International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

Analysis of Consumer Behavior on Demand for Hydroponic Vegetables at Fris Fresh Market in Ambon City.

Remesya Miquella Stefhanie Birahy, A.E Pattiselano, W.B Parera, Sp, M.P

[1,2,3]Universitas Pattimura

Email : rmsyamquella@gmail.com, @august_pattiselano@yahoo.com

Abstract

This study aims to determine consumer behavior based on attributes, size, freshness, cleanliness and benefits) on the demand for hydroponic vegetables and to determine the factors that influence the demand for hydroponic vegetables based on the characteristics of respondents at Fris Fresh Market, Ambon City. This study used a descriptive method where data was collected using a survey technique using an interview measurement tool in the form of a questionnaire containing a list of questions. The results of the study describe the size attribute that has the strongest influence with the highest percentage among the other attributes for respondents in purchasing hydroponic vegetables and simultaneously age, education, number of dependents, income,

Keywords: Consumer Behavior, Demand, Horticultural Vegetables

INTRODUCTION

Horticultural crops are included in the types of plants that contribute to the development of the agricultural sector, one of which is vegetable commodities. The advantage possessed by vegetable commodities is that they have potential competitiveness. The rate of population growth is accompanied by a growing demand for vegetable needs for humans. Besides that, technological advances with the birth of industries have made land for housing and farming increasingly limited. Efforts to meet the needs of vegetables in the midst of limited land in urban areas continue to be made and one of them is to develop agriculture with a hydroponic system. Cultivation techniques with hydroponics are plant cultivation techniques with water as a planting medium. This technique has the advantage of (a) it does not require large areas of land,

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(b) easy to care for (c) has a high selling value (d) the success of plants to grow and produce is more guaranteed. Weaknesses of farming with hydroponic techniques: (a) requires high costs (b) requires special skills (c) the availability and maintenance of hydroponic equipment is rather difficult. (Silvina and Syafrinal 2017)

Vegetables grown with a hydroponic system have better quality, are environmentally friendly and hygienic, plant growth is faster, crop yield quality is maintained, and yields increase compared to vegetables grown with conventional systems but the costs required are high. With high quality, hydroponic vegetables have a special market segment, sold at a premium price or a price much higher than the market price. Generally hydroponic vegetables are marketed to supermarkets, modern markets, supermarkets, hotels and restaurants.

Public awareness of the importance of health makes hydroponic vegetables start to be in demand and become the choice. This has an impact on consumption patterns in society, where today's people are starting to pay attention to the sources of food they consume. Even so, the level of consumption of hydroponic vegetables is still small compared to ordinary vegetables. This difference is because the price of hydroponic vegetables is much higher than ordinary vegetables, so a strategy is needed to increase public interest in consuming hydroponic vegetables. One strategy to answer that is to provide satisfaction to consumers.

Many experts define consumer satisfaction based on their respective perspectives, even though there is no single definition that serves as a common reference for consumer satisfaction, but in essence they state the same substance regarding customer satisfaction. According to Kolter and Keller in Donni Junni Priansah (2017). Stating that customer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the expected product performance (results) to the expected performance (or results). If performance is below expectations, the consumer is dissatisfied. If performance meets expectations, the consumer is satisfied. If performance exceeds expectations, the consumer is very satisfied/happy.

Based on the description that has been presented, the writer/researcher is interested in conducting a study on "Consumer Behavior Analysis of Demand for Hydroponic Vegetables at Fris Fresh Market in Ambon City"

Formulation of the problem

1. How is consumer behavior (based on attributes, size, freshness, cleanliness and

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benefits) on demand for hydroponic vegetables at Fris Fresh Market, Ambon City.
2. What are the factors that influence the demand for hydroponic vegetables based on the characteristics of respondents at Fris Fresh Market, Ambon City

Research purposes

1. To find out consumer behavior (based on attributes, size, freshness, cleanliness and benefits) on demand for hydroponic vegetables.
2. To find out the factors that influence the demand for hydroponic vegetables based on the characteristics of respondents at Fris Fresh Market, Ambon City.

LITERATURE REVIEW

Hydroponic Characteristics

Hydroponics comes from the Greek, hydroponic. The word is a combination of two words namely hydro which means water, and onos which means work. So, hydroponics means water work or work with water.

Hydroponics uses water as the main medium for cultivation with additional nutrients for plant growth. The advantages of the hydroponic system include more efficient land use, plant production without using soil, higher and cleaner production quantity and quality, more efficient use of fertilizers and water, easier pest and disease control.

