



Consumer Preference on Demand for Avocado in Traditional Markets Aceh Utara District

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ABSTRACT

Consumer demand is an action taken by consumers to buy a product. The first objective of this study was to analyze and determine the effect of income, education, number of dependents, and the price of avocado on the demand for avocado butter in the traditional markets of North Aceh District. The second objective is to analyze the order of attributes of the most important mango avocado fruit according to consumer preferences in traditional markets in North Aceh District. This study was tested with validity and reliability tests and analyzed using multiple linear analysis and obtained the calculated F results from both traditional markets to obtain significant results so that reject H_0 and accept H_1 means simultaneously (simultaneously) with a 95% confidence level.

INTRODUCTION

The mountains of Central America and Mexico are the origin and place where the first avocado plant (*Persea americana*) grows (Andi, 2013). A type of plant that can thrive in tropical and subtropical climates is the avocado plant. There are three different types of avocado plants with a racial classification, namely Mexican (*Persea americana drymivolia*), Guatamela (*Persea americana guatemalensis*), and West India (*Persea americana Mill*) (Afrianti, 2010). Mexican and Guatemalan breeds are suitable for planting in a subtropical environment, while the West Indian type grows best in a tropical climate (Verti et al. 2021).

Avocados are low in sodium and high in potassium and minerals. In addition, avocados have the ability to protect cholesterol, preventing any obstruction of its absorption into the tissues. This plant is also one of the very important medicinal plants and is used as a traditional medicine to treat conditions including diabetes, canker sores, stone urine, high blood pressure, dry skin on the face, and toothache (Widyaningrum, 2008).

Consumer demand is the consumer's desire to purchase an item. Each manufacturer must use a unique strategy in order for consumers to purchase their goods. Demand is the volume of products or services that consumers want to purchase at various price points over a certain period of time. The consumer's willingness to buy is influenced by the price level and the emphasis on consumption. Customers have a need for a product or service and an opportunity, such as money or revenue, to meet that need (Mustafa, 2006).

Consumers will be inspired to act as a means of expressing their thoughts and feelings if they feel confident and like to use the product or service (Ferrinadewi, 2008). A manufacturer will pay attention to certain consumer habits such as looking around and checking products on the shelves, picking up and glancing at goods, turning the wheels of the shopping cart, etc. Certain actions have a significant influence on affection, consumer intelligence and impulsive purchases (Firmansyah, 2018).

Administratively, Aceh Province has two districts that contribute the largest production, namely Central Aceh regency and Bener Meriah Regency because both regencies are astronomically located in highland areas. The total production of avocado fruit every year in the regency has a figure that has increased with the last production figures in 2021 Central Aceh 70,061 quintals and Bener Meriah 120,779 quintals (BPS Aceh Province, 2022). Research Objectives:

1. To analyze and find out the effect of income, education, number of dependents, and avocado prices on the demand for butter avocado in the Traditional Market of North Aceh Regency.
2. To analyze the order of attributes of the most important avocado fruit according to consumer preferences in Pasar Traditional, North Aceh Regency.

THEORETICAL REVIEW

Consumer Behavior

Consumer behavior is the study of individuals, groups or organizations and the processes carried out in selecting, determining, obtaining, using, and stopping the use of products, services, experiences, or ideas to satisfy the needs and impact of these processes on consumers and society (Hawkins, *et al*, 2001).

Consumer Preferences

Consumer preferences can refer to things that consumers like as well as their preferences. Consumer perception of the product affects this preference. Any circumstance can be ranked, from the most popular to the least popular, at any time (Munandar *et.al.*, 2012). Preference has a purpose, and that goal is for customers to enjoy their final purchase choice to achieve consumer happiness. It is clear how each buyer chooses how many goods to buy based on the tastes and available budget. One might assume that consumers are capable of making logical choices because they choose the most satisfying product for their money (Pindyck dan Rubinfeld, 2012). Nicholson (2002) affirms that the three fundamental characteristics of the preference relationship are the following:

1. Completeness

If A and B are two conditions or situations, then each person should always be able to specify whether A is preferable to B, B is preferable to A or, A and B are equally preferred.

