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# Consumer Preferences Analysis in Consuming Broiler Chicken Eggs at Kolpajung Market Pamekasan Regency

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**Abstract:** Eggs as a food source of protein that has high nutritional value and is relatively cheap so that it is easily accessible by the community. To provide information about consumer preferences for broiler chicken eggs, a study was conducted with the aim of knowing the attributes of broiler chicken eggs that are consumer preferences in the Kolpajung Market, Pamekasan Regency and knowing the attributes that consumers most consider in the decision to buy broiler chicken eggs. The research method used is a survey method with purposive sampling. The analysis used is descriptive analysis and analysis of purchasing decisions with SmartPLS. The results showed that partially the Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preferences ( $Y$ ). Partially Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) directly have no positive and significant effect ( $P > 0.05$ ) on consumer decisions ( $Z$ ). Simultaneously Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) have a simultaneous indirect influence on Consumer Preference ( $Y$ ) because through the Decision-Making variable ( $Z$ ) of 0.350 or 35%. Meanwhile, simultaneously the variables of Product ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) are able to influence Consumer Preference ( $Y$ ) by 0.568 or 56.8%.

**Keywords:** Preferences, Consumers, Broiler Chicken Eggs.

## 1. INTRODUCTION

The livestock sub-sector has a strategic role in the economic life and human resource development of Indonesia. This role can be seen from the function of livestock products as a source of protein food which is very important for improving the quality of Indonesian human resources. The development of the main livestock population and their production is



an illustration of the level of availability of national protein sources. The level of consumption that will determine the quality of human resources is influenced by the level of availability of livestock production and the level of household income or consumer purchasing power. Livestock products that contain high protein are meat, eggs, and milk. Among the three livestock products, eggs are one of the livestock products that are often consumed because the price is relatively cheap compared to other livestock products, easy to obtain and easy to process into various foods, so eggs are always needed by various consumers. In addition, eggs are the perfect food because they contain nutrients needed for living things such as protein, fat, vitamins and minerals in sufficient quantities. Eggs contain high quality protein because they contain a complete structure of essential amino acids so that eggs are used as a benchmark in determining the quality of proteins of various food ingredients. Egg consumption in Indonesia tends to increase because the price of eggs is relatively affordable by the Indonesian people compared to other sources of animal protein. The increase in average egg production by 6.12% in 2020 from 4.75 million tons in 2019 to 6.12 million tons in 2020, was contributed by growth in Java by 60.34% and the rest outside Java by 39.66%. Meanwhile, East Java Province is the province with the highest egg production of broiler chickens in 2020, which is 1.73 million tons. (BPS Jawa Timur, 2021).

The increase in egg consumption causes egg marketing activities to also increase, this is one of the most important activities whose purpose is to distribute products in the form of broiler chicken eggs from farmers to consumers. Producers need to know consumer taste in determining whether a consumer likes or dislikes a product. Before consumers decide to buy a product, they first consider the physical characteristics (attributes) inherent in the product. Likewise, in purchasing of broiler chicken eggs, some of the attributes that consumers consider include the price of eggs, egg size, shell thickness, egg color, egg cleanliness and egg pores. In order for marketed eggs to get a good response from consumers, producers must be able to provide eggs with attributes that match the wants and needs of consumers. Therefore, it is necessary to understand consumer behavior, including consumer preferences. If consumer preferences are well understood, producers can design the right strategy to respond to consumer expectations and make a business differentiation strategy with its competitors. Based on this description, the author is interested in conducting research on consumer preferences for broiler chicken eggs in the Kolpajung traditional market, Pamekasan Regency. The purpose of this study is to determine the attributes of broiler chicken eggs that are consumer preferences and the attributes that are most considered by consumers in the decision to buy broiler chicken eggs.

