persons in the household
Presence or not of children up to 14 years old	Presence of children up to 14 years old Absence of children up to 14 years old

¹ Multiple choice questions.

² Open questions.

³ Friends indication, animal origin, tenderness, product presentation, and taste.

⁴ National minimum wage considered: R\$ 724.00 (base year: 2014).

the week to buy the product (75.6%), and 55.4% read the label of the product being acquired; however, only 22.5% understand all the information contained therein. Most of the individuals in the survey are not satisfied with the packaging on the shelves (79.7%) and 46.9% always buy the same cut.

Almost half of the individuals interviewed (48%) are willing to pay up to 10% more for a product with quality assurance. Promotional posters and ads in the point of sale have no influence on the purchase decision in most of the consumers, who declared never or rarely to be influenced by such situational factors (51.3% and 22.9%, respectively) (Table 3).

Taking into account the knowledge of beef brands and differentiated products, most of the individuals understand the concept of certified beef (58.3%) and know at least one commercial brand of this product (50.2%). However, less than half of the individuals know what special or premium cuts are (45.8%). Among the respondents, 49.8% consider quality and appearance as tools of choice at the moment of choosing a certain beef brand (Table 3).

From the frequencies obtained in each variable, the socio-demographic profile of the respondents with their preferences and purchase habits was related. Interaction with significant difference ($P < 0.05$) were highlighted and only these associations were described herein (Table 4).

The male gender was associated to the higher frequency of meat consumption compared with the female (75.4% vs. 55.7%) ($P < 0.05$), as well as the knowledge on certified meat (66.4% vs. 51.7%) ($P < 0.05$). In addition, the largest quantity of beef brands known was related to men, since they showed superior knowledge in relation to one or more brands (82.8%) compared with women (70.5%) ($P < 0.05$).

To better characterize the sample studied, the age of the respondents was divided as follows: respondents under 30

years old, group 1; respondents between 31 and 60 years old, group 2; and from 61 to 89 years old, group 3.

It was observed that the group 3 was associated with the lowest weekly consumption of beef compared to the groups 1 and 2 (52.2%, 30.9%, and 32.4%, respectively) ($P < 0.05$), and the younger individuals showed higher consumption (69.1%).

As to the attributes that made the respondent choose certain beef brand at the moment of purchase, individuals between 61 and 89 years old were associated with “Nothing”, that is, they did not choose any beef brand (26.1%) ($P < 0.05$). It was possible to see the proximity between this group with the option “Nothing”, as well as the individuals between 31 and 60 years old with price, quality and appearance, and the youngest group with other attributes (friends indication, origin of the animal, meat tenderness, product presentation, taste) (Figure 1).

Surprisingly, as to knowledge of premium cuts, the youngest consumers (under 30 years old) were associated with no knowledge of this kind of product (72.7%; $P < 0.05$) (Table 4).

In relation to the influence of the point of sale in the purchase decision, most of the individuals between 31 and 60 years old showed no influence by ads, posters, or panels in the point of sale when buying beef (58.2%) ($P < 0.05$). The correspondence analysis of this association reinforces the Chi-square test results through the proximity between ages “31 to 60” and “never”, similarly between superior age group (61 to 89) and “rarely”. With the youngest respondents (under 30), in this aspect, the purchase standard was different, being often influenced by the point of sale. It was not possible to visualize this proximity with the Chi-square test only. It was also noted that the answer “always” stood alone, far from of all age groups (Figure 1).

Regarding the knowledge of beef brands among individuals who did not know any brand, there was a strong

association with the lowest income group (42.2%), as well as among individuals in the group of four to 10 minimum wages and their knowledge of just one beef brand (58.7%) and among the respondents with more than 10 minimum wages and the knowledge of more than one brand (47.9%) ($P < 0.05$). This result was very interesting, because it demonstrates that the gradual increase in the income of the respondents is significantly associated to the knowledge

of a greater number of beef brands. The correspondence analysis reinforced the above mentioned: lower income level is nearer to the non-knowledge of beef brands and higher income is near the knowledge of a greater number of brands (Figure 2).