Theoretical basis

Consumer Behavior Theory

The needs and desires of consumers are very diverse and can change according to the times and are influenced by many factors that influence consumers in making purchases. Therefore those who are in charge of conducting marketing must be able to master and understand consumer behavior so that the realized marketing activities are able to run practically and successfully, so that the company's targets can be achieved (Khafidin 2020).

Consumer behavior is an important aspect that must be considered by companies in marketing efforts, with the aim of providing satisfaction to consumers. Consumer behavior will direct how individuals make decisions to allocate available resources of time, money, effort and energy (Utami et al 2017).

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From the definitions of consumer behavior above, it can be concluded that the definition of consumer behavior is an individual or group (consumer) behavior or action in buying or using a product or service that involves a decision-making process so that they will get the product or service desired by someone. consumer

Factors Influencing Consumer Behavior

Kolter and Keller (2017), there are three factors that influence consumer buying behavior, namely cultural factors, social factors and personal factors. The following is a complete explanation of these three factors:

Cultural Factors

a. Social Factors
b. Personal Factors (Personal Factors)

Consumer purchasing decisions are also influenced by personal characteristics. These personal factors consist of:

- Age and Life Cycle StageI
- Work and Economic Environment (Economic Situation)
- Personality and Self-Concept (Personality and Self-Concept)
- Lifestyle (Life Style)

Demand Theory

Demand and supply will affect the market (supply) from the producer side, so that the price created is a combination of the strengths of each of these parties.

Factors that influence demand theory:

1. the goods themselves
2. Per capita income level
3. Taste or habit
4. Total population
5. Consumer behavior

Consumer behavior is the process and activity when a person is associated with searching, selecting, purchasing, using, and evaluating products and services to meet needs and wants. For low-priced goods (low-involvement) the decision-making process is carried out easily, while for high-priced goods (high involvement) the decision-making process is carried out with careful consideration.

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According to economic law, if the price increases, the demand will decrease, if the price decreases, the demand will increase, if the supply increases, the price will decrease, and if the supply decreases, the price will increase. The factors that influence demand are one of the keys for consumers to consume a service product.

Previous Researchers

According to previous researchers by Eka et al "Consumer Behavior Analysis of Purchasing Oyster Mushrooms in Pekan Baru City" In purchasing oyster mushrooms, consumers believe that the attributes of health benefits and substance content are the most trusted attributes in choosing oyster mushroom products, that is, they both obtain value 2.48 followed by attributes of substance content, texture and taste. The price attribute is the attribute that has the lowest value, which is 0.63. In the analysis of the evaluation of the attributes of the substance content is the main factor for consumers in purchasing oyster mushrooms, meaning that oyster mushrooms do not contain chemicals so they are safe for consumption by consumers.

Framework

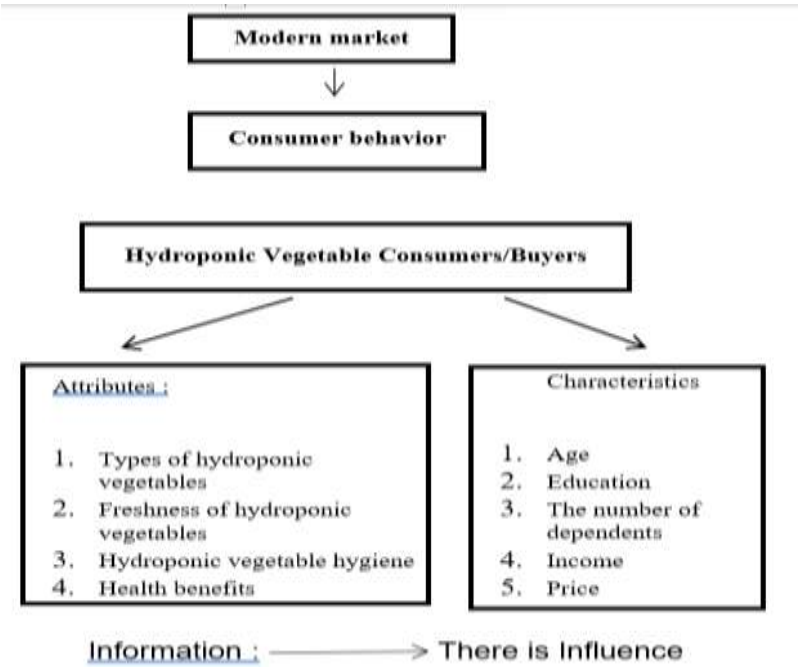
Consumers here are individual consumers. Individual consumers are household consumers who buy hydroponic vegetables for family consumption. Age or age is an important factor that can affect the level of purchase.