## **2. RESEARCH METHODS**

This research was conducted in September 2022 at the Kolpajung Market, Pamekasan Regency. The research location was selected purposively based on certain considerations according to the research objectives (Singarimbun dan Efendi, 1995). The number of populations is a consideration in determining the research location because the greater population in an area, the greater of the level of consumption. The location chosen is Kolpajung Market, Pamekasan Regency, which is in Pamekasan Sub-District. The consideration of choosing the research location is because Pamekasan Sub-District is the sub-



district that has the largest population, namely 90,212 people or 10.61% of the total population of Pamekasan Regency of 850,139 people (BPS Kabupaten Pamekasan, 2021). The population of this study were all consumers of broiler chicken eggs at the research location who made purchase transactions. Sample determination was carried out using accidental sampling technique. Taking respondents through this method is a consumer who are buying broiler chicken eggs and are willing to be interviewed where each member of the population has the same opportunity to be a respondent (Bungin, 2005). The number of samples was 75 people with the consideration that the more samples studied, the more the data will spread normally so that the results will be obtained better because the research using statistical analysis has a minimum respondent size of 30 people (Hasan, 2002). The number of respondents is considered to have represented all consumers in buying broiler chicken eggs in Pamekasan Regency. The research method was conducted by direct observation and interview to collect primary data from respondents and secondary data from related agencies. Most of the data used in this research is primary data. Primary data was obtained from interviews with respondents. Secondary data were obtained from the Central Bureau of Statistics and the Agriculture and Livestock Service Office of Pamekasan Regency. The data analysis used in this research are: 1. Descriptive analysis, used to obtain information about the general condition of the research location and the characteristics of the respondents. This analysis aims to describe the characteristics of a sample or population that is observed (Sugiyono, 2014). 2. Partial Least Squares – Structural Equation Modelling (PLS-SEM) analysis is used to determine the egg attributes that are most considered by consumers in determining purchasing decisions.

### **3. RESULTS AND DISCUSSION**

#### **Overview of the Research Locations**

The population is a consideration in determining the research location because the greater the population in an area, the greater the level of consumption. The location chosen is Kolpajung Market, Pamekasan Regency, which is in Pamekasan Sub-District. The consideration of choosing the research location is because Pamekasan Sub-District is the sub-district that has the largest population, namely 90,212 people or 10.61% of the total population of Pamekasan Regency of 850,139 people (BPS Kabupaten Pamekasan, 2021).

#### **Respondents Characteristics**

Based on data in the location, 75 respondents were obtained who were consumers of broiler chicken eggs in Pamekasan, used as research respondents showed several characteristics. The characteristics of these respondents are described based on gender, age, education, number of family members, income per month, and frequency of egg purchases per month.

#### **Gender**

Of the 75 respondents used in this research with male gender as many as 10 people (13 %) and women as many as 65 people (87 %), as shown in the following figure:

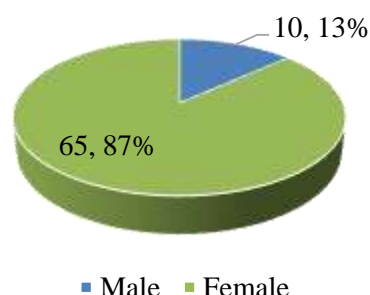


Figure 1. Gender of Respondents

Based on the data in figure 1 above, it is known that consumers of broiler chicken eggs are mostly female consumers (87%) because female consumers usually tend to often buy daily necessities to the market compared to male consumers. Because women have the authority to make purchases of household needs, besides that men lack the skills and knowledge about the needs of eggs for the household. Gender is a difference between men and women due to social and cultural formations that exists in a socio-cultural system of society. Gender is thought to be related to perceptions about product quality and also the decision to consume a product (Eviyanti, 2006).

### Age

Age is one of the important elements that determine consumer perceptions of the quality of egg products in making decisions to consume broiler chicken eggs. Of the 75 respondents used in this research with an age distribution are: less than 30 years as many as 7 people (9%), aged between 30 to 50 years as many as 48 people (64%), and those over 50 years old as many as 20 people (27%), as shown in the following figure:

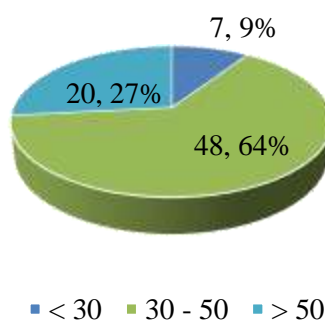


Figure 2. Age Distribution of Respondents

Consumers with an age range between 30-50 years have the largest percentage (64%) because at that age consumers are mature enough and are at an established age so that they can act as decision makers in determining the type of food to be consumed by their families so that they can influence purchasing decision for broiler chicken eggs for consumption. In the age range, the majority of respondents are housewives whose job is to take care of the household and have a full decision in spending the needs of their family. Age can affect a



person's taste for goods and services. A person's age is one of the factors that influence his perception in making the decision to accept a product or service as something new (Kotler, 2001).

