

## RESEARCH ARTICLE

### **Integrating Consumer Perceptions into Sustainable Agricultural Practices: A Case of Commercial Broilers and Meat Quality in Kalutara District, Sri Lanka**

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#### **ABSTRACT**

*Understanding consumer perception is essential for ensuring the sustainability and competitiveness of the poultry industry, especially in regions experiencing shifting economic and dietary patterns. This study was conducted to investigate the key factors influencing poultry meat purchasing decisions among consumers in the Kalutara District. This study employed a descriptive research design to explore consumer perceptions of poultry meat quality and incorporates factor analysis to identify underlying dimensions influencing consumer evaluations. Totally, 250 samples were selected among the customers across 14 Divisional Secretariats in Kaluthara District, Sri Lanka. Consumer purchasing patterns indicated that the majority acquire poultry weekly (46%) or monthly (51.6%), whereas daily purchases were infrequent. Consumers exhibited significant concerns over manufacture and expiration dates (100%), whereas over half (56%) emphasised the importance of brand reputation. The factor analysis revealed 12 dimensions of consumer perceptions, including overall quality perception, certification concerns, appearance and texture preferences, and price sensitivity. Five distinct consumer clusters were identified, ranging from those prioritising overall quality indices related to appearance and consistency to those highly concerned with quality certification standards. These segmentation points to the need for tailored marketing strategies to appeal to specific consumer preferences. Producers and retailers must focus on certifications, product consistency, and quality assurance, while also innovating in product presentation and sensory appeal to satisfy different consumer segments and maintain market competitiveness.*

**Keywords:** *Consumer perceptions, Food certifications, Food security, Meat quality, Poultry farming*

#### **INTRODUCTION**

The poultry industry is a vital component of the agricultural sector and plays a crucial role in Sri Lanka's economy by contributing significantly to food security, employment, and gross domestic product (GDP) (Vidanapathirana *et al.*, 2024). It serves as a high-quality protein source and enhances agricultural productivity through efficient feed conversion while integrating effectively with crop farming. Technological advancements have further enhanced production efficiency and the industry's adaptation to health-conscious consumer

preferences has fueled the demand for value-added products (George and George, 2023). According to the Department of Census and Statistics (DCS) of Sri Lanka (2024), the animal production sector, which includes poultry, dairy, and egg production, contributed approximately 1.2% to the national GDP in the first quarter of 2024. This sector experienced a growth rate of 6.1% compared to the same quarter in 2023. Specifically, poultry slaughtering increased by 3.1%, milk production by 2.5%, and egg production by 17.8% during this period.

Consumer perception plays a pivotal role in the poultry industry, as it directly influences purchasing decisions and brand loyalty (Pandanwangi *et al.*, 2023). Consumers value quality poultry products that ensure safety, wholesomeness, and high nutritional value, with poultry meat offering 20-23% protein (Barbut and Leishman, 2022). The accessibility, affordability, and versatility of poultry meat have led to consistent growth in its consumption (Haque *et al.*, 2020). However, with this rising demand, there is an increasing focus on understanding consumer perception regarding the quality of poultry meat (George and George, 2023). Research shows a significant shift in Sri Lankan consumer behaviour towards prioritising the safety, nutritional value, and overall quality of meat products (Alahakoon *et al.*, 2016). Consumers are increasingly prioritising freshness, safety, and nutritional value in poultry meat, driven by health concerns, convenience, and the desire for a balanced diet (Bandara *et al.*, 2021; Priolo *et al.*, 2002). Consumer perceptions of poultry meat quality are shaped by multiple factors, including sensory experiences, socio-cultural influences, personal preferences, marketing strategies, and information sources (Imran *et al.*, 2014). Sensory experiences, such as taste, texture, and aroma, are crucial in forming consumer perceptions of poultry meat quality. Positive sensory encounters enhance consumer satisfaction and foster loyalty to specific brands or products (Grzybowska-Brzezinska *et al.*, 2023). Furthermore, the appearance of poultry, such as colour, marbling, fat content, and packaging, also influences consumer preferences (Adamski *et al.*, 2016; Inguglia *et al.*, 2023). Consumer perceptions of poultry meat quality substantially impact purchasing decisions and consuming behaviours. This study aims to identify the key factors influencing consumer preferences and purchasing decisions regarding chicken meat in the Kalutara District, Sri Lanka. Understanding these preferences can provide valuable insights for manufacturers and retailers, enabling them to tailor their products to meet consumer expectations and enhance market competitiveness.