2. Transitivity

If a person says he likes A more than B, and prefers B to C, then he should like A over C. Thus one cannot articulate his conflicting preferences.

3. Continuity

If a person declares to prefer A to B, all conditions under A are favored over conditions under option B.

Demand

Demand is the desire for a specific product supported by the ability and willingness to buy it. Desire turns into demand if it is supported by the ability and willingness to make purchases. Demand represents general consumer behavior in the market that affects the amount of demand for a product by consumers and how it affects changes in those factors on demand. When a person's total income increases, assuming the price does not change, then the quantity of goods purchased for each item also increases. Market demand for a commodity indicates the number of alternatives to the commodity requested per time period, at various alternative prices by all individuals in the market (Raysitho, 2016).

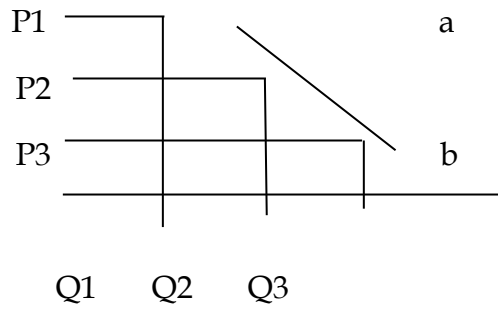


Figure 1. Demand curve

There are several factors that influence demand, namely the Price of Goods or Services, Income, Intensity of Needs, Tastes, and Prices of Substitution Goods. From the explanation above, it can be described as the scheme of the research series as follows:

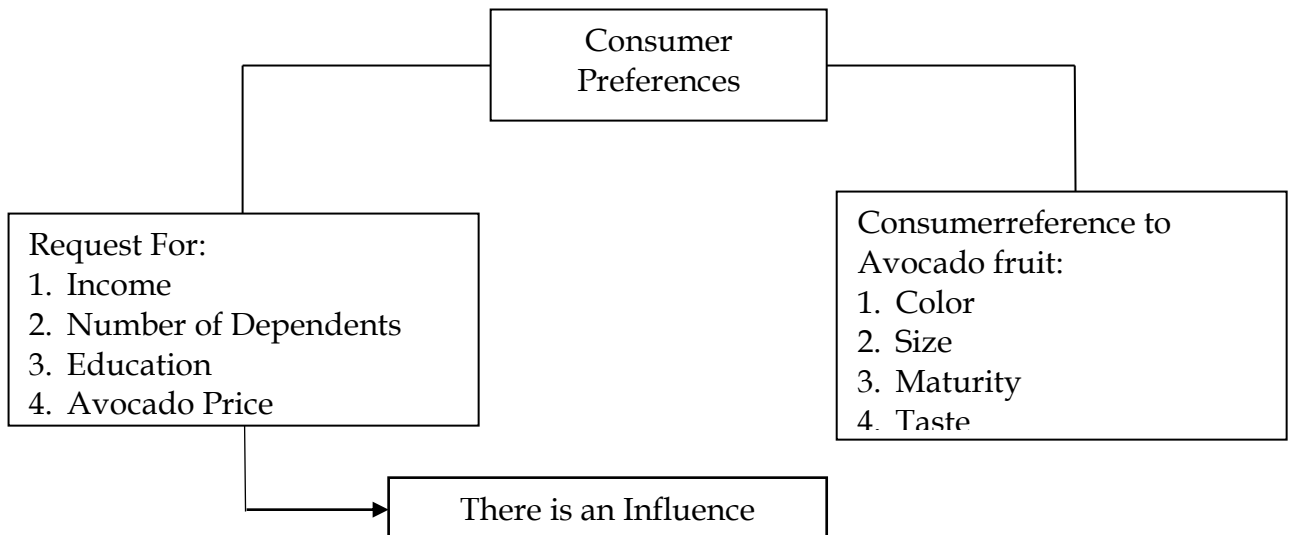


Figure 2. Framework Scheme of Thought

Research Hypotheses:

Ho: There is no influence between income, the number of dependents, the price of avocados, on the demand for avocado fruit.