### Education

The description of respondents based on education level is the education taken by each respondent. Of the 75 respondents used in this research with the distribution of education levels are: elementary school as many as 34 people (45 %), junior high schools as many as 12 people (16 %), high schools as many as 19 people (25 %), diploma/collage as many as 6 people (8 %), and others as many as 4 people (5 %) as shown in the following picture:

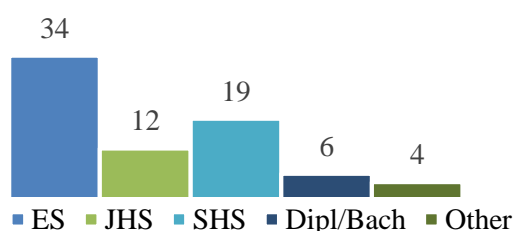


Figure 3. Education Level of Respondents

The results showed that respondents who consumed broiler chicken eggs mostly had elementary school education as many as 34 people (45%) followed by respondents with a senior high school education level of 19 people (25%). According to Nurmansyah (2006), it is explained that the level of education can affect a person's consumption behavior due to his mindset and experiences. A person who has knowledge and a higher level of education tends to choose a product that is of higher quality than someone with a lower education, apart from looking at the quality of the product he chooses, consumers with higher education will also look further at the disadvantages and risks of buying a product, and tend to be more critical in purchasing and selecting a product.

### Number of Family Members

Of the 75 respondents used in this research with the distribution of the number of family members are: family members are: 1 family member as many as 1 respondent (1 %), 2 family members as many as 14 respondents (19 %), 3 family members as many as 19 respondents (23 %), 4 family members as many as 26 respondents (35 %), and more than 4 family members as many as 17 respondents (23 %) as shown in the following picture:

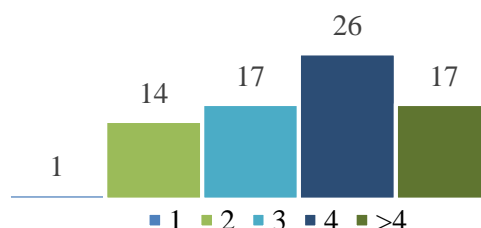


Figure 4. Number of Family Members of Respondents



The result showed that the highest number of respondents' family member was 4 people in the family as many as 26 people (35 %). The number of family members can influence product purchasing decision in a family (Supranto, 1997).

### Respondents' Income per Month

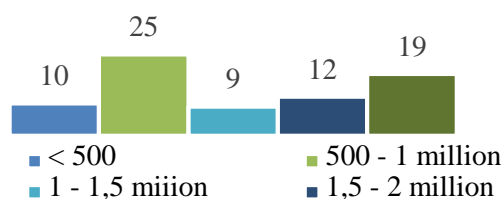


Figure 5. Respondents Income per Month

A person's income level can influence the decision to purchase a product. Of the 75 respondents used in this research with the distribution of respondents' income per month are: < 500 thousand as many as 10 respondents (13 %), between 500 thousand – 1 million as many as 25 respondents (33 %), between 1 million to 1.5 million as many as 9 respondents (12 %), between 1.5 million to 2 million as many as 12 respondents (16 %), and more than 2 million as many as 19 respondents (25 %). The most income level of respondents is between 500 thousand to 1 million rupiah per month (33%), this shows that with an affordable prices and has a high nutritional value is a consideration for consumers who have incomes between 500 thousand to 1 million rupiah to consume broiler chicken eggs. According to Sumarwan (2002), income is a reward received by someone from the work he does for a living. Income is usually received in the form of money. The amount of income will illustrate a person's purchasing power, which in turn will affect their consumption patterns. The purchasing power of a household is not only determined by the income of one person, but of all working household members.