## **MATERIALS AND METHODS**

This study employed a descriptive research design to explore consumer perceptions of poultry meat quality in the Kalutara District of Sri Lanka. Both qualitative and quantitative data were incorporated to thoroughly understand factors affecting consumer behaviour. Data collection involved structured questionnaires and direct interviews, followed by analysis using statistical

methods. The study was conducted, targeting adult consumers aged 20 and above. This age group was selected on the basis that individuals in this category are more likely to make independent purchasing decisions, especially regarding food items such as poultry meat. Individuals below this age threshold were excluded, as their consumption choices are often influenced or made by parents or guardians.

The study was conducted to cover all Divisional Secretariat (DS) divisions (14) within Kalutara, a region recognised for its high poultry meat consumption (Table 1). As part of the Western Province, Kalutara plays a significant role in Sri Lanka's poultry industry, housing numerous farms, processing companies, and meat outlets. Data were gathered from March to August 2024. The sample size of 250 respondents was determined based on the adult population (aged 20 years and above) in the Kalutara District, using a 90% confidence interval (Department of Census and Statistics, Sri Lanka, 2021). The required sample size was determined using the formula proposed by Krejcie and Morgan (1970) at a 95% confidence level, assuming a population proportion of 0.50 and a margin of error of 0.05, taking into consideration resource limitations and logistical feasibility. A convenience sampling method was initially employed due to practical difficulties in accessing a comprehensive, Divisional Secretariat-level disaggregated adult population database. Population data for each Divisional Secretariat were obtained from the Ministry of Home Affairs (2021). The proportion of the total population represented by each Divisional Secretariat was calculated using the formula:

$$\begin{aligned} &\text{Percentage of total population in each Divisional Secretariat} \\ &= (\text{Population of a Divisional Secretariat} \\ &\quad / \text{Total population across all Divisional Secretariat divisions}) \times 100 \end{aligned}$$

Using these proportions, the number of respondents allocated to each Divisional Secretariat was determined by:

$$\begin{aligned} &\text{Number of respondents per Divisional Secretariat} \\ &= (\text{Percentage of population in a Divisional Secretariat} / 100) \times 250 \end{aligned}$$

**Table 1:** Distribution of respondents according to Divisional Secretariats

| <b>Divisional Secretariat</b> | <b>Total population</b> | <b>Sample size</b> | <b>Percentage (%)</b> |
|-------------------------------|-------------------------|--------------------|-----------------------|
| Agalawatta                    | 40,573                  | 8                  | 3                     |
| Bandaragama                   | 77,715                  | 23                 | 9                     |
| Beruwala                      | 192,939                 | 33                 | 13                    |
| Bulathsinhala                 | 85,574                  | 17                 | 7                     |
| Dodangoda                     | 70,471                  | 13                 | 5                     |
| Horana                        | 132,856                 | 23                 | 9                     |
| Kaluthara                     | 165,691                 | 33                 | 13                    |
| Madurawala                    | 38,153                  | 7                  | 3                     |
| Millaniya                     | 56,982                  | 11                 | 5                     |

|            |         |    |    |
|------------|---------|----|----|
| Panadura   | 217,128 | 35 | 14 |
| Mathugama  | 127,682 | 17 | 7  |
| Walallwita | 63,456  | 10 | 4  |
| Ingiriya   | 61,315  | 11 | 4  |

### Data analysis

A factor analysis was performed to identify the underlying structure among the observed variables of appearance, colour, texture, smell, and consistency. This method reduces the dimensionality of the dataset by grouping correlated variables into latent factors, which represent broader perceptions of quality. To identify consumer segments based on their preferences, a Hierarchical cluster analysis was performed using average linkage (UPGMA), which balances all pairwise distances and avoids the sensitivity to outliers seen in single linkage.

