

To Buy Or Not To Buy : Consumers' Perception And Purchasing Behaviour On Local Meat In Segamat, Johor.

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Abstract. Malaysia has experienced significant economic growth in recent decades, and this has accounted for an increase in meat consumption. In Malaysia, the low supply of local meat creates a shortage in the market, encouraging consumers to purchase imported meat. Factors such as regional growth differences, seasonality changes, food safety and quality, personal tastes and habits, product prices, and health concerns, influence the demand for meat. So, it is important to find out how people in Segamat, Johor, think about and buy local meat. A total of 100 questionnaires were distributed through an online platform as a pilot study resulting in 60 meat consumers participation. Results identified that the key drivers that influenced meat purchases were price of meat and consumers' perception on food safety. Besides, consumer perception towards local meat is focusing on freshness of the meat (slaughtered on the day it is sold, not frozen) (91.67%), and the origin of the meat (not imported meat) (96.67%). The findings obtained will help in providing insightful information to local meat suppliers and the Johor State Department of Veterinary Services, about the concerns of local meat consumers in Segamat everytime they purchase the item.

1 Introduction

The demand for meat is growing globally. In 2023, Malaysians will consume an estimated 50 kilograms of poultry meat per person. This puts Malaysia among the top global consumers of poultry meat worldwide. The breakdown of Malaysians' meat demand in 2023 are, 50 kilograms per person for poultry meat, 5.73 kilograms per person for beef and veal, 5.16 kilograms per person for pig meat, and 1.14 kilograms per person for sheep meat [1]. Meat is one of the world's most important nutrient sources.

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According to Our World in Data (2023), meat production has more than tripled in the last 50 years, reflecting rising global demand. The world now produces more than 350 million metric tons of meat per year. Meat production is heading towards a slight increase (0.8 percent) from 2022 to 365 million metric tons [2]. Global projections indicate that the consumption of poultry, pig meat, beef, and sheep meat will increase by 15%, 11%, 10%, and 15%, respectively, by 2032 [3]. In Malaysia, poultry, cattle, beef, and buffalo meats are the most common sources of animal protein consumption. Like other ASEAN countries, chicken and fish dominate Malaysian diets. However, Malaysians have the highest per capita beef consumption among ASEAN countries, at 8.9 kg per person [4].

Various factors contribute to a high demand for meat-based products. Income, urbanization, and increased population all drive up food demand and shift people's dietary preferences toward more resource-intensive animal products and processed foods [5]. Consumers' preference for imported or local meat contributes to the market supply of this product. In Malaysia, the low supply of local meat creates a shortage in the market, encouraging consumers to purchase imported meat. The Agriculture and Food Security Minister, Datuk Seri Mohamad Sabu, stated that Malaysia requires an additional 200,000 metric tons of beef annually in order to satisfy the beef demand by 2030. Consequently, Malaysia is required to import 80% of its meat in order to satisfy the population's needs, due to the fact that the country's beef cattle production is still below 20%, specifically 47,000 metric tons [6]. Domestic beef production from cattle and buffalo is unable to meet demand for fresh meat and processed beef products [7]. Therefore, this industry presents a variety of opportunities to market participants.

Previous studies on meat demand have mainly focused on analyzing consumer preferences for specific aspects of meat, rather than investigating their views or beliefs toward meat. Perception is of utmost importance, since customers predominantly favor flavor above other criteria such as food companies, advertising, health, and product safety [8]. Consumers' perception of meat and meat products stems from their expectations of certain attributes, either intrinsic or extrinsic, which are interrelated and contribute to personal and environmental factors that influence consumer decision-making [9]. According to a recent study, consumers in Johor Bahru are influenced by factors such as freshness, cleanliness, and halal status when deciding whether or not to purchase imported beef meat [10]. [38] asserted that factors such as regional development disparities, social and demographic factors, seasonal variations, food safety and quality, individual preferences and habits, product pricing, and health concerns influence the demand for meat. Therefore, understanding consumer behavior is crucial, as the attention to customers' perceptions significantly influences their purchasing decisions. Therefore, this study focuses on the demand for local meat in Segamat, Johor, as no findings have been obtained to date. However, the majority of the provided reading materials focus on discussions about imported meat. The difference between consumer preferences and perceptions is also interesting to explore, as it will affect consumers' purchasing behavior in a community. This study concentrates on the demand for local meat in Segamat, Johor, as it has yet to yield any findings. Therefore, the primary goal of this study was to identify consumers' perceptions and purchase behaviors when purchasing local meat in Segamat. This study focused on local meat and how consumers choose it before making a purchasing decision.

