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Evaluation of Consumer Attitudes Regarding Local Brand Milk and Dairy Products: Case of Süleymanpaşa Districts of Tekirdağ-Türkiye

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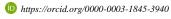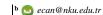*Corresponding author

A R T I C L E I N F O	A B S T R A C T
	Since the concept of brand has a wide and diverse range, it is divided into different groups from different perspectives. Local brands are products that are produced, manufactured, and sold by a company in a specific city or that are distributed in a constrained area. This study's primary goal is to assess how local brands selling milk and dairy products in a particular region are perceived by local consumers. It also seeks to analyze the standing of local producers in this sector and consumer attitudes toward regionally branded goods by highlighting the significance of milk and dairy products in terms of human health. The study makes use of survey information from 381 households in Süleymanpaşa Districts of Tekirdağ-Türkiye. The data were analyzed using fundamental statistical techniques, factor analysis, and logistic regression analysis. In the survey, it was found that 85.0% of participants were familiar with the idea of local brand, while just 15.0% were not. Consumers who said they buy local brand milk and dairy products made up 78% of the sample. Consumers found local products to be more natural and tastier than national brands. According to the factor analysis, the judgements influencing customers' preference for local brand milk and dairy products were classified into five factors. These factors are named as naturalness and quality, price and promotion, health, food safety, brand and image. Logistic regression analysis was used to explain the association between purchasing local brand milk and dairy products and factor scores, as well as knowing the notion of local brand. Those who favor "Naturalness and Quality" in purchased milk and dairy products are nearly three times more likely than those who do not to purchase local brand milk and dairy goods. With a probability of 68.4%, those who do not understand the notion of local brand will not purchase local branded products.

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Introduction

Milk is one of the most important foods that humans must consume in order to achieve their nutritional needs. It serves as the first dietary supply for both humans and mammals following birth. Milk, which provides important animal protein, fat, lactose, vitamins, and minerals, is essential for adequate and well-balanced nutrition at all ages, from infancy to old life. Milk is a food that is easy to consume and digest. The production of milk and dairy products is critical to human health, and implementing food safety regulations in this process imposes significant responsibility on producers at both the national and local levels. Additionally, because milk contains several vitamins and minerals like calcium, proteins, vitamin A, and vitamin D, consumers view it as a significant food source, particularly when it comes to calcium for bone and dental health (Özsayın, 2017).

World milk production is projected to grow faster than other major agricultural products over the next decade, increasing by 1.7% annually to 1030 million tons by 2030 (OECD/FAO, 2021). Data from the FAO for 2022 indicate that 930 million tons of milk will be produced worldwide in that year. Cow's milk makes up about 81% of this production, while buffalo milk makes up 15.4%. The largest production shares are held by the USA (102.7 million tons), EU (159.3 million tons), and India (213.8 million tons) (FAOSTAT, 2022). Over the next decade, India and Pakistan are expected to contribute more than half of the growth in world milk production. It is anticipated that production in the European Union would expand more slowly than globally.

The amount of raw milk produced in Turkey in the same period was 21.5 million tons. In 2021, the raw milk production forecast was 23 million tons and decreased by

7.1% in 2022. The amount of milk produced is 92.3% cow's milk and 4.9% sheep's milk (TUIK, 2022). Approximately 15% of the cow's milk collected by commercial dairies in Turkey is delivered to consumers as drinking milk. The amount of drinking milk production in Turkey decreased in 2022 compared to the previous year (1.7%) and was realized as 1.5 million tons (TEPGE, 2023). According to 2021 data, total cheese production in Turkey was 763 thousand tons (Anonymous, 2022).

Milk consumption is considered as an indicator of development for countries. Milk and dairy product consumption values are quite high in countries with adequate and healthy nutrition (Onurlubaş and Çakırlar, 2016). Milk is a food that can be consumed directly, and there are also food such as cheese and yogurt produced from milk. Since milk has been a food since antiquity, every civilization has its unique customs for processing milk. Dairy products produced with traditional methods have enabled each society to have a unique palate and led to the emergence of products with very different flavors from milk.

Global milk and dairy product consumption is estimated to be 116.9 kg per person year based on 2020 data. Europe consumes the most milk per person year, whereas Africa consumes the least (Anonymous, 2022). As of 2022, cheese consumption was 20.9 kg per capita in the EU and 17.9 kg in the USA. Annual per capita butter consumption is highest in New Zealand (6.2 kg) and many Northern European countries (4.2 kg). In Turkey, products such as milk, yogurt, feta cheese and ayran are also more widely consumed, while drinking milk is generally consumed as whole milk (TEPGE, 2023). Due to the high level of informality in Turkey, the amount of milk consumption varies. According to the report prepared by the Chamber of Agricultural Engineers (2018), per capita drinking milk consumption was estimated at approximately 41.5 kg (ZMO, 2019; Engindeniz, et al. (2021). Originally, the term "trademark" refers to the designs, writings, and other features that were used to set one product or service apart from another. But today, the idea of a trademark is valued highly and is thought of from a much wider viewpoint. Today, brands are valued equally to the tangible assets of enterprises as an intangible asset. As the most important asset for businesses functioning on a worldwide scale, brands can serve a variety of purposes (Çakırer, 2013).