Taking into account what made the respondent choose a certain beef brand, the group that opted for no brand (option “nothing”) was associated with the lower-

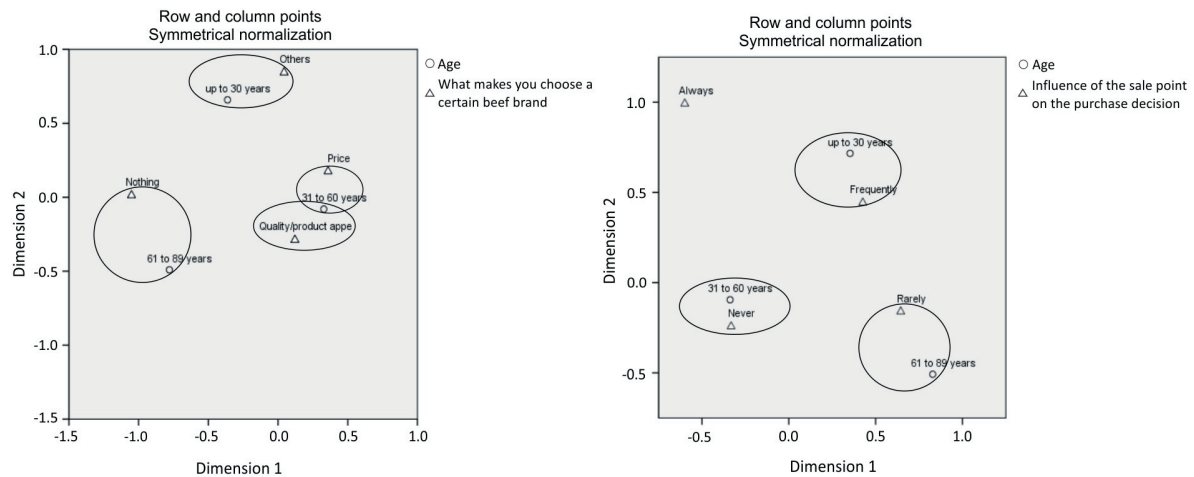


Figure 1 - Relation between “Age” and preferences and purchase habits.

Table 2 - Characterization of the sample population in the survey

Additional variable	Number of respondents (n)	Frequency (%)
Gender		
Men	122	45
Women	149	55
Age		
Up to 30	55	20.3
Between 31 and 60	170	62.7
61 to 89	46	17
Income ¹		
Up to 3 minimum wages ²	83	30.9
Between 4 and 10 minimum wages	138	51.3
11 or more minimum wages	48	17.8
Education		
Basic	44	16.2
Middle	98	36.2
University	129	47.6
Number of persons in the household		
Alone	20	7.4
Two persons	79	29.1
Three to five persons	156	57.5
More than five persons	16	5.9
Household classification (presence of children)		
Without children up to 14 years old	213	78.6
With children up to 14 years old	58	21.4

n - number of respondents. Total number of respondents was 271.

¹ Two respondents did not answer.

² National minimum wage considered: R\$ 724.00 (base year: 2014).

income individuals (21.7%); the price was associated to the group with income between 4 and 10 minimum wages (29%) and the quality and appearance were associated with higher-income respondents (77.1%) ($P < 0.05$). Such disparity reveals that higher-income consumers are more concerned with the qualitative attributes of the product they purchase, possibly due to the financial condition of choosing products with the best quality perceived. It is also

interesting to observe that even among the lower-income respondents, 42.2% are concerned with the “quality and appearance”, a percentage that is superior to the option “price” (25.3%); however, this association is not proven by the correspondence analysis (Table 4).

Graphically (Figure 2), the proximity between the level of income up to three minimum wages and “nothing” is perceived (no option for brand); for income between 4

Table 3 - Frequency distribution (n and percentage) of the variables collected through the collection tool applied to beef consumers

Variable	Number of respondents (n)	Frequency (%)
Beef consumption frequency		
Four times a week or more	175	64.6
Three times a week or less	96	35.4
Preferred moment of the week to purchase beef		
Weekend	28	10.3
Week days	38	14
Does not have a preference	205	75.6
Habit of reading the label of the product being purchased		
No	121	44.6
Yes	150	55.4
Level of understanding of the information available on the label		
Understands all the information on the label	61	22.5
Understands part of the information on the label	94	34.7
Does not understand any information on the label	116	42.8
Knowledge of the concept of certified beef		
No	113	41.7
Yes	158	58.3
Satisfaction with the beef packaging found at the point of sale		
No	55	20.3
Yes	216	79.7
Habit of always purchasing the same beef cut		
Yes	127	46.9
No	70	25.8
Depends on the occasion	74	27.3
Beef brands the respondent knows		
None	65	24
One brand	136	50.2
More than one brand	70	25.8
Attributes that influence the choice of determined beef brand		
Nothing (Does not choose brand)	39	14.4
Price	65	24
Quality/product appearance	135	49.8
Others ¹	32	11.8
Knows what special or premium cuts are		
No	147	54.2
Yes	124	45.8
How much would you pay more for a cut with quality guarantee		
Nothing	106	39.1
1 to 10%	130	48
11% or more	35	12.9
Influence of the point of sale on the purchase decision		
Never	139	51.3
Rarely	62	22.9
Frequently	47	17.3
Always	23	8.5

¹ Indication of friends, animal origin, tenderness, product presentation, and taste.