H₁: There is an influence between income, the number of dependents, the price of avocados, on the demand for avocado fruits.

METHODOLOGY

The case study approach is what was done in this study. The case study technique highlights the nature of research on a particular subject over time or a phenomenon found in a location that is not always the same as another location.

The determination of the study area is determined *purposively*, that is, the sample is determined intentionally. The location chosen is one of the traditional markets whose buyers are end consumers and which is tailored to the research objectives, namely in the Batuphat traditional market and Kreung Geukeuh traditional market, North Aceh Regency.

The population in this study is consumers who are in the North Aceh Regency Traditional Market, namely the Batuphat traditional market and the Kreung Geukeuh traditional market. The sampling method used is the *accidental sampling* method, which is to determine the sample based on chance, then the research sample is a consumer who coincidentally meets the researcher when making an avocado purchase transaction. According to Sugiyono, 2016 stated that the feasible sample size in the study was between 30 to 500, thus the researcher determined the number of samples in this study was 60 people with 30 each in Batuphat traditional market and 30 Kreung Geukeuh traditional market.

Data Collection Methods

a. Primary Data

Primary data are obtained through interviews and questionnaires that have been prepared in advance in accordance with the objectives and needs of the research. The questionnaire in this study was designed with a likert scale model made with 5 alternative answers, namely Disagree (TS), Disagree (KS), Simply agree (CS), S etuju (S), and Very S etuju (SS).

b. Secondary Data

Secondary data in this study were obtained from literature studies and other previous books and journals related to the discussion.

Data Analysis Methods

Data processing is carried out using the help of the SPSS program and the results are presented in tabular form then described descriptively. Before the data is tested with testing tools, several steps of data testing are needed first, namely through validity tests and reliability tests. Furthermore, testing is carried out through classical assumption tests in which there are normality tests, multicollienarity tests and heteroskedasticity tests.

Multiple Linear Regression Analysis

After the data is tested and has met the test requirements, the data is then analyzed, to answer the first problem, which is to use multiple linear regression analysis. Regression analysis is an analytical tool that explains the consequences and magnitude of the consequences caused by one or more free variables (X) to one bound variable (Y). This method is used to analyze the

effect of independent variables namely (income, education, avocado price) on the dependent variables (demand for avocados).

Formula used:

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + e \dots \dots \dots (1)$$

Description:

- Y = avocado Fruit Request
- a = Constants / intercepts
- b = Regression Coefficient
- x₁ = Income (Rp/month)
- x₂ = Number of Dependents (Soul)
- x₃ = Education (Year)
- x₄ = Avocado Price (Rp/Kg)
- e = Error

Regression models that already meet the requirements of classical assumptions will be used to analyze the continuation of data through hypothesis testing as follows:

1. Test F (Unison)

This test is used to determine whether all the free variables (X₁, X₂, X₃, X₄) together have a noticeable influence or not on the bound variable (Y).

With the following test criteria:

If sig > 0.05, then H₀ is indicated.

If the sig < 0.05, then H₁ is accepted.

2. t-test (Partial)

The t test is carried out to find out whether the influence of each free variable (X₁, X₂, X₃, X₄) on the bound variable (Y) whether real or not.

With the following test criteria:

If sig > 0.05, then H₀ is accepted.

If the sig < 0.05, then H₁ is accepted.

RESULTS AND DISCUSSION

Validity Test

Test the validity of the interview results that are declared valid or feasible if r count > r table. The validity results at the Batuphat traditional market and the Krueng Geukeuh traditional market found that the validity test conducted on 30 respondents produced a valid statement. This can be inferred by seeing that each variable has a calculated r greater than the table r. This indicates that all questions made are feasible and can be used for research purposes.

