

## ANALYSIS OF FACTORS AFFECTING THE DEMAND FOR BROILER CHICKEN MEAT IN PAMULANG DISTRICT, SOUTH TANGERANG CITY

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### Abstract

Chicken meat is a source of animal food that contains high enough nutrients in the form of protein and energy. Broilers are one of the most popular commodities in the world of livestock agribusiness in Indonesia. In 2021 broiler meat production in South Tangerang City will reach 17,897,290 Kg, but broiler chicken meat production is assisted by farmers from nearby cities and regencies for up to 60% of total production. Pamulang experienced an increase in demand in 2021 with a total of 4,225,286 Kg. The data that will be collected in this research are data on chicken meat consumption in one family, data on egg consumption in one family, data on the purchase price of chicken meat in one purchase, data on the purchase price of eggs in one purchase, income in one family, the number of family members. The characteristics of household consumers in Pamulang District are dominant in buying broiler chicken meat as much as 1-3 Kg per month because it is easy to obtain, household consumers are also more dominant in buying broiler chicken meat at a vegetable shop near their home. The factors that influence the demand for broiler meat are the price of broiler chicken meat, the price of chicken eggs, the number of family members, and family income. There are only 3 of the factors that significantly affect the demand for broiler meat among household consumers in Pamulang District, namely the variable price of broiler meat, the price of chicken eggs and family income, for the variable number of family members has no significant effect on the demand for broiler chicken in household consumers in Pamulang District.

**Keywords:** Demand; Price of Chicken Meat; Price of Chicken Eggs; Number of Family Members; Number of Population.

### INTRODUCTION

Population growth in Indonesia continues to increase every year, this shows that the higher the population growth rate, the higher the level of consumption needs of the Indonesian people who are in the City as well as in the Village.

Table 1. South Tangerang City Meat Production in 2020-2021

Year	Beef Cattle (Kg)	Goat (Kg)	Sheep (Kg)	Broiler chickens (Kg)
2020	4.087.133	192.434	25.672	17.752.521
2021	4.154.043	191.068	25.791	17.897.290

Source: Departement of Food Security, Agriculture and Fisheries South Tangerang City

In 2020 broiler chicken meat production reached 17,752,521 kilograms and in 2021 broiler chicken meat production reached 17,897,290 kilograms, but broiler chicken meat production was helped a lot by farmers from nearby cities and districts up to 60% of the total meat production of broiler chickens.

Pamulang Subdistrict experienced an increase in demand in 2021 with a total of 4.225.286 kilograms whereas in 2020 only 4.179.837 kilograms. Based on the description above, the following problems can be identified (1) How is the demand for broiler chicken meat in Pamulang District? (2) What are the factors that influence the demand for chicken meat and how much influence do these factors affect Pamulang District?

## RESEARCH METHODS

### Data Source Type

The data in this study are data on chicken meat consumption in one family, data on egg consumption in one family, data on the purchase price of chicken meat in one purchase, data on the purchase price of eggs in one purchase, income in one family, number of family members. The type of data studied is the primary data type. The technique used to use the survey technique through the distribution of questionnaires to respondents in Pamulang District.

### Data Analysis

The data that has been obtained in the form of results from research questionnaires must be processed and analyzed to produce outputs or conclusions that are in accordance with the formulation of the problem in the study. Methods in the processing and analysis of data using quantitative analysis. The analysis tool used is multiple linear regression using *Statistical Product and Service Solutions (SPSS) 26* tools before regression analysis is carried out classical assumption tests.

### Test of Classical Assumptions

#### Normality Test

Bains to find out whether the data from the research that has been used is normally distributed or not. Normally distributed data is that data will follow the normal form of distribution. The normally distributed residual value is in the form of a bell *shape curve*. A good regression model has a normal or near-normal data distribution. This can be known by looking at the distribution of data on the *Normal P-P plot of the Regression Standardized Residual graph*.

#### Multicholnearity Test

This test is used to see whether there is multicollinearity in the resulting regression model. This means that the independent variables contained in the model have a perfect or close-perfect relationship (the correlation coefficient is high or even 1) (Algifari, 2013:84).

