



Analysis of Household Consumer Level Factors Affecting Beef Demand in the Source Market of the Cirebon Regency

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Abstract. The purpose of this study is to ascertain the growth and demand for beef at the household consumer level in the Cirebon Regency Sumber Market, as well as the impact of broiler commercial chicken meat as a substitute item and the variables that influence the amount of beef demand at the homemaker's consumer level in the Cirebon Regency Sumber Market. The Sumber Market was chosen as the research site, with sampling as the primary factor in the decision. Sixty-eight respondents were all housewives and accidental sampling was employed using the Lemeshow formula methodology to sample the respondents. Multiple linear regression is used to analyze the data, and the SPSS 27 program is used for hypothesis testing. Traditional assumption testing includes the autocorrelation test, the normality test, and the F test. A value of F-calculated to $10,388 > F\text{-table } 2,350$ indicates that the variables of beef price, consumption, chicken meat price, income, and number of family dependents (X1, X2, X3, X4, X5) together have a positive effect and significant to the demand for beef. The results showed that the demand for meat in Cirebon Regency was influenced by income (X4), which obtained a sig value of 0.01 0.05. The number of family dependents.

Keywords: Beef, Demand, Consumer, Housewives

INTRODUCTION

The livestock sector has a large share in meeting food needs in the community. Livestock is one of the sub-sectors in the agricultural sector that contributes to the provision of proteins of animal origin, such as meat, milk and eggs as well as the associated products of products such as skin, fur, bones and manure. One of the roles of animal husbandry is to provide the needs of the population for animal protein found in meat, especially beef. Because meat that has the best nutritional content is in beef. Beef is one of the food products that has nutritional value to meet protein needs for the community, beef is also among the largest protein producers after poultry and fish.

Food is a material that is eaten daily to meet the needs for maintenance, growth, and replacement for the needs of damaged tissue. Food is a producer of fat, energy, a source of calories, to supply energy from within. Indonesia has enough land to be able to raise beef cattle,

opportunities to raise beef cattle in Indonesia are also many because from year to year the population in Indonesia continues to grow, so people need a source of protein from animals. The amount of beef in Indonesia that must be available will be determined by the beef consumption needs of the population nationally.(Suhardjo, 2000)(Buckle, 2009)

Meanwhile, the national beef consumption needs are determined by the population and per capita beef consumption of the Indonesian people. In line with population growth and increasing public awareness of the importance of protein from animals, the national demand for beef will also tend to increase. Beef in the future is expected to always increase. However, when compared to other countries, the demand for beef for consumption in Indonesia is still relatively low. (Dwiyanto, 2008)

This will also open up opportunities for national beef marketing, then express the opinion that the population in Indonesia which is already more than 225 million people followed by population growth above 1.5% is a great potential for the extraordinary domestic market. (Santoso and Titik, 2011) Indonesian people in 2017 only reached an average of 1.8 kg for beef consumption, followed by chicken meat by 7 kg (Organization for Economic Co-operation and Development (OECD), 2018).

Beef consumption in 2018 was 2.50 kg/capita/year, fluctuating to 2.56 kg/capita/year in 2019, while beef consumption decreased in 2020 due to the Covid-19 pandemic to 2.36 kg/capita/year. The increase occurred again in 2021 to 2.44 kg/capita/year. West Java is one of the provinces in Indonesia also has great opportunities from the livestock sector, especially beef livestock. In addition to being one of the largest population, the demand for beef consumption makes beef cattle business have a good opportunity.

Year-on-year demand for beef has fallen and meat prices have risen. This is due to the price of beef which changes every year. But besides that, the demand for beef has fluctuated. The availability of beef will always be needed by people with high, medium and low incomes. Public awareness of the nutritional needs of meat protein is a factor in increasing demand in line with the understanding of animal protein which is important in the community. Thus, the increasing public awareness about the nutritional needs of protein and also the increasing population will also increase the demand for beef needed.