The level of education is an important factor that can affect the size of the purchase level of a product.The number of family members or the number of dependents can affect the number of requests where from the large number of family members of a consumer, the number of requests will tend to increase, so that the number of family members has a major effect on the demand for the product itself.

From the explanation above, it can be described a scheme of research thought series as follows:

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RESEARCH METHODS

Types of research

The type of research used in this study is a descriptive method, which is a research method that has the characteristics of focusing on solving existing problems and actual problems by means of the data collected first being compiled, explained and then analyzed

Location and Time of Research

This research was conducted in Sirimau District, Ambon City, Maluku, especially at the Fris Fresh Market Supermarket.

Research Data Sources

Source of data used in this study using primary data and secondary data.

Population and Sample

The number of samples in this study were 100 respondents.

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Method of collecting data

The data collected in this study are primary data and secondary data. Primary data collection methods and secondary data obtained from

Field Study (observation)

Interview

Questionnaire

. The questionnaire in this study was designed with a Likert scale model made with 5 alternative answers, with the following formula:

SS : Very Agree value 5
S : Agree value 4
KS : Not enough Agree value 3
TS : Don't agree value 2
STS : Very Don't agree value 1

Data analysis method

Data processing is carried out using the SPSS program.

Validity and Reliability Test

Validity tests how well an instrument is made to measure a particular concept to be measured. This test uses the Pearson Product Moment correlation test. With the score criteria for each variable, if r-count > r-table, it can be said to be valid (Prawoto and Basuki 2016)

Reliability Test

This test uses the Cronbach's Alpha method to find out the consistency of measuring instruments, whether the measuring tools used are reliable and remain consistent if the measurements are repeated. In this case the researcher uses the Cronbach's Alpha method to assess whether this questionnaire is reliable or not according to the criteria according to Prawoto and Basuki (2016) if the alpha:

Calculation Score Interpretation

In order to get the interpretation results, it must first know the highest score (maximum), score index and score interval.

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1. Calculating Highest Score
   Maximum score = Number of Respondents x highest Likert score
2. Calculating Score Index: Score Index (%) = Total Score / Maximum Score x 100
3. Interval formula: I = 100/Total Likert Score

Classic assumption test

This study uses a regression analysis tool to test the research hypothesis. Regression analysis requires several assumptions that must be met, namely, as follows Normality test, Multicollinearity Test

Descriptive Analysis

To answer the first problem formulation, namely by using descriptive analysis using a Likert scale to analyze consumer behavior criteria based on the attributes of hydroponic vegetables, namely freshness, cleanliness and benefits. The data which is the identity of the respondents and the purchasing decision making process are grouped based on the same answer, then presented based on the number of respondents using an index score.

Multiple Linear Regression Analysis

After the data is tested and meets the test requirements, the data is then analyzed. To answer the second problem, it uses multiple linear regression analysis. Regression analysis is an analytical tool that explains the consequences and magnitude of the consequences caused by one or more independent variables (X) on one dependent variable (Y). This method is used to analyze the effect of the independent variables (age, education, number of dependents, income and price) on the dependent variable (demand for hydroponic vegetables). The formula used:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Where :
Y = Total demand for hydroponic vegetables (Kg)
a = Constant / intercept
b1 + Regression coefficient of variable X1, and so on
X1 = Age (Years)
X2 = Education level (years)
X3 = Number of dependents (life)

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X4 = Income (Rp/month)
X5 = Price of hydroponic vegetables (Rp/Kg)
e = Errors

Decision making is carried out by the following test T test (Partial)

The t-test was conducted to find out whether the effect of each independent variable (X1, X2, X3, X4, X5) on the dependent variable (Y) is real or not.

The test criteria are as follows

If T count < T table or sig > 0.05 then H0 is accepted

If T count > T table or sig < 0.05 then H1 is accepted F Test (Simultaneously)

This test is used to determine whether all the independent variables (X1, X2, X3, X4, X5) together have a real or not significant effect on the dependent variable (Y).

