

Factors Affecting the Demand for Chicken Eggs in Konda Konawe Selatan District During the Covid-19 Pandemic

Samsul Alam Fyka*, Azhar Bafadal, Fadel Ahmad

Department of Agribusiness, Faculty of Agriculture, Halu Oleo University
Jl. H.E.A. Mokodompit, Kampus Hijau Bumi Tridarma, Anduonohu, Kendari 93232 Indonesia

*Corresponding author: samsulalamfyka@uho.ac.id

(Submitted: January 11, 2022; Accepted: March 06, 2022)

ABSTRACT

This study aims to determine the factors that influence the demand for chicken eggs during the Covid-19 pandemic in Konda District, South Konawe Regency. Respondents in this study were 100 people who consumed purebred chicken eggs. The analytical method in this study uses multiple linear regression analysis in the form of natural logarithms. The results showed that the factors that influenced the demand for chicken eggs during the Covid-19 pandemic were the price of purebred chicken eggs, the price of fish, the average income of consumers, and the number of family members a significant effect on the demand for purebred chicken eggs. A 1% increase in the price of laying eggs will reduce the demand for laying eggs by 3.568%, a 1% increase in the price of fish will increase the demand for laying eggs by 2.604%.

Keywords: demand; covid-19 pandemic; chicken eggs

INTRODUCTION

One of the agricultural sub-sectors has an important role in the livestock sub-sector, where livestock commodities play a very important role in fulfilling national nutrition, especially animal protein. The trend of increasing consumption of food sources of animal protein originating from livestock has pushed the livestock sub-sector to become a new source of growth for the agricultural sector (Soedjana, 1997).

The livestock sub-sector has an increasingly strategic role in meeting consumer demand for animal protein food commodities. One source of protein that is in great demand by the people of Indonesia is broiler eggs. Thing One of them is because the price is affordable and easy to get and from a nutritional point of view, eggs are quite good for the body (Rorimpandey et al., 2020). Animal husbandry is a business activity that applies management and entrepreneurship principles to the technical aspects of raising livestock that is in line with the correct animal husbandry-based knowledge so that business goals can be achieved. To achieve this goal, breeders exploit existing resources by renting or buying (Rasyaf, 2000).

The business of developing laying hens in Indonesia has good prospects, especially when viewed from the aspect of society regarding

nutritional needs. According to national standards, protein consumption per day per capita is set at 55 g consisting of 80% vegetable protein and 20% animal protein. Fulfillment of these nutrients, especially animal protein can be obtained from egg protein. Thus, the business of laying hens has good potential to be developed (Sitorus et al., 2003).

Almost all types of society can consume this type of food as a source of animal protein. This is because eggs are one form of food that is easily obtained and also easy to process. This makes eggs a type of food ingredient that is always needed and widely consumed by the community. In turn, the need for eggs will also continue to increase (Fausayana & Marzuki, 2016). Along with increasing public awareness and knowledge of health, the fulfillment of protein needs of animal origin that meet consumption standards increases. Animal protein is very important because it contains amino acids that are close to the amino acid composition needed by humans, making them easier to digest and more efficient in their utilization. One of the foodstuffs of animal origin with high nutritional content is chicken eggs. Chicken eggs are one of the people's favorites in fulfilling animal protein. This is because the price is cheap, easy to process, and easy to obtain so it is suitable for all groups of people.



Demand is a desire accompanied by a willingness and ability to buy the goods in question. The assumptions above can be concluded that the consumer's desire to buy a product at various price levels and at a price they can afford is reachable by the community over a period or within a certain period (Simanjuntak et al., 2018). Real demand is a reflection of the number of purebred eggs successfully sold by chicken eggs traders to consumers. The demand for laying eggs is influenced by several factors. The factors that influence the demand are the price of laying eggs, the price of substitute goods, and the average income of consumers. Therefore, the demand for laying eggs is used to measure the desire of buyers (consumers) in a market. The demand function measures the relationship between the quantity demanded of a good and all the factors that influence it. Similar research has been conducted by (Siburian et al., 2021; Adetyobagus, 2019; Astaman et al., 2019)

Coronavirus disease (Covid-19) is an infectious disease caused by a type of coronavirus that was newly discovered in Wuhan, China in December 2019 (WHO, 2020). The spread of Covid-19 can occur from people who are infected with the virus, it can spread from person to person through splashes from the nose or mouth (droplets) that come out when people cough or exhale (Harmen, 2020). The increasing number of residents from year to year and the Covid-19 pandemic which has not ended until now have caused the demand and consumption of chicken eggs to increase. In some cases, not a few people behaved in panic buying in response to the Covid-19 incident. People flocked to buy food in the market to be used as stock to meet needs for a certain period. So there needs to be an effort to increase the production of laying hens which are livestock commodities that produce laying eggs. This is because the production of laying eggs offered to the public must be able to meet the demand or consumption of the community.