2 Literature Review

2.1 Meat Consumption in Malaysia

Malaysia's food system is based on the agrifood sector, which involves a complex network of drivers with diverse profiles, interests, and expertise. The National Agrofood Policy 2.0 (2021-2030) includes livestock production among three subsectors: paddy and rice, fruits and vegetables, and fisheries and aquaculture. This will be achieved through the implementation of 18 strategies and 58 action plans [11]. The livestock industry not only provides the majority of protein sources, milk and dairy products in Malaysia, but it has also created numerous job opportunities, generated income, and has the potential to change the country's social patterns. *Pelan Strategik & Tindakan Pembangunan Industri Pedaging Negara 2021-2025*, 2021 outlines several issues and challenges of the livestock sector, including a low livestock base population to accommodate high extraction rates, increased procurement costs, operating costs (involving labor, feed and overall operating costs), insufficient development allocation, limited financial funds, limited areas, lack of local food resources, labor challenges, disease threats, and competition with imported frozen meat [12].

According to a Khazanah Research Institute study, Malaysia has one of the highest per capita bovine meat consumptions in Southeast Asia, despite the fact that the country is one of the region's lowest producers [13]. Between 1960 and 2005, per capita consumption of beef and poultry increased dramatically. From 1960 to 2005, per capita consumption increased by 900% due to its status as the most popular, cheapest, and homogeneous meat product in multiracial Malaysia. Similarly, per capita consumption of beef increased by nearly 260% over the same time period [14]. In 2020 people in Malaysia consumed more white meat (pork, poultry) compared to red meat (beef, mutton) with total meat consumed per capita being 61.5kg [15]. While for the future Malaysia intends to produce 50% (111,000 metric tons) of beef/buffalo meat and 30% (14,200 tons) of mutton/sheep meat within five years (2021-2025) [12]. Malaysia is currently experiencing a persistent scarcity of domestic beef, a matter of great concern as indicated by earlier research. The governments anticipate that the industry will persistently encounter a deficit in domestic beef supply and progressively rely more on imports [16]. Malaysia is heavily reliant on imported bovine meat, primarily from India in frozen form and Australia in fresh form, as well as from New Zealand and Brazil, to meet domestic demand. In 2018, India accounted for 78% of the value of frozen bovine meat imports, followed by Australia (12%) and New Zealand (5%) [17]. Imports are projected to increase in Mexico, Malaysia and Saudi Arabia, primarily due to rising national demand, and in Iraq due to tight domestic supplies [18].

The country's dependence on imported meat products does not guarantee long-term sustainability. Until now, the demand still exceeds the supply for local meat. This dependence is one of the unhealthy issues, as it does not help the development of the local economy. Domestic economic growth is very important in helping Malaysia's economic progress. Therefore, this study is expected to help the government, especially local authorities, to identify what factors can affect the purchasing power of local consumers, especially in Segamat.

2.2 Consumer's perception on local meat consumption

Consumer perception is a study under social science that can influence consumer behavior and preference when selecting a product. In today's competitive market, consumer perception is crucial for the success of a business, contributing to a buying trend and can determine a company's success or failure. Customer perception refers to the process by which a customer

selects, organizes and interprets information / stimuli inputs to create a meaningful picture of the brand or the product [19]. Brand perception and consumer preferences are integral factors that shape the success and longevity of businesses [20]. In a recent review of consumer perception on meat study, various factors can influence consumers to make a purchase. Different people have different perceptions of meat products. Studies have found a significant relationship between consumer perception and issues such as halal legality, quality, freshness, country of origin, and current issues such as organic meat and plant-based meat [10][9][14]. Consumers' perception of meat and meat products is based on dynamic psychosocial constructs, which have been tested over the last decade [21].

Quality and freshness have driven high demand for local meat in the market [22][23]. [24] the crucial factors for determining the demand for fresh meat (poultry) in Malaysia are the retail prices of chicken and mutton, household income, the number of households, geographic location (state and stratum), the ethnicity and nationality of the head of the family, and the education level of the head of the household. A comparison analysis was conducted to examine the differences between imported frozen buffalo meat and fresh local beef. [22] discovered that consumers preferred fresh local beef considering it was of higher quality. This study also revealed that the retail prices for fresh local beef were affordable. Meanwhile, a study by [25] on purchase intention organic meat in Klang Valley, Malaysia found that purchase intention behavior is influenced by both psychological variables and individual motives, including food choice motives such as meat characteristics, price, concern for safety, and concern for health.