The test criteria are as follows:

If F count < F table or sig > 0.05 then H0 is accepted

If F count > F table or sig < 0.05 then H1 is accepted

Operational Definitions and Limitations

a. Consumer behavior is all the things or reasons that underlie consumers in making purchasing decisions.
b. The market is a place for transactions between sellers and buyers who carry out buying and selling transactions of goods according to their respective needs.
c. Price is the amount of money spent/paid by consumers to obtain the product offered (Rp/Kg).
d. Consumer income is the total average family income per month.
e. Regression analysis is an analytical method that aims to determine whether or not there is an influence of the independent variable on the dependent variable.
f. As a sample, there are end consumers who buy hydroponic vegetables at Fris Fresh Market, Ambon City
g. The commodity studied is hydroponic vegetables
h. The research was conducted at Fris Fresh Market, Ambon City
i. The factors that influence consumer behavior studied are age, education level, number of dependents, income and the price of hydroponic vegetables.

RESULTS AND DISCUSSION

A Brief History of Fris Fresh Market

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Fris fresh market is one of the modern supermarkets in Maluku with golden rules“Everything you want people to do to you…. Do the same for them ". Fris fresh market is located at JL. Rijali No. 26 Kel Karang Panjang, Kec Sirimau, Ambon City, Maluku. Fris Fresh Market itself was established on December 12, 2012.

Fris fresh market sells everything you need, starting from cosmetic items, vegetable snacks, fruits and others. With a variety of prices according to the pockets of society ranging from school children to civil servants.

Characteristics of Respondents

Respondents in this study were consumers who bought hydroponic vegetables for household consumption at Fris Fresh Market, Ambon City. The total number of respondents that the writer took in this study was 100 people. Elements of the characteristics of the respondents who were analyzed included age, education, number of dependents and income. The elements of the characteristics of the respondents will be described as follows:

Age

Age is important to know because it relates tothe productive age of the respondents (Sugiono, 2017). Data from the research grouping of respondents according to age can be seen in table 3.

Table 3. Characteristics of Respondents by Age

Age (Years)	Number of Respondents	Percentage (%)
20-30	29	29%
31-40	18	18%
41-50	32	32%
51-60	21	21%
Total	100	100

Source: Primary Data Processed in 2023

Based on the data in table 3, it can be seen that respondents who buy hydroponic vegetables at Fris Fresh Market in Ambon City are still classified as productive. The highest percentage of respondents' characteristics based on the age range at the age of 41-50 years is 32%. Respondents at this age tend to have a high enough interest in shopping to support their daily needs. The older a person is, the decision will be made in

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something that is decided with full consideration (Muhammad Sukri 2016). In addition, respondents in the age range of 41-50 years have an average education level of S1.

Education

A person with a high level of education has broad knowledge and insight, in relation to consumption, those with higher education realize the importance of education, so that consumption expenditure will be greater and fulfillment of needs will also increase (Baliwati, 2017)

The number of respondents based on educational level can be seen in table 4.

Table4. Characteristics of Respondents Based on Education Level

Level of education	Number of Respondents	Percentage(%)
SENIOR HIGH SCHOOL	24	24%
D3	17	17%
S1	59	59%
Total	100	100

Source: Primary Data Processed in 2023

Based on the data in table 4, it can be seen that the respondent who has the highest level of education is the respondent with an undergraduate degree, namely 59%. This proves that the respondents who buy the most hydroponic vegetables are those with a high level of education. The relationship between the respondent's education and consumer interest lies in the decision, meaning that the higher a person's education, the better the consideration in choosing vegetables. And it will also be easy to understand the advantages of vegetables (Kharisma, 2022).

Total Dependents

The number of dependents is the number of souls (house membershouseholds) who still occupy or inhabit the same house with the head of the household, and are still a household burden in meeting their daily needs (Nurlaila, 2018)

Table 5. Characteristics of RespondentsBased on Total Dependents

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Total Coverage	Number of Respondents	Percentage
0 – 2	57	57 %
3 – 4	40	40%
5 - 6	3	3 %
Total	100	100

Source: Primary Data Processed in 2023

Based on table 5, it can be seen that the respondent who has the highest number of dependents is the respondent with the number of dependents 0-2, namely 57%. In household life, the amount of family burden can affect the level of consumption incurred because it relates to more and more needs (Rosmiaty Chodijah, 2017).

Income

The amount of people's income can affect demand because the level of income will reflect people's purchasing power or demand. The higher the level of people's income, the purchasing power or demand for goods and services will be high. Conversely, if the income level of the community is low, then the purchasing power or demand for goods and services is also low (Fria Irmanda, 2021). The characteristics of respondents based on their monthly income can be seen in table 6.