In today's competitive marketplace, a brand is more than just a name; it's also a commercial asset that provides a product identity and personality, affects consumer perceptions, and directs their purchasing decisions. Businesses and their customers can develop and shape relationships via the use of brands. Additionally, brands, which are now seen as part of a company's intellectual capital, have evolved into a commercial asset separate from their associated products. As a result, brand building for entrepreneurs necessitates a set of actions covering nearly every aspect of the company (Schultz and Barnes, 1999).

According to Philip Kotler (2000), as consumers become familiar and loyal to the brand, there is an opportunity to reduce the company's marketing expenditure in the long run. Increased demand for certain brands creates an advantage for the businesses, distributors and retailers that own that brand. When the brand is perceived to be of high quality, businesses may have the advantage of being able to sell that product at a higher price than competing products. The trust provided by the brand name allows manufacturers to easily expand their product lines.

As stated by İslamoğlu and Fırat (2011), a brand should provide the desired, desired and expected satisfaction by the consumer. At the same time, the brand should be able to cooperate with the consumer on satisfaction. A long-term relationship should be established between the consumer and a strong brand, based on trust, empathy and free from risks. Since the concept of brand is a multifaceted and broad concept, researchers have developed different categorization methods according to different perspectives. They have classified trademarks in various ways according to different criteria such as purpose of use, trademark right ownership, form, registration status, geographical area of operation (Şehirali, 1998; Özel, 2002; Eymen, 2007; Yarıcı, 2007).

Local brands, which are exclusive to a particular country or a limited geographic region, are said to help close the gap between the national economy and individual affluence (Natarajan & Thiripurasundari, 2010). Local consumer groups are the primary target of local brands' attention (Kotler and Armstrong, 2007). For regional companies that have had difficulty creating their own goods and identities, local methods provide a feasible alternative (Harun et al., 2010). Schuiling and Kapferer (2004), local brands have advantages such as the ability to respond more effectively to local needs, the ability to adopt flexible pricing approaches, the flexibility to adapt more easily to competitive conditions, the ability to manage the product range in a more adaptable way, and the ability to enter new markets faster. Local brands emphasize consumer awareness, trust and perception of quality rather than strong brand image compared to national and international brands. It is extremely tough to break customers' allegiance to heritage brands in industries where advertising is not as important. The foundation of local companies' competitive advantage in these markets is the trust relationships they have built with customers (Kapferer, 2002). Despite all these advantages, local brands also have some disadvantages. The small scale of the products sold by local brands increases production and marketing costs (Schuiling and Kapferer, 2004). Possible logistics problems that local brands may experience may cause them to fail to meet local requirements in different regions (Kotler and Armstrong, 2008).Numerous research, locally and nationally, have been carried out on the consumption of milk and dairy products as well as the variables influencing consumer preferences (Gül, 1987; Vural, 2001; Akbay and Tiryaki, 2007; Erdal and Tokgöz, 2011; Özcan, 2011; Karakaya and Akbay, 2014; Terin, 2014; Kızıloğlu, 2014; Yorgancılar, 2014; Terin et al., 2015; Yazıcı, 2016; Karakaya and Özkan, 2020; Engindeniz, et al., 2021; Yılmaz, et al., 2022). The common point of these studies is that socio-demographic and economic characteristics are effective in individuals' preferences for milk and dairy products. Edirisinghe and Athauda (2009) examined the relationships between demographic and socio-economic characteristics of Sri Lankan consumers in an ordered logistic regression and showed that age, cost and attitudes towards milk use and

nutritional attitudes were the main factors affecting milk consumption. In addition, household monthly income, health problems and education level were found to play a greater role in consumption.

In contrast to other studies, this study aims to evaluate consumer perceptions of local brands operating in a certain geographical area in the milk and dairy products market. Additionally, by emphasizing the importance of milk and dairy products in terms of human health, the point at which local milk and dairy producers stand on this issue and the attitudes of consumers towards local brand milk and dairy products were examined.

Material and Methods

The research material includes data obtained from face-to-face interviews with consumers residing in Süleymanpaşa district of Tekirdağ province and questionnaires presented to these individuals (Figure 1).