Reability Test

From the results of interviews with 30 respondents who were judged to meet the predetermined criteria, the results of the reability test were seen through the value of cronbach alpha in the Batuphat traditional market and the Krueng Geukeuh traditional market, namely in item 1 the cronbach alpha value of .534. Item 2 cronbach alpha value of .593. Item 3 cronbach alpha value of

.534. Item 4 cronbach alpha ,616. Item 5 cronbach alpha, 640. Item 6 cronbach alpha ,729. Item 7 cronbach alpha ,688. From these results inferred from the results of items 1 to 7 cronbach alpha values greater than 0.50 this shows that all reliable variables and all statements made are declared feasible and can be used for research purposes.

Validity Test

The results of the analysis showed that the validity test conducted on 30 respondents produced a reliable statement. This is implied by the fact that each variable has a higher calculated r than the table r . This shows that all respondents are worthy and appropriate for research.

Reability Test

From the results of the reability analysis conducted on 30 respondents who were judged to meet the predetermined criteria, the results of the reability test were seen through the value of cronbach alpha in the Batuphat traditional market and the Krueng Geukeuh traditional market produced 7 items. That is in item 1 the cronbach alpha value is .681. Item 2 cronbach alpha value of .682. Item 3 cronbach alpha value of .721. Item 4 cronbach alpha ,746. Item 5 cronbach alpha, 726. Item 6 cronbach alpha ,792. Item 7 cronbach alpha ,704. From these results, it is concluded from the results of items 1 to 7 that the value of cronbach alpha is greater than 0.50, this shows that all reliable variables and all statements made are declared feasible and can be used for research.

Test Classical Assumptions

1. Multicholnearity Test

Detection of the presence or absence of multicholnearity is by looking at the *tolerance* value and variant *inflation factor* (VIF) value. A commonly used test criterion is a *tolerance* value of 0.10 or equal to a VIF value of < 30 .

Table 1. Collinearity Statistics Demand

Type		Coefficients ^a	
		Collinearity Statistics	
		Tolerance	VIF
	(Constant)		
	Income	.553	1.810
1	Number of level	.816	1.225
	Education	.714	1.401
	Price	.782	1.278

Source: Primary Data, 2022.

From the table above, it can be seen that each value of the *Inflation Factor Variance* (VIF) of the variable < 10 , this indicates that the model does not contain multicholnearity.

2. Heteroskedasticity Test

Table 2. Glejser Test

Type	Coefficients ^a			Sig.
	Unstandardized Coefficients		Std. Error	
	B			
(Constant)		.031	.031	.316
income		-4.245E-009	.000	.101
1 level		.000	.003	.936
education		.001	.002	.709
price		-8.634E-009	.000	.969

a. Dependent Variable: RES2

Source: Primary Data Processed 2022

In the Glejser Test, the basis for decision making in heteroskedasticity is that if the significance value (Sig) is greater than 0.05, then the conclusion is that there is no symptom of heteroskedasticity in the regression model, if the significance value (Sig) is smaller than 0.05, then the conclusion is that there is a symptom of heteroskedasticity in the regression model. From the table above, it can be seen that the significance value (Sig) of all variables is greater than 0.05, so it can be concluded that heteroskedasticity does not occur. This means that the data in this study can be regressed.

3. Normality Test

To test whether the data distribution is normal or not, it can be done by looking at the *normal probability plot*. If the data distribution is normal, then the line describing the actual data will follow its diagonal line. The normality test results can be seen in the *normal probability plot* chart below:

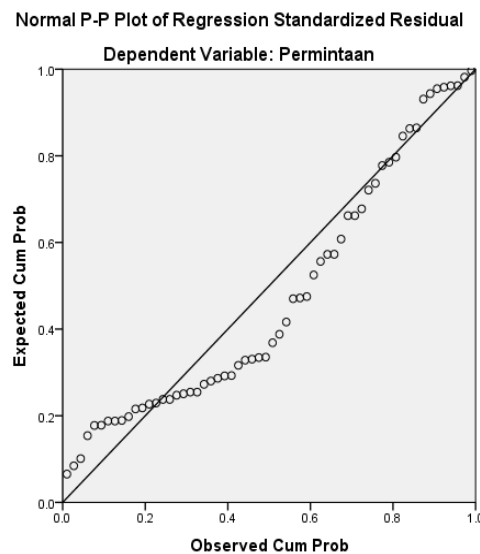


Figure 3. Normal Graph P - P Plot of Regression Standardized Residual

From the graphic above, it can be seen that the points in the model of the multiple linear regression equation spread around the line and follow the direction of the diagonal line. There based on normality tests, regression analysis is feasible to use or normal distribution data. This means that the data in this study can be regressed.