Table 6. Characteristics of Respondents Based on Income

Revenue (Month)	Number of Respondents	Percentage
1,000,000-2,000,000	23	23%
2,000,000-3,000,000	39	39%
3,000,000-4,000,000	22	22%
4,000,000-5,000,000	16	16%
Total	100	100

Source: Primary Data Processed in 2023

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Based on table 6, it shows that the respondents with the most income are 2,000,000-3,000,000, which is 39%. Based on these data it can be seen that some respondents are in the upper middle income group and have a good level of education. The level of education and income level of consumers will influence their choices in purchasing vegetables according to their income.

Validity test

Questions are declared valid or feasible if r count > r table. The validity results can be seen in table 7

Table 7. Size Validity Test

Size Variable	R Count	R Table	Information
Question 1	0.569	0.196	Valid
Question 2	0.778	0.196	Valid
Question 3	0.595	0.196	Valid
Question 4	0.648	0.196	Valid
Question 5	0.693	0.196	Valid

Source: Primary Data Processed in 2023

Based on table 7 it can be seen that the validity test conducted on 100 respondents resulted in the size attribute of questions 1 - question 5 being declared valid. This can be concluded by seeing that each variable has a calculated r value that is greater than the r table value.

Table 8. Freshness Validity Test

Freshness Variable	RH counted	R Table	Information
Question 1	0.492	0.196	Valid

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Question 2	0.638	0.196	Valid
Question 3	0.414	0.196	Valid
Question 4	0.540	0.196	Valid
Question 5	0.570	0.196	Valid

Source: Primary Data Processed in 2023

Based on table 8 it can be seen that the validity test conducted on 100 respondents resulted that the freshness attribute from question 1 to question 5 is valid.

Table 9. Cleanliness Validity Test

Cleanliness Variable	R Count	R Table	Information
Question 1	0.602	0.196	Valid
Question 2	0.644	0.196	Valid
Question 3	0.585	0.196	Valid
Question 4	0.547	0.196	Valid

Primary Data Sources Processed in 2023

Based on table 9, the validity test was carried out on 100 respondents, which resulted from questions 1 to 5 being valid.

Table 10. Benefit Validity Test

Benefit Variable	R Count	R Table	Information
Question 1	0.809	0.196	Valid
Question 2	0.581	0.196	Valid
Question 3	0.623	0.196	Valid
Question 4	0.692	0.196	Valid
Question 5	0.664	0.196	Valid

Source: Primary Data Processed in 2023

From table 10 it can be seen that the validity test conducted on 100 respondents resulted in the benefit attribute from question 1 to question 5 being declared valid. This

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can be concluded by seeing that each variable has a calculated r value that is greater than the r table value

Reliability Test

Table 11. Reliability Test

Variable	Question Items	Cronbach's Alpha	Information
Size	5	0.666	Reliable
Freshness	5	0.360	Reliable
Cleanliness	4	0.340	Reliable
Benefit	5	0.697	Reliable

Source: Primary Data Processed in 2023

From the table above it can be concluded that the measuring instruments in this study belong to the class of perfect reliability and high reliability. Namely with a Cronbach's Alpha value of 0.666, freshness of 0.360, cleanliness of 0.340 and benefits of 0.697

Consumer Behavior on Demand for Hydroponic Vegetables (Based on Size, Freshness, Cleanliness and Benefits Attributes)

Attributes are characteristics or characteristics of an object or product that is used as an object. Attributes of hydroponic vegetables in this study include the attributes of size, freshness, cleanliness and benefits.

Table 12. Consumer Behavior on Demand for Hydroponic Vegetables Based on Size

Variable Size	Score					TOTAL SCORE
	STS	TS	KS	S	SS	
P. 1	0	0	1	41	58	457
P.2	0	0	1	54	45	444
P.3	0	0	5	38	57	452
P.4	0	0	3	38	47	450

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P. 5	0	0	8	42	38	438
TOTAL						2,241

Source: Primary Data Processed in 2023

From table 12 it can be seen that in general the respondents answered agree and strongly agree according to predetermined measures. Size affects the interest of respondents who strongly agree because in buying hydroponic vegetables with large sizes and long sizes. Damage and the presence of branches in hydroponic vegetables also affect respondents who strongly agree in purchasing hydroponic vegetables. Because respondents tend to like vegetables that are in good shape without any branches in vegetables. In addition, respondents who did not agree with their interest in buying vegetables that were large and long, because according to them agreed that medium size vegetables were attractive, if the sizes tended to be long they were less interested in choosing them.