## RESULTS AND DISCUSSION

### Socio-demographic characteristics

The socio-demographic characteristics of 250 chicken meat consumers from the Kalutara District in the Western Province of Sri Lanka are detailed in Table 2. The sample was composed of randomly selected individuals from all divisional secretariat regions of the district. The sample was balanced in terms of gender, with 47.2% male and 52.8% female respondents.

In terms of marital status, the majority of consumers (51.6%) were married, while 48.4% were unmarried. The age distribution showed that the largest group of consumers fell within the 31-40 years age range (36.8%), followed by those aged 41-50 years (32.8%) and 21-30 years (28.8%), with a small portion (1.6%) being over 50 years. Similarly, educational attainment varied, with 36.4% having completed primary education, 29.2% holding secondary education, and 34.4% with higher education. The majority of consumers had a monthly income level between 40,000-49,000 LKR (36.4%), while 31.6% earned between 30,000-39,000 LKR, and 32.0% earned over 50,000 LKR. The religious compositions were included 27.6% Buddhists, 26.4% Catholics, 23.2% Muslims, and 22.8% Hindus, reflecting the diverse cultural backgrounds of the respondents.

Although the proportion of Islamic individuals in our sample was higher than district-level census data for Kalutara, this likely reflects differences in the selected Divisional Secretariats. The study aimed to understand consumer perceptions of poultry meat quality, not to proportionally represent religious groups. However, the balanced representation supported a more inclusive understanding of consumer views without introducing bias. These socio-demographic variables provided a broad representation of chicken meat consumers in the district, allowing for a comprehensive analysis of their purchasing behaviours and perceptions of poultry meat quality.

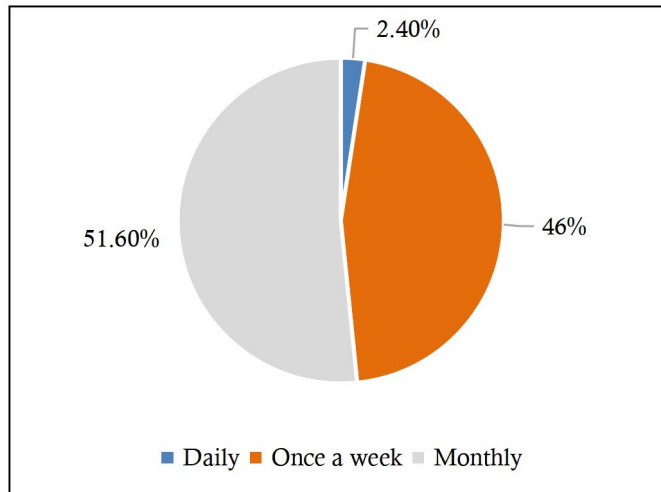
**Table 2:** Socio-demographic characteristics of chicken meat consumers in Kalutara District

| Variables                  | Types               | Frequency | Percentage (%) |
|----------------------------|---------------------|-----------|----------------|
| Gender                     | Male                | 118       | 47.2           |
|                            | Female              | 132       | 52.8           |
| Status                     | Married             | 129       | 51.6           |
|                            | Unmarried           | 121       | 48.4           |
| Age (Yrs)                  | 21–30               | 72        | 28.8           |
|                            | 31–40               | 92        | 36.8           |
|                            | 41–50               | 82        | 32.8           |
|                            | Above 50            | 04        | 1.6            |
| Educational level          | Primary education   | 91        | 36.4           |
|                            | Secondary education | 73        | 29.2           |
|                            | Higher education    | 86        | 34.4           |
| Monthly income level (LKR) | 30,000–39,000       | 79        | 31.6           |
|                            | 40,000–49,000       | 91        | 36.4           |
|                            | ≥50,000             | 80        | 32.0           |
| Religious culture          | Buddhism            | 69        | 27.6           |
|                            | Catholic            | 66        | 26.4           |
|                            | Islam               | 58        | 23.2           |
|                            | Hindu               | 57        | 22.8           |