Table 4 - Associations between social-demographic determinants (gender, age, monthly income, and education) and the variables regarding purchase habits, brands knowledge, and preferences of beef consumption (%)

Social-demographic determinant/variable	Beef consumption frequency		Beef brands the respondent knows		Knowledge of the concept of certified beef		Attributes that influence the choice of determined beef brand			Knows what premium cuts are		Influence of the sale point on the purchase decision											
	Until four times	Three times or less	None	One	More than one	No	Yes	Nothing ¹	Price	Quality/product appearance	Others ²	P-value	No	Yes	P-value	Never	Rarely	Frequently	Always	P-value			
Gender																							
Men	75.4	24.6	0.001	17.2	50.8	32	0.024	33.6	66.4	0.015	11.5	22.9	49.2	16.4	0.146	54.1	45.9	1000	54.9	22.1	14.8	8.2	0.688
Women	55.7	44.3		29.5	49.7	20.8		48.3	51.7		16.8	24.8	50.4	8		54.4	45.6		48.3	23.5	19.5	8.7	
Age																							
Up to 30	69.1	30.9		16.4	60	23.6		54.5	45.5		20	23.6	38.2	18.2		72.7	27.3		36.4	25.5	25.5	12.7	
31 to 60	67.6	32.4	0.033	24.1	46.5	29.4	0.123	36.5	63.5	0.165	9.4	26.5	52.9	11.2	0.018	50	50	0.008	58.2	18.2	14.1	9.4	0.005
61 to 89	47.8	52.2		32.6	52.2	15.2		45.7	54.3		26.1	15.2	52.2	6.5		47.8	52.2		43.5	37	19.6	0	
Income																							
Up to 3 minimum wages	72.3	27.7		42.2	47	10.8		49.4	50.6		21.7	25.3	42.2	10.8		68.7	31.3		41	21.7	21.7	15.7	
4 to 10 minimum wages	60.15	39.85	0.188	13.8	58.7	27.5	0.000	39.9	60.1	0.172	13	29	45.7	12.3	0.001	55.8	44.2	0.000	52.2	25.4	17.4	5.1	0.01
11 or more minimum wages	64.6	35.4		20.8	31.3	47.9		33.3	66.7		4.2	8.3	77.1	10.4		25	75		68.8	18.8	8.3	4.2	
Education																							
Basic	61.3	38.7		52.3	36.3	11.4		54.5	45.5		15.9	34.1	36.4	13.6		77.3	22.7		43.2	22.7	11.4	22.7	
Middle	75.5	24.5	0.016	20.4	64.3	15.3	0.000	43.9	56.1	0.079	16.3	23.5	52	8.2	0.352	56.1	43.9	0.001	50	18.4	23.4	8.2	0.003
University	57.4	42.6		17.1	44.2	38.7		35.7	64.3		12.4	20.9	52.7	14		45	55		55	26.4	14.7	3.9	

¹ Nothing = Does not choose beef brand.

² Indication of friends, animal origin, tenderness, product presentation, and taste. Groups with P<0.05 differ statistically from each other.

Table 5 - Associations between household profile (number of persons and the presence or not of children up to 14 years old) and the variables regarding purchase habits, knowledge of brands, and preferences of beef consumption (%)