From all the answer data on the respondent's size attribute, it can be seen by the answer score index method as follows:

Total score = 2,241

Max Score = 2,500

Score Index $= \frac{Total\ skor}{Skor\ Maksimal} X\ 100\ \%$

Score Index $= \frac{2.241}{2.500} x 100\%$

Score Index = 89,64 %

From the data obtained, it is equal to 89.64% is included in the very strong interval.

Table 13. Consumer Behavior on Demand for Hydroponic Vegetables Based on Freshness

Variable Size	Score					TOTAL SCORE
	STS	TS	KS	S	SS	
P. 1	0	0	0	59	41	459
P.2	0	0	5	46	49	441
P.3	0	0	4	42	54	450
P.4	0	0	5	55	40	435
P. 5	1	1	7	49	42	430

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TOTAL	2.215

Source: Primary Data Processed in 2023

From table 13 it can be seen that the average respondent's answers are very agree and agree according to the freshness that exists. Freshness affects the interest of respondents in purchasing hydroponic vegetables. Because respondents tend to like vegetables that look fresh, the color of green vegetables indicates that the vegetables are healthy and the texture of the vegetables is good. In addition, the respondents who answered did not agree with the supply time of vegetables which influenced the respondent's buying interest, because according to the respondents vegetables could be stored and lasted for 5-6 days using good packaging. In this case, most of the vegetables at Fris Fresh Market are packed in good packaging and stored in a safe place and temperature so that the vegetables are preserved until the next supply time.

From all the answers to the attributes of the freshness of the respondents above, it can be seen by the score index method for the answers obtained:

Total score = 2.215

Maximum score = 2,500

Score index $= \frac{Total\ skor}{Skor\ Maksimal} x\ 100\%$

Score Index $= \frac{2.215}{2.500} 100\%$

Score Index = 88,60 %

From the data obtained 88.60% is included in the very strong interval.

Table 14. Consumer Behavior on Demand for Hydroponic Vegetables Based on Cleanliness

Variable Size	Score					TOTAL SCORE
	STS	TS	KS	S	SS	
P. 1	0	0	1	38	61	460
P.2	0	0	1	52	47	446
P.3	0	1	27	37	35	405
P.4	0	0	3	43	54	451
TOTAL						1,763

Source: Primary Data Processed in 2023

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From table 14 it can be seen that the average respondent's answer is strongly agree and agree according to the existing cleanliness. Cleanliness greatly influences respondents in making purchases. Because respondents tend to like vegetables that look clean, the leaves and skin of vegetables are free of dirt and there are no roots at the ends of the vegetables. In addition, the increased selling price did not affect the respondents' interest in making a purchase, because there is a price for quality, prices that tend to be high have better quality.

From all the data on the answers to the cleanliness attributes of the respondents above, it can be seen by the answer score index methodobtained:

Total score = 1,763
Max Score = 2,000
Score Index $= \frac{Total\ Skor}{Skor\ Maksimal} x\ 100\ \%$
Score Index $= \frac{1763}{2.000} x\ 100\ \%$
Score index = 88,15 %

From the data obtained, it is equal to 88.15%, including the very strong interval.

Demand for Hydroponic Vegetables Based on Their Benefits

Variable Size	Score					TOTAL SCORE
	STS	TS	KS	S	SS	
P. 1	0	2	2	44	52	448
P.2	0	0	0	59	41	441
P.3	0	0	4	43	53	447
P.4	0	1	4	49	53	447
P. 5	1	1	4	43	51	442
TOTAL						2,214

Source: Primary Data Processed in 2023

Based on table 15, it can be seen that the average respondent's answer is strongly agree and agree according to the benefits provided. Benefits greatly influence respondents in purchasing hydroponic vegetables. Because hydroponic vegetables are vegetables that contain many benefits and hydroponic vegetables are good vegetables to eat every day. Hydroponic vegetables also contain nutrients and vitamins that are widely known by the public so that in this case it greatly influences respondents in buying hydroponic vegetables.