The high consumption of meat in Cirebon Regency is inseparable from the large number of immigrants including workers and students. Judging from the data, it can be explained that beef production in Cirebon Regency has decreased and increased from 2018 to 2021, beef production in 2018, namely 3,830,055 Kg, decreased in 2019 to 3,715,556 Kg, then in 2020 increased to

4,371,936 Kg and decreased again in 2021 by 4,364,539 Kg. (BPS (Central Statistics Agency), 2022)

Sumber is a sub-district located in Cirebon Regency and is also the center of government and economy of Cirebon Regency, Sumber sub-district also finds the Cirebon regent office, DPRD office, District Court, Religious Court, Police Office, Prosecutor's Office and other agencies, sports facilities such as Stadium and Gor Ranggajati, transportation facilities namely type C source terminals with various majors available, This terminal is owned by the Cirebon Regency Transportation Office located in Sumber District.

In 2021, Sumber District has 12 sub-districts and 2 villages, namely Gegunung, Babakan, Perbutulan, Sumber, Watubelah, Matangaji, Sidawangi, Kaliwadas, Tukmudal, Pasalakan, Pejambon, Sendang, and Kemantren. The total population in Sumber District in 2021 is 98,371 people with an area of 29.54 km², while the average amount of beef consumption per day in the form of calories in Cirebon Regency is 64.50 Kcal. (BPS (Central Statistics Agency), 2022)

LITERATURE

By (Soeparno, 2011) meat we mean all animal tissues and all products obtained from the transformation of those tissues that are fit for consumption and do not cause health problems for people living in the world who consume them. Beef is a food with a high nutritional content. The average water content is 77.65%, the average fat content is 14.7% and the average protein content is 18.26%. (Prasetyo and Masdiana Ch Padaga, 2013) Beef serves as a nutritional supplement in the form of animal protein. Meat can be divided into two groups, fresh meat and processed meat. Fresh meat is unprocessed meat, used as a raw material for food processing. (Desroiser, 1988) .

Beef is often processed into processed foods ranging from satay, rendang, sausages and others. Processed meats are low in protein and water and high in fat and minerals (Soeparno, 2005). Beef protein is important because it contains all the essential amino acids, including those containing mineral S that vegetable proteins do not have and are essential for growth and are also easily digestible. In addition, beef is also a major source of minerals Ca, P, Zinc, Fe as well as vitamins B2, B6 and B12 which are important for the human body. (Talib and Yudi Guntara Noor, 2008)

The chemical composition of beef in general can be estimated, namely water 75%, protein 19%, fat 2.5%, carbohydrates 1.2%, non-protein soluble substances 2.3%, including nitrogenous substance 1.65% and inorganic substance 0.65%, and vitamins that are soluble in fat and in water

are relatively very little. Meat proteins, based on their solubility, consist of three main categories, namely myofibrin proteins, sarcoplasmic proteins, and connective tissue proteins and organelles. Demand is the desire of consumers to buy an item at different price levels over a period of time. (Soeparno, 2011)(Masyhuri, 2007)

The law of demand states that if the price of a good rises, then the quantity of goods demanded will decrease and vice versa. Simply put, the law of demand can be formulated as follows: the amount purchased per unit time becomes larger, due to lower prices, other conditions are constant (*ceretis paribus*). (Rinse, 1984). Factors that affect the demand for beef, namely consumer demand for an item, are not only closely related to the price of the item, but closely related to other factors.

There are many factors that affect demand other than the price of the item. Factors other than the price of the goods themselves are household income, prices of other goods, consumer tastes, population, advertising factors carried out by the government and so on. Supply can be interpreted as the overall amount of goods and services offered in various commodities and the possible prices prevailing in the market in a given period. While according to supply is the amount of goods that these producers offer at various price levels during a certain period.(Muslich, 2011)(Ahman et al., 2009)(Rahardja et al., 2008)

Meat consumption will continue and increase in the days to come. Meat consumption has a positive effect on health . This is because the digestibility of animal protein is better than vegetable protein (Henchion et al., 2014)(Mathijs, 2015)(Astuti and A. Rahmawati, 2010). The price of beef in urban and rural areas largely determines the amount of beef consumed. Beef consumption in rural and urban households is influenced by household income, number of family members, education level of head of household, price of beef, purebred chicken, price of native chicken, processed/cured meat and swallow.(Zulkarnain et al., 2015)