### Frequency of Egg Purchases per Month

Of the 75 respondents used in this research with the distribution of the frequency of purchasing eggs per month are: once per month as many as 1 respondent (1 %), 2 times per month as many as 10 respondents (13 %), 3 times per month as many as 12 respondents (16 %), 4 times per month as many as 15 respondents (20 %), and more than 4 times per month as many as 37 respondents (49 %) as shown in the following figure:

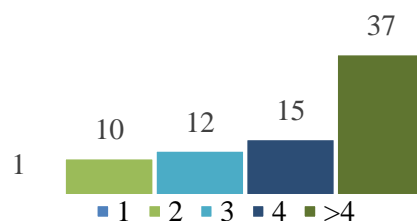


Figure 6. Frequency of Egg Purchases per Month



### Descriptive Analysis of Research Variables

Descriptive analysis is used to determine the results of respondents' responses to the variables used through the questionnaire items submitted. Furthermore, the processing of the frequency distribution of each of these variables is carried out by grouping the value scores of the respondents' answers.

### Variables of Broiler Chicken Eggs

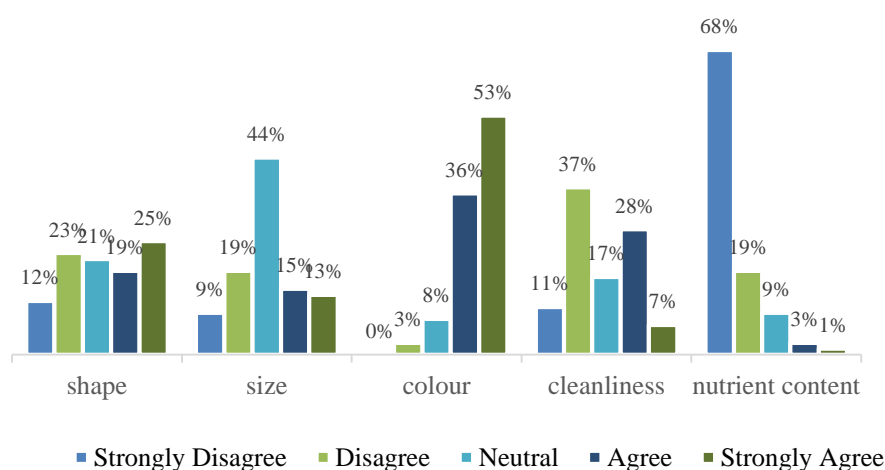


Figure 7. Variables of Broiler Chicken Eggs

In figure 7 it is explained that from the answers of 75 respondents to the product variable in the form of broiler chicken eggs, it shows that the first statement, namely the shape of the egg, strongly agrees as a consideration in choosing broiler chicken eggs as much as 25%. The second statement, namely the size of the eggs, was answered neutrally as a consideration in choosing broiler chicken eggs as much as 44%. The third statement, namely the color of eggs, was answered strongly agree as a consideration in choosing broiler chicken eggs as much as 53%. The fourth statement, namely the cleanliness of eggs, was answered to disagree as a consideration in choosing broiler chicken eggs as much as 37%, and the fifth statement, namely the nutritional content of eggs, was answered very disagreeably as a consideration in choosing broiler chicken eggs as much as 68%. The variable of broiler chicken egg is considered important for consumers because consumers tend to choose the preferred broiler chicken eggs, namely consumers consider egg size and color of the eggs to be the easiest physical attributes that can be used to visually determine the quality of the eggs.



