

## Factors and components affecting smallholder dairy farmers and the local value chain in Gjirokastra region

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### Abstract

Livestock is one of the agro-food sectors, very important in Albania. About 1/2 of farmers are engaged in animal husbandry, including the dairy sector. Dairy products occupy an important part in the consumption basket of Albanian families. Milk production is mainly dominated by cow's milk (more than 4/5). In general, dairy products are destined for the domestic market, so the increase in production is mainly driven by the increase in domestic demand, while the balance of international trade in dairy products shows a structural deficit. The dairy sector is considered a priority sector based on the potential for import substitution. During the first decade of the transition, there was a large growth trend in the production of milk (and dairy products), growth that continued throughout the following years. Despite these improvements, milk yield (eg for cows, which is the main source of milk production) is lower than the yield in EU countries. In addition to the low yield, another major concern is the lack of compliance with standards, which prevents Albania from exporting dairy products to EU markets. The objective of this study is to provide an overview of the dairy sector, analyzing recent developments and the current situation, and including opportunities, constraints and difficulties, with a particular focus on investment needs/potentials.

To achieve the objectives of the study, data and information from secondary and primary sources were used. Semi-structured interviews with value chain actors and sector experts were used as the primary source of data collection. The data was analyzed using various techniques, including descriptive analysis, trend analysis (dynamic), text analysis, and strategy based on SWOT analysis. The combination of qualitative and quantitative analysis has been essential to identify/understand trends, gaps and investment needs.

Many processing factories have problems with liquidity related to the process of cheese production technology. For this reason, there is a need for short-term loans in this value chain. The current policy of partial grants has important implications for financial institutions - they have the opportunity to co-finance investments (stalls, cold chain, milk processing, etc.) for the investment of 100% of the amount, of which at least 50% can be a short-term loan (the part that must be reimbursed by the grant after the end of the investment) and a 50% long-term loan for the part that must be paid by the beneficiary.

**Keywords:** smallholder dairy farmers, local value chain, employment, strategy, funding.

## 1. Introduction

This study was financed by the National Agency for Scientific Research and Innovation within the project “Standardization of Livestock Products in Gjirokastër District”.

Agriculture is one of the main sectors of the Albanian economy in terms of employment and contribution to GDP and is considered a priority sector by the Albanian government. Despite recent growth, Albanian agriculture still faces various challenges, including difficulty in accessing credit. The agricultural sector attracted only 2% of the total lending of the economy. The dairy sector is one of the main agri-food sectors. About half of the farmers are engaged in this sector. Milk production has increased in recent years. In general, dairy products are destined for the domestic market, so the increase in production is mainly driven by the increase in domestic demand. Despite the observed growth, the balance of international trade in dairy products shows a structural deficit, which means potential for increased production to replace (part of) imports

### 1.1 Objectives of the study:

The overall objective of this study is to provide an overview of the selected value chain in Albania by analyzing recent developments and the current situation, and including opportunities, constraints and difficulties, with a particular focus on investment needs/potentials. .

More specifically, the study:

- provides an overview of the main trends in production, international trade and market trends;
- provides a “snapshot” of value chain structure, value chain flows and governance, with a particular focus on “value chain leaders”
- analyzes key aspects of the value chain through a strategy based on SWOT analysis, and
- provides recommendations for the main opportunities for the banking system (investment financing, working capital financing and value chain financing).

This study provides information and recommendations that may be useful to guide entry strategies (interventions) for financial institutions or for the preparation of financial services products.

## 2. Methodology

### 2.1 Selection of the sector

This study is part of a scientific research project funded by the National Agency for Scientific Research and Innovation “Standardization of livestock products in Gjirokastër District and creation of a trademark”. For this reason, the first phase consisted of identifying the priority sectors for which there is the highest demand/potential for growth and investment; this is taking into account the market potential for exports or the potential for import substitution. Two groups of factors were taken into consideration when identifying the products to be analyzed, namely the market potential and other factors that enable the product’s competitive advantages.