Meanwhile, the stock of purebred chicken eggs in the market is met by local breeders and outside Konda District. The existing livestock technology has recently undergone significant developments. So, it is also driven by the need/demand for livestock products. However, in carrying out a business, a producer requires production planning that is based on demand and costs, and one of the easiest determinants is based on demand. This is what underlies why researchers feel interested in researching the factors that influence the demand for laying eggs in Konda.

District South Konawe Regency during the Covid-19 Pandemic Period.

METHOD

Location and Time

The location of research was carried out in Konda District. This location determination was carried out intentionally (purposive sampling) with the consideration that in the Ambololi market and the Cialam Jaya market registered in Konda District, there were traders of purebred chicken eggs and most of the consumers of purebred chicken eggs were residents of Konda District. This research was conducted from March 2021 to February 2022.

Respondent

The respondents of this research used an accidental sampling technique. according to (Rianse and Abdi, 2009) Accidental sampling is a sampling technique based on certain criteria or considerations. So, in this accidental sampling technique, researchers took respondents to shop for laying eggs at the Ambololi market and the Cialam Jaya market. To determine the number of consumer samples using the Slovin formula (Rianse and Abdi, 2019), namely:

$$n = \frac{N}{Nd^2+1}$$

Note: n = Number of samples; N = total population; d = 10% sampling error = 0.1

So the number of consumer samples in the study to be taken is 100 people divided into 50 respondents who will be spread over two markets registered in Konda District.

Data analysis

To analyze the effect of each factor on the price of laying eggs, the price of substitute goods/fish prices, and the average income of consumers per month the demand for laying eggs in Konda District, South Konawe Regency, multiple linear regression analysis is used in the form of natural logarithms. The model is formulated as follows (Ross & Sadat, 2007; Setyawati et al., 2021):

$$\ln Y = \ln a + 1 \ln X_1 + 2 \ln X_2 + 3 \ln X_3 + 4 \ln X_4 + U$$

Note: Y = demand for laying eggs (kg/month); X₁ = Price of chicken eggs (Rp/kg); X₂ = price of substitute goods (price of fish) (Rp/kg); X₃ = consumer's average income per month (Rp/kg); X₄ = Number of family members (people); β₁–β₄ = regression coefficient; U = Error term; α = constant; ln = natural logarithm

To determine the significance of the effect of each independent variable, the t-test was used as well as to detect the feasibility of the model (model fit) by taking into account the significance value of t. If $t \text{ sig} < 0.05$ then the model is declared fit or there is a partially significant effect. On the other hand, if $t \text{ sig} > 0.05$, the model is declared unfit. To determine the significance of the effect of each independent variable, the F test (simultaneous effect) is used as well as detecting the feasibility of the model (model fit) by taking into account the significance value of F. If $F \text{ sig} < 0.05$, the model is declared fit/there is a simultaneous significant effect. On the other hand, if $F \text{ sig} > 0.05$, the model is declared unfit.

Before performing multiple linear regression analysis in the form of natural logarithms, the classical assumption test was carried out as a requirement in the application of regression analysis, namely the normality test, multicollinearity test, and autocorrelation test. The normality test aims to determine whether in the regression model the confounding or residual variables have a normal distribution. Test multicollinearity aims to test model regression to find a correlation between the independent variables. This multicollinearity is used because in the regression analysis there is an assumption that implies that the independent variable must be free from multicollinearity symptoms or there is no correlation between the independent variable. The results of the multicollinearity test are indicated by the VIF value for the price of laying eggs (X1), the price of substitute goods/fish prices (X2), the average income of consumers (X3), and the number of family members (X4). In the linear regression model, there is a correlation between the confounding error in period t and the confounding error in period t-1 (previous). A good regression model is a regression that is free from autocorrelation. The values of dU and dL can be obtained in the Durbin-Watson statistical table which depends on the number of observations and many variables that explain.