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From all the data on the answers to the attributes of the benefits of the respondents above, it can be seen by the score index method, the answers are obtained:

Total Score = 2,214
Max Score = 2,500
Score Index $= \frac{Total\ Skor}{Skor\ Maksimal} x\ 100\ \%$
Score Index $= \frac{2.214}{2.500} x\ 100\ \%$
Score Index = 88,56 %

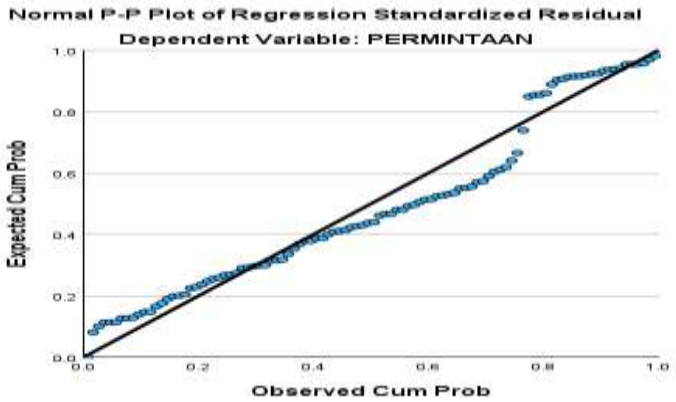
From the data obtained 88.56% are included in the very strong interval.

Effect of price, age, education, number of dependents and income on the demand for hydroponic vegetables

Classic assumption test

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 that describes the actual data will follow the diagonal line. The results of the normality test can be seen in the normal probability plot graph



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From the graph above it can be seen that the points in the multiple linear regression equation model spread and follow the direction of the diagonal line. Therefore, based on the results of the normality test, the regression analysis is feasible to use or the data is normally distributed. This means that in this study it can be regressed.

Multicollinearity Test

This test is a detection of the presence or absence of multicollinearity in our data by looking at the tolerance value and the Variance Inflation Factor (VIF) value. This multicollinearity test has test criteria, namely the tolerance value > 0.10 or the same as the VIF value < 10. The results of the multicollinearity test can be seen in the output results below:

Table 16. Multicollinearity Test Results

Coefficientsa			
Model		tolerance	VIF
	(Constant)		
	AGE	.652	1,533
	EDUCATION	.994	1006
	THE NUMBER OF DEPENDENTS	.668	1,497
	INCOME	.930	1075
	VEGETABLE PRICE	.956	1,046

a. Dependent Variable: DEMAND

Source: Primary Data Processed in 2023

From table 16 it can be seen that the age variable has a VIF value of 1,533 <10, the education variable has a VIF value of 1,006 <10, the number of dependents variable has a VIF value of 1,497 <10, the income variable has a VIF value of 1,075 and vegetable prices are a VIF variable of 1,046 <10, then in conclusion the output data results above do not contain multicollinearity.

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Multiple Linear Regression Analysis

Table 17. Multiple Linear Regression Analysis Test Results

Variable	Regression Coefficient	Error standard	Sig
Age	.650	.465	.165
Education	901	1,303	.491
The number of dependents	-10,267	3,432	.004
Income	.493	.338	.149
Vegetable Prices	2.172	080	<.001

Source: Primary Data Processed in 2023

From table 17 it can be seen that multiple linear regression analysis can be formulated in the following equation:

Y = 596.60 + 0.650X1 + 0.901X2 - 10.267X3 +0.493X4 + 2.172 + e

Partial Test (T Test)

T-test is basically a test used to show how far the influence of one by one independent variable on the dependent variable. To prove and see, partially the factors of age (X1), education (X2), number of dependents (X3), income (X4), and price (X5) have a significant effect on the demand for hydroponic vegetables (Y) at Fris Fresh Market, Ambon City in this study can be seen in the SPSS output:

Table 18. Results of Multiple Linear Regression Analysis

Model	Q	Sig.
(Constant)	28,872	<.001
Age	1,398	.165
Level of education	.692	.491
The number of dependents	-2,991	.004
Income	1,456	.149
Vegetable Prices	26,986	<.001

Source: Primary Data Processed in 2023

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The Effect of Age (X1) on the Demand for Hydroponic Vegetables (Y)

From the results of the partial test, it can be seen that the sig value is 0.05 > 0.165 so that H0 is accepted and H1 is rejected. This means that partially the age variable has no effect on the demand for hydroponic vegetables. Because hydroponic vegetables are vegetables that have many benefits and are multifunctional, so they are very popular with all ages, both children and adults.