2.3 Consumer's meat purchase behavior

Consumer behaviour includes all the actions of a customer, beginning with the search for suitable services and products, and continuing to the utilization and final use of these services or goods [26]. Consumer behaviour refers to the observable actions of individuals or groups, such as organisations, that are impacted by both external and internal factors [27]. These factors guide their decision-making process in selecting and enjoying the goods or services they are looking for [28].

In recent years, there has been a growing concern among consumers regarding the quality of food, especially in terms of its perceived impact on health and safety awareness including meats. The consumption of livestock goods has a direct relationship to the community's purchasing power or ability. There occurs a significant relationship between income levels and consumption behavior [29].

The consumer needs to consider numerous factors when deciding on purchasing meat. These include quality, price, hygiene, health, and so on. This study [30] indicates that there is significant potential for the creation of distinct goods that offer enhanced taste, beneficial health impacts, increased convenience, and attractive process characteristics. According to [31], the meat purchasing process comprises five stages: need identification, information retrieval, evaluating other options, purchase, and post-purchase evaluation.

Malaysian consumers are more sensitive to issues related to health and food safety. Another major concern for customers, especially Muslim consumers in Malaysia, is the halal status of food products [32]. According [28], two factors that influence consumer behavior in buying factors are external and internal factors. External factors, including the fluctuating quality approach and the size of the household, have a partial impact. On the other hand, internal factors such as the varying approach towards age, occupation, education, income, and price of goods do not have any partial impact on the overall consumption of goods.

3 Methodology

3.1 Sample and Data Collection

We conducted this study in Segamat, Johor, focusing on individuals who work and reside in Segamat, and consume meat, regardless of their purpose or intention. However, the analysis cannot use all responses obtained during data collection. We will only analyze responses that meet the criteria. Table 1 contains the criteria that the respondent must meet. This study uses 400 samples, based on a table from Krejcie and Morgan (1970), and distributes the questionnaire using simple random sampling.

For the purpose of this paper, we analyzed data obtained during a pilot study. A total of 100 participants responded to the pilot survey, but only 60 were eligible, and 40 were excluded due to data quality checks and whether the participants did not meet the inclusion criteria needed. We collected the data using an online survey through Google Form and distributed it via an official UiTM email and other social media platforms like WhatsApp and Telegram. We distributed the questionnaire from June 1st, 2024, until June 30th, 2024, and sent a reminder email every Thursday at 8 a.m.

Table 1: Inclusion and Exclusion Criteria.

Inclusion Criteria	Exclusion Criteria
People who are working and lived in Segamat, Johor.	People who are not working and lived in Segamat, Johor.
Consume local meat	Did not consume meat

3.2 Questionnaire Design

A meticulously designed, self-administered questionnaire was created to examine the perception and purchasing patterns of consumers in Malaysia about locally sourced meat. The questionnaire consisted of a total of 20 questions. There were eight questions about the perception of local meat among Malaysian consumers. The inquiries encompassed consumer experience and dietary patterns. There were twelve questions that pertained to the customer purchasing behavior of local meat in Malaysia. The questions encompassed purchasing location, seasonality, sensory qualities, and buy drivers. The last portion of the survey gathered data on socio-demographic factors such as age, gender, race, income, occupation, and education level. The questionnaire was developed in English and translated to Bahasa Malaysia as researchers believed all Malaysians are fluent in these both languages. The questionnaire was adopted and adapted to ensure that the questions asked are suitable for Malaysians. A brief description of each section and variable used in questionnaire has been made to avoid confusion among respondents when answering the questionnaire.

Ethics approval was granted by the Universiti Teknologi MARA (UiTM) Research Ethics Committee with approval code REC/05/2024(ST/MR/98). Consent was obtained for each participant prior to starting to answer the questionnaire.

3.3 Data Analysis

This study will use only one type of analysis which is descriptive analysis. The descriptive analysis was used to depict the socio-demographic characteristics of the consumers and ascertain their level of perception for local meat and purchasing behaviour among them. The

data was analyzed using Statistical Package for Social Science (SPSS) software version 20. Data collected at the nominal level of measurement are expressed as categorical labels or names. Likert-like scales are specifically developed to assess the degree of agreement that consumers have with statements.

4 Result and Discussion

4.1 Socio-Demographic Characteristics

The survey generated a total of 60 valid questionnaires. Table 2 shows the demographic of consumers by gender, marital status, race, age, income and education level. Female respondents accounted for 70% (42) of the respondents, whereas 30% (18) were males. In terms of age distribution, 81.67% of respondents were between 25 to 54 years of age, 15% of respondents were between 55 to 64 years, and 3.33% aged between 15 to 24 years old. The majority of respondents were married (76.67%). A large number of respondents (95%) are Malay, and the number of Indian, Chinese and others are 1.67% each. Most of the respondents who completed the questionnaire stated their education level are master's degree (45%), PhD (18.33%), Diploma and Degree (25%) and secondary school (11.67%). In terms of income distribution, 53.33% respondents had an income between RM4,850 to RM10,959, high income range between RM10,960 and above (6.67%), and income below RM4,849 is 40%. All respondents are from Johor, either working or living in Johor.