#### Heteroskedasticity Test

The purpose of this test is to determine the existence of deviations from the conditions of classical assumptions in the regression model, where the condition in the regression model is the absence of heteroscedasticity. In this study, the

heteroscedasticity test was carried out with a *glejser* test.

### Multiple Liner Regression

According to Riduwan and Akdon (2009:142), Multiple regression analysis is a development of simple regression analysis. The model of the multiple linear regression equation for the demand for chicken meat is as follows:

$$PDA = a - b_1HDA + b_2HTR + b_3PK + b_4JAK + e$$

Information:

PDA = Demand for Chicken Meat (Kg)

a = Constant

B1-B4 = Regression coefficient

HDA = Chicken Meat Price (Rupiah)

HTR = Egg Price (Rupiah)

PK = Family Income (Rupiah)

JAK = Number of Family Members

$\varepsilon$  = Error or error element (error)

### Hypothesis Testing

R<sup>2</sup> Test (Coefficient of Determination)

The coefficient of determination is the amount used to indicate the extent to which the diversity of demand (Y) can be explained by the conjecture model (Ghozali, 2013:97). Nazir (2005:460), states that to see what percentage of the dependent variable variation can be explained by the variation of independent variables used the coefficient of determination (R<sup>2</sup>).

Simultaneous Testing of All Conjecture Parameters (F-Test)

The statistical test F basically shows whether all the independent or free variables entered in the model have a joint influence on the dependent or bound variables (Sugiyanto, 2004:196).

## RESULTS AND DISCUSSION

### Broiler Chicken Meat Demand

Consumer demand for household broiler chicken meat in Pamulang District is a dependent variable in this study. Broiler chicken meat purchased by households is usually in size per head, where on average 1 broiler chicken meat is 1kg. Households are most interested in buying broiler chicken meat as much as 1-3 kg per month. Most household consumers based on the reasons for consuming broiler chicken meat the largest is because it is easy to obtain with a percentage of 36.36% of households in Pamulang District. Most household consumers based on the location purchase of broiler chicken meat in Pamulang District are the highest home vegetable artisans with a percentage of 43.43% of household consumers.

### Analysis of Factors Affecting the Demand for Broiler Chicken Meat

#### 1. Broiler Chicken Meat Price (X1)

Most household consumers buy broiler chicken meat at a price of Rp.42,000 – Rp.44,000 with a percentage of 45.45% or as many as 45 household consumers.

#### 2. Chicken Egg Price (X2)

Most household consumers buy chicken eggs at a price of Rp.20,000 – Rp.22,000

with a percentage of 41.41% of household consumers.

3. Number of Family Members (X3)

Most household consumers have 4-5 family members in one household, with a percentage of 47.47% of household consumers.

4. Family Income (X4)

Most household consumers have an income or family income of Rp.4,100,000 – Rp.5,000,000, with a percentage of 69.69% of household consumers.

**Simultaneous Significance Test (F-Test)**

Table 2. F test Research

ANOVA <sup>A</sup>						
Model		Sum of Squares	df	Mean Square	F	Itself.
1.	Regression	177.874	4	44.469	17.450	.000
	Residual	239.540	94	2.548		
	Total	417.414	98			

Dependent Variabel: PDA

Based on the calculation results of the F test in Table 24, a calculated F value of 17.450 is obtained greater than the F table of 2.467 with a confidence level of 95% and has a significance value of 0.000 less than  $\alpha$  (0.05). Based on the results of these calculations, it can be concluded that H0 is rejected.

**Demand Analysis of Broiler Chicken Meat in Pamulang District**

Table 3. Demand Analysis Research

Model	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients		Itself.
	B	Std. Error	Beta	t	
1. (constant)	20.452	3.568		5.732	.000
HDA	-.538	.074	-.628	-7.243	.000
HTR	.148	.072	.168	2.059	.042
How	.166	.144	.093	1.153	.252
Hp	.045	.020	.193	2.197	.030