Social-demographic determinant/variable	Beef consumption frequency			Beef brands the respondent knows			Knowledge of the concept of certified beef			Attributes that influence the choice of determined beef brand			Knows what premium cuts are			Influence of the sale point on the purchase decision								
	Until four times	Three times or less	P-value	None	One	More than one	P-value	No	Yes	P-value	Nothing ¹	Price	Quality/product appearance	Others ²	P-value	No	Yes	P-value	Never	Rarely	Frequently	Always	P-value	
Number of persons in the household																								
1	10	90		30	55	15		50	50		20	25	25	30		50	50		50	35	15	0		
2	24.1	75.9	0.128	35.4	44.3	20.3	0.44	46.8	53.2	0.462	12.7	20.3	34.2	32.9	0.886	63.3	36.7	0.196	46.8	30.4	17.7	5.1	0.121	
3 to 5	40.4	59.6		17.9	53.8	28.3		39.1	60.9		14.1	16	32.7	37.2		49.4	63.7		51.9	19.2	18.6	10.3		
>5	43.8	56.2		18.8	37.5	43.8		31.3	68.7		18.8	6.3	50	25		62.5	37.5		68.8	6.2	6.2	18.8		
Household classification (presence of children)																								
No	23	77	0.559	23	51.6	25.4	0.635	43.7	56.3	0.209	16	18.3	31.4	34.3	0.209	55.9	44.1	0.303	53.1	21.1	17.4	8.5	0.585	
Yes	31	69		27.6	44.8	27.6		34.5	65.5		8.6	13.8	41.3	36.2		48.3	51.7		44.8	29.3	17.2	8.6		

¹ Nothing = Does not choose beef brand.

² Indication of friends, animal origin, tenderness, product presentation, and taste. Groups with P<0.05 differ statistically from each other.

and 10 minimum wages, the brand is chosen according to a category “price”; and above 11 minimum wages, the brand is chosen according to the appearance and quality of the product. Similarly, higher-income respondents were strongly associated to the knowledge of the concept of premium cuts, in contrast to low-income respondents (75% vs. 31.3%; P<0.05) (Table 4).

As to the influence of posters, ads, and/or panels in the point of sale on purchase decision, individuals with income up to three minimum wages were associated with being always influenced by those tools (15.7%) (P<0.05) compared with the higher-income respondents, who were associated with never having their decision interfered by such tools (68.8%) (P<0.05). This relation can be graphically reinforced by the proximity between the category “more than 10 minimum wages” and “never”, “up to three minimum wages” and “always” (Figure 2).

In relation to education, the group of “higher” education-level respondents showed lower frequency of weekly beef consumption (42.6%; P<0.05) (Table 4). In the other variables, income and education had similar associations: education increase was related to the knowledge of branded products. Only income had direct association with education, which was not observed to gender and age.

Among the respondents who said they know more than one beef brand, most of them have higher education (38.8%) (P<0.05). It is noteworthy that the correspondence analysis graph clearly shows this association: basic-level respondents were near “no brand”, medium-level respondents near “one brand”, and the “higher-level ones near “more than one brand” (Figure 2).

It was also possible to associate lower education levels (basic level) with no knowledge of the special cuts (77.3%) (P<0.05) and with the option “always” in the influence of posters and ads in the point of sale on purchase decision (22.7%) (P<0.05). As to the last association, the graphic representation clearly elucidates the association between the categories (Figure 2).

No significant associations were observed between the household profile and the variables studied (Table 5).

The attributes considered the most important, that is, the most influential at the moment of the purchase of beef were “product appearance” (75.6%), “price” (72.3%), and “type of cut” (60.1%), followed by “easy to prepare” (22.1%), “origin” (19.9%), “packaging” (18.8%), and “inspection” (17.3%). The production system (2.6%), breed (4.8%), and nutritional composition of the cut (8.9%) were

the least mentioned as important and having influence at the moment of purchase. The attributes “brand” (12.9%) and “quality control stamp” (13.3%) were little valued by the consumers as decision tools at the moment of the product purchase, proving to be of little relevance.

Discussion

Men showed higher level of knowledge on the meaning of certified meat (51.3%) compared with women (48.7%). This result contrasts with the study carried out by Velho et al.