Table 2: Socio-Demographic Characteristics.

Demographic		Frequency	Percentage (%)
Gender	Female	42	70.00
	Male	18	30.00
Marital Status	Single	14	23.33
	Married	46	76.67
Race	Malay	57	95.00
	Chinese	1	1.67
	Indian	1	1.67
	Other	1	1.67
Age	15 – 24 years	2	3.33
	25 – 54 years	49	81.67
	55 – 64 years	9	15.00
Income	Below RM4,849	24	40.00
	RM4,850 – RM10,959	32	53.33
	RM10,960 and above	4	6.67
Education Level	Secondary School	7	11.67
	Diploma	3	5.00
	Degree	12	20.00
	Master	27	45.00
	PhD	11	18.33

4.2 Frequency of Meat Consumption

Based on the pilot survey done by the researchers, beef was the meat preferred (90%) by the consumers, followed by lamb and mutton (10%). Most of the consumers perceived that consuming beef and sheep meat, in comparison to mutton, offered much greater health benefits, supported by [33]. Based on Figure 1, the present study shows that most of the

Johorean consumers only consume meat once in a month (48.33%). Only 10% of consumers consume meat once in a week, and 15% consume once every two weeks. While 21.67% of consumers only consume meat once in a year. Even though most of the consumers agreed that meat was much healthier than poultry, none of the consumers consume meat regularly. The main reason for not consuming beef, lamb or mutton regularly is because the market price for these products is way too expensive as compared to the price for poultry. Besides, 61.67% among the consumers prefer to consume local meat as compared to imported meat.

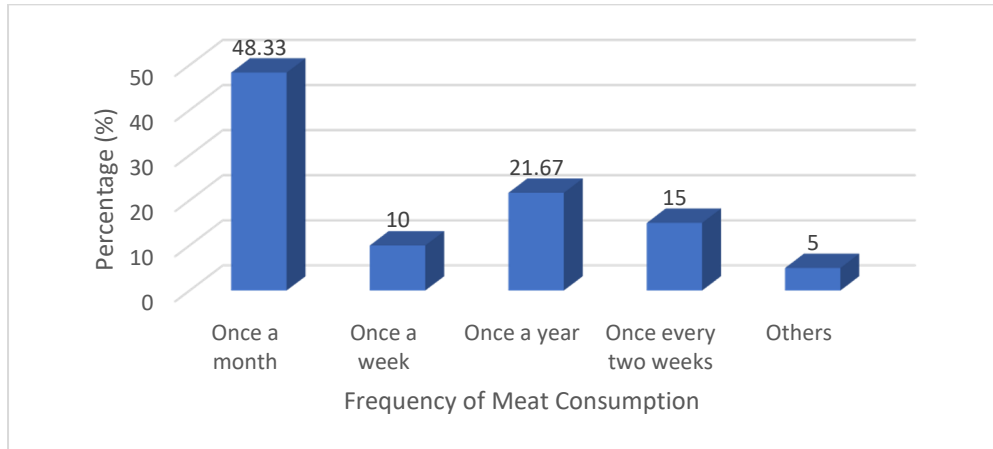


Fig. 1. Frequency of Meat Consumption Among Johorean.

4.3 Consumer's Perception on Local Meat Consumptions

Following the questionnaire design, consumers were asked about their perceptions on local meat, especially in Segamat Johor. Segamat City is a prosperous city located in the northern part of Johor and known as a mid-size place in the region of Johor. The population in this city increased to 213,900 people in 2020 mixing a variety of races. Perception to consume local meat will be different based on the individual preferences. Based on Table 3, the most important perceptions chosen by Johor's consumers on local meat is halal status not in doubt. Considering the number of consumers who answered the questionnaire were mainly Muslims, thus, halal status will be the first concern when buying a food item, because consuming halal product is an obligation. Besides, it is easy to find local and Muslim suppliers in Segamat, especially in the wet market (*pasar basah*). Most of the consumer also agreed that the origin of local meat is not in doubt (66.67% strongly agreed and 30% agreed) because as Segamat city is a mid-size town, most of the consumers know and familiar with the meat suppliers. They also have knowledge about the origin of the meat (most of the butchers raise their own cattle). In terms of the freshness, 60% of consumers strongly agree and 31.67% agree that freshness of local beef is not in doubt as compared to imported beef and 46.67% strongly agree that local meat is more tasty and delicious as compared to imported meat or frozen meat.