The market potential is examined from two perspectives: export potential and import

substitution potential. Export potential takes into account the emerging performance of exports (the actual trend of exports) combined with the international demand for a given product - when exports increase over time and this coincides with the increase in international demand, this product is considered to have export potential . Import substitution potentials examine the potentials to meet domestic demand. Other aspects that lead to a competitive advantage include the supply-side factor, such as the labor-land ratio, tradition and skills, as well as the links established between actors in the value chain, including also the tested links between Albanian actors and international buyers . The value chain of dairy products is considered a priority sector considering the potential for import substitution.

## **2.2 Data Collection**

This study is partly qualitative and partly quantitative. This enables a better understanding of the status and dynamics of the relevant product chain. The study combines the analysis of secondary data and primary data. For various issues/indicators, the analysis is based on secondary data (including sectoral/structural data). The secondary data were obtained from MBZHR (Ministry of Agriculture and Rural Development), INSTAT (Institute of Statistics), UNSTAT COMTRADE (for international trade), FAOSTAT (for production and consumption) and EUROSTAT (for production and international trade) etc. Also, a review of other studies and reports was conducted. The limitations encountered are that for some indicators (related to domestic production and internal trade) no statistics are available, while for some others there are no recent statistics. However, for international trade, the most recent data were found and analyzed. Meanwhile, in those cases where it was necessary and possible, data were collected from other countries (or regions) for the purposes of a comparative analysis. Primary data collection was carried out through semi-structured in-depth interviews with key informants who are value chain actors and sector experts. In order to identify the main actors and experts for each value chain for the semi-structured interviews (part of the primary qualitative study) a survey with a "snowball" sampling technique was used. In-depth interviews with key informant actors (along with studies of available documentation) enabled updated understanding of key patterns and key links of the value chain. Due to the limited resources and time available, only a limited number of interviews were conducted.

## **2.3 Data analysis**

Regarding data/information analysis, secondary statistical data were subjected to standard descriptive analysis, including tables and graphs showing statistical or historical trends. The comparison of production and consumption trends with those in the world, in Europe and in some cases with neighboring countries was also carried out, when this was necessary. Regarding the interviews with experts/actors of the value chain, the notes were analyzed using qualitative analysis techniques, with the aim of summarizing the most important and interesting issues mentioned in the interviews. Value chain analysis is used as a general framework for the analysis of the structure of the value chain (products, finance and information) and for the analysis of flows.

### 3. Tendencies and perspectives of the livestock sector

#### 3.1. Production trends

##### 3.1.1. Primary production

The production of milk and dairy products has suffered a large decline during the beginning of the transition after the restructuring of the post-communist agricultural sector. However, milk production began to increase rapidly in the first decade of transition - relying mainly on small farms producing for own consumption and sale and driven by increased demand for domestic consumption. The increase in the production of milk (and dairy products) has continued throughout the following years. While the number of cattle and small animals has decreased during this period, milk production has increased (see table 1), confirming an improvement in yield (efficiency), made possible by investments in breeds and better management associated with a consolidation tendency (in terms of the size of livestock farms). Milk production is mainly dominated by cow's milk.

**Table 1: Amount of milk collected 2017 - 2021, Kg**

Categories	2017	2018	2019	2020	2021	Categories
Cow's milk	109,601,825	120,570,108	124,236,091	101,318,790	93,856,590	Cow milk
Sheep milk	13,484,215	12,065,551	10,041,317	10,349,729	13,071,155	Sheep's milk
Goat's milk	8,080,942	6,226,765	5,267,339	7,217,779	7,794,931	Goat's milk
Cream						Cream