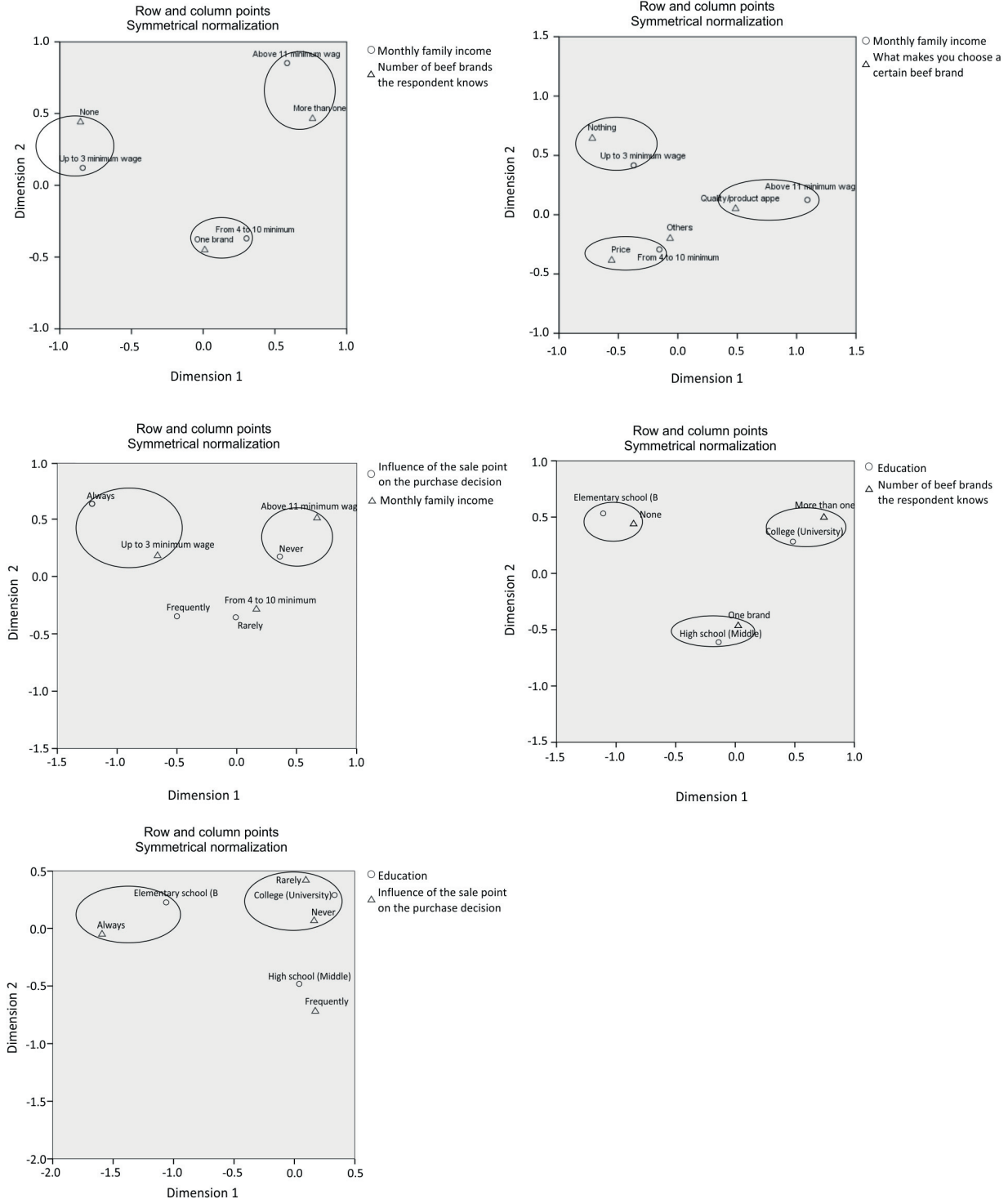


Figure 2 - Relation between “Monthly family income” and “Education” and preferences and purchase habits.

(2009) in Porto Alegre, Rio Grande do Sul, Brazil, in which most women (64.2%) knew the meaning of certified meat compared with men (55.2%).

In a research developed by Yen et al. (2008), investigating the knowledge of the consumer and the influence of socio-demographic factors in the meat consumption, men showed higher levels of meat consumption than women, showing a decline in consumption according to age.

The male gender also showed greater knowledge of beef, which can be related to the regional habit of consumption of this product, like having barbecue in special occasions and weekends, when predominantly men choose and purchase the product.

Teixeira (2013), analyzing the profile of beef consumers in Porto Alegre, like the results of the present study, observed that there is a trend of the male consumers having greater knowledge about the types of certifications, although women are more demanding when buying the product. The author also verified that women showed lower frequency of beef consumption compared with men.

Older-age respondents (61 to 89 years old) showed lower frequency of beef consumption, which may be related to the dissemination of possible adverse effects of red meat to health and because it is a more traditional public, who buys food having convictions already acquired. Moreover, they were not influenced by external factors when buying this product. These findings show that these consumers have pre-established opinions and concepts and a more traditional habit of consumption, not showing interest in trying out different products. The difficulty these consumers have in chewing beef, due to its texture homogeneity, may be another factor explaining the lower frequency of consumption. Research demonstrate that only 17.5% of the elderly are able to chew meat, such as beef. (Brunetti et al., 1998; Silva and Goldenberg, 2001).