### Price Variable

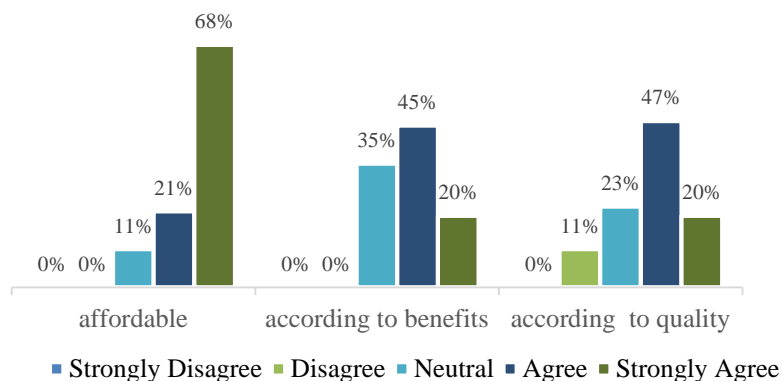


Figure 8. Price Variable

In Figure 8, it explains that from the responses of 75 respondents to the price variable, most of the respondents answered strongly agree. The first statement, namely the affordable price of broiler chicken eggs, is a consideration in choosing broiler chicken eggs, as many as 51 respondents (68%) answered strongly agree. The affordable egg prices are a consideration for consumers because the price to be paid is related to consumer income. The second statement, namely the price of eggs purchased in accordance with the benefits obtained, the respondent answered agree as many as 34 respondents (45%). While the third statement about the price of eggs purchased according to the quality obtained, respondents answered agree as many as 35 respondents (47 %). Consumers strongly agree with the affordable price of eggs because the price has a relationship with the money to be spent and the price of the eggs purchased at that time must also get the quality in accordance with the money spent. Consumers of broiler chicken eggs in Pamekasan consider the affordability of egg prices more than the suitability of egg prices with the benefits obtained, as well as the suitability of egg prices with the quality of eggs obtained. According to Kotler (2005), price is a very important part of marketing a product because price is one of the four marketing mixes. Price is an exchange rate of goods and services expressed in monetary units.

### Promotion Variables

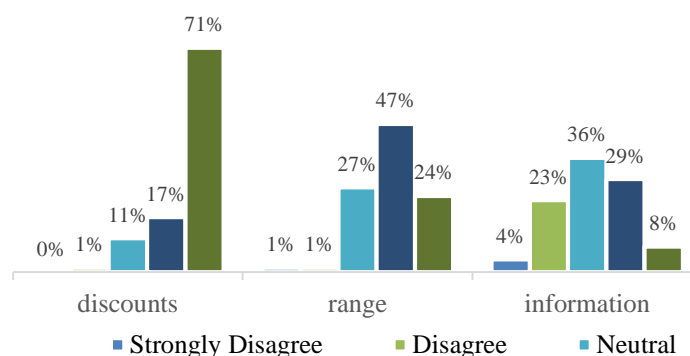


Figure 9. Promotion Variables





In Figure 9, it explains that of the responses of 75 respondents to the promotion variable, most of the respondents answered agree and even strongly agree. The first statement, namely discounts are a consideration in choosing broiler chicken eggs, as many as 53 respondents (71%) answered strongly agree. Egg discounts are a consideration for consumers because the discount will be related to the amount of money paid. The second statement, namely the wide range of promotions, the respondents answered agree as many as 35 respondents (47 %). While the third statement about the information provided by someone, respondents answered neutrally as many as 27 respondents (30 %). Consumers strongly agree with promotions in the form of discounts and a wide range of promotions because discounts have a relationship with the money that will be spent by consumers. According to Sistaningrum (2002), explaining that there are four promotional objectives, namely: introducing yourself, persuading, modifying, and shaping behavior as well as reminding about the product and company concerned, so that promotion is important in determining consumer preferences for broiler chicken eggs.

### Location Variables

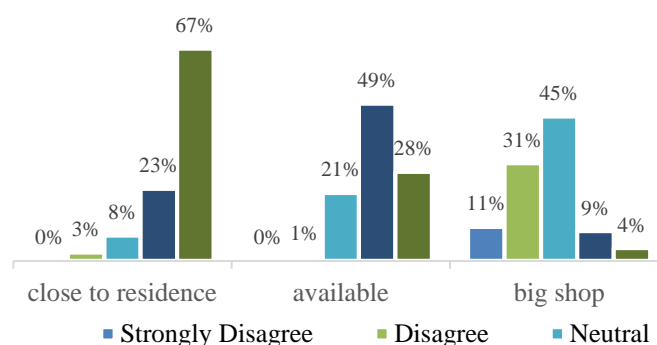


Figure 10. Location Variables

In Figure 10, it explains that from the responses of 75 respondents to the location variable, most of the respondents answered agree and even strongly agreed. The first statement, namely the location close to the place of residence, is a consideration in choosing broiler chicken eggs, as many as 50 respondents (67%) answered strongly agree. Consumers choose the location of egg sales close to where they live as a consideration for consumers to make it easier to buy broiler chicken eggs. Consumers tend to like products that are easily available and close to where they live, because this relates to the transportation costs incurred by consumers. The second statement, namely eggs are always available when going to buy, the respondents answered agree as many as 37 respondents (49 %). While the third statement about the area or size of the store, respondents answered neutrally as many as 34 respondents (45 %). Consumers choose the location of egg sales close to where they live, which is a consideration for consumers to make it easier to buy broiler chicken eggs so that consumers can easily buy broiler chicken eggs. Consumers have evaluation criteria including location, product completeness, product quality, price, service, convenience in shopping, and promotions so that these become very important factors and must be considered for consumers to choose which store to visit (Natalia, 2012).