Source: INSTAT, 2022

**Table 2: Milk production by counties, 2021.**

No.	County Prefecture	Milk - Milk							
		Total Total	%	Cows * Cows	%	Sheep	%	Goats	%
I	Bera	51,820	5%	37,424	4%	6,241	8%	8,155	10%
II	Debar	71,830	7%	63,786	7%	3,686	5%	4,359	5%
III	Durres	69,493	7%	62,962	7%	3,030	4%	3,501	4%
IV	Elbasan	112,639	11%	95,041	11%	6,301	9%	11,297	14%
V	fern	181,590	18%	167,376	19%	8,033	11%	6,181	8%
VI	<b>Gjirokastra</b>	<b>35,496</b>	<b>4%</b>	<b>19,459</b>	<b>2%</b>	<b>7,935</b>	<b>11%</b>	<b>8,103</b>	<b>10%</b>
VII	Korce	112,487	11%	93,230	11%	11,168	15%	8,090	10%
VIII	Kukes	53,260	5%	48,960	6%	2,235	3%	2,065	3%
IX	Lezha	53,967	5%	48,179	6%	1,375	2%	4,413	6%
X	Shkoder	76,215	8%	65,518	8%	4,008	5%	6,689	8%
XI	Tirana	113,421	11%	105,746	12%	2,525	3%	5,150	6%
XII	Vlore	80,802	8%	51,700	6%	16,931	23%	12,171	15%
Total / Total		<b>1,013,020</b>	<b>100%</b>	<b>859,381</b>	<b>100%</b>	<b>73,466</b>	<b>100%</b>	<b>80,173</b>	<b>100%</b>

Source: INSTAT, 2022

The counties with the highest concentration of small milk production are Vlora, Gjirokastra, Korça and Elbasani, which together account for more than 1/2 of the total production. In general, counties that have a higher concentration of wool usually tend to have more of the same, since both of these species are more common in mountainous areas.

### 3.1.2. Processing

Available data show a slight decline in dairy production over the period 2017-2021, with fluctuations from year to year. In general, the demand for cheese, yogurt and butter in the country is mainly covered by domestic production. In general, the production of dairy products is destined for the domestic market, so the decrease in production is mainly driven by the decrease in domestic demand. As mentioned above, there are fluctuations from year to year and from product to product, but at the same time concerns have been raised about the reliability of data on domestic production due to the high level of informality in the processing of dairy products.

**Table 3: Progress of cheese production in our country, 2017-2021**

Dairy products	2017	2018	2,019	2,020	2021	derivatives
Cheese	14,712,154	14,580,870	13,589,977	11,711,889	13,113,905	Cheese
<b>By type of milk</b>						<b>By origin</b>
Cheese from cow's milk	10,895,070	11,400,986	10,955,091	8,814,766	9,492,348	Cheese from cow's milk
Cheese from sheep milk	2,757,922	2,341,064	1,927,461	1,958,414	2,560,039	Cheese from sheep's milk
Cheese from goat's milk	1,059,162	838,820	707,425	938,709	1,061,518	Goat's milk cheese
<b>By texture</b>						<b>According to hardness</b>
Soft cheese	8,255,670	7,764,763	6,554,730	5,430,507	7,069,846	Soft cheese
Medium-hard cheese	4,093,721	3,852,338	3,431,770	3,394,720	2,998,184	Semi-hard cheese
Hard cheese	918,019	1,352,343	1,858,140	1,025,720	1,082,193	Hard cheese
Fresh cheese (curd etc.)	18,444,744	1,611,426	1,745,337	1,860,942	1,963,682	Other products (Milk curd, Yogurt sauce)
Processed cheese	211,960	443,371	452,840	464,090	435,987	Processed cheese

Source: INSTAT, 2022

The main dairy product is cheese. About 3/4 of the total cheese production is based on cow's milk, the rest on the milk of small animals, mainly sheep. The main type of cheese is soft cheese (white like feta cheese). This type of cheese is widely consumed, but also preferred by processors because of the quick return on investment. Often soft (white) cheese is stored/seasoned for several weeks compared to hard cheese called "kaçkavall" and "vize" cheese, which is seasoned for several months, which constitutes a liquidity limitation. Hard cheese is more likely to be produced during months of higher milk production. There are no data or statistics on the percentage of dairy products that are produced using (partially or fully) milk powder, although cases of significant use of milk powder have been reported. Dairy product labels do not indicate whether milk powder has been used. This is also a concern for consumers.

