Analysis of Madurese Cattle Consumer Preferences (Case Study of Purnomo Sapimulyo Farm in Boyolali District)

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Abstract

The agricultural sector includes a variety of plant and animal production activities to meet human needs, including the livestock subsector which plays an important role in the economy. In Indonesia, beef cattle farming, especially in Madura, has great potential in improving people's welfare and meeting the growing demand for protein. Consumer preferences are the choice likes or dislikes of a product, which is influenced by various factors such as shape, taste, and texture. Understanding consumer preferences can help improve customer satisfaction, develop more effective marketing strategies, and produce products that are more in demand. This study aims to examine the characteristics of the respondents and examine the attributes of Madura cattle which are consumer preferences in Purnomo Sapimulyo Farm, as well as examine the attributes that consumers consider most in the purchase decision of Madura cattle. The fishbein multi-attribute analysis method showed that the most considered attribute by consumers when buying Madura cattle was meat texture with an average value of 2.78. Purchase decisions based on the highest value to the lowest value are meat texture, price, weight, service, promotion and skin color

Keywords: Consumer preferences, , Livestock ,Madura Cattle

Introduction

The livestock subsector plays an important role in the national economy and is able to absorb a lot of labor, making it a reliable sector to improve the country's economy. This can be seen from the 2013 Agricultural Census (ST2013) data which shows that there are 13.56 million livestock households in Indonesia. In addition, the availability of livestock products plays a role in improving the nutritional status of the community, especially in fulfilling the need for calories and animal protein. Fulfillment of calorie and animal protein consumption also contributes to improving the quality of human resources (Abdullahi et al., 2023).

The agricultural sector includes various activities related to the production of plants and animals to fulfill human needs. One of the important subsectors in agriculture is animal husbandry, which plays a major role in increasing farmers' income and supporting the community's economy. In Indonesia, beef cattle farming is one of the main subsectors that is expected to meet the increasing demand for protein. , Madura beef cattle farming has great potential in improving the economic welfare of the local community (Gustiani, E., & Fahmi, T, 2022).

The purpose of the value of consumer preferences is to determine purchase satisfaction with the product. By understanding the assessment of consumers of marketed products, it can improve the quality of products.

more effective marketing strategies and produce products that are more attractive to consumers (Fitriani, 2021).

The beef cattle population in recent years has increased rapidly. According to Livestock and Animal Health Statistics data, the beef cattle population in Indonesia in 2018-2021 reached 17.97 million heads. In 2022, based on provisional figures, it is estimated that the beef cattle population will experience a drastic decline due to the recovery period from the Covid-19 pandemic. The increase in population is in line with technological developments, especially in the livestock sector.

Boyolali Regency is one of the regions in Central Java province with the majority of the population as beef cattle farmers. It can be seen that there is an increase in the beef cattle population in Boyolali Regency. This indicates an increasing trend in beef consumption in Boyolali Regency (Septriyandi et al., 2024).

The total beef consumption in Central Java Province in 2020 was 87.54 tons. But in 2021 meat consumption in Central Java Province has decreased. Due to the Covid-19 pandemic with a total of 41.17 tons of meat consumed. Meanwhile, in 2022 there was an increase in the amount of beef consumption in Central Java Province of 83.87 tons. This study focuses on consumer satisfaction influenced by several factors of meat texture, skin color, weight, price, service, promotion. The purpose of the consumer preference value is to determine purchase satisfaction with the product. By understanding the assessment of consumers of marketed products, it can improve more effective marketing strategies and produce products that are more attractive to consumers.

This study seeks to determine the preferences that consumers consider in purchasing Madura beef cattle at Purnomo Sapimulyo Farm in Boyolali Regency. Given the growing population and increasing beef consumption, this greatly affects consumer preferences in the selection of Madura beef cattle. By analyzing these dynamics, this study aims to contribute to the development of the livestock sector, to stabilize the demand for beef cattle and to produce domestic superior products.

Method

This research uses quantitative methods by collecting data and information. The sampling technique is usually done randomly. Data collection is done with objective research instruments, while data analysis is quantitative or statistical. The main objective of this method is to test the hypothesis that has been set. identify the attributes of Madura cattle that become consumer preferences at Purnomo Sapimulyo Farm, Boyolali Regency. and understand the factors that consumers consider in buying Madura cattle (Hidayattulloh & Ridwan, 2020). The research location was chosen deliberately because it was considered by the number of consumers who bought Madurese cattle at Purnomo Sapimulyo Farm.

Data Collection

This study uses primary and secondary data obtained from various relevant institutions, including the Central Bureau of Statistics (BPS), and questionnaires. The data covers a 5-year period from 2019 to 2024, including information on beef cattle population, beef consumption, income, and consumer preferences.