Multiple Linear Regression Analysis

a. Coefficient of Determination Test (R²)

Based on the results of the research on the results of the Coefficient of Determination Test (R²) can be seen in the following SPSS results:

Table 3. Determinant Coefficient Test (R²)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723 ^a	.523	.488	.30391

a. Predictors: (Constant), Harga, Pendidikan, Jumlah T, Pendapatan

b. Dependent Variable: Permintaan

Source: Primary Data Processed 2022

Based on the table above, it can be seen that the R Square value is 0.523

b. Test in Unison (Test F)

To prove the correctness of the hypothesis, the F Test was carried out, which is to compare sig F with alpha (0.05). To prove the hypothesis that has been formulated regarding the effect of income (X1), Number of Dependents (X2), Education (X3), and Avocado Price (X4) on the demand for Avocado fruit. From the results of the SPSS test, it is known that the coefficient value of determination from the study was 0.994 or 99.4%. This value can be interpreted to mean that simultaneously of the number of workers, the number of workers, educationn and the price of avocado affect the demand for avocado fruit and the remaining 6% is influenced by other factors outside this study. The Multiple-R value is 0.997 or 99.7 % which means that there is a close relationship between income, the amount of labor, education, price to demand.

The Sig value on the F test (in unison) is 0.000. On the basis of decision making if Sig < 0.05 then reject H₀ and accept H₁. This means that the variables of income, number of workers, education, price have a real and significant effect on the variables of terikan, namely demand.

c. Testing in Unison (T Test)

1. Effect of Income (X₁) on Avocado Fruit Demand (Y)

From the partial test results, a Sig value of 0.800 > 0.05 was obtained. Then it can be concluded that H₀ is accepted and H₁ is rejected. This means that income has no real effect on the demand for Avocado fruit at Batuphat Traditional Market. This is because income is not one of the consumer factors in consuming avocado fruit.

2. Effect of the Number of Dependents (X_2) on the Demand for Avocado Fruit (Y)

From the partial test results, a Sig value of $0.626 > 0.05$ was obtained. Then it can be concluded that H_0 is accepted and H_1 is rejected. This means that the number of dependents has no effect on the demand for avocado fruit. This is because when conducting research with questions consumers who buy avocado fruit in moderation because it is for their own consumption, but do not have a large number of dependents. This is because the benefits of this avocado fruit differ in enjoyment and are in demand from other types of.

3. The Effect of Education (X_3) on the Demand for Avocado Fruit

From the partial test results obtained sig values of $0.082 > 0.05$. Then it can be concluded that H_0 is accepted and H_1 is rejected. This means that education has no effect on the demand for avocados. This is because when conducting research with the question of consumers who buy avocado fruit that almost all levels of education are already aware of the importance of consuming safe and healthy fruit. Another reason for buying avocado fruit is not based on education is that it can be caused by desires, interests, or habits and to fulfill family desires.

4. Effect of Price (X_4) on Avocado Fruit Demand

From the partial test results obtained sig values of $0.000 < 0.05$. Then it can be concluded that H_0 is rejected and H_1 is accepted. This price has a noticeable effect on the demand for avocado fruit.

5. Effect of Demand on Demand based on Attributes of Avocado Fruit

An attribute is a characteristic or ciri-characteristic possessed by an object or product. The attributes of avocado fruit in this study include the attributes of color, size, ripeness, taste, and how to consume.