RESULT AND DISCUSSION

Characteristics of Respondents

Respondents in this study were chicken egg traders and consumers who bought purebred chicken eggs at Ambololi Market and Cialam Jaya Market which were registered in Konda District. The identity of the research respondents includes age, education level, and occupation.

1. Age

The age of the research respondents can be seen from the results of grouping respondents based on age in Table 1 below.

Table 1. Respondents by Age

No	Age (Years)	Number of Respondents (Persons)	Percentage (%)
1	0 – 30	16	16%
2	31 – 40	34	34%
3	> 41	50	50%
Amount		100	100

Source: Primary data processed, 2021

Based on Table 1, the largest age group in the respondents was above 41 years, namely 50 people or 50%, while the smallest group came from 0-30 years, which amounted to 16 people or 16%. Furthermore, respondents aged 31-40 years were 34 people or 34%. Age can determine the level of maturity of a person so this can affect his behavior and thinking.

2. Level of education

The level of education can be used as a benchmark to measure a person's intellectual level. The higher the education, the higher the intellectual level. The composition of respondents by education level can be seen in Table 2.

Table 2. Respondents Based on Education Level

No.	Level of Education	Number of Respondents (Persons)	Percentage (%)
1	SD	22	22%
2	SMP	20	20%
3	SMA	51	51%
4	S1	7	7%
Amount		100	100

Source: Primary data processed, 2021

Table 2 shows that the educational background of the respondents is Elementary School (SD) to S1. The number of respondents with high school education (SMA) is 51 people or 51%, and respondents with elementary school education (SD) are 22 people or 22%. Furthermore, respondents with an undergraduate education were 7 people or 7% and respondents with junior high school education (SMP) were 20 people or a percentage of 20%.

3. Profession

Work often affects a person's behavior in his decisions. In addition, work in general also reflects a certain form of buying behavior towards an item/service. The composition of respondents by occupation can be seen in Table 3.

Table 3. Respondents by occupation

No	Profession	Number of Respondents (Persons)	Percentage (%)
1	Housewife	81	81%
2	Civil Servant	1	1%
3	Entrepreneur	18	18%
Amount		100	100

Source: Primary data processed, 2021

Based on Table 3, it is known that the respondents have different work backgrounds. Respondents as housewives are more dominant, namely as many as 81 people or 76%, while respondents who work as civil servants are at least 1 person or 1%. Then the respondents who work as entrepreneurs are 18 people or 18%

Factors Affecting Demand for Chicken Eggs

In a demand for laying eggs, there are factors that affect the demand. The factors that influence demand include the price of laying eggs, the price of fish, the average monthly income, and the number of family members.

1. Price of Chicken Eggs

Price is an important thing in making a purchase of goods or services. Consumers are very careful in purchasing an item/service so the consumer's purchase price greatly affects the amount of demand. The price that is more expensive than usual results in the volume of consumer purchases of laying eggs is reduced and vice versa if the price is cheaper than usual, the volume of purchasing chicken eggs increases. The percentage of research respondents' classification based on the price of laying eggs can be seen in Table 4.

Table 4. Percentage of chicken egg prices in Konda District in 2021

No	Price of Chicken Eggs	Number (Soul)	Percentage (%)
1	21,000	27	27
2	22,000	63	63
3	22,500	10	10
Amount		100	100

Source: Primary data processed, 2021

Table 4 shows that as many as 63% of respondents bought purebred chicken eggs at a price of Rp22,000/Kg, as many as 21% bought purebred chicken eggs at a price of Rp21,000, and as many as 10% bought purebred chicken eggs at a price of Rp22,500. Based on these results it is known that the price greatly affects the level of

demand, if the price is accompanied by satisfactory quality, including the price of purebred chicken eggs according to the size of the eggs sold, and the cleanliness of the chicken eggs themselves. Therefore, many consumers choose eggs of good quality.

2. Price of Substitute Goods (Price of Fish)

The demand for an item is also influenced by the price of other related goods, both for goods and services substitutions well as complementary goods. Usually, consumers only choose fish when the price of chicken eggs increases. Fish prices can be seen in Table 5.