Data Sources and Variables

This research uses primary and secondary data from official BPS sources, and questionnaires.

Data Analysis

The Likert scale is a measurement tool that is often used in surveys and research to measure respondents' attitudes, opinions, or perceptions of a statement.

3	Like	attribute level is important for Madura cattle commodities, consumers are likely to consume or buy products with that attribute level.
2	Neutral	level of attributes should be possessed, consumers may consume or purchase, may not
1	Dislikes	Dislike means that the attribute level is undesirable and consumers unlikely to buy madura cattle with that combination of attributes.

To find out the most considered Madura Cow fruit attributes using Fishbein's Multi Attribute analysis.

With the following formula:

$$A^0 = \sum_{i=1}^{n} ei$$

Where:

Ao   : Consumer attitude towards the object

bi   : the level of consumer confidence that the object has certain attributes (i-th attribute) ei : consumer evaluative dimension of the i-th variable owned by the object.

n   : number of attributes that madura cattle have

Determining the assessment of trust in the attributes of Madura cattle (bi) is done by setting a scoring standard using a Likert scale.

$$bi = \frac{a + 2b + 3c}{a\ b\ c + \ +}$$

Description :

bi : the value of trust in madura cattle

a : number of consumers who choose agree

b : number of consumers who choose neutral

c : number of consumers who choose disagree

Assessing attributes (ei) by setting standards (scoring) using a Likert scale like the previous step, then multiplying the score of each attribute with the frequency of consumer answers and dividing it by the total number of consumers, to determine consumer assessment of Madura cattle attributes.

Determine the attitude towards the object (Ao) with the formula:

Ao : bi .ei

Description:

Ao   : consumer attitudes toward madura cattle

bi   : the level of consumer confidence that the purchased Madura cattle has certain variables

ei   : the evaluative dimension (evaluation) of consumers towards the -1st variable owned by madura cattle.

The fishbein multiattribute analysis method, the consumer belief test (bi) towards Madurese cattle reflects their feelings whether they like or not, and whether they feel happy or unhappy. This attitude can also describe the respondents' level of trust in the various attributes of Madura cattle, as well as their understanding of Madura cattle and their benefits. Consumer evaluation (ei) is a consumer statement about the good or bad of the attributes contained in Madura cattle. The assessment is done based on consumer

beliefs so that consumers get cattle that match their desires. Consumer Attitude (AO) aims to find out the most important attributes considered in making Madura cattle purchase decisions.

RESULT AND DISCUSSION

This section provides a summary of the research results.

1. Fishbein Multiattribute Analysis

   Fishbein's Multiattribute Analysis to determine consumer beliefs and evaluation

   of the attributes most considered in the purchase of Madura beef cattle.

   Table 1. Consumer Confidence (bi) of Madura Cattle in Purnomo Sapimulyo Farm, Boyolali Regency in 2024.

Madurese Cattle Attributes		A	1	2	3	Total Value	Average
Products	Meat Texture	B	1	9	42	52	
		C	1	18	126	145	2,78
	Skin Color	B	27	23	2	52	
		C	27	46	6	79	1,51
	Weight	B	5	11	36	52	
		C	5	22	108	135	2,59
Price	Price	B	2	14	36	52	
		C	2	28	108	138	2,65
Services	Services	B	26	2	24	52	
		C	26	4	72	102	1,96
Promotion	Promotion	B	21	24	7	52	
		C	21	48	21	90	1,73

Source: Primary Data Analysis

A : Likert Scale
B : Number of Respondents Who chose
C : The product of the Likert scale and the number of respondents who choose
3 :Like
2 :Neutral
1 : Dislike

Table 1. Table 1 shows that the attributes that are considered the most favorable and approved by consumers are the meat texture of Madura cattle with an average value of 2.78 and the price with an average value of 2.65. It can be interpreted that consumers have confidence that the meat texture and price of Madura cattle are most approved. The attribute of madura cattle that is less preferred or less approved by consumers is the skin color attribute with the lowest average value of 1.51 of madura cattle.

The second attribute that consumers believe is good is price. Consumers think that Madurese cattle are priced according to their preferences. In addition, by buying madura cattle, consumers indirectly like the weight of madura cattle. The third attribute that consumers believe is weight, in this case consumers who choose neutral are 11 respondents. In addition, the weight of the Madurese cattle they buy is what consumers want.

The fourth attribute less believed by consumers is service. In this case, 26 respondents chose to disagree. This is because each respondent has their interests and affairs. The fifth attribute is less believed by consumers about promotion, this is because promotions on social sometimes only during booming times after that the promotion sinks quickly. In addition, consumers prefer promotion through brochures at the mosque because it is more effective. The sixth attribute is Skin color is not considered important by consumers. It can be saPirdeftehreant cceosnsumers are not concerned about the color of the skin on Madura cattle, as it does not affect the texture of the meat.