METHOD

The type of research used in this study is descriptive quantitative, which is a type of research that explains the causal relationship between dependent variables and independent variables by testing hypotheses / theories. The approach used is to conduct interviews with beef consumers in the Cirebon Regency Source Market using respondents as the unit of analysis. The data used in this study are secondary data and primary data.(Eunuch, 2017)

Primary data is a data source that directly provides data to the data collector, while secondary data sources are sources that are not directly provided data to the data collector in other words

through other people or through documents. Secondary data is obtained by collecting data by researchers who will conduct research from existing sources and also secondary data can be called available data. The data was obtained from agencies or official institutions related to this study. (Sugiyono, 2013)(Sugiyono, 2013)(Hasan, 2002)

In this study, data were obtained from the Central Bureau of Statistics, the Industry and Trade Office of Cirebon Regency and the Agriculture Office of Cirebon Regency. Prier data is obtained by conducting direct interviews to fill out questionnaires to predetermined respondents. Data that has been obtained will be tabulated and analyzed statistically, as a reference data obtained from books, the Central Bureau of Statistics and previous Research.

DISCUSSION

Beef production in Cirebon Regency tends to increase or decrease in 2017 beef production as much as 3,973,029 Kg, in 2018 to 2019 decreased by 19% to 3,830,055 Kg in 2018 and 18% to 3,715,556 Kg in 2019, the increase in beef production occurred again in 2020 by 22% to 4,371,888 Kg and fell again by 21% to around 4,364,539 Kg. Beef production was found several problems and obstacles.

Overall, the issue is how increasing beef production can increase public demand. Along with population growth and community income, it is certain that demand for livestock products will continue to increase, but the progress of livestock productivity is relatively slow due to the increasingly limited area of livestock land and is one of the causes of laceproduction(Rusdi and Suparta, 2016). The decline in beef production in 2019 occurred due to the Covid-19 pandemic where all residents went into *lockdown* to reduce the spread of the virus.

Beef Price Table (Rp/kg) Cirebon Regency 2017 - 2021

No	Beef Price (Rp/kg)	Year	Percentage (%)
1	IDR 120,080	2017	20%
2	IDR 121,111	2018	20%
3	IDR 120,556	2019	20%
4	IDR 114,957	2020	19%
5	IDR 122,756	2021	20%

Source: BPS Kabupaten Cirebon in numbers, 2022

Based on the table above, regarding the price of beef in Cirebon Regency, it can be seen that the price of beef from 2017 – 2018 has increased by 20%, namely in 2017 the price of beef per Kg

was Rp 120,080 / Kg to Rp 121,111 / Kg in 2018, beef prices decreased from 2019 to 2020 by 20% to Rp 120,556 / Kg in 2019 and in 2020 again fell by 19% to IDR 114,957/Kg and an increase again in 2021 by 20% to IDR 122,756/Kg. The imbalance of production and demand has an impact on price increases, beef prices have a type after experiencing an increase there has never been a decline to the initial position.

Although it is down, it still remains at a price above the initial price. This behavior is due to rapid price changes not followed by production-side changes. This is due to the long production cycle, low cultivation technology and farmers have part-time businesses. However, in 2020 the price of beef in Cirebon Regency decreased drastically to IDR 114,957 due to the Covid-19 pandemic so that demand for beef fell and production decreased. Pasar Sumber provides community needs, one of which is beef. The beef sellers come around 03.00 WIB followed by 09.00 WIB the time if non-household consumers and household consumers buy the meat. (Rusdi and Suparta, 2016)

Household consumers usually buy beef to be reprocessed for personal and family consumption, for example, meat stews, rendang, meat soup and so on. Beef sellers will experience high demand to coincide with holidays such as Eid al-Fitr, Eid al-Adha, ahead of the fasting month commonly referred to as muploadan, new year and other holidays. On weekdays, beef sellers get an average of 4 to 6 consumers per day to meet the demand for beef in Cirebon Regency.

The Effect of Beef Prices on Beef Demand

The price of beef (against the demand for beef (Y), obtained - 0.042 which is negative (-), while the value (df) = 68 - 5 = 63 and the level of significance 0.05 is 1.669 X_1) T_{hitung} , so it can be concluded - 0.042 < 1.669 and obtained a significance value of 0.967 > 0.05. This means that the variable price of beef (T_{tabel}) no real effect on beef demand (Y). Thus, it can be concluded that it is X_1) H_0 accepted and rejected. The results obtained show H_1 that the price of beef is not always stable, it can be seen from the data obtained during the study it is known that the lowest price of beef is IDR 120,000.00 and the highest is IDR 170,000.00.