Figure 1. Research Area

The data of this study was obtained from the field study conducted in 2019 and does not require ethics committee approval. According to Turkish Statistical Institute (TUIK) data, there are 48,000 households in Süleymanpaşa district of Tekirdağ province. To determine the number of questionnaires representative of households, the "proportional sampling" method will be used, which is based on Yamane's (2009) formula. A 95% confidence interval and a 5% margin of error were included in equation 1. Furthermore, p=q=0.5 was chosen to achieve the maximum sample size because there hasn't been any research on the use of local brand milk and dairy products in the research region. (Equation 1).

$$n = \frac{N \times t^2 \times p \times q}{d^2 \times (N-1) + t^2 \times p \times q} \qquad (1)$$

n: number of people to be surveyed, N: 48,000 (number of households in Tekirdağ Süleymanpaşa) (TUIK, 2020), p: 0.5 (those who buy local brand milk and dairy products), q: 0,5 (those who do not buy local brand milk and dairy products), t: 1.96 (value in t table according to 5% accepted margin of error), d: 0.05 (sampling error accepted according to frequency of occurrence)

As a sampling method, random sampling selection technique was used in Tekirdağ province. With this method, 381 different households were represented and face-to-face questionnaires were applied to consumers. Means, frequency distributions, factor analysis and logistic regression analysis were used to explain consumers' attitudes towards the purchase of branded milk and dairy products.

Factor analysis is a multivariate statistical method and its aim is to obtain a limited number of unrelated and meaningful new variables (factors or dimensions) by combining p interdependent variables. This method aims to discover the hidden structures underlying the factors. Factor analysis also involves the process of obtaining descriptions of common factors or new concepts, called factorization, using the factor loading values of items. This process aims to reveal functional explanations of concepts (Büyüköztürk, 2018).Factor analysis aims to reveal random factors reflecting the classification, which cannot be observed from the p variables in the data matrix x, which are observed and correlated between them, but which emerge when the variables come together. These new derived variables are called factors. It is used to reveal hidden dimensions that are known to exist but cannot be determined by direct observation. The most common use is to reduce and simplify much larger data sets (Karagöz, 1991).

Logistic regression analysis is a method used to model the relationship between one or more independent variables and the dependent variable. In this analysis, the dependent variable has a categorical characteristic, while the independent variable(s) can have both continuous and categorical characteristics. Binary logistic regression analysis refers to models where the dependent variable has only two categories. In this model, the occurrence and non-occurrence of the event are represented as 0 and 1. The ratio of the probability of the event occurring to the probability of the event not occurring is the "odds ratio" Odds ratio can take values between 0 and $+\infty$ (Karcı and Arlı, 2018).

Results and Discussion

The study's participants were divided into 46.7% men and 53.3% women. When age categories are examined, it is discovered that 28.1% of participants are between the ages of 25 and 34, and around 37% are between the ages of 35 and 54. When the consumers' education level is examined, 26.3% are primary school graduates, 21.3% are secondary school graduates, 30.4% are high school graduates, 11.8% are undergraduate graduates, and 10.2% are postgraduate and above. In the study by Abdikoğlu et al (2018), the rate of high school graduates was found to be 27%, and 28.3% in Oraman, et al (2011). In Karakaya and Özkan's (2020) study analyzing the factors affecting the preferences of consumers in Antalya province for retailer branded milk and dairy products, the rate of postgraduate graduates was found to be 9.8%.

The average monthly household income of the surveyed consumers was found to be 3,761.02 TL (639.63 $). In addition, the average monthly food expenditure of the household was calculated as 1,274.39 TL (216.73 $). Consumers allocate approximately 33.9% of their income to food expenditures. Akbay and Tiryaki (2007), in their study in Kahramanmaraş province, found that the share of monthly food expenditures of consumers in their total income was 32.69%. Erdal and Tokgöz (2011), in their study on the consumption preferences of consumers for packaged and open milk, found that the ratio of food expenditures was approximately 17% of total income and 24% of total expenditures. When the monthly income distribution is analyzed, there is a concentration in the

range of 2,000 - 3,999 TL (340.12-680.10) and 4,000 - 5,999 TL (680.27-1020.23). Similarly, monthly food expenditures of households are concentrated in the range of 500 - 1,249 TL (85.03$- 212.41$) (Table 1). Based on demographic features, a broad consumer profile was developed, claims Vural (2001). The study found that the purchase behavior of milk and dairy products is influenced by consumer income. It was also discussed how education influences the decision-making process in a way that leads to collaborative decision-making.