Table 2. Evaluation table (ei) of Madura cattle in Purnomo Sapimulyo Farm, Boyolali Regency in 2024.

		A	1	2	3	Total Value	Average
Products	Meat Texture	B	1	9	42	52	
		C	1	18	126	145	2,78
	Skin Color	B	28	22	2	52	
		C	28	44	6	78	1,5
	Weight	B	2	13	37	52	
		C	2	26	111	139	2,67
Price	Price	B	0	17	35	52	
		C	0	34	105	139	2,67
Services	Services	B	2	22	28	52	
		C	2	44	84	130	2,5
Promotion	Promotion	B	22	23	7	52	
		C	22	46	21	89	1,71

Source: Primary Data Analysis

Description:
A: Likert Scale
B: Number of Respondents Who chose
C: The product of the Likert scale and the number of respondents who voted
3. Like
2. Neutral
1. Dislike

Table 2 shows that meat texture is the most important attribute in the purchase decision of Madura cattle by consumers. This means that consumers consider meat texture with an average value of 2.78. The texture of Madura beef is the most important attribute to be considered in determining the purchase decision of Madura cattle. This can be seen from the average evaluation results from consumers. For evaluation of the lowest average results or those that are not preferred by respondents is skin color with a value of 1.5. The second attribute that is important in the purchase decision of madura cattle is weight and price. This is because consumers who buy madura cattle mostly choose cattle according to weight and price. So it can be said that price and weight are very important considerations in purchasing Madurese cattle.

The third attribute most considered by consumers in purchasing Madura cattle is service. This is because if the service is very good and in accordance with the wishes of consumers, then consumers will give more trust to the farm. The fourth attribute is considered very less important, namely the skin color attribute because according to consumers the skin color is not that important.

Table 3. Consumer Attitude (Ao) of Madura Cattle in Purnomo Sapimulyo Farm, Boyolali Regency in 2024

MADURESE CATTLE Attributes	Confidence (bi)	Evaluation (ei)	Attitude (Ao)	Rating
Meat Texture	2,78	2,78	7,72	I
Skin Color	1,5	1,51	2,26	VI
Weight	2,67	2,59	6,91	III
Price	2,67	2,65	7,07	II
Services	2,5	1,96	4,9	IV
Promotion	1,71	1,73	2,95	V

Source: Primary Data Analysis

Table 3. Table 3 shows that consumers' attitudes towards the most important attributes considered in making purchasing decisions for Madura cattle when viewed from highest to lowest are meat texture, price, weight, service, promotion, and skin color. So it can be seen that the attributes most considered by consumers in purchasing Madura cattle are texture, price and weight. The results of Fishbein's multiattribute analysis show that meat texture is the factor that consumers pay most attention to when buying madura cattle. The main attribute considered by consumers in choosing madura cattle at Purnomo Sapimulyo farm is meat texture. However, consumers are more likely to prioritize taste as the first consideration, because most buy madura cattle with

the aim of consuming and enjoying the taste. Therefore, the texture attribute is a very important factor in making purchasing decisions for madura cattle.

Previous research aims to identify the types of banana fruit that are most purchased by consumers, analyze consumer attitudes and preferences in banana fruit purchasing decisions in traditional markets in Semarang City. The method used in this research is survey. Sample determination was done by quota sampling with a total sample size of 108 respondents. Data collection methods through interviews with the help of a structured questionnaire. Data were analyzed descriptively, Fishbein's Multiatribut attitude analysis, and Conjoint analysis. The results showed that the type of banana that consumers most often buy is kepok banana with a percentage of 45% of respondents. Consumer attitudes towards the attributes considered in the banana purchase decision are taste attributes (17.17) with a positive value, fruit skin color (14.97) with a neutral value, size (10.46) with a negative value, and the number of fruits per comb (9.95) with a negative value. Consumer preferences are shown by the importance value of the most prioritized banana fruits with a slightly sweet taste, greenish yellow skin color, a large number of fruits per comb (>16 pieces), and medium size (10-14 cm). Keywords: banana fruit, consumers, traditional market, preference, attitude (Rumapea & Roessali, 2021).

Conclusion

Based on the research results from the analysis that has been done, it can be concluded that. The attribute of madura cattle that is most considered by consumers in purchasing madura cattle is meat texture, with the reason that consumers prioritize the importance of meat texture attributes compared to other attributes. consumers are more likely to prioritize taste as the first consideration, because most buy madura cattle with the aim of consuming and enjoying the taste The attributes considered from highest to lowest are meat texture, price, weight, service, promotion and madura cattle skin color.

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