This is in accordance with the law of demand (Sukirno, 2014) on rights is a hypothesis that states the lower a good is, the more demand for a good there is. Conversely, the higher the price of an item, the less demand for an item.

The Effect of Consumption on Beef Demand

Consumption (against demand for beef (Y), obtained 0.833 which is positive value (+), while the value (df) = 68 - 5 = 63 and the significance level of 0.05 is 1.669 X_2) T_{hitung} , so that it can be concluded 0.833 < 1.669 and obtained a significance value of 0.408 > 0.05. This

means consumption $T_{tabel} (X_2)$ no real effect on the demand for beef (Y). Thus, it can be concluded that it is H_0 accepted and rejected. The results obtained show H_1 that the increase and decrease in beef consumption is partly due to beef prices that tend to be unstable.

This is influenced by high and low market demand, in certain months such as before religious holidays the demand for beef will tend to increase quite drastically. The soaring increase in demand for beef resulted in a significant increase in prices from normal prices. After a religious holiday, usually beef permits will gradually decrease so that the price of beef decreases and prices return to stability. Thus, the increase in demand resulted in unstable beef prices. (Sukirno, 2014)

The Effect of Commercial Broiler Meat Prices on Beef Demand

The price of chicken meat (against the demand for beef (Y), obtained $0.114 X_3$) T_{hitung} which is positive (+), while the value (df) = $68 - 5 = 63$ and the significance level of 0.05 is 1.669, so that it can be concluded $0.114 < 1.669$ and obtained a significance value of $0.909 > 0.05$. This means that the price of chicken meat $T_{tabel} (X_3)$ has no real effect on the demand for beef (Y). Thus, it can be concluded that it is H_0 accepted and rejected. These results indicate that changes in broiler meat prices have no impact on changes in beef demand H_1

The Effect of Consumer Income on Beef Demand

Affecting consumer income (against beef demand (Y), obtained 3,602 positive values (X_4) T_{hitung} +), while the value (df) = $68 - 5 = 63$ and the significance level of 0.05 is 1,669, so that it can be concluded $3,602 > 1,669$ and obtained significance values of $0.01 < 0.05$. This means consumer income $T_{tabel} (X_4)$ real effect on beef demand (Y). Thus, it can be concluded that it is H_0 rejected and accepted. The results obtained point to H_1 this influence because consumer income is an important factor in the demand for various goods and changes in income always cause changes in demand for various types of goods.

The effect of the number of dependents of the family on the demand for beef

Affecting the number of family dependents (against the demand for beef (Y), obtained 2,250 positive value (+), while the value (df) = $68 - 5 = 63$ and the significance level of 0.05 is 1,669, X_5) T_{hitung} so that it can be concluded $2,250 > 1,669$ and obtained a significance value of $0.28 > 0.05$. This means the number of dependents of the family $T_{tabel} (X_5)$ no real effect on the demand for beef (Y). Thus, it can be concluded that it is H_0 rejected and accepted. The results show H_1 that there is a positive relationship between the number of dependents of the family and the demand for beef, indicating that the more dependents in the household, the demand for beef in the Source Market will increase, and vice versa.

CONCLUSION

Based on the results of research and discussions that have been carried out in the previous chapter, it can be concluded that from the results of factors that affect beef demand in the Cirebon Regency Source Market, the following conclusions can be drawn:

1. The results said that the variable price of beef did not have a significant effect on the variable demand for beef. Judging from the significance value for the variable price of beef is $0.967 > 0.05$.
2. The variable price of chicken meat does not affect the variable demand for beef. Judging from the significance value for the variable price of chicken meat is $0.909 > 0.05$.
3. The income variable has a significant influence on beef demand with the significance value for the income variable is $0.01 < 0.05$. The variable the number of family dependents has an insignificant effect with the significance value for the variable number of family dependents is $0.28 > 0.05$. Other independent variables had no influence on beef demand.

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