Recapitulation of Respondents' Answers

Table 4. Respondent Recapitulation Results

No	Variable	Score					Percentage %
		1	2	3	4	5	
							100
1	Color						
	P1			11	12	7	100
2	Size						
	P2	1		5	11	13	100
3	Maturity						
	P3				13	17	100
4	Taste						
	P4			1	7	22	100
	Average	0,85	1,14	5	11	11,85	

Source: Primary Data Processed 2022

Based on the information obtained from the results of the study, it can be seen that from the variables of the type of avocado fruit that is in demand in the Batuphat Traditional market, color affects consumers' buying interest, namely as many as 12 respondents or with a percentage of 30%. This means that all respondents agree that in buying avocado fruit is influenced by color attributes. Based on the size of the respondents as many as 13 with a percentage of 26% the size is a consideration for consumers to buy avocado fruit because of the large avocado fruit in general. Based on the aroma attributes, respondents answered as many as 17 with a percentage of 34% of the maturity attributes being considered by consumers to buy avocado fruit because the right maturity attracts consumers' purchasing power. Based on the taste variable, respondents answered as many as 22 with a percentage of 44% of taste being the main thing to buy avocado because of its delicious fruit.

Effect of Income, Number of Dependents, Education, Avocado Price on Avocado Demand in Batuphat Traditional Market

Multiple Linear Regression Analysis

a. Test in Unison (F test)

To prove the correctness of the hypothesis, the F Test was carried out, which is to compare sig F with alpha (0.05). To prove the hypothesis that has been formulated (X1), (X2), (X3), (X4) on the demand for Avocado fruit, it can be explained as follows:

Table 5. Unison Test Results (F Test)

Variable	Regression Coefficient	Standatr Error	Sig
Income	8,249	,000	,142
Totals Dependents	-,006	,006	,355
Education	,003	,003	,470
Price	3,022	,000	,000
Constant	-.091	,066	,183
Multiple R	,991	-	-
F-hit	346,439	-	-
R-square	,982	-	-

Source: Primary Data Processed 2022

From the table above, it can be seen that multiple linear regression analysis can be formulated in the following equation:

$$Y = -0,091 - 8,249 X_1 - 0,006 X_2 + 0,003 X_3 + 3,022 X_4 + e.....(2)$$

From the results of the SPSS test, it is known that the coefficient value of determination from the study was 0.982 or 98.2%. This value can be interpreted to mean that simultaneously the number of workers, educationn and the price of avocados affect the demand for avocado fruit and the rest by 1.8% is influenced by other factors outside this study. The Multiple-R value is 0.991 or 99.1 % which means that there is a close relationship between income, the amount of labor, education, price to demand.

The Sig value on the F test (in unison) is 0.000. On the basis of decision making if Sig < 0.05 then reject H₀ and accept H₁. This means that the variables of income, number of workers, education, price have a real and significant effect on the variables of terikan, namely demand.

b. Testing in Unison (T Test)

The T test basically shows how far one free variable affects a bound variable. To prove and see whether partially the factors of Income (X₁), Number of Dependents (X₂), education (X₃), Avocado Price (X₄), have a real and significant effect on the demand for Avocado fruit in theBatuphat Radisional T Market. For more details, you can see the following hypothesis testing results:

1. Effect of Income (X₁) on Avocado Fruit Demand (Y)

From the partial test results, a Sig value of 0.142 > 0.05 was obtained. Then it can be concluded that H₀ is accepted and H₁ is rejected. This means that income has no real effect on the demand for Avocado fruit at the Krueng Geukeuh Traditional Market. This is because income is not one of the consumer factors in consuming avocado fruit.

2. Effect of the Number of Dependents (X₂) on the Demand for Avocado Fruit (Y)

From the partial test results, Sig values of 0.355 > 0.05 were obtained. Then it can be concluded that H₀ is accepted and H₁ is rejected. This

means that the number of dependents has no effect on the demand for avocado fruit. This is because when conducting research with questions consumers who buy avocado fruit in moderation because it is for their own consumption, but do not have a large number of dependents. This is due to the benefits of this avocado fruit and this avocado is different from other avocados in consuming it. It is in demand from other types of avocados.