### **Frequency of chicken purchases among participants**

The research examined the frequency of chicken purchasing behaviour among poultry consumers in the Kalutara District. The findings revealed that a small fraction (2.4%) of participants procure chicken daily. Conversely, a significant percentage (46%) claimed weekly chicken purchases, but the majority (51.6%) reported monthly purchases (Figure 1).

The findings indicate that the primary purchasing patterns occur weekly and monthly, while everyday purchases are comparatively rare. Comprehending these purchase behaviours is essential for enhancing and customising marketing efforts to correspond with regional consumer demand trends.

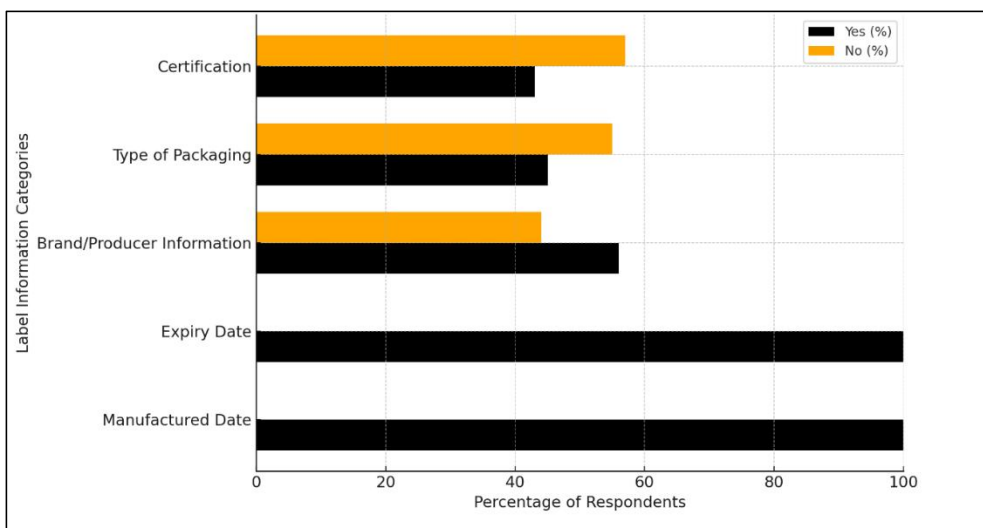


**Figure 1:** Distribution of chicken meat purchase frequency among participants

### Consumer perceptions when buying chicken

The study identified key consumer concerns when purchasing chicken, as shown in Figure 2. All participants (100%) expressed concern about the manufacture and expiration dates, highlighting the importance of freshness and safety information. Over half of the participants (56%) are concerned about the manufacturer, indicating that brand reputation significantly influences purchasing decisions. Accordingly, Northen (2000) perceived quality approach supports this observation, indicating that consumers rely on specific cues, such as brand reputation, to assess quality. In line with this theory, 56% of respondents in this study reported that the manufacturer was a significant factor, indicating that brand plays a key role in their quality judgments. The type of packing is a concern for 45% of consumers, showing that packaging details moderately impact their choices.

Olson and Jackoby (2000) also emphasise the role of labelling and packaging in helping consumers infer quality during shopping, which aligns with the findings of this study, where concerns about expiration dates, packaging, and certification were reported that consumers actively seek out such information to guide their decisions. Similarly, the 43% concern regarding certification can be viewed as a reflection of the focus on food safety and ethical standards in the production process, where certifications assure consumers about compliance with these standards. The 45% concern about packaging in this study reflects the importance of product image, with packaging serving as a visual indicator of quality and safety. These inputs can guide producers and retailers in addressing the most critical consumer concerns to build trust and meet market expectations. Furthermore, Caswell *et al.* (1998) categorise product attributes into those related to production processes, such as food safety, and product-specific attributes, such as packaging and sensory factors.