### External Factor Variables

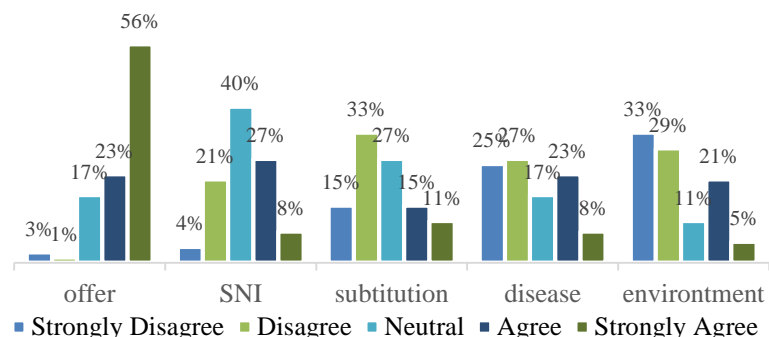


Figure 11. External Variables

In Figure 11, it explains that from the responses of 75 respondents to external variables, most respondents answered neutral to disagree. The first statement, namely when I buy broiler chicken eggs, the eggs offer given by the seller influences me in the purchase, 42 respondents (56 %) answered strongly agree. The second statement, namely when I buy broiler chicken eggs, egg offer, Indonesia National Standard of broiler chicken eggs became my consideration, the respondents answered neutrally as many as 30 respondents (40%). The third statement about the existence of egg substitution products (local chicken eggs, duck eggs, quail eggs, etc.) influences me in buying broiler chicken eggs, respondents answered disagree as many as of 25 respondents (33 %). The fourth statement about the existence of diseases issue such as avian influenza (AI), influenced me in buying broiler chicken eggs, respondents answered disagree as many as 20 respondents (27 %). And the fifth statement about the environment (family/friends) influences me in buying broiler chicken eggs, respondents answered strongly disagreeing as many as 25 respondents (33 %). Consumers mostly answer disagree on external variable for egg that completed with Indonesia National Standard, egg substitute products, avian influenza disease issues, and the environment. So that without paying attention to these external factors, it will not affect consumer decisions in deciding on the purchase of broiler chicken eggs.

### Consumer Preference Variables

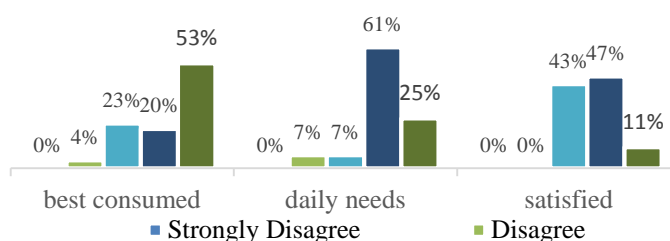


Figure 12. Consumer Preferences



In Figure 12, it explains that from the responses of 75 respondents to the consumer preference variable, most of the respondents answered agree to strongly agree. The first statement, namely when I buy broiler chicken eggs, broiler chicken eggs were the best product to be consumed in the purchase, as many as 40 respondents (53 %) answered strongly agree. The second statement, namely when I buy broiler chicken eggs, broiler chicken eggs have met my daily needs to be my consideration, the respondents answered agree as many as 46 respondents (61%). The third statement that I feel satisfied in consuming broiler chicken eggs influences me in buying broiler chicken eggs, the respondents answered agree as many as 35 respondents (47 %). Consumers make purchases because they fulfill their daily needs, feel satisfied in consuming eggs and broiler chicken eggs are the best products for consumption. If consumers feel that the eggs consumed can meet their daily needs, then these consumers will buy the eggs continuously. According to Wijaya (2007), consumer behavior is related to a person's habits and consumption patterns so that preference become the main factor influencing this. Consumer preferences, wants, and usage levels are often related to demographic variables such as age, gender, life cycle, income, occupation, education, religion, and the number of family members (Kotler, 2001).