Table 2 presents the prioritization of consumers' dairy purchasing locations and preferences based on the weighted scoring calculation. According to the findings, consumers primarily prefer supermarkets to purchase milk and dairy products. Notably, no consumers purchase these products from local markets or online sources. The data also reveal that after supermarkets, consumers tend to prefer to buy milk and dairy products directly from producers. Niyaz and Inan (2016) stated that 53% of the consumers in TR22 South Marmara Region prefer to buy milk and dairy products from the market and 36.8% prefer to buy directly from the producer. According to Engindeniz, et al. (2021), 80% of consumers buy milk and dairy products from the market, while the second place of purchase was producers. Similarly, Çelik, et al. (2005), in their study in Şanlıurfa province, found that 61.4% of consumers prefer to buy milk from supermarkets.

The average purchase amounts of milk and dairy products of consumers are given in Table 3. Accordingly,

on average, households consume 9.48 liters of milk, 4.02 kg of feta cheese and 9.82 kg of yogurt per month. When calculated as annual consumption amounts, milk consumption was found to be 113.76 kg, cheese 48.24 kg and yogurt 117.84 kg per household. In the study, the average household size was determined as 3 people. Accordingly, per capita milk consumption in Süleymanpaşa district of Tekirdağ province was found to be 37.92 kg, cheese consumption 16.08 kg and yogurt consumption 39.28 kg per year. According to the report prepared by the National Milk Council in 2022, per capita drinking milk consumption was estimated as 39.1 kg, cheese consumption as 19.6 kg and yogurt consumption as 29 kg (Anonymous, 2022). In a study conducted in İzmir/Bornova district, it was determined that the annual milk consumption per capita was 37.43 kg, yogurt consumption was 32.84 kg and cheese consumption was 18.48 kg (Engindeniz, et al. 2021). In a study conducted in 2001 in Antalya province, milk consumption per capita was 15.3 kg/year and yogurt intake was 23.2 kg/year (Vural, 2001). In this regard, the amount of milk and dairy products consumed in the research region is comparable to previous studies.

Among the consumers who participated in the survey, 85.0% stated that they knew the concept of local brand and 15.0% stated that they did not know the concept of local brand (Table 4). 78% of the surveyed consumers stated that they purchased milk and dairy products with local brands.

Table 1. Demographic Characteristics of Consumers

	Oran (%)
Gender	
Male	46.7
Female	53.3
Age Groups	
25 - 34	28.1
35 - 44	17.2
45 - 54	20.7
55 - 64	22.4
65 years and older	11.6
Education Status	
Primary School	26.3
Middle School	21.3
High School	30.4
Undergraduate	11.8
Master's Degree and Above	10.2
Household Income Level	
2000 TL below (below 340.13$)	12.9
2.000 TL - 3.999 TL (340.13$ - 680.10$)	38.3
4.000 TL - 5.999 TL (680.27$ - 1020.24$)	37.8
6.000 TL - 7.999 TL (1020.40$ - 1360.37$)	9.4
8.000 TL and above (1360.54$ above)	1.6
Household Monthly Food Expenditure	
500 TL below (85.03$ below)	2.1
500 TL - 1.249 TL (85.03$ – 212.41$)	51.5
1.250 TL - 1.999 TL (212.58$ – 339.96$)	31.4
2.000 TL - 2.749 TL (340.13$ – 467.52$)	12.0
2.750 TL and above (467.69$ above)	3.0
Total	100.0

Table 2. Consumers' Preference Priorities for Dairy Products Purchase Location

	Super Market	Grocery	Delicatessen	Internet	Public/Street Bazaar /Farmers
Milk	1	3	-	-	2
Feta Cheese	1		2		3
Fresh Kashar Cheese	1	3	2		
Aged Kashar Cheese	1	2	3		
Yogurt	1	3			2
Butter	1		3		2
Cream	1	3			2

Table 3. Average Purchases of Milk and Dairy Products by Consumers

Milk and Dairy Products	Amount Consumed (kg or lt) (monthly)
Milk	9.488 lt
Feta Cheese	4.021 kg
Fresh Kashar Cheese	1.734 kg
Aged Kashar Cheese	1.698 lt
Yogurt	9.815 kg
Butter	1.340 kg
Cream	0.846 kg

Table 4. Consumers' Knowledge and Purchase of Local Brand Concept

Knowing the Concept of Local Brand	%
Knows	85.0
Doesn't know	15.0
Total	100.0
Consumers' Purchase Status of Local brand Milk and Dairy ProductsLocal brand	%
Purchasing	78.0
Not Purchasing	22.0
Total	100.0

Table 5. Consumers' Reasons for Not Purchasing Local brand Milk and Dairy Products

Reasons for Not Purchasing Local brand Milk and Dairy Products	%
Packaging	8.9
Storage Life	30.4
Price	19.0
Food Safety	18.5
Nutritional Values	6.0
Availability	17.3
Total	100.0

Among consumers who do not buy local brand milk and dairy products, 8.9% cited the packaging of the product as a problem, while 30.4% cited short storage time as a concern. In addition, 19.0% cited the price of the product, 18.5% were concerned about food safety, 6% were concerned about the adequacy of nutritional value, and 17.3% cited the ubiquitous availability of the products as a reason for not purchasing (Table 5). In İzmir province, Kahraman (2016) conducted a study on brand selectivity in milk consumption habits and discovered that characteristics including trust, health, quality, taste, and flavor were significant determinants of both brand preference and consumption patterns.