### 3.2. International trade trends

The trade balance of dairy products shows a structural deficit, but much lower if compared to the other sub-sector of livestock, that of meat. Due to market conditions and production limitations (animal feed costs in Albania are higher than in other countries of the region, mainly due to the small size of farms), the trade deficit of dairy products should be considered as structural and it is expected to continue like this in the future. Exports are negligible due to limitations in standards and due to structural constraints. Imports of dairy products mainly consist of cheese and UHT milk. Another dairy product that is imported is milk powder, up to about 500 tons/year or about 1 million USD - as mentioned a little above, it is used in agro-industry (often mixed with fresh milk) to produce dairy products, partly to bear the costs of fresh milk and partly to cover the shortages/gap between the seasonality of demand on the one hand and the supply of fresh (raw) milk on the other.

**Table 4: Albania’s foreign trade in dairy products (HS 04)**

year	Exports Million USD	Imports Million USD	Export/Import
2005	0.2	5	4%
2010	0.57	12.57	4.50%
2015	2.98	20.4	14.60%
2020	1.93	22.02	8.80%
2021	1.37	20.71	6.60%

Source, INSTAT, 2022

Cheese exports are negligible or very low. On the other hand, during the last years, an increase in the amount of imported cheese has been observed.

**Table 5: Import and export of cheese, Albania, by year**

year	Exports (000 USD)	our	Imports (000 USD)	Export/Import Value
2005	:	:	1.417	:
2010	:	:	4.273	:
2015	15	3	5.585	0%
2019	2	0	5.153	0%
2020	54	10	6.105	1%
2021	171	34	8.236	2%

Source, INSTAT, 2022

The main export partner is Kosovo, however, exports are negligible (below USD 200,000). The main supplier of imported cheese is Germany, with 44% of total imports, followed by Italy and Austria, which together account for 2/3 of total imports.

### 3.3 Customer requirements and preferences

Cheese is the main dairy product and one of the basic food items in the Albanian consumer’s basket. One of the most important factors related to consumer preferences

is the type of milk used to make the cheese. Of course, most consumers prefer cheese made without milk powder, but made only with fresh, raw milk. The use of powdered milk is perceived as an unnatural and non-traditional method for cheese production. Even the origin of production seems to be an important factor for the majority of Albanian consumers. According to various studies, most consumers choose their products from the origin (domestic versus imports, southern products). In general, there is a strong consumer preference for local food products. Also, within the group of local products, there are significant differences in perceptions based on the region of production within Albania. Most consumers consider the region/area of origin as important or very important when deciding to buy Albanian products, including dairy products and especially cheese.

Albanian consumers in urban areas show a strong preference for Gjirokastra cheese. Also, most consumers are willing to pay a higher price for cheese produced in their preferred region. Consumer preference for cheese from Gjirokastra (or other regions), which has a great tradition and long history in cheese production, constitutes a potential to develop regional brands. The apparent consumption of cheese in Albania is lower than the average per capita consumption in Europe, which in 2018 was around 13.8 kg/capita, while in Albania it was 6.3 kg/capita. Montenegro has the highest cheese consumption per capita of all Balkan countries, while Serbia has the lowest per capita consumption.