### Description of Purchasing Decision Variables

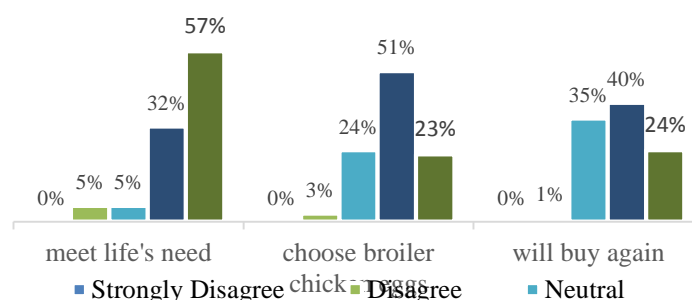


Figure 13. Description of Purchasing Decision Variables

In Figure 13, it explains that from the responses of 75 respondents to the purchasing decision variable, most of the respondents answered agree to strongly agree. The first statement, namely broiler chicken eggs are able to meet my daily needs, as many as 43 respondents (57 %) answered strongly agree. The second statement, namely I prefer broiler chicken eggs to other egg products, as many as 38 respondents (51 %) answered agree. The third statement, namely I will buy broiler chicken egg again, as many as 30 respondents (40 %) answered agree. Consumers agree with the statement about purchasing decision because broiler chicken eggs are considered the best product, can meet daily needs and consumers are satisfied in consuming broiler chicken eggs. Engel, et al (1994) explain that the last stage in the consumer behavior model is the act of purchase. Purchase occurs when the consumer obtains selected alternative or an acceptable substitutes if necessary. At the purchase stage, the consumer must make a decision regarding the time of purchase, the place of purchase, and the mode of payment.

### Partial Analysis per Variable

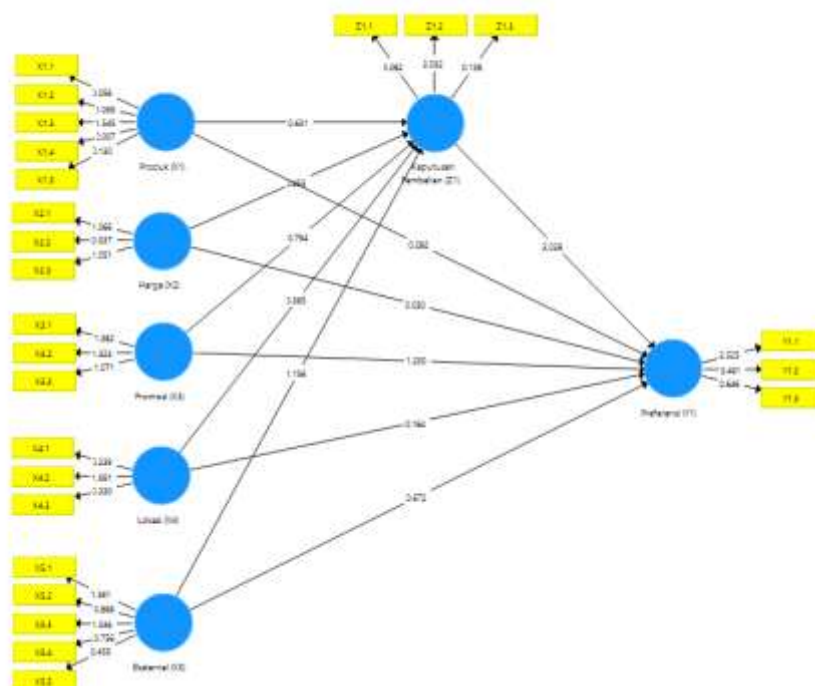


Figure 14. Partial Analysis Results per Variable

**By using Smart-PLS analysis partially, it can be described that:**

#### **Relationship between Variables to Consumer Preferences**

- Product variable (X<sub>1</sub>) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preference (Y), since the value of  $T = 0.282 < 1.96$
- Price Variable (X<sub>2</sub>) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preference (Y), since the value of  $T = 0.030 < 1.96$
- Promotion variable (X<sub>3</sub>) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preference (Y), since the value of  $T = 1.200 < 1.96$
- The Location Variable (X<sub>4</sub>) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preference (Y), since the value of  $T = 0.164 < 1.96$
- External Variables (X<sub>5</sub>) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preference (Y), since the value of  $T = 0.672 < 1.96$