**Figure 2:** Consumer concerns regarding meat product information: Percentage of respondents indicating importance of various factors

### **The effects of socio-demographic variables**

The study examined the relationships between various socio-demographic variables and consumer behaviours regarding chicken meat. The results are summarised in Table 3, presenting the chi-square values ( $X^2$ ) and corresponding  $p$ -values for purchasing frequency, meat brand preference, and the importance of certification of meat quality. Gender exhibited no significant correlation with meat purchasing frequency ( $X^2=5.622$ ,  $p=0.06$ ), brand choice ( $X^2=0.397$ ,  $p=0.897$ ), or the significance of certification ( $X^2=0.466$ ,  $p=0.792$ ). This suggests that gender does not significantly influence consumer behaviour in this area. Conversely, age had a significant correlation with both purchasing frequency ( $X^2=6.485$ ,  $p=0.02$ ) and the significance of certification ( $X^2=8.952$ ,  $p=0.03$ ).

Older consumers generally buy meat more often and assign greater significance to meat certification, either due to heightened health awareness or established purchasing patterns. Nonetheless, age did not have a significant impact on brand selection ( $X^2=2.591$ ,  $p=0.385$ ).

**Table 3:** Association between socio-demographic profile and meat purchasing behaviour, brand preference, and importance of certification

| Socio-demographic character | Purchasing frequency       | Meat brand preference     | Importance of certification of meat quality |
|-----------------------------|----------------------------|---------------------------|---------------------------------------------|
| Gender                      | $X^2=5.622$<br>$p=0.06$    | $X^2=0.397$<br>$p=0.897$  | $X^2=0.466$<br>$p=0.792$                    |
| Age                         | $X^2=6.485$<br>$p=0.02^*$  | $X^2=2.591$<br>$p=0.385$  | $X^2=8.952$<br>$p=0.03^*$                   |
| Education level             | $X^2=5.417$<br>$p=0.02^*$  | $X^2=2.745$<br>$p=0.452$  | $X^2=6.111$<br>$p=0.01^*$                   |
| Monthly income              | $X^2=0.749$<br>$p=0.001^*$ | $X^2=5.273$<br>$p=0.04^*$ | $X^2=5.825$<br>$p=0.023^*$                  |
| Religious culture           | $X^2=7.025$<br>$p=0.02^*$  | $X^2=9.62$<br>$p=0.382$   | $X^2=3.362$<br>$p=0.762$                    |

\* *p*-values that are statistically significant at 0.05 level ( $p < 0.05$ )

The degree of education was a significant factor, reporting notable correlations with purchase frequency ( $X^2=5.417$ ,  $p=0.02$ ) and the significance of certification ( $X^2=6.111$ ,  $p=0.01$ ). This indicates that those with higher education levels are more inclined to purchase meat often and prioritise certification, potentially due to enhanced access to knowledge about food safety and quality. Monthly income exhibited a significant correlation with purchasing frequency ( $X^2=0.749$ ,  $p=0.001$ ), brand preference ( $X^2=5.273$ ,  $p=0.04$ ), and the importance of certification ( $X^2=5.825$ ,  $p=0.023$ ), suggesting that consumers with higher incomes not only engage in more frequent meat purchases but also demonstrate specific preferences for brands and certifications. De Silva *et al.* (2011) corroborated these findings by elucidating the correlation between socio-demographic characteristics and consumer behaviour in meat purchase, brand choice, and the significance of certification, which unveils distinct patterns. The growing emphasis on food quality among consumers, particularly in Sri Lanka, reflects a broader trend that transcends various food products, including meat and staple crops like rice. Researchers and agronomists have increasingly focused on the potential of traditional landraces, locally adapted varieties that have been cultivated over generations to enhance both nutritional quality and

yield (Pushpakumari and Geekiyanage, 2014, 2015; Pushpakumari *et al.*, 2017, 2024, 2025). Age, educational level, monthly income, and religious culture significantly influence purchasing frequency and attitudes toward certification, aligning with work that highlights socioeconomic aspects in consumer decision-making.