### **3.4 Security Standards**

All the way down the value chain there are deficiencies in food safety standards. Albania faces serious problems in the national food safety control system in terms of legislation, infrastructure, institutional capacities, control and law enforcement, which affect real and perceived safety risks for consumers. Problems in the food safety system have been identified by several studies. The standard of food safety is a main concern perceived by Albanian consumers. Numerous studies document/highlight consumer concerns about food safety. The main law on food safety in Albania is the law "On food", no. 98638, (dated 28.01.2008). It sets out the requirements for the production and placing on the market of safe human food and animal feed products, to some extent in line with EU provisions. The Ministry of Education and Culture has determined the Minimum National Standards (MSK) in accordance with EU practices. Good agricultural practice (GAP) should coincide with the type of cultivation that a farmer should follow in the region concerned, including as a minimum compliance with general legal requirements for the environment. During the last years, food and farm safety, business licensing, collection and transport of milk, animal health, etc. Despite legal and institutional changes, many farmers are not informed or aware of the standards. According to a previous study, about 87% of surveyed dairy farmers state that they do not have cooling tanks (tanks) for milk storage, which is a prerequisite to achieve milk safety and quality standards. Most farmers do not know which institutions are responsible for food safety, animal health or continuous control of standards. Although most farmers state that they have a register of animals (live thing) on the farm, they do not know which institution is responsible for their control. Lack of awareness of standards leads to non-compliance with these standards, which

means lower market access (especially in the case of exports) and restrictions on access to funds, where access to these funds is conditional on the fulfillment of certain standards in a documented manner. The growing pressure from alignment with EU legislation to improve standards means increasing demand for significant investment along the value chain to meet standards. Awareness campaigns combined with efforts for more rigorous law enforcement and the availability of financial incentives would greatly increase the likelihood of increasing these investments at the farm, trader and processor level.

#### 4. Structure of the value chain and main actors

##### 4.1. Value chain structure and stakeholder profile

Figure 1 below schematically identifies the actors of the milk value chain and the main channels through which milk flows from farmers to the end consumer.

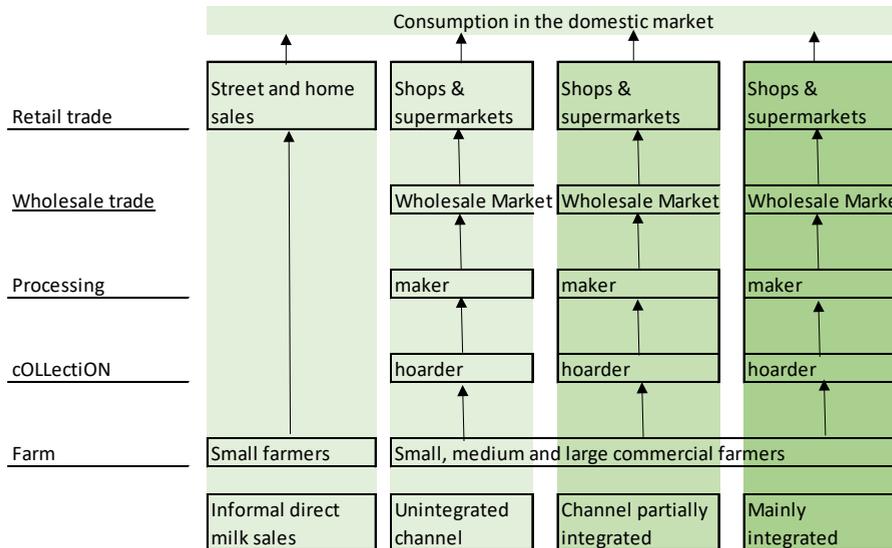


Figure 1. Diagram of the value chain in the dairy sector

**Source: Paper of the Authors**

As can be seen in the figure, the main actors in the milk value chain are farmers, milk collectors, milk processors and wholesalers and retailers of dairy products. We first present a brief profile of the main actors in the value chain and then continue with the description of the flows in the value chain and the coordination of this chain.

#### Farmers

Most units producing milk from cows are very small, with only 1 cow per farm, mainly oriented towards meeting the needs for personal consumption. Accordingly, 59% of dairy farms have only 1 cow. About 1/3 of dairy farms have 2-3 cows and can

be considered farms that produce for own consumption and to sell, since farms with 2-3 cows usually sell a part of the milk. About 8%, or almost 13,000 farms, have 5 or more cows - these farms are market-oriented, among which there are 1,748 farms, or 1% of them, with 11 cows or more, which are more market-oriented. strong market orientation and a stronger potential for future investment

The largest farms with cattle for milk are respectively those with 21-50 cows and those with over 50 heads, which can be considered large farms in the Albanian context.