Table 3: Segamat Johor Perception on Local Meat.

Variable	Percentage (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Halal status is not in doubt	0	0	1.67	23.33	75
Origin of meat is not in doubt	3.33	0	0	30	66.67
Quality is not in doubt	0	0	6.66	36.67	56.67
Certification certified is not in doubt	3.33	0	11.67	30	55
Safety to consume is not in doubt	0	0	8.33	31.67	60
Freshness of local beef is not in doubt	0	0	8.33	31.67	60
Local meat is more taste	1.67	3.33	18.33	30	46.67

4.3 Consumer's Meat Purchasing Behavior

As seen in Table 4, consumers believed that halal (86.67%) was an important factor when purchasing local meat, followed by freshness (73.33%). Consumers' evaluation of freshness not only serves as a predictor of eating quality, but also serves as a sign of safety. According to a study by [34], it was found that 95.6% of urban people and 88.1% of rural inhabitants in China expressed worry regarding the freshness of meat. As we know, looking for the halal is obligatory for Muslims.

Most of the consumers also agreed (51.67% strongly agree and 35% agree) that price plays an important role when buying local meat. Currently, the price for local meat is RM39.91/kilogram, while imported meat is RM35.10/kilogram [35]. Even though the price for imported meat is much cheaper than local meat, consumers believed that paying a higher price is fine in order to get a good quality meat [36]

The result handled by this study is against from study by [33]. Johorean prefer to buy local meat as compared to imported meat because of the safety (65%) and quality (65%). However, a study on Chinese consumers showed a significant number of Chinese customers exhibit a preference for purchasing imported meat as opposed to domestically produced meat, primarily due to concerns regarding safety, quality, and health.

Researchers believed that promotion is not an important variable chosen by consumers and results showed that 11.67% of consumers strongly disagree that promotion will make them purchase more local meat. 67% among consumers strongly disagree that promotion is the reason when buying local meat. Only 26.67% strongly agree that promotion is the reason to purchase, contradict with a study by [37].

Table 4: Purchasing Behaviour of Local Meat by Segamat Johor Consumers.

Variable	Percentage (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Halal	0	0	0	13.33	86.67
Price	0	0	0	48.33	51.67
Locality	0	0	5	43.33	51.67
Quality	0	0	1.67	33.33	65
Food safety	0	0	0	35	65
Promotion	11.67	0	25	36.66	26.67
Labelling	5	5	30	38.33	21.67
Taste	0	0	11.67	35	53.33
Packaging	0	6.66	36.67	31.67	25
Freshness	0	0	0	26.67	73.33
Nutrient	2	3	8.33	36.67	50
Certification	0	0	13.33	31.67	55

5 Conclusion and Recommendation

This study explores consumers' perception and purchasing behavior of local meat in Segamat, Johor. Finding shows that the perceptions for local meat included its halal status and its place of origin. Besides that, freshness and safety of the meat are also the main key factors. The study also found that consumers prioritize the halal status of local meat, freshness, and price when purchasing it. The place of origin of local meat is known, and consumers are familiar with the suppliers. Promotion was not a significant factor, contradicting previous research. The low supply of local meat creates a market shortage, encouraging consumers to purchase imported meat. Understanding consumer preferences and perceptions is crucial to understand local purchasing behavior, thus it will influence the decision among consumers whether to buy or not to buy the local meat.

This paper has some limitations. First, the current study only used pilot test data because the researcher was unable to collect 400 responses from the entire Johor population. This study's data collection included only 60 respondents, which is insufficient to cover the entire state of Johor. The number of respondents is suggested to increase up to 400 respondents, following the suggested number of samples by Krejcie and Morgan (1970). Second limitation in terms of data analysis. This study used descriptive analysis, which only performs frequency and percentage. Thus, it is recommended to have a comprehensive data analysis using the PLS-SEM method to estimate complex models with many constructs. Besides, it is also recommended to expand the data collection, not only focusing in Segamat, Johor, but nationwide in Malaysia.

Meat is one of Malaysia's primary protein sources; extensive research, including collaboration with local businesses, community organizations, and academic institutions, particularly to gain access to their networks, can help the development of this industry in Johor. Thus, this study will benefit multiple parties. To begin, this study can help livestock industry entrepreneurs and marketers to better understand consumers' perception and purchasing behaviour when purchasing local meat.

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