General Analysis of Recent Changes in Poultry Meat Consumption in Turkey

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Abstract: Individuals need to be fed to sustain their vital activities. Poultry meat is similar to other meats in terms of nutritional value content. All over the world, poultry meat production and consumption has increased rapidly in recent years. Poultry sector in Turkey, providing a continuous development and an important part of the animal protein needs can be met is an important branch of production. The purpose of this research is to evaluate general analysis of recent changes in poultry meat consumption in Turkey between the years of 2001-2017. The main material of this study is the data which is obtained from Turkey Institute of Statistics Institute and projections have been made until 2023 by trend analysis the average consumption in this 17-year period was calculated as 18.01 kg/capita. The expected consumption in 2023 is estimated as 33.33 kg/capita based on trend analysis. Despite the increase in poultry meat prices, consumption is increasing, too. This is explained by the fact that the price of poultry meat is cheaper than the other meats. One of the important factors affecting poultry meat production and consumption is feed prices. Because of the import of corn and soybean, feed costs are high and this causes the poultry meat price to be high, too. Increasing public supports and production planning will give beneficial results in terms of price stability, which will also be reflected in consumption amounts. This study includes analyzes that might be useful for decision and policy makers in poultry sector.

Keywords: Consumption, Poultry meat, Trend analysis, Turkey.

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Introduction

Individuals need to be fed to sustain their vital activities. The continuity of a healthy life, growth, mental and physical activity is only possible with adequate and balanced nutrition. Animal products come first in meeting the energy, protein, vitamins and mineral material needs of people for adequate and balanced nutrition [1]. On the other hand, inadequate and unbalanced nutrition can cause many diseases. Individuals, especially children, elderly and pregnant women who are in disadvantageous and risk groups, should consume sufficient amount of protein, vegetables, fruits, cereals, dairy products and meat on a daily basis.

In optimal nutrition, the main objective is to aim for minimum disease risk and maximum good condition, therefore maximum healthy life [2]. Poultry meat, which has an important place in optimal nutrition recommendations, is similar to other meats in terms of nutritional value content. The saturated fat and cholesterol content are also less. For this reason, chicken meat is more common in healthy nutrition recommendations [2]. Poultry meat is an important protein source with a high biological value in a healthy diet. Poultry meat is less oily than other animal meats, easier to digest, and contains amino acids and vitamins (B group, especially) are counted among the rich value foods [3].

Because of these properties, it is a food that can be consumed easily. Poultry meat is rich in vitamins and amino acids such as B2, B6, B12, as well as iron, zinc and phosphorus that children need. An average of 60-90 grams of white meat consumption is recommended per day in children nutrition [3]. However, the basic nutritional standards adopted for the protection of public health and the development of the country's
economy should also be implemented [4, 5]. The animal protein requirement needed for the nutrition of individuals can be obtained mainly from red meat, poultry products and fish. Regional differences are effective in supplying these nutrient sources due to many reasons. In recent years, the production and consumption of poultry meat, especially chicken meat, has increased rapidly in recent years [6]. In the last 20 years there has been an increase of 195% in the presence of poultry, unlike the other animal species for meat consumption [7].

Contraction in red meat production has led to an increase in prices, resulting in the preference for poultry products in meeting the animal protein deficit [5, 8, 9, 10, 11]. The poultry sector in Turkey, providing a continuous development and an important part of the animal protein needs can be met which is an important branch of animal production. While Poultry production was initially carried out at a high unit cost in small family owned enterprises, structural changes were made in the sector and integrated facilities were established in Turkey. With the investments made, the number and production capacity of modern production facilities have increased rapidly and the high standard production has become widespread in Turkey [12].

Turkey, in 2007, 1.1 million tons of poultry meat production, in a short period of 6 years, has reached 1.91 million tons that is increasing about 75%. This situation was reflected in Turkey’s exports, too. Turkey’s export in the same period is increased by 665% in the poultry industry and It was the 8th in the world [13]. According to 2016 data, Brazil and the US are the top countries in world exports, 30% of the world's production and 53% of global exports are carried out by these two countries [14].

Turkey is the 11th country in the world exports. Turkey's exports, mainly the Middle East, including Iraq, are spread over a vast geographical area into the Far East and the Caucasus [15]. On the other hand, production costs have also increased due to fluctuations in exchange rates in Turkey. These rising costs have started to adversely affect the poultry meat sector. In this study, the general analysis of the changes occurring in poultry meat consumption in recent years has been made in Turkey.

Materials and Methods

The main material of this study is the data which is obtained from Turkey Institute of Statistics Institute (TUIK, in Turkish abbreviation). Data on the amount of poultry meat products [16] and population data [17] obtained from TUIK data and which were used in trend analysis. The number of enterprises and coops in poultry data is used for between 2006-2017 [18]. A data set was created in Excel from TUIK data and the analyses were done in Excel. Here, projections have been made until 2023 by using data from previous years between 2001- 2017. In addition, other studies and surveys that have been made on the subject are used in the interpretation of results.

Results and Discussions

It is not possible to determine the exact number of poultry, production and consumption amounts exactly. By its nature, poultry farming has not been fully recorded anywhere in the world. In fact, this is true for the entire livestock sector. One of the important features of poultry farming is that it is carried out mostly by rural people, mainly by micro-scale and usually family businesses, in order to meet their daily needs. On the other hand, animal husbandry data is dynamic. In other words, the number of births, deaths and cuts can be changed daily.