### **Factors influencing consumer perceptions and preferences**

The factor analysis conducted on consumer responses identified 12 distinct components, each representing a specific dimension of consumer perceptions and preferences regarding chicken meat quality. These components are shown in Table 4, along with the loading values that indicate the strength of association between the factors and the respective variables. The data indicated that consumers prioritise sensory characteristics like colour, texture, and smell when assessing overall quality. Component 1, which had high loadings for colour (0.752), texture (0.735), consistency (0.726), and smell (0.713), indicates that these sensory factors are critical in shaping consumer perceptions of meat quality. Certification significantly influences consumer decision-making, especially among those willing to pay more for high-quality products. In Component 2, certification (loading of 0.419) and appearance (0.413) were significant, particularly for consumers who have had negative experiences with meat (0.445). These findings indicate that certification functions as a quality assurance indicator, motivating consumers to purchase products they consider safer and of superior quality. Appearance emerged as a key determinant across several components. For example, Component 3 highlights the importance of both appearance (0.360) and texture (0.362) in consumer purchasing behaviour. Consumers focusing on appearance are more likely to assess the visual attributes of chicken meat before making purchasing decisions. Additionally, detailed visual inspection plays a critical role, as seen in Component 9, where specific appearance characteristics (loading of 0.685) had the strongest influence on consumer evaluations. This suggests that consumers with a strong focus on appearance tend to carefully examine the meat for defects or signs of freshness. Consistency is another crucial factor for consumers. In Component 5, satisfaction with consistency (loading of 0.535) and sensitivity to colour (0.383) indicate that a stable quality standard is necessary to meet consumer expectations. Component 10 further supports this, with a high loading for brand switching due to consistency issues (0.581), showing that inconsistent product quality can lead to brand loyalty erosion. Price sensitivity combined with certification is also an important consideration.