Dependent Variabel: PDA

$$PDA = 20,452 - 0,538 HDA + 0,148 HTR + 0,166 JAK + 0,045 PK$$

Based on the regression equation, a constant value of 20.452 meanings is obtained, which means that the value of the variables HDA, HTR, JAK, and PK is equal to zero, then if the demand for broiler chicken meat has a value equal to 20,452 with this result the demand for broiler chicken meat will remain 20,452 Kg (Kilogram) if there is none from HDA, HTR JAK and PK. Here is the effect of each independent variable on the dependent variable:

The Effect of Chicken Meat Prices on Broiler Meat Demand

Based on the results of the t-test in Table 25, the absolute value of t count is -7,243 and the table t value is 1.985 which means  $t_{count} > t_{table}$ . When viewed from the significance value of 0.000 when compared to the error rate value of 0.05, the significant value is smaller than the error rate value ( $0.00 < 0.05$ ) so that  $H_0$  is rejected.

#### The Effect of Chicken Egg Prices on Broiler Chicken Meat Demand

Based on the results of the t test in Table 25, the absolute value of t count is 2,059 and the table t value is 1.985 which means  $t_{count} > t_{table}$ . When viewed from the significance value of 0.000 when compared to the error rate value of 0.05, the significant value is smaller than the error rate value ( $0.00 < 0.05$ ) so that  $H_0$  is rejected.

#### The Effect of the Number of Family Members on the Demand for Broiler Chicken Meat

Based on the results of the t test in Table 25, the absolute value of t count is 1.153 and the value of t of the table is 1.985 which means  $t_{count} < t_{of\ the\ table}$ . When viewed from the significance value of 0.252 when compared to the error rate value of 0.05, the significant value is greater than the error rate value ( $0.00 < 0.05$ ) so that  $H_0$  is accepted.

#### The Effect of Family Income on the Demand for Broiler Chicken Meat

Based on the results of the t-test in Table 25, the absolute value of t count is 2,197 and the table t value is 1.985 which means  $t_{count} > t_{table}$ . When viewed from the significance value of 0.030 when compared to the error rate value of 0.05, the significant value is smaller than the error rate value ( $0.00 < 0.05$ ) so that  $H_0$  is rejected.

### Coefficient of Determination Testing (R-Test<sup>2</sup>)

Table 4. Coefficient of Determination Test Results (R<sup>2</sup>)

No	Information	Value
1	R	0,653
2	R <sup>2</sup>	0,426
3	Customized R <sup>2</sup>	0,402

Source: Primary Data (processed)

Based on Table 4, it is known that the R-square value or the resulting coefficient of determination, the amount of R-square value or coefficient of determination, aims to measure how much the success rate of the regression model that the researcher uses in assessing the value of the variable or the level of ability of the free variables can explain the balance of diversity of its bound variables. Table 26 shows the R-square value or coefficient of determination as much as 0.426, this shows that 42.6% of the demand for broiler chicken meat in Pamulang District can be explained by the free variables, namely the price of broiler chicken meat, the price of chicken eggs, the number of family members and family income used in the multiple linear regression equation models, while the remaining 57.4% is explained by variables outside the multiple linear regression equation models.

## CONCLUSIONS AND SUGGESTIONS

Based on some of the results of the analysis and discussion in this study conducted in the previous chapter, the following conclusions were obtained the general description of household consumers in Pamulang District predominantly buy broiler chicken meat as much as 1-3 Kg per month the reason that it is easy to get, household consumers are also more dominant buy broiler chicken meat at a vegetable vendor near the house due to the ease of access to purchase. There are only 3 of the factors that have a real influence on the demand for broiler chicken meat in household consumers in Pamulang District, namely the variable price of broiler chicken meat, the price of chicken eggs, and family income, for the variable number of family members does not have a real effect on the demand for broiler chicken meat in household consumers in Pamulang District.

It is necessary to conduct further research on the demand for broiler chicken meat which includes the demand of households, industries, or MSMEs for offline and online food and other culinary services. Based on the results of regression calculations, it is stated that the value of the coefficient of determination is only 42.6%, which means that there is still an influence from other free variables such as processed meat as a complementary item, therefore for further research, it is expected to add free variables other than the variables that have been entered.