In this study, based on official TUIK data, recorded enterprises data and consumption values are used. Therefore, it should be expected that the production and consumption values realized will be higher than the values used in this study. Between the years of 2006-2017, the average number of poultry enterprises are increased by 0.008% as compared to the data starting year which was 2006, while the number of coop increased by 11.8% on average at the same periods in Turkey. Despite the limited increase in the number of enterprises in this process, there has been a significant increase in the number of poultry due to the increase in the number of coops.

This experienced increases in the white meat sector, hence poultry farming, shows that it's an enhanced sector in Turkey. On the other hand, the technological level in the production of poultry meat and products in the current situation has reached EU standards in Turkey. This situation shows
that the current number of enterprises and poultry houses has the infrastructure and capacity to meet domestic demand and also export in Turkey. The graph of the change in the poultry sector due to years is given in Figure 1. The trend analysis of the poultry meat consumption value per capita in Turkey is given in Figure 2. Accordingly, the amount of consumption value, as compared to the year 2001, is averagely increased by 92.2% in a 17-year period. While per capita consumption was 9.37 kg in 2001, it is reached to 26.44 kg in 2017.

Although consumers prefer red meat in general, but high price of red meat is caused to limit the consumption amount of red meat in Turkey. So, the most consumed meat is poultry in Turkey. If there is no special negative situation, such as H5N8, avian flu disease, it is expected that this amount will continue to increase in the coming years. According to the World Agriculture Outlook 2012 data, the average per capita of some selected countries and the EU per capita per year is given in Figure 3 [19].

Accordingly, the average value of poultry meat consumption per capita in selected countries in the mentioned period was 21.6 kg and this amount is about the same rate as in Turkey. Between the years of 2003 and 2018 (up to October) changes’ occurring in consumer prices of poultry meat in Turkey is given in Figure 4. Accordingly, the consumer prices are increased by 3.2 times in 2018 (first ten months) period as compared to 2003, which is the reference year. Poultry meat feed mixes are usually prepared on the basis of maize and soybean. The feed rations of poultry are mainly composed of maize and soybean by more than 50%, and raw materials such as wheat, barley and sunflower and cottonseed pulp are also used in addition to these raw materials. Almost the entire soybean and a certain portion of corn is to be supplied by import in Turkey. For this reason, due to the increasing raw material prices, that is at least 65% of the total cost due to the fact that poultries are mostly fed with concentrated feed [12], prices are also increasing.

This increase is caused by the high price of poultry meat. However, the increase in poultry meat prices does not reduce the demand for poultry meat very much. Due to the higher market prices of the other meats, the consumer demands more poultry meat than white meat and red meat under existing conditions in Turkey. According to TUIK data, up to 2023 trend analysis of consumption amounts was made.

Trend analysis is given in Figure 5. Accordingly, per capita consumption in 2023 is expected to increase by 26.1% as compared to 2017. The trend analysis of the change in consumer prices that is expected to occur in the same period is presented in Figure 6.

Figure 1: The recent changes in number of enterprises and coops in poultry in Turkey
Figure 2: The changes in poultry meat consumptions between the years of 2001-2017 in Turkey

Figure 3: Average poultry meat consumption values in some selected countries (kg/capita)

Figure 4: Poultry meat consumer price changes between the years 2003-2018 in Turkey
Although there are various problems of the poultry sector in Turkey is in a continuously evolving structure both in terms of both production and consumption quantities. In the future, it is seen that poultry meat consumption will continue to increase according to the trend analysis. Price is one of the important factors that can affect the speed of this increase.

The most important and expensive input of the poultry sector is feed. The mixed feed sector imports more than 40% of the total raw material needs from other countries in Turkey. Cost dependence on feed and rising feed prices affect costs, rising costs negatively affect producers and hinder production sustainability and profitability [12] in poultry sector in Turkey.

Therefore, the problems faced by the sector in the supply of feed raw materials cause production costs to increase. On the other hand, this situation leads to an increase in prices in the domestic market and in this case can affect the consumer and consumption amount negatively.

In recent years, the public has increased the production amount by providing additional measures and support to corn and soybean to solve the feed problem in Turkey. In addition, within the scope of Instrument for Pre-Accession Assistance Rural Development (IPARD), producers are provided with poultry meat for 380 TL per ton, for processed and preserved products 485 TL per ton is supported [14].

**Conclusion**

Although there are various problems of the poultry sector in Turkey is in a continuously evolving structure both in terms of both production and consumption quantities. In the future, it is seen that poultry meat consumption will continue to increase according to the trend analysis. Price is one of the important factors that can affect the speed of this increase.

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Increasing these supports and production planning will give beneficial results in terms of price stability, and this will also be reflected in consumption amounts. In such a case, both the producer and the consumer will have benefit. As a result, prices are one of the most important reasons affecting the consumption of poultry meat in Turkey.

Increases in prices are mainly due to feed costs. On the other hand, supply and demand-based production planning will protect both the producer and the consumer. In such a case it will ensure stability in the poultry meat sector and consumption amounts.

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