Table 5. Percentage of fish prices in Konda District in 2021

No	Fish Price	Number (Soul)	Percentage (%)
1	35,000	66	66
2	40,000	34	34
Amount		100	100

Source: Primary data processed, 2021

Table 5 explains that 66% of research respondents choose to buy fish at a price range of Rp35.000/kg. The high price of fish compared to the price of purebred chicken eggs, so consumers prefer to buy purebred chicken eggs. Consumers will choose cheaper goods over expensive goods. According to Siahaan (2015), substitute goods are goods that can replace the function of other goods so that the price of substitute goods can affect the demand for goods that can be replaced. The nature of the substitute goods is to completely replace the function of the main goods. Therefore, if the main goods are not available because of their high prices, they can be replaced with other goods, so that people do not have to worry about shortages of goods or services (Astati & Paly, 2018).

3. Monthly Income

A person's level of income will affect the purchasing power of consumers. Income is income obtained from all productive family members and contributes to the purchase of household needs, both from main work and side work, which is stated in Rp/month.

This is a benchmark for consumers to buy an item. The size of a person's income affects the ability and level to purchase goods or services. The higher a person's income, the greater a person's ability to buy a variety of their needs (Jannah et al., 2018). The level of income measured in this study is the respondent's average monthly income in the

form of salary. The percentage of research respondents' classification based on average monthly income can be seen in Table 6.

Table 6. Percentage of average income per month of research respondents in 2021

No.	Average Monthly Income	Number (Soul)	Percentage (%)
1	< 1,000,000	21	21
2	1,000,000 - 3,000,000	63	63
3	> 3,000,000	16	16
Amount		100	100

Source: Primary data processed, 2021

Based on the data in Table 5, it is known that most of the respondents have an income of Rp1,000,000 - Rp3,000,000 per month as much as 67%, followed by group respondents who have an income level below Rp1,000,000 as much as 21% and above Rp3,000,000 as much as 16%. This shows that respondents have the level of income is quite varied and this will affect the level of purchase of purebred chicken eggs in Konda District. According to Jannah et al. (2018), the amount of income will affect the size of purchasing power from consumers. Consumer income is a reflection of consumer purchasing power. Consumer income will affect the quality and quantity of demand. If the demand for a good decrease when income decreases. So goods are called normal goods (normal goods). The connection between income and quantity demanded dispositive the consumer's income increases, the demand for an item will increase.

4. Number of Family Members

The number of family dependents is the number of family members who are dependents of the household, both siblings and non-siblings who live one house but not working. The more the number of family members, the bigger the needs met (Rungkat et al., 2020). The more the number of family members, the relatively large number of family needs that must be met, so they tend to push to work to meet their needs economy respondent's family. In the demand for chicken eggs, consumers are also strongly influenced by family members who live together. More details can be seen in Table 7.

Table 7. Percentage of total family members of research respondents in 2021

No.	Number of Family Members	Number (Soul)	Percentage (%)
1	1-3	44	44
2	4-5	51	51
3	> 6	5	5
Amount		100	100

Source: Primary data processed, 2021

Table 7 shows that the number of respondent's family members in Konda District is the most, with 4-5 people which can be categorized as moderate family dependents with a percentage of 51%, 1-3 small families as much as 44%, and more than six large families by 4%. This is by the opinion of Purwanto and Taftazni (2018) who stated that the size of family members is 1-3 including small families, 4-5 including medium families, and more than six including large families.

Result of Analysis of Factors Affecting Chicken Eggs

To determine the effect of the independent variable (X) which consists of the price of laying eggs, the price of substitute goods/the price of fish, the average income of consumers, and the number of family members on the dependent variable (Y) the demand for laying eggs, it was carried out multiple regression analysis logarithms natural. Based on the results of the analysis, the following equation is obtained:

$$\ln Y = 12.848 - 3.568 \ln X1 + 2.004 \ln X2 + 0.150 \ln X3 + 0.486 \ln X4$$

Note: Y = Demand for laying eggs (kg/month); X1 = Price of chicken eggs (Rp/kg); X2 = Price of substitute goods/price of fish (kg/month); X3 = Average consumer income (Rp/month); X4 = Number of family members (soul)

1. Simultaneous Test (F Test)

F-test is generally used to determine whether all independent variables have the same effect on the dependent variable (Sena, 2011). This F test was conducted to see whether there was a simultaneous effect of the price of laying eggs, fish prices, average income, and the number of family members on the demand for laying eggs in Konda District, South Konawe Regency. The results of the F test of this study can be seen in Table 8.