**Table 4:** Factors influencing poultry meat quality attributes

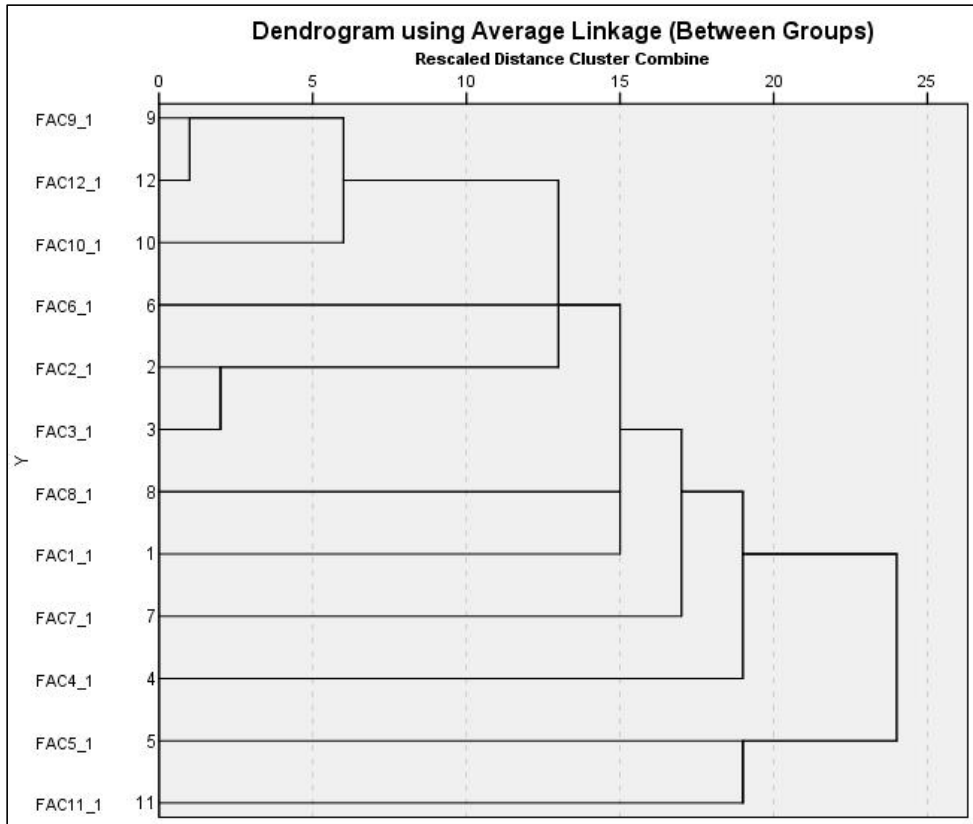
| <b>Component</b>                              | <b>Description</b>                                      | <b>Key attributes (Loadings)</b>                                       |
|-----------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------|
| 1: Overall quality perception                 | Broad focus on quality (colour, texture, smell)         | Colour (0.752), Texture (0.735), Consistency (0.726), Smell (0.713)    |
| 2: Certification and willingness to pay       | Concern with certification and paying for quality       | Certification (0.419), Appearance (0.413), Negative experience (0.445) |
| 3: Appearance and texture importance          | Focus on appearance and texture in purchasing decisions | Appearance (0.360), Texture (0.362), Fresh meat smell (0.489)          |
| 4: Specific characteristics and certification | Detailed appearance focus and certification influence   | Appearance details (0.446), Certification (0.401)                      |
| 5: Consistency and color sensitivity          | Sensitivity to consistency and color                    | Consistency satisfaction (0.535), Color sensitivity (0.383)            |
| 6: General appearance sensitivity             | General sensitivity to appearance                       | Appearance (0.364)                                                     |
| 7: Detailed appearance focus                  | Detailed focus on appearance                            | Appearance (0.501)                                                     |
| 8: Certification and appearance concerns      | Certification concerns with appearance                  | Certification (0.412), Appearance concerns (0.355)                     |
| 9: Detailed appearance evaluation             | Detailed evaluation of appearance                       | Appearance characteristics (0.685)                                     |
| 10: Consistency concerns                      | Importance of consistency                               | Brand switching due to consistency (0.581)                             |
| 11: Price and certification sensitivity       | Sensitivity to price and certification                  | Willingness to pay for better appearance (0.352)                       |
| 12: Negative sensory experiences              | Impact of negative sensory experiences                  | Unpleasant smell (-0.515)                                              |

In Component 11, a moderate loading (0.352) for willingness to pay for better appearance suggests that while consumers are cost-conscious, they are still willing to invest in products that demonstrate better visual quality and certification assurance.

These components, with varying levels of loading, highlight the importance of attributes such as appearance, texture, consistency, certification, and price sensitivity. The study done by Kennedy *et al.* (2004) identified "appearance" and "convenience" as the primary factors influencing consumer choice through thematic analysis. This study's quantitative factor analysis offers a more granular view of consumer preferences. While both studies underscore the importance of appearance, analysis goes further by identifying twelve distinct components, such as texture, consistency, and certification, which segment consumers into specific groups with varied priorities. This detailed segmentation enhances our understanding of the diverse factors that influence consumer decisions, providing a more comprehensive framework for targeted marketing and product development strategies.