The non-knowledge of premium products by the consumers under 30 years old were surprising, since, in general, this consumer group has more interest and easy access to different media. This fact may suggest that the promotion of this kind of product is not being valued or efficiently transmitted to these consumers.

The monthly family income and education showed to be related and their associations with the other variables had a similar behavior as to the knowledge improvement according to the education level increase. A significant difference was not observed between the income and frequency of beef consumption of respondents, differently from findings of other authors (Schlindwein and Kassouf, 2006; Coelho et al., 2009; Pes et al., 2012; Kirinus et al., 2013; Teixeira, 2013). Kirinus et al. (2013) observed a trend

of increasing beef consumption as the purchasing power of the consumer increases. Schlindwein and Kassouf (2006) observed that family income increases the probability of consumption and the expense with beef purchase, besides declaring that a 10% increase in the family income increases expenses with beef (2.8%).

Similarly, Pes et al. (2012) stated that the income increase generates increase in the consumption of protein food. Coelho et al. (2009) exemplifies that the income increase tends to increase the household consumption of products such as prime beef. Such disparity may be associated to a change in the behavior of the higher-income and higher-education consumer, who is aware of the appeals of "healthy life" and may be influenced by media and NGO (non-governmental organization) information, which, in the last years have presented a negative positioning in relation to beef. Teixeira (2013) also verified that the higher-income and higher-education respondents had greater knowledge on the kind of beef certifications. That author concluded that the education level, monthly family income, gender, and age were the factors that most influenced the consumer choices. These findings agreed with this research as to the sample studied.

It was observed that the product appearance, price, and kind of cut were the attributes most cited by the consumers as important in the decision of beef purchase and attributes related to brand and certification were poorly valued. These findings differ from studies developed by other authors in the so-called "more advanced" markets. In a survey conducted by Lim et al. (2013), it was found that the American consumers were willing to pay more for meat with sensorial and sanitary quality guarantee.

As to products with quality guarantee, certification, and origin labels, Loureiro and Umberger (2003, 2005, 2007) detected that the American consumers would be willing to pay more for meat. However, in a meta-analysis study developed with different agricultural products, Verlegh and Steenkamp (1999) found no significant difference in the effect of a certification in the purchase intention.

The results found in the present study may be related to a pattern of more conservative consumption by the respondents, who will decide what product to buy based on visual observation and pre-established beliefs and the presence of a seal or brand is not interesting and sufficient to significantly influence their decision.

Studies using correspondence analysis as a differentiation tool of consumer groups according to their choices and preferences at the moment of beef purchase were not found in the literature. It was possible to divide the consumers into distinct groups, according

Table 6 - Consumer groups according to their preference of purchase and knowledge of differentiated products

Youngsters Lower income Lower education	Higher income Higher education	Elderly, independent of income and education
Influenced by point of sale in the purchase decision	Not influenced by point of sale at the moment of purchase	Little or no influence of point of sale at the moment of purchase
Do not know beef brands	Know more than one beef brand	
Do not know premium products		
Do not choose branded products	Quality and appearance are tools for choosing a brand	Do not choose branded products

Youngsters: up to 30 years old; lower income: up to 3 minimum wages; lower education: basic level; higher income: 11 or more minimum wages; higher education: superior level; elderly: 61 to 89 years old.

to the proximity between the variables related to their choices at the moment of purchase (Table 6). Younger consumers (under 30 years old), with lower income (up to 3 minimum wages) and lower level of education (elementary) are influenced by the presence of posters and ads at the point of sale, do not know premium and branded products, and do not choose these products at the moment of purchase, in contrast to higher-education and higher-income consumers. The elderly were grouped independently of income and education, showing a more conservative purchase style, with little or no influence of extrinsic attributes such as brand and point of sale.

Conclusions

It can be verified that consumption frequency of beef is higher among men who has greater knowledge of certified beef with quality differentials, also having greater knowledge on beef brands available in the market. Respondents between 61 and 89 years old show lower frequency of consumption and are not influenced by external and situational factors at the time of purchase. The youngsters show little knowledge on the meaning of premium cuts. Higher-income and higher-education consumers show greater knowledge of branded products and quality certifications and tendency to value differential features in the beef they are purchasing, being a potential consumer niche that should be the target of industries and commerce. Almost half the respondents who look for branded meat have quality and appearance as choice tools at the time of purchase. The most valued attributes at the time of purchase are the product appearance, price, and cut and the least are the production system, breed, and nutritional composition of the product. The brand and the certification seals are little relevant as tools to help on the decision to buy beef.

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