Based on Table 8, it is known that the calculated F value is 38.065 with a significance level of confidence is 5% or = 0.05, because the value of Sig is smaller than = 0.05 (0.000 < 0.05), it can be interpreted that the price of laying eggs (X1), fish prices (X2), average income (X3), and the number of family members (X4) used in the model simultaneously or jointly have a significant effect on the demand for laying eggs in Konda District. South Konawe Regency.

Table 8. Simultaneous test results (Test F)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.898	4	2.474	38.065	0.000
Residual	6.175	95	0.065		
Total	16.073	99			

R = 0.785
R Square = 0.616
Adjusted R Square = 0.600
Std. Error of the Estimate = 0.25496

Source: Primary data processed, 2021

Multiple correlations can be seen based on the R-value, namely the correlation between the independent variables and the dependent variable. The value of R ranges from 0-1, if it is close to 1, then the relationship is getting closer. Conversely, if it is close to 0, then the relationship is getting weaker. The space value obtained in this analysis is 0.785, which means that the independent variable is the price of laying eggs (X1), the price of fish (X2), average income (X3), and the number of family members (X4) on the dependent variable of demand for chicken eggs. race (Y) is a strong relationship because it is close to 1.

The coefficient of determination shown by the value of R Square (R²) is 0.616, meaning that the diversity of demand for laying eggs can be explained by the diversity of the variables of laying egg prices (X1), fish prices (X2), average income (X3), and the number of family members (X4) of 61.6%, while 38.4% is explained by the diversity of other variables not included in the model.

2. Partial Test (t-Test)

The t-test is a test used to show how far the influence of one by one independent variable on the dependent variable. To prove and see, whether partially the price of chicken eggs (X1), fish prices (X2), average income (X3), and the number of family members (X4) has a significant effect on the Demand for race chicken eggs (Y) in Konda District, South Konawe Regency. The results of the partial test (t-test) in this study can be seen in Table 9.

Table 9. Partial test results effect of independent variables on demand for laying chicken eggs

Model	Coef. Regression	T	Sig
(Constant)	12,848	.984	.328
Price of Chicken Eggs	-3,568	-3.116	.002
Fish Price	2,004	4.964	.000
Average Income	0.150	2,306	.023
Number of Family Members	0.486	4.718	.000

Source: Primary data processed, 2021

a. The Influence of the Price of Raised Chicken Eggs (X1) on the Demand for Race Chicken Eggs (Y)

From the results of the partial test at the 95% confidence level or 5% significance level ($\alpha = 0.05$), it can be seen that the Sig value is 0.002 < 0.05. This value explains that partially the price variable for laying eggs has a significant effect on the demand for laying eggs. This proves that the public is also sensitive to price increases in the market. Based on the regression analysis that the coefficient value of the price of laying eggs is -3.568, it shows that a 1% increase in the price of laying eggs will reduce the demand for laying eggs by 3.568% with the assumption that the other independent variables are constant. The coefficient is negative, which means that there is an effect negative between the price of purebred chicken eggs and the more demand for purebred chicken eggs, the higher the price of purebred chicken eggs, the lower the demand for chicken eggs.

The results of this study are in line with the law of demand which states that the higher the price of an item, the more demand for that item will decrease. Vice versa, the lower the price of an item, the demand for an item will increase. Febrianto and Putritamara (2017) add in the results of their research that price increases cause buyers to look for other goods with similar functions at lower prices.

b. Effect of Fish Price (X2) on Demand for Chicken Eggs (Y)

From the results of the partial test at the 95% confidence level or 5% significance level ($\alpha = 0.05$), it can be seen that the Sig value is 0.000 < 0.05, meaning that partially the price of fish has a significant effect on the demand for laying eggs. Based on the regression analysis, the value of the fish price coefficient of 2.004 shows that a 1% increase in the price of fish will increase the demand for laying eggs by 2.004% with the assumption that the other independent variables are constant. The results of this analysis have a positive relationship if the price of fish has increased, consumers prefer

to buy chicken eggs with reasons as a substitute for side dishes. Babay et al. (2019) add that this is to the economic theory which states that the demand for goods is not only influenced by the price of the goods themselves but is also influenced by the prices of other goods.

