



# Analysis of the Factors that Influence Demand for Broiler meat in the City of Gunungsitoli

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**Abstract.** Consumption of chicken meat is very accepted by consumers compare to other kind of meat. The purpose of the study was to find out the factors that influence the demand for broiler chicken meat in Gunungsitoli city. The research was conducted from May until June 2021 using primary data. The method used in sampling is interviewing respondents with purposive sampling (intentionally) and in analysis with Multiple Linear Regression using SPSS 24 application tool. The results showed that the demand for broiler chicken meat in Gunungsitoli city was influenced simultaneously by the price of broiler chicken meat, age, number of family members, income level, fish price, taste level, and education level with  $R^2=0.606$ . The price of broiler chicken meat, income level and taste level have a noticeable effect on the confidence level of 95%.

**Keywords:** broiler chicken meat, demand, familymember, income level, taste level

Received [19 August 2021] | Revised [29 September 2021] | Accepted [08 October 2021]

## 1. Introduction

The agricultural sector is a very important sector in the economic development of the Indonesian nation. The agricultural sector is not only synonymous with business in terms of farming, in the broadest sense agriculture includes 5 subsectors, namely subsectors of food crops, plantations, forestry, livestock and fisheries. One of the agricultural subsectors that has a fairly important role is the livestock subsector because the livestock sector is one of the food producers for the community, especially in the fulfillment of animal protein.

Stated that meat consumption is an important part of consumers' daily food intake. The human need for animal protein is driving the rapid demand in the market for meat production. There are many sources of animal protein that can be obtained from various types of food, for example from various types of meat such as chicken, pork, beef, goat meat and so on [1]. Rapid economic growth and structural changes usually enormously affect the demand for basic foodstuffs [2].

Chicken meat is one source of animal food that contains nutrients high enough in the form of protein and energy. The demand for meat continues to increase along with the needs of the people in an area. Consumption of chicken meat is very accepted by consumers around the world compared to other meat consumption [3].

Declared meat consumption to be an expensive food for less developed countries. The main reasons for the increase in demand for meat are an increase in population, increased technology and increased income [4].

Chicken meat is consumed by all people from various backgrounds and from various types of income [5]. This shift in consumption patterns can be an opportunity for broiler chicken farmers to further increase their production. Stated that the livestock sector in general has progressed with the presence of livestock development with shared responsibilities between government, public and private [6]. Broiler chickens are chickens that are genetically capable of growing very quickly with low feed conversion compared to other livestock. In a period of 6-8 weeks the chicken can reach a life weight of 1.5-2 kg and in general can meet the tastes of consumers or the public [7]. So that the population of broiler chickens is quite large.

The increase in consumer or community appetite for broiler chicken meat will be directly proportional in the increase in interest in broiler chicken business. Some of the influences of consumer preferences, namely:

1. Non-breed chicken population is getting lower in number and quite difficult to obtain in the market.
2. Broiler chicken meat is cheaper in price and easy to find in the market.

The texture of broiler chicken meat is softer so it takes a relatively fast time in its processing.

## **2. Materials and Method**

The research site was conducted in gunungsitoli city and surrounding areas. The traditional market in Gunungsitoli City is the main source of data from this study. The data collection time will be done in May to June 2021.

### **2.1. Sample Assesment Method**

The method of determining consumer samples is done by purposive method (intentionally) which is the taking of respondents who are consumers who come shopping for broiler chicken meat in traditional markets in Gunungsitoli City. The number of respondents in this study was determined as many as 60 respondents, this determination was made based on the number of at least 30 respondents who can empirically provide a stable sample variety as a restoration of population variety [8]. The addition of respondents is done assuming that the more number of respondents, the better the data obtained.

## 2.2. Data Collection Method

The data used in this study is primary data and secondary data. Primary data obtained from interviews with broiler chicken consumers using a list of questions / questionnaires that have been made before. Secondary data was obtained from relevant agencies and agencies such as the North Sumatra Food and Livestock Security Office, the Central Statistics Agency and other related agencies as well as other literature such as journals and previous research results that supported this study.