In terms of distribution at the district level, market-oriented farms are found mainly in the low and western areas of Albania, namely in Fier, Shkodër, Vlorë and Durrës, where there is also a generally greater concentration of all types of farms with cows for milk. Dairy cows are normally kept in simple stalls, fed mainly on forage and grazed on grass and meadow fields, and are also given concentrated animal feed and minerals. In only a few cases, large farms have invested in modern stables and started to implement a mostly stable production regime. Small cow farms usually milk cows by hand, while larger ones have milking equipment. Most sheep and goat milk production units are also very small; the average sheep herd size is just under 30 and the average goat herd size is approximately 25 goats. There are about 40,000 farmers who have sheep and 22,000 who have goats. Most herds of minnows are mixed (combining both types). Most of the smaller farms have up to 10 heads. Only 43% of farmers who have sheep and 33% of farmers who have goats have more than 10 heads. In most cases, the goats are raised on pasture - however, cases of intensive breeding have recently been noted for some larger goat farms. Only 5000 (5% of all small dairy farms) farms are considered large commercial farms. These farms could be of interest to the banking system. The modal value for large commercial farms appears to be between 101 and 200 head.

It is clear that most herds are small. There are several reasons for the predominance of small herds and the decrease in the number of small animals, including: - Difficulty in finding food, especially during winter; - Lack of capacity for milk collection/processing. This is most evident in the Kukës district, where, despite the large area of pastures/lawns, herds are small and production is low; - Ownership problems on pastures; - Lack of manpower; young people have emigrated or do not want to work in livestock farming; - Breeders of imtaves are mainly middle-aged or elderly individuals; - Lack of financial resources to buy animals, feed for animals, etc., in all counties. In terms of distribution at the district level, market-oriented farms of sheep and goats are found mainly in the mountainous areas of Albania, namely in Gjirokastrë, Vlorë, Berat and Korçë. The production system is usually pasture-based. Sheep and goats depend almost entirely on grazing for sustenance; they are kept mainly on pastures, both in winter and in summer. In summer they also use the agricultural land after harvest. Smaller farms in Albania operate almost exclusively with manual milking technology, which requires a lot of work. Sheep and goats milk twice a day and the milk is preserved using several methods: it is kept fresh in cold running water; it is kept fresh through plastic bottles filled with ice, which are placed in milk drums and in special cases also in cooling tanks. Cooling in the cold water system is used only in mountainous areas that have a stable water supply. Farmers are more interested in cold storages, because they offer the possibility of cooling

the milk during the night and then delivering it to the processors in the morning, however, access to energy remains a problem in mountainous areas/pastures. Larger smallholder farms have invested in improved stables and many produce their own animal feed by growing fodder and grain. However, the low intensity of capital use for production for both cow and small farms has resulted in low productivity, relatively high production costs and low profit, which do not enable the accumulation of capital for new investments making so that the level of production and yield in many livestock farms is low.

### **Milk collectors**

Milk collection and transport is one of the weakest points in the value chain. Collection of raw milk is mainly organized by milk processors and private milk collectors. Farmers also deliver significant amounts of milk for processing to processing units<sup>10</sup>. While milk processors usually collect milk mainly from the area where the processing unit is located, specialized independent collectors also collect milk from more distant areas. Small farmers usually do not have any milk cooling equipment (cooling tank), so collection is done at least once a day, and from May to September it can be done twice a day. A private independent milk collector typically collects milk from 50 to 150 farms (approximately 500 to 1500 liters per day). They earn about 2-7 Lek per liter of milk for the collection service, depending on the distance traveled for collection; this is where they act as independent entrepreneurs - however often, particularly in the case of some of the larger milk processors, the collectors may be employees of the company. Evening and morning milk is often mixed in barrels or plastic drums, often at a high temperature and for a long time. Also, milk of different qualities is mixed and transported in the same load. Cleaning and sanitizing milk containers is often inconvenient. In mountainous areas, the time needed to collect and transport milk is even longer (up to four hours without refrigeration). Milk containers (pails) are mostly not made of plastic for holding food or stainless steel materials and most of the milk is not stored or transported at the required temperature.