The Effect of Education (X2) on the Demand for Hydroponic Vegetables (Y)

From the results of the partial test, the value is sig 0.05 > 0.491 so that H0 is accepted and H1 is rejected. This means that partially the education variable has no effect on the demand for hydroponic vegetables

Effect of the number of dependents (X3) on demand (Y)

From the results of the partial test, the sig value is 0.05 <0.004 so that H0 is rejected, H1 is accepted. This means that partially the number of dependents affects the demand for hydroponic vegetables. Because if there are a large number of dependents in the family it will affect the number of purchases of hydroponic vegetables which are adjusted to the number of dependents in the family.

The Effect of Income (X4) on the Demand for Hydroponic Vegetables

From the results of the partial test, the sig value is 0.05 > 0.149 so that H0 is accepted and H1 is rejected. This means that partially income does not affect the demand for hydroponic vegetables. Because hydroponic vegetables are relatively affordable so that respondents from all walks of life with low or high incomes can buy and consume them.

The Effect of Price (X5) on the Demand for Hydroponic Vegetables

From the results of the partial test, the value is sig 0.05 > 0.001 so that H0 is rejected and H1 is accepted. This means that partially the price is very influential on the demand for hydroponic vegetables. Because the price of hydroponic vegetables tends to fluctuate every time affecting consumers in buying hydroponic vegetables. In this case, when the research was conducted, there were several respondents when the price of hydroponic vegetables increased, they preferred to buy vegetables that were cheaper in traditional markets.

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Simultaneous Test (Test F)

To prove the truth of the hypothesis, an F test is carried out, namely comparing sig with alpha (0.05). To prove the hypothesis that has been formulated regarding the effect of age (X1), education (X2), total dependents (X3), income (X4) and price (X5) on the demand for hydroponic vegetables, it can be explained as follows:

Table 19. F test (simultaneous test) in multiple linear analysis

Model	Sum Of Squares	df	MeanSquare	F	Sig
Regression	1388196.106	5	277639.221	149,813	<.001b
residual	174203.894	94	1853.233		
Total	1562400,000	95			

a. Dependent Variable : Request

b. Predictors: (Constant), Vegetable Prices, Number of Dependents, Education Level, Income, Age)

Primary Data Source Processed 2023

The sig value on the F test (simultaneously) is <0.001. On the basis of decision making if Sig <0.05 then H0 is rejected and H1 is accepted. This means that the variables age, education, number of dependents, income and prices have a real and significant effect on the related variable, namely demand. From the results of the sig that can be seen, it can be explained that simultaneous testing of these demand variables is said to influence one another where the variables of the number of dependents and price have a very significant influence.

Determination Coefficient Test

Table 20. Determination Coefficient Test

Model	**R**	**R Square**	**Adjusted R Square**	**std. Error of the Estimate**
1	**.943a**	**.889**	**.883**	**43.04919**

a. Predictors: (Constant), Vegetable Prices, Number of Dependents, Education Level, Income, Age)

Primary Data Sources Processed in 2023

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From the results of the SPSS test it is known that the coefficient of determination of the study is 0.889 or 88.9 %. This value can be interpreted that simultaneously age, education, number of dependents, income and prices affect the demand for hydroponic vegetables and as much as 11.1% is influenced by other factors. The Multiple R value is 0.943 or 94.3% which means a close relationship between age, education, number of dependents, income and price on the demand for hydroponic vegetables.

CLOSING

Conclusion

The conclusions of this study are:

1. Demand for hydroponic vegetables based on attributes can be seen from the acquisition of the index score results, namely the size attribute 89.64% is classified as very strong, the freshness attribute 88.60% is classified as very strong, the cleanliness attribute is 88.15% is classified as very strong and the benefits attribute is 88.56% is classified very strong. With this it can be concluded that the size attribute has the strongest influence with the highest percentage among the other attributes for respondents in purchasing hydroponic vegetables.
2. Based on multiple linear regression analysis partially the number of dependents variable Sig 0.05 > 0.004 and the price variable sig 0.05 > 0.001 so that it affects the demand for hydroponic vegetables. While the age variable was sig 0.05 > 0.165, the education variable was 0.05 > 0.491 and the income variable was sig 0.05 > 0.149 so that it had no significant effect on the demand for hydroponic vegetables. Based on the simultaneous multiple linear analysis, the result is sig 0.001 <0.05 so that H0 is rejected and H1 is accepted. This means that simultaneously age, education, number of dependents, income, and prices have a significant and significant effect on the demand for hydroponic vegetables.

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