## 2.3. Data Analysis Method

The data analysis methods used in this study are descriptive methods and regression analysis. Regression analysis is used to determine the effect of two or more free variables on one bound variable. Data processing is used using Microsoft Excel 2007 and SPSS version 24 tools.

## 3. Results and Discussion

### 3.1. Multiple Regression Results Table

Variable	Koefisien	t-count	P-value
Constant	4,830	1,134	,262
Income	2,285E-7	2,234	,030
Age	-,013	-,976	,334
Number of Family Members	,132	1,816	,075
Broiler Chicken Price	,000	-2,140	,037
Fish Price	-6,215E-6	-,180	,858
Education Level	-,065	-,208	,836
Taste Level	1,764	6,365	,000
$R^2 = 60.6\%$	$P\text{-value} = 0,000$		
$R^2 \text{ (adj)} = 55,3\%$	Durbin Watson statistic (d) = 1,977		
F hitung = 11,448			

### 3.2. Broiler Chicken Price

Based on the results of the test analysis, the results found that the variable price of broiler chicken meat has a significance value of 0.037 smaller than 0.05 which means that the price of broiler meat affects markedly the demand for broiler chicken meat in the city of Gunungsitoli. This is in line stated that the demand for broiler chicken meat in the traditional market of bogor district citeureup subdistrict was markedly affected by the increase in broiler chicken prices. This proves that the public is also sensitive to the increase in the price of goods in the market [9].

Determination of chicken price broiler follows market price conditions (price taker). The price of chicken broiler in Gunungsitoli City tends to be stable starting from IDR 33,000 - IDR 38,000 per kilogram. Respondents most buy chicken broiler at a price of IDR 35,000 per kilogram and the average price of chicken broiler from the total respondents studied amounted to IDR 35,600 per kilogram.

### **3.3. Fish Price**

Based on the results of regression analysis, the broiler chicken price variable has a significance value of 0.858 greater than the real level of  $\alpha = 0.05$ , then the fish price variable has no significant effect on the demand for broiler chicken meat in Gunungsitoli City. The regression coefficient value is -0.00006215, meaning that if the price of fish increases by one percent, it will decrease the number of broiler chicken demand by 0.00006215 percent.

This result is in line with the variable results of chicken egg prices having a t-count value of 1,659, showing no effect of significance on the confidence level of 95 percent and regression coefficient value of 0.71 [10]. The increase in fish prices did not significantly affect the demand for broiler chicken meat. This is because fish has become a major part in the menu of the local community, so fish is always available to consumer households in the city of Gunungsitoli. Fish will remain available, whether there is or there is no demand for broiler chicken meat. This means that when consumers buy chicken meat, consumers will also still buy fish, because fish has become a staple.

### **3.4. Family Income**

Household income affects the purchasing power of consumers on a good / service. The higher a person's income, the more purchasing power increases and vice versa. The average consumer income is IDR. 3,388,330,00. Based on the results of regression analysis, the income variable has a significance value of 0.030 smaller than the real level of 0.05, it is concluded that the family income variable affects the demand for broiler chicken meat in Gunungsitoli City. Income affects the demand for broiler chicken meat because income reflects a person's purchasing power over an item. Consumers who have high incomes then the purchasing power of broiler chicken meat is also high and vice versa.

The regression coefficient value of 0.000000285 and marked positive means that if consumer income increases by 1 percent, then the demand for broiler chicken meat will also increase by 0.000000285. The initial hypothesis suggests the same condition as the results of the study i.e. income has a positive relationship to the demand for broiler chicken meat, the greater the consumer income will increase the amount of demand for broiler chicken meat at any given price level. This result is in line with the results of income variables having a t-count value of 1,960 having a significant effect on the confidence level of 95 percent and the regression coefficient value of 0.790 [11].