c. The Effect of Average Consumer Income (X3) on Demand for Chicken Eggs (Y)

The results of the partial test show that the consumer's average income variable is at the 95% confidence level or 5% significant level ($\alpha = 0.05$) with its Sig value ($0.023 < 0.05$), meaning that the consumer's average income variable has a significant effect on variable demand for laying eggs. Based on regression analysis, the average consumer income coefficient value is 0.15 which shows that every 1% increase in average income will increase the demand for laying eggs by 0.15%.

This is supported by the theory put forward by Iswardono (1994) who argues that consumer demand for that item is not only influenced by the price of the good itself but also influenced by income, prices of other goods, consumer tastes, and other factors. This identifies that the eggs of purebred chickens are categorized as normal goods. Normal goods are necessities for consumers which are always in line with the value of the income received. If income increases, the number of purchases will increase, but if income decreases, the number of purchases will decrease. So income is always linked with consumer purchasing power both in quality and quantity.

d. Effect of Number of Family Members (X4) on Demand for Chicken Eggs (Y)

From the results of the partial test at the 95% confidence level or 5% significance level ($\alpha = 0.05$), it can be seen that the Sig value is $0.000 < 0.05$, meaning that partially the variable number of family members has a significant effect on the demand for laying eggs. Based on the regression analysis, the coefficient value of the number of family members is 0.486 which shows that every 1% increase in the number of family members will increase the demand for laying eggs by 0.496%.

The number of family members describes the potential number of consumers who will buy an item as well as purebred chicken eggs, so there is a tendency that if the number of family members increases, the eggs purchased by consumers will also increase. This is because the more members that are borne in a family, there will increase in consumption needs to be shown in the condition real in the market, that the number of purchases of

laying eggs increases in proportion to the number of consumer family members. This is the opinion of Hanani et al. (2011) which suggests that the increase in population followed by the development of employment opportunities will indirectly increase the demand for an item.

CONCLUSION

Based on the results of the analysis of the demand for laying eggs in the Konda District of South Konawe during the Covid-19 pandemic, then can be concluded that the factors that affect the amount of demand for chicken eggs, namely the price of laying eggs, the price of fish, the average income of consumers, and the number of family members have a significant effect on the demand for laying eggs. The price of laying eggs and fish prices are elastic to the demand for laying eggs. A 1% increase in the price of laying eggs will reduce the demand for laying eggs by 3.568%. A 1% increase in fish prices will increase the demand for laying eggs by 2.604%. The average income of consumers and the number of family members is inelastic to the demand for laying eggs. An increase in the average consumer income of 1% will increase the demand for laying eggs by 0.150%. An increase in the number of family members by 1% will increase the demand for laying eggs by 0.486%.

CONFLICT OF INTEREST

The authors whose names are listed have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

REFERENCES

- Adetyobagus, D.S. 2019. Analysis of demand for beef in Semarang Regency. Indonesian Journal of Economic Development 2(2): 395-403.
- Astaman, P., A.R. Siregar, & S.U. Nurbayani. 2019. Analysis of the effect the price of the demand for chicken eggs in Biringkanaya District. Conference Series: Earth and Environmental Science 473:012024. DOI: 10.1088/1755-1315/473/1/012024.
- Astati & M.B. Paly. 2018. Faktor-Faktor yang Mempengaruhi Permintaan Broiler di Kelurahan Balangnipa Kecamatan Sinjai Utara Kabupaten Sinjai. Jurnal Ilmu dan Industri Peternakan. 4(2):109-115. [Indonesian]