3. The Effect of Education (X_3) on The Demand for Avocado Fruit

From the partial test results obtained sig values of $0.470 > 0.05$. Then it can be concluded that H_0 is accepted and H_1 is rejected. This means that education has no effect on the demand for avocados. This is because when conducting research with the question of consumers who buy avocado fruit that almost all levels of education are already aware of the importance of consuming safe and healthy fruit. Another reason for buying avocado fruit is not based on education is that it can be caused by desires, interests, or habits and to fulfill family desires.

4. Effect of Price (X_4) on Avocado Fruit Demand

From the results of the partial test, it was obtained a sig value of $0.000 < 0.05$. Then it can be concluded that H_0 is rejected and H_1 is accepted. This price has a significant effect on the demand for avocados.

5. Effect of demand on demand (Based on Attributes- Attributes of Avocado Fruit

Attributes are characteristics or traits possessed by an object or product. The attributes of avocado fruit in this study include the attributes of color, size, ripeness, taste, and how to consume.

Recapitulation of Respondents' Answers

Table 6. Respondent Recapitulation Results

No	Variable	Score					Percentage %
		1	2	3	4	5	
1	Color						
	P1		8	4	12	6	100
2	Size						
	P2	2	1	7	12	8	100
3	Maturity						
	P3			3	20	7	100
4	Taste						
	P4			5	4	21	100
	Average	1,57	2,57	5,57	12,28	7,85	

Source: Primary Data Processed 2022

Based on the information obtained from the results of the study, it can be seen that from the variables of the type of avocado fruit that is in demand in the

Batuphat market, color affects consumers' buying interest, namely as many as 12 respondents or with a percentage of 30%. This means that all respondents agree that in buying avocado fruit is influenced by color attributes. Based on the size of the respondents as many as 12 with a percentage of 30% the size is a consideration for consumers to buy avocado fruit because of the large avocado fruit in general. Based on the aroma attribute, respondents answered as many as 20 with a percentage of 50% of the maturity attribute being considered by consumers to buy avocado fruit because the right ripeness attracts consumers' purchasing power, so consumers are interested in buying it. Based on the taste variable, respondents answered as many as 21 with a percentage of 42% of taste being the main thing to buy avocado instead of other fruits because it has a delicious taste when consumed.

CONCLUSIONS AND RECOMMENDATIONS

Based on multiple linear regression analysis obtained F calculated results from the Krueng Geukeuh market 1124.77 or sig 0.000 < 0.05 so reject Ho and accept H1. This means that simultaneously (simultaneously) the income, number of dependents, education, and price of avocados have a real and significant effect on the demand for avocado fruits. Based on multiple linear regression analysis, partially variable income, number of dependents, education has no real effect on the demand for avocado fruit, while avocado price has a real and significant effect on the demand for avocado fruit at a confidence level of 95%.

Based on multiple linear regression analysis obtained F count results from the Batuphat market 346.43 or sig 0.000 < 0.05 so reject Ho and accept H1. This means that simultaneously (simultaneously) the income, number of dependents, education, and price of avocados have a real and significant effect on the demand for avocado fruits. Based on multiple linear regression analysis, partially variable income, number of dependents, education has no real effect on the demand for avocado fruit, while avocado price has a real and significant effect on the demand for avocado fruit at a confidence level of 95%. Consumers who choose avocado fruit in the Krueng Geukeuh market based on color as much as 12 respondents (30%). Consumers who chose avocados based on size were 13 respondents (26%). Consumers who chose avocado fruit based on aroma were 17 respondents (34%). There were 22 consumers who chose avocados based on taste (44%).

It is hoped that the public will pay more attention to healthy consumption patterns, by consuming fruits such as avocados with a high enough vitamin value for the body. With this research, it is hoped that the Batuphat and Krueng Geukeuh Traditional Markets can maintain the quality and quality of avocado fruit, thereby increasing the attractiveness of consumers to buy in the market.

FURTHER STUDY

This research still has limitations, so it is necessary to carry out further research related to the topic Consumer Preference on Demand for Avocado in Traditional Markets. Future researchers can examine other variables in the market as information for the reader.

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