## BIBLIOGRAPHY

- Algifari. 2013. *Regression Analysis of Theories, Cases and Solutions*. Yogyakarta: BPFY Yogyakarta.
- Arikunto, S. 2010. *Research Procedure: A Practical Approach*. Jakarta: Rineka Cipta.
- Dewi Windiani, Diah Ari, 2014, *Variations of Practical Recipes for The Daily Menu: Chicken Dishes (goring, grilled, stir-fried, soupy, pepes)*, Jakarta: Fmedia, ISBN:970065221.
- Fadilah, Roni. 2013. *Super Complete Broiler Breeding*. Jakarta: PT Agro Media Pustaka.
- Paradise, Muhammad. 2009. *Agribusiness Management*. Jakarta: Bumi Aksara.
- Ghozali, Imam. 2013. *Applications of Multivariate Analysis with IBM SPSS Programs. 21 Regression PLS Update*. Semarang: Diponegoro University Publishing Agency.
- Irianto, Agus. 2004. *Basic Concepts Statistics & Their Applications*. Jakarta: Kencana.
- Ministry of Health of the Republic of Indonesia. 2019. Regulation of the Minister of Health of the Republic of Indonesia Number 28 of 2019 concerning Nutritional Adequacy Figures Recommended for the People of Indonesia. *PMK No 28 Th 2019 ttg Angka Kecukupan Gizi Yang Dianjurkan Untuk Masyarakat Indonesia.pdf (kemkes.go.id)*. Retrieved November 7, 2021, at 23.04 WIB.
- Compass. 2020. UMK Tangsel 2021 Increased to Rp. 4.2 Million Workers Disappointed Lower Than Proposed. *UMK Tangsel 2021 Increased to IDR 4.2 Million, Workers Disappointed Lower than the Proposed Page all - Kompas.com*. Retrieved November 25, 2021, at 22.22 WIB.

- Lukman. 2007. *Introduction to Microeconomic Theory*. Jakarta: UIN Jakarta Research Institute with UIN Jakarta Press.
- Mandala Manurung. 2008. *Introduction to Economics*. Jakarta: Publishing Institute of the Faculty of Economics, University of Indonesia.
- Masyhuri. 2007. *Microeconomics*. Malang: UIN Malang.
- Nasution, Mustafa. 2006. *An Exclusive Introduction to Islamic Economics*. Jakarta: Prenada Media.
- M. Nazir. 1988. *Research Methods*, Jakarta: Ghalia Indonesia.
- Pranata, E., Salmiah and Hutajulu. 2013. *Demand Analysis of Broilers in Medan City*. Journal of Agribusiness.
- Prathama Rahardja, Mandala Manurung. *Macroeconomic Theory*. Jakarta: LPFEUI. 2008.
- Rahayu, I and C. Budiman. 2002. *Utilization of Traditional Plants as An Adictive Feed in An Effort to Create an Environmentally Friendly Local Chicken Culture*. Lokarya Nasional Innovation Technology Development Local Chicken. Department of Livestock Production Science and Technology, Faculty of Animal Husbandry, Bogor Agricultural University. Bogor.
- Rasyaf Muhammad. 2008. *Broiler Breeding Guide*. Jakarta: Penebar Swadaya
- Riduwan and Akdon. 2009. *Formulas and Data in Statistical Analysis*. London: Alfabeta.
- Ritonga, Hamonangan. 2003. *Calculation of the Poor*. Jakarta: Central Bureau of Statistics.
- Rose, S. P. 2001. *Principles of Poultry Science*. CAB International.
- Setyono, D.J and Ulfah, M. 2011. *7 Successful Moves to Become a Broiler Farmer*. Penebar Swadaya, Jakarta
- Sukirno, S. 2011. 2012. *Microeconomic Theory Introduction*. Jakarta: Rajawali Press.
- Sugiyanto. 2004. *Social Statistical Analysis*. Malang: Bayu Media Member of IKAPI East Java.
- Sugiyono. 2017. *Business Research Methods Quantitative, Qualitative, Combination, and R&D Approaches*. London: Alfabeta.
- Solomon, Wahid. 2004. *Regression Analysis using SPSS*. Yogyakarta: Andi.
- Suprayitno, Eko. 2008. *Microeconomics Islamic Perspective*. Yogyakarta: UIN-Malang Press.