In Table 6, the relationship between the demographic structure of consumers and their purchasing status of local brand milk and dairy products is analyzed. Accordingly, there is no relationship between being under and over 35 years of age and purchasing status (p>0.05). There is a significant relationship between education level and purchasing status (p<0.05). According to Cramer's V coefficient, there is a weak relationship. The Cramer V coefficient provides information about the strength of the relationship between two categorical variables (Öztuna et al., 2008). This coefficient is between 0 and 1 (Healey, 2011). The purchasing rate is 71% for primary school graduates, 79% for secondary school graduates, 82.6% for high school graduates, 66.7% for undergraduate graduates and 92.3% for graduate graduates. There is also a relationship between purchase status and consumer income (p<0.01). While 66.7% of consumers with an income of 2000 TL (340.13$) or less buy local brand milk and dairy products, 88.1% of consumers with 4000 TL (680.27$) and above purchase. While local brand milk and dairy products are purchased by 74.7% of male customers, 80.7% of female consumers do the same. According to Karakaya and Özkan (2020), gender influences the chance of eating retailer-branded milk and dairy goods. Specifically, female consumers are 5.84 times more likely than male consumers to consume retailer-branded milk and dairy products.

Factor analysis was used to assess consumer perceptions of the attributes, marketing strategy, and food safety of regionally branded milk and dairy products. Table 7 provides details on the variables utilized in factor analysis. In this context, the majority of consumers (85.04%) stated that they find local brand milk and dairy products more natural compared to national brands. The idea that local brands have a shorter storage life because they are natural is also noteworthy at 72.71%. At the same time, consumers believe that local brand milk products preserve traditional flavors. This reflects the role of consumers prefer to buy local brand milk and dairy products to support local producers, demonstrating a desire to strengthen the local economy (63.26%).In terms of price, 66.93% of consumers think that the price of local brand milk and dairy products is in line with their quality. This suggests that local brands are also economically attractive to consumers by offering affordable alternatives. Confidence in the accuracy of label information and perceptions of the absence of harmful substances in the product content support consumers' positive attitudes towards local brands in preserving cultural values and long-established flavors. Customers have noticed that there is not enough marketing or advertising for regionally branded milk and dairy products on the market. 65.09% of customers said there weren't enough promotional activities, while 61.94% said the advertising weren't good enough.

In Table 9, the reliability of the scale created for the judgments presented in the questionnaire was measured by Cronbach's Alpha method. The calculated value of 0.826 shows that the data is suitable for analysis. The suitability of the obtained data for factor analysis was tested with KMO (sample equivalence test) and Bartlett's (sphericity test). The KMO value was found to be 0.795. The fact that this value is greater than 0.50 indicates that the data are suitable for factor analysis (Table 10).

In the total variance explained, five factors explained 65.005% of the total variance, with factor I explains for 29.428% of the total variance, factor II explains for 15.337%, factor III explains for 7.181%, factor IV explains for 6.645%, and factor V explains for 6.414% (Table 10).

According to the results of the applied factor analysis, the judgments affecting consumers' preference for local brand milk and dairy products can be analyzed under five different factors (Table 11). Factor I is named as "Naturalness and Quality". In this factor, the judgments that affect consumers' preference for local brand products are summarized as the price of the products is affordable according to the quality of the products, traditional flavors are preserved and the storage life of local brands is short because they are natural. Factor II is named as "Price and Promotion". Under this factor, factors such as availability of local brand products, promotions, product campaigns and lack of variety are included.

Consumers prefer local brand products because they are more affordable and they can be found everywhere. Factor III is named as "Health". In this factor, the judgments that affect consumers' preference for local brand products include that the products are produced in accordance with hygiene conditions, the packaging is healthy and hygienic, and the producers are well controlled by supervisory institutions. Factor IV is named as "Food Safety". Under this factor, the judgments that affect consumers' preference for local brand products include the absence of harmful additives in the product content and that local brands comply with food safety standards. Factor V is named as "Brand and image". Under this factor, the reasons why consumers prefer local brands include wanting to support local producers and finding local brands' products more delicious (Table 11).