### **Consumer segmentation in the chicken meat market**

The analysis of customer preferences and priorities in the chicken meat industry offers critical information on purchase behaviours, allowing producers and retailers to optimise their strategies accordingly. Hierarchical cluster analysis is a statistical method for finding relatively homogeneous clusters of consumers based on measured preference (Lee *et al.*, 2009; Thompson *et al.*, 2004). The hierarchical cluster analysis identified 5 distinct customer groups, each characterised by specific characteristics influencing their purchasing decisions (Figure 3). The first group of consumers has a comprehensive approach to evaluating the overall quality indices, including appearance, texture, colour, certification, quality, health standards, and price index. This group represents a significant portion of the market and carefully considers each of these factors when making purchasing decisions, particularly when buying chicken. The second group consists of appearance-focused consumers. This group pays close attention to detailed aspects of the chicken's appearance, including colour, fat distribution, texture, weight ratio, packaging, skin condition, and the absence of bruising or discolouration before making a purchase. The third group, appearance and texture-focused consumers, place significant importance on sensory experiences, especially the texture and appearance of the chicken, associating these attributes with freshness and overall quality. The fourth group consists of consumers who are highly sensitive to consistency and colour. They prefer foods with higher chroma, associating vibrant colours with freshness. As food decomposes, its chroma decreases, which contrasts with the desired appearance. This suggests that consumers rely on visual colour to evaluate freshness and avoid contamination. Therefore, understanding these colour preferences is essential for the industry. The fifth group comprises consumers who prioritise certification and safety. This group is prepared to pay a premium if the product upholds the requisite quality standards and safety protocols.



**Figure 3:** Dendrogram illustrating the hierarchical relationships among consumer clusters based on preferences and priorities in chicken meat purchasing

In summary, these clusters reveal the multifaceted nature of consumer preferences, with a strong emphasis on sensory attributes, certifications, and consistency. The findings align with recent research highlighting the increasing consumer awareness of quality and safety in food products (Adamski *et al.*, 2016).

Understanding these distinct consumer segments can help poultry producers tailor their marketing strategies to meet the diverse needs of their customers, thereby enhancing product appeal and market competitiveness. The findings from this study are supported by Ripoll Garcia *et al.* (2015), who classified Spanish consumers based on their food-related lifestyles and perceptions of chicken breast. This segmentation emphasises the necessity for producers and retailers to develop targeted marketing strategies that cater to the specific needs and consumption patterns of different groups. Bannor *et al.* (2022) further elaborate on consumer preferences, identifying four market segments in the context of indigenous chicken products: shopper consumer segment, conventional or ethnocentric consumer segment, privilege consumer segment, and pleasure-seeker consumer segment. These segments reflect different

motivations and willingness to pay for premium products, reinforcing the importance of understanding consumer diversity. By recognising these segments, the poultry industry can modify its offerings to satisfy specific consumer needs and preferences effectively. Moreover, Grunert *et al.* (2004) discuss consumer perception of meat quality and the implications for product development. They highlight the Total Food Quality Model, which posits that consumers form expectations about meat quality based on their experience and the informational cues present in the shopping environment. This model is relevant for understanding how consumers perceive the various attributes of chicken products, as it emphasises the role of sensory qualities, such as appearance and texture, in shaping consumer expectations and satisfaction. Martinez Michel *et al.* (2011) also identify the optimum combination of attributes desired by consumers and emphasise the willingness to pay for these attributes. This is critical for the poultry industry, as it indicates that enhancing product characteristics can lead to increased consumer satisfaction and profitability. Consumer preferences in the chicken meat market are diverse and multifaceted. By utilising inputs from prior research, poultry producers and retailers can implement more effective tactics that correspond with the diverse demands of various consumer segments, hence enhancing satisfaction and sales.

## **CONCLUSION**

The results suggest that in the Kalutara District, the acquisition of poultry meat is predominantly premeditated rather than spontaneous, with the majority of consumers making purchases on a weekly or monthly basis. Furthermore, the overwhelming concern for manufacturing and expiration dates, along with strong attention to brand reputation, underscores the importance of product transparency and trust in consumer decision-making. The factor analysis revealed 12 dimensions of consumer perceptions, including overall quality perception, certification concerns, appearance and texture preferences, and price sensitivity. Notably, consumers placed high importance on sensory attributes like colour, texture, and smell, as well as certifications that ensure food safety and quality. Producers and retailers must focus on certifications, product consistency, and quality assurance, while also innovating in product presentation and sensory appeal to satisfy different consumer segments and maintain market competitiveness. This information is particularly valuable for the commercial industry, as it can help uplift standards and promote more sustainable agricultural practices.

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