#### **Relationship between Variables to Purchasing Decisions**

- The Product variable (X<sub>1</sub>) directly has no positive and significant effect ( $P > 0.05$ ) on the purchasing decision (Z), since the value of  $T = 0.631 < 1.96$
- The Price Variable (X<sub>2</sub>) directly has no positive and significant effect ( $P > 0.05$ ) on the purchasing decision (Z), since the value of  $T = 0.663 < 1.96$
- The Promotion variable (X<sub>3</sub>) directly has no positive and significant effect ( $P > 0.05$ ) on the purchasing decision (Z), since the value of  $T = 0.744 < 1.96$
- The Location variable (X<sub>4</sub>) directly has no positive and significant effect ( $P > 0.05$ ) on the purchasing decision (Z), since the value of  $T = 0.965 < 1.96$

e. External Variables ( $X_5$ ) directly has no positive and significant effect ( $P > 0.05$ ) on purchasing decisions ( $Z$ ), since the value of  $T = 1.156 < 1.96$

### Simultaneous Analysis per Variable

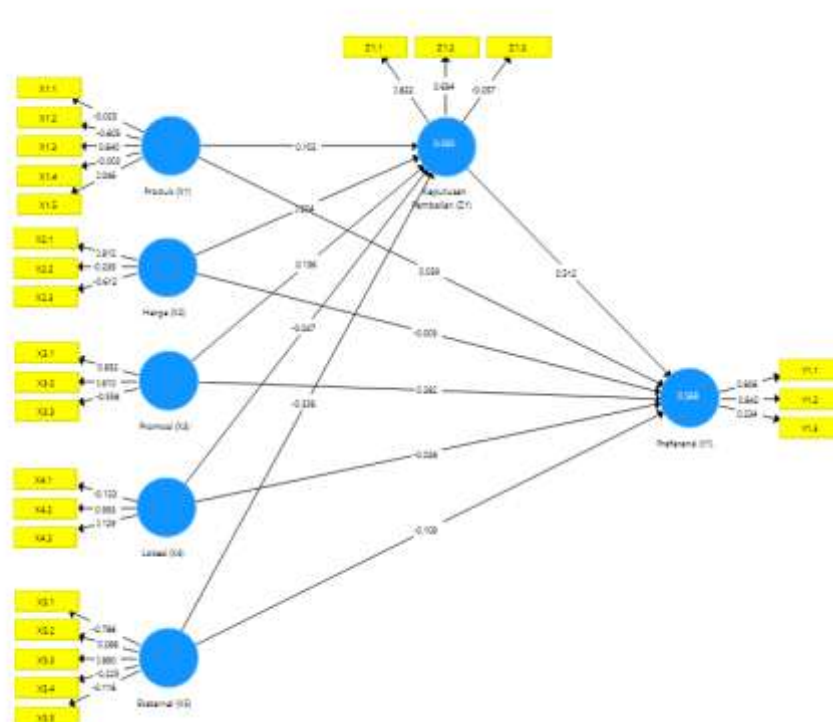


Figure 15. Simultaneous Analysis Results per Variable

By using simultaneous Smart-PLS analysis, it can be described that the Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) have an indirect effect simultaneously on Consumer Preferences ( $Y$ ) because through the Decision Making variable ( $Z$ ) of 0.350 or 35%. Meanwhile, the direct effect simultaneously on Product variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) is able to influence Consumer Preferences ( $Y$ ) by 0.568 or 56.8%.

### 4. CONCLUSION

- Partial analysis concluded that the Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) directly have no positive and significant effect ( $P > 0.05$ ) on consumer preferences ( $Y$ )
- Partial analysis concluded that the Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) directly have no positive and significant effect ( $P > 0.05$ ) on consumer decisions ( $Z$ )
- The analysis simultaneously concluded that the Product Variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) have a simultaneous indirect effect on



Consumer Preference (Y) because through the Decision Making variable (Z) of 0.350 or 35%

- Meanwhile, the direct effect simultaneously of Product variables ( $X_1$ ), Price ( $X_2$ ), Promotion ( $X_3$ ), Location ( $X_4$ ), and External ( $X_5$ ) is able to influence Consumer Preferences (Y) by 0.568 or 56.8%

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