A binary logistic regression analysis was performed to identify the variables influencing customers' decisions to buy local brand dairy and milk products. In the logistic regression model, the binary categorical variable "Consumers' Purchase Status of Local brand Milk and Dairy Products" (1: Purchases, 0: Does not purchase) was used as the dependent variable. As independent variables, the factor scores obtained from factor analysis ("Naturalness and Quality", "Price and Promotion", "Health", "Food Safety", "Brand and Image") and "Knowing the Concept of Local Brand (1: Knows, 0: Does Not Know)" are included in the model. Descriptive statistics for these variables are given in Table 12.

Table 6. Relationship between Demographic Structure and Local brand Milk-Dairy Product Purchase

	Purchasing (%) (freq.)	Does not purchase (%) (freq.)	
Age			
Under 35 years of age	79.4(85)	20.6(22)	χ^2 : 0.191 p:0.662
35 and above	77.4(212)	22.6(62)	Cramer's V : 0.0224
Education			
Primary School	71.0(71)	29.0(29)	
Middle School	79.0(64)	21.0(17)	
High School	82.6(95)	17.4(20)	χ^2 : 15.1 p:0.015**
Undergraduate	66.7(30)	33.3(15)	Cramer's V : 0.18
Master's Degree and Higher	92.3(36)	7.7(3)	
Gender			
Male	74.7(133)	25.3(45)	χ^2 : 1.96 p:0.16
Female	80.7(163)	19.3(39)	Cramer's V : 0.0718
Income			
2000 and below	66.7 (60)	33.3 (30)	
2001-4000 TL (340.30$ - 680.27$)	75.7 (112)	24.3 (36)	χ^2 : 15.1 p:0.001*
4000 above (680.27$ above)	88.1 (118)	11.9 (16)	Cramer's V : 0.201

*p<0.01, **p<0.05

Table 7. Descriptive Statistics of Variables Used in Factor Analysis

	Frequency Distribution (%)					Mean	Std.Dev
	1	2	3	4	5		
I find the price of local brand milk and dairy products affordable according to their quality (K115).	10.5	7.87	14.7	38.58	28.35	3.66	1.26
I believe that local brand milk and dairy products preserve traditional flavors (K113)	8.14	6.82	14.44	38.58	32.02	3.80	1.20
I think local brand milk and dairy products have a shorter storage life because they are natural.(K114)	5.77	8.92	12.6	34.91	37.8	3.90	1.17
I find local brand milk and dairy products more natural (K103)	3.41	3.67	7.87	43.31	41.73	4.16	0.96
Local milk and dairy products have more promotions / product campaigns (K101)	35.17	29.92	10.24	15.22	9.45	2.34	1.34
I find advertisements and promotions of local brand milk and dairy products sufficient (K98)	33.33	28.61	19.95	8.66	9.45	2.32	1.28
I can find local brand milk and dairy products everywhere (K99)	16.05	17.11	22.63	26.32	17.89	3.13	1.33
I find the product diversity of local brand milk and dairy products sufficient. (K100)	21.0	22.83	18.37	23.1	14.7	2.88	1.37
I prefer local brand milk and dairy products because they are more affordable. (K97)	22.57	19.16	18.11	22.83	17.32	2.93	1.42
I think that local brand milk and dairy products produce in accordance with hygiene conditions. (K104)	4.46	9.19	29.13	34.65	22.57	3.62	1.07
The packaging of local brand milk and dairy products is healthy and hygienic. (K106)	6.3	5.77	29.66	37.01	21.26	3.61	1.08
I think that companies producing local brand milk and dairy products are controlled well enough by supervisory institutions (K109)	17.06	19.69	28.08	22.05	13.12	2.94	1.28
I think that local brand milk and dairy products do not contain additives that are harmful to health.(K108)	14.17	13.12	11.55	36.22	24.93	3.45	1.37
I think local brand milk and dairy products fully comply with food safety standards (K110)	12.86	17.32	29.4	24.67	15.75	3.13	1.25
I try to buy local brand milk and dairy products to support local producers. (K112)	7.61	9.97	19.16	31.76	31.5	3.70	1.23
I find the products produced by local brand milk and dairy products more delicious (K102)	5.51	7.61	13.39	30.45	43.04	3.98	1.17

1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree

Table 8. Reliability Analysis

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.830	16

Table 9. Test of Sample Equivalence (KMO) and Test of Sphericity (Bartlett)

Kaiser-Meyer-Olkin Measurement of Sampling Adequacy		.795
Bartlett's Test of Sphericity	Approximate Chi-Square	1998.460
	df	120
	Sig.	.000