### **3.5. Age**

Based on the results of regression analysis, the value of the significance of the age variable t test of 0.334 is greater than the real level of  $\alpha = 5$  percent then the age variable has no significant effect on the demand for broiler chicken meat. The age of respondents did not have a significant effect on the demand for broiler chicken meat because of the consideration of taste and taste for eating

broiler chicken meat so that consumers both young and old are equally fond of broiler chicken. The regression coefficient value is -0.013 and is marked negative. That is, if the age increases by one percent, it will decrease the number of broiler chicken demand by 0.013 percent. This result is in line with the result of age variables having a t-count value of 1,245 has no significant effect on the confidence level of 95 percent and has a regression coefficient value of 0.194 [12].

### **3.6. Number of Family Members**

Based on the results of regression analysis, the significance value of the test variable t variable number of family members of 0.075 greater than the real level of  $\alpha = 5$  percent then the variable number of family members had no significant effect on the demand for broiler chicken meat. . The regression coefficient value is 0.132 and is marked positive. That is, if the number of family members increases by one percent, it will increase the number of broiler chicken demand by 0.132 percent. These results are in line with variable results the number of family members having a t-count value of 1,960 had no significant effect on the 95 percent confidence level and the regression coefficient value of -0.820 [11]. The results showed that broiler chicken meat is not a staple whose availability is always needed every day, the income owned by the family is more used for other needs.

This is also in line his book entitled Education and Economic Growth versus Population Poverty which explains that the demand for families or households is not only limited to children, but also includes demand for other types of goods [13]. With the amount of income or family income that remains or does not change, increasing the number of family members, the number of goods requested will be reduced. In addition, adding family members means that additional costs are needed for other needs, such as health costs, school fees, and others.

### **3.7. Level of Education**

Based on the results of regression analysis, the value of the significance of the test t variable level of education by -0.836 greater than the real level of  $\alpha = 5$  percent then the education level variable had no significant effect on the demand for broiler chicken meat. . The regression coefficient value is 0.065 and is marked negative. That is, if the level of education increases by one percent, it will increase the number of broiler chicken demand by 0.065 percent. This is in line which states that the demand for broiler chicken meat in the city of Medan is not markedly influenced by the level of education [14]. This is because broiler chicken meat is a type of food that is relatively common in the people of Gunungsitoli city so that every community is used to consuming it.

### **3.8. Level of Taste**

Based on the results of regression analysis, the value of the significance of the test t variable education level of 0.000 is smaller than the real level of  $\alpha = 5$  percent then the variable level of

taste has a significant effect on the demand for broiler chicken meat. . The regression coefficient value is 1.764 and is marked positive. That is, if the number of family members increases by one percent, it will increase the number of broiler chicken demand by 1,764 percent. This is in line which states that the level of demand for broiler chicken meat clearly affects the demand for broiler chicken meat [15]. The higher a person's appetite for an item, the demand for it will increase. This makes the respondent's demand for broiler chicken meat increase if the taste is high.

#### **4. Conclusion**

1. Based on the discussion of the results of the research that has been presented, it is in accordance with the hypothesis of broiler chicken price, income and taste level have a significant effect on the demand for broiler chicken meat in Gunungsitoli City and fish prices, age, number of family members and education level have no real effect on the demand for broiler chicken meat in Gunungsitoli City. With  $R^2$  0.606 which means 60.6 percent diversity of factors that influence the demand for broiler chicken meat can be explained by the free variable in the regression model and the remaining 39.4 percent is explained by other variables outside the model.
2. The survey results stated broiler chicken meat respondents from 60 respondents of the female sex as many as 38 people and men as many as 22 people. with ages between 31 to 40 years. The majority of respondents' education levels were high school and housewife jobs and had a family of four to five. Average family income of Rp. 2,000,000.01 - 4,000,000.00.
3. The majority of broiler chicken meat consumers have planned the purchase of broiler chicken meat, the determinant of the purchase decision is the mother, the frequency of purchases within one month as much as 4 times. The reason in consuming broiler chicken meat is that it can be made various variations of the food menu and the processing is easy.

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