- Babay, S.A. & M.E. Antara. 2019. Factors affecting demands for broiler chicken eggs in Palu City. *Agrotechnical Journal* 7(5):556-565.
- Jannah, N. & M.E. Antara. 2018. Factors affecting consumer behavior in consuming imported citrus fruits in Palu City. *Agroland Journal* 25(2):121-129.
- Fusayana, I. & M.A. Marzuki. 2016. Analisis faktor-faktor yang mempengaruhi permintaan telur ayam ras di Kota Kendari dan hubungannya dengan keberdayaan peternak. *journal sosio agribisnis* 1(1):32-46. [Indonesian]
- Febrianto, N. & J.A. Putritamara. 2017. Projection of elasticity of demand for chicken eggs in Malang Raya. *Journal of Animal Sciences* 27(3):81-87.
- Hanani, N. & R.F. Asmara. 2011. *Ekonomi Mikro*. Universitas Brawijaya. Malang. [Indonesian]
- Harmen. 2020. Dampak Pandemi Covid-19 terhadap Ketersediaan Pakan Ternak di Sumatera Barat. *Jurnal Pembangunan Negeri* 5(2):130-147. [Indonesian]
- Hermanto. 2020. Dampak Covid-19 Terhadap Sektor Pertanian. *Buletin*. Jakarta, Biro Perencanaan Sekretariat Jenderal Kementerian Pertanian RI. Jakarta. [Indonesian]
- Iwardono. 1994. *Teori Ekonomi Mikro*. Gunadarma. Jakarta. [Indonesian]
- Purwanto, A., & B.M. Taftazani. 2018. Pengaruh jumlah tanggungan terhadap tingkat kesejahteraan ekonomi keluarga pekerja K3L. Universitas Pandjajaran. *Pekerjaan Sosial* 1(2):33-43. [Indonesian]
- Rasyaf. M. 1993. *Manajemen Pemeliharaan Ayam Petelur*. Kanisius. Yogyakarta. [Indonesian]
- Rianse, U. & Abdi. 2009. *Metodologi Penelitian Sosial dan Ekonomi (Teori dan Aplikasi)*. Alfabeta. Bandung. [Indonesian]
- Rorimpandey, I.C., A. Makalew, M.L. Rundengan, F.N.S. Oroh. 2020. Analisis konsumsi telur ayam ras pada mahasiswa Fakultas Peternakan Universitas Sam Ratulangi Manado. *Jurnal Ekonomi Manajemen Bisnis dan Akuntansi* 8(4):1-10. [Indonesian]
- Ross, H., & N.A.M. Al-Sadat. 2007. Demand Analysis of Tobacco Consumption In Malaysia. *Nicotine & Tobacco Research* 9(11):1163-1169.
- Rungkat, J.S., P. Kindangen & E.N. Walewangko. 2020. Pengaruh pendidikan, jumlah anggota keluarga dan pengalaman kerja terhadap pendapatan rumah tangga di Kabupaten Minahasa. *Jurnal Pembangunan Ekonomi dan Keuangan Daerah* 21(3):1-15. [Indonesian]
- Sena, TF 2011. Variable antisedent organizational citizenship behavior (OCB). *Journal of Management Dynamics* 2(1):70-77.
- Setyawati, Marwanti, & Sundari. 2021. Factors affecting the demand for native chicken eggs in Surakarta City. *Conference on Sustainable Agriculture and Environment* 1-8.
- Siahaan, A.M. 2015. Analisis permintaan permintaan masyarakat terhadap produk kosmetik Oriflame di Kota Pekanbaru. *Jom Fekon* 2(2):1-11. [Indonesian]
- Siburian, Mirwandhono, Hasnudi, & Berutu. 2021. Analysis of Factors Affecting Demand for Kampung Chicken in Sidikalang. *Journal of Integrative Animal Husbandry* 9(2):13-19.
- Simanjuntak, A., Jufri, M., & Iskandarini. 2018. Analisis faktor-faktor yang mempengaruhi beras di Kota Medan (Kasus: Kelurahan Mabar, Kecamatan Medan Deli, Kota Medan Propinsi Sumatera Utara). *Journal on Social Economic of Agriculture and Agribusiness* 9(11):1-17. [Indonesian]
- Sitorus, S.A., H.Hasyim, & M.Jufri. 2015. Analisis faktor-faktor yang mempengaruhi permintaan dan penawaran telur ayam ras (Studi Kasus: Pasar Petisah, Kecamatan Medan Petisah). *Journal of Agriculture and Agribusiness Socioeconomics* 4(10):1-15. [Indonesian]
- Soedjana, T.D. 1997. Penawaran, Permintaan dan Konsumsi Produk Peternakan di Indonesia. *Jurnal Forum Agroekonomi* 1(2):17-34. [Indonesian]