Table 10. Total Variance Explained

C	Initial Eigenvalues			Square Loadings Extraction Sums			Square Loadings Rotation Totals		
	Total	Variance (%)	Cumulative %	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	4.708	29.428	29.428	4.708	29.428	29.428	2.652	16.574	16.574
2	2.454	15.337	44.764	2.454	15.337	44.764	2.572	16.072	32.646
3	1.149	7.181	51.945	1.149	7.181	51.945	1.904	11.901	44.547
4	1.063	6.645	58.590	1.063	6.645	58.590	1.732	10.828	55.375
5	1.026	6.414	65.005	1.026	6.414	65.005	1.541	9.630	65.005
6	.753	4.707	69.712						
7	.741	4.632	74.344						
8	.622	3.889	78.233						
9	.614	3.838	82.071						
10	.565	3.533	85.604						
11	.466	2.915	88.519						
12	.461	2.880	91.399						
13	.450	2.815	94.213						
14	.384	2.402	96.616						
15	.302	1.885	98.501						
16	.240	1.499	100.000						

C: Component

Table 11. Rotated Component Matrix

		Components				
		1	2	3	4	5
Naturalness and Quality	I find the price of local brand milk and dairy products affordable according to their quality (K115).	.804				
	I believe that local brand milk and dairy products preserve traditional flavors (K113)	.736				
	I think local brand milk and dairy products have a shorter storage life because they are natural.(K114)	.683				
	I find local brand milk and dairy products more natural (K103)	.662				
Price and Promotion	Local brand milk and dairy products have more promotions / product campaigns (K101)		.794			
	I find advertisements and promotions of local brand milk and dairy products sufficient (K98)		.777			
	I can find local brand milk and dairy products everywhere (K99)		.678			
	I find the product diversity of local brand milk and dairy products sufficient. (K100)		.654			
	I prefer local brand milk and dairy products because they are more affordable. (K97)		.507			
Health	I think that local brand milk and dairy products produce in accordance with hygiene conditions. (K104)			.780		
	The packaging of local brand milk and dairy products is healthy and hygienic. (K106)			.669		
	I think that companies producing local brand milk and dairy products are controlled well enough by supervisory institutions (K109)			.590		
Food Safety	I think that local brand milk and dairy products do not contain additives that are harmful to health.(K108)				.755	
	I think local brand milk and dairy products fully comply with food safety standards (K110)				.743	
Brand and image	I try to buy local brand milk and dairy products to support local producers. (K112)					.686
	I find the products produced by local brand milk and dairy products more delicious (K102)					.628

Table 12. Descriptive Statistics of Variables

	Mean	Std.Dev
Consumers' Purchase Status of Local brand Milk and Dairy Products (1: Purchases) (Dependent Variable)	0.78	0.42
Naturalness and Quality	3.88	0.91
Price and Promotion	2.72	0.96
Health	3.39	0.89
Food Safety	3.29	1.12
Brand and image	3.84	0.96
Knowing the Concept of Local Brand (1: Knows the concept of local brand)	0.85	0.36

The averages for the factors were calculated from the averages of the answers given to the judgments included in each factor (1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree). It is assumed that factors with a mean of up to 2.5 are perceived by consumers as strongly negative, factors with a mean between 2.6-2.9 are perceived by consumers as relatively negative, factors with a mean between 3.0-3.4 are perceived by consumers as relatively positive and factors with a mean above 3.5 are perceived by consumers as strongly positive. In light of this, it is noted that customers' perceptions of the "Naturalness and Quality" of local brand milk and dairy products are favorable in comparison to those of other brands (3.88). Similarly, customers gave local brand milk and dairy products a favorable evaluation in terms of their "Brand and image" (3.84). When analyzing the logistic regression findings, this was taken into account.

First, the test results showing the overall fit of the model are presented in Table 13. It is seen that the overall significance of the model, i.e. the goodness of fit, is statistically significant ($p < 0.01$).

According to the Hosmer and Lemeshow test result, the estimated logistic regression model was found to be appropriate for the data (p=0.383) (Table 14).Cox & Snell R^2 and Nagelkerke R^2 values indicate the magnitude of the variance explained by the model in the dependent variable. The overall fit of the model was found to be good (Cox & Snell R^2=0.243; Nagelkerke R^2=0.373). Accordingly, 37% of the local brand purchase status is explained by the independent variables (Table 15). Coefficient estimates and odds ratios of binary logistic regression analysis are presented in Table 16.

Customers who positively view local brand milk and dairy products in terms of "Naturalness and Quality" are

three times more likely to buy them than consumers who do not, as demonstrated by the coefficients in Table 16. In other words, consumers who perceive local brand milk and dairy products as more natural and of higher quality than other brands are more likely to purchase these products. Furthermore, consumers are 1.6 times more likely to buy local brand milk and dairy products than those who have a positive view of the "Brand and image" aspect. As can be seen from Table 11, the "Brand and image" factor includes judgments about supporting local producers and the brand image of local brand milk and dairy products. Consumers' perceptions of the "Food safety" factor are relatively positive (3.29). However, 29.4% of the consumers are indifferent to the statement "I think local brands fully comply with food safety standards". In other words, consumers are cautious about local brand milk and dairy products in terms of food safety. Therefore, consumers who pay attention to the "Food Safety" factor are 1.16 times less likely to purchase local brand milk and dairy products than others (1/0.862=1.16). local brand In the case of knowing the concept of local brand, when the reference category is taken as "Knows", those who do not know this concept will not purchase local brand products with a probability of 68.4% ((1-0.316)*100 = 68.4%).

Table 13. General Test of Model Coefficients

	Chi-square	df	Sig.
Step	105.908	6	.000
Block	105.908	6	.000
Model	105.908	6	.000

Table 14. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8.534	8	.383

Table 15. Model Summary

Step	-2 Log likelihood	Cox & Snell R^2	Nagelkerke R^2
1	295.552a	.243	.373

Table 16. Model Estimation Results

	β	S.E.	Wald	df	Sig.	Exp(β)(odds)
Naturalness and Quality	1.107	.160	48.023	1	.000	3.027
Price and Promotion	.150	.159	.888	1	.346	1.162
Health	-.057	.153	.141	1	.707	.944
Food Safety	-.149	.162	.844	1	.358	.862
Brand and image	.459	.142	10.390	1	.001	1.583
Knowing the Concept of Local Brand[1]	-1.154	.369	9.756	1	.002	.316
Constant	1.806	.179	101.412	1	.000	6.086

Refereance category : [1]Knows

In conclusion, local brand milk and dairy products attract significant interest among consumers and are evaluated with various positive attitudes. Factors such as naturalness, taste, health, affordable prices and trust in the product production processes offer great potential for local brand producers to increase customer satisfaction and build a wider customer base. Consumers' positive attitudes towards product production processes are also evident. Consumers have a positive view that local brand milk and dairy products comply with the storage standards from the raw material from the producer to the product, that production is carried out in accordance with hygiene conditions, and that product packaging is healthy and hygienic.

Studies conducted on this subject explain that hygiene conditions in milk and milk products and the idea that the product is healthy are important factors for the purchase of the product, and that households pay the most attention to the expiration date of the product during purchase (Gündüz, et al., 2013). It is important in terms of guiding consumer behavior and awareness in accessing healthy food with the studies to be conducted and guiding the decisions to be taken. For this purpose, it is very important to popularize healthy milk processing techniques and to provide necessary trainings to producers (Yılmaz, et al.,

2022). Enterprises producing local brand milk and dairy products need to switch to production processes that will gain the trust of consumers and comply with food safety criteria. According to the results obtained in the research, it was seen that the most important criterion for consumers when purchasing milk and dairy products is that the product is healthy. Therefore, local producers should manage the processes of milk from the producer to the finished product in accordance with human health and operate in accordance with food safety systems related to milk production.

It should be considered as a great advantage for local brand producers that consumers know the concept of local brand and prefer local brand milk and dairy products to national brands when they consider criteria such as naturalness, price, health and taste. In the study, it was determined that consumers mostly buy milk and dairy products from supermarkets. In addition, it was observed that they prefer to buy directly from the producer after the supermarket. This shows that the urban population prefers to obtain milk and dairy products from supermarkets. At the same time, the fact that consumers prefer to buy milk and dairy products directly from the producer after supermarkets may indicate that street dairying still continues.

In order to increase their sales, enterprises operating in the milk and dairy products sector should produce products and services in line with their wishes and expectations by bringing consumer preferences to the forefront (Onurlubaş & Çakırlar, 2016). Local brands have the opportunity to establish a trust relationship directly with consumers and can meet their needs directly. They can also be more flexible on price than national brands. Local brand product producers must first show and emphasize to consumers that they preserve traditional flavors and establish a trusted relationship. Global brands that establish close relationships with consumers can also be accepted as local brands by consumers after a certain period of time in local geographies where they have been operating for many years.

Consumers stated that they find the promotions, product variety and advertisements of local brand products inadequate. Local producers should develop advertising strategies that are compatible with today's technologies by using the advantages of the local brand. These advertisements should emphasize how to respond to consumers in the best and fastest way. At the same time, they should continue their efforts to increase the amount of shopping by creating a variety of products suitable for consumers' desires. By organizing campaigns, they can increase their sales and build a closer relationship with consumers. As a factor to increase consumer satisfaction, Topçu, Baran, and Denizli (2016) recommend implementing marketing tactics and strategies for the short supply chain, including the choice for low-income consumers to buy generic branded milk with high sensory quality qualities either directly from the farmer or from local producer milk processing facilities. To guarantee the long-term survival and sustainable existence of local producers who take use of their relative pricing advantage, this is a priority that must be given significant attention.

Acknowledgements

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