### **Milk processors**

Sheep and goat milk are processed almost exclusively to produce cheese. Milk delivered to milk processors is processed in different ways based on tradition, experience and knowledge. Counties such as Korça, Gjirokastra, Saranda and Vlora are traditional sheep and goat milk processing counties and have more experience and knowledge to produce hard cheese (yellow cheese also known as kačkavall and viza cheese) and white cheese. with brine (Feta cheese). Cheesemakers have passed their knowledge of cheesemaking down to the younger generation of their family, making it easier to find people who have deep knowledge of traditional cheesemaking. The situation is quite different in other areas such as Dibra, Kukësi or Shkodra. The differences with these areas can be seen not only in the quantity of cheese produced, but also in its quality, especially for hard cheese and Feta type cheese that is produced from sheep's milk or from a mixture of sheep's and goat's milk. . The cheese sold in the market is different in taste, composition and other physical (chemical) parameters. The supply of milk from farms is the main problem for the milk processing industry. Supply

from farmers has low food safety standards and often high collection costs, although this varies from county to county. In some areas, the high price of milk combined with its low quantity results in low profit for the business. Increasing the quantity and quality of milk production is the basis for the development of a modern dairy industry. Sufficient supply of milk to processing plants is important for utilization of equipment capacity and distribution of fixed costs through higher production. The processing technology in this area is characterized by two types of processing units, namely seasonal processing units and those that operate all year round that can be larger and more mechanized. Seasonal processing units are quite common especially in the case of milk processing from fines. The dairy industry suffers from fragmentation, poor quality of raw material and poor processing practices, especially in the case of small and medium-sized companies. Many cheese factories do not have sufficient storage capacity and usually the milk is processed using a primitive technology. The short period during which sheep and goat milk is available (100-150 days per year) requires relatively large herds for milk supply; otherwise, the cost of milk collection can be high and milk quality control difficult. Under these conditions, small processing units (up to 5 tons/day) located in the production area seem more suitable; in a typical situation such a unit covers about 150 flocks of 50 sheep/goats each (about 5 villages). Small processors suffer from a lack of sufficient knowledge of the technological process, which leads to low standards and quality and unreliable cheese product (different qualities over time). According to the study, there is a demand or need for expertise and education regarding the technological process of milk processing.

## 5. SWOT Analysis and funding needs

### 5.1. Strategy based on SWOT Analysis

The following strategy based on SWOT analysis aims to identify financing opportunities in the dairy sector.

Table 6: Livestock sector, Strategy for SWOT analysis

STRENGTH(S) (+)	WEAK POINTS (W) (-)
The pastures in Albania are rich/quality (for grazing)	Unsuitable breeds result in low milk yield.
Long tradition in cattle breeding	The small size of the farms making it expensive to produce animal feed and the high dependence on expensive imports.

	Investment in modern dairy farms (mainly cows) by a significant number of business-oriented farmers	Insufficient food sources, especially during winter; low maintenance pastures and meadows
	Investments in facilities and modern technology by a significant number of milk processing factories	Inadequate stalls
		Poor milk safety and quality Poor milk collection infrastructure
		Outdated milk processing technology and (often) incomplete equipment for smaller dairies
		Lack of waste processing and disposal systems in large farms and dairies
		Limited investments in the processing of livestock by-products
<b>OPPORTUNITIES (O) (+)</b>	<b>STRATEGY FOR S (+) / O (+)</b>	<b>STRATEGY FOR W (-) / O (+)</b>
The possibility to buy animals of breeds with high productivity		Support for breed improvement
Stable domestic demand for dairy/cheese products	Support to increase milk processing capacities	Support for the improvement of pasture infrastructure, including water distribution points
Potential to increase the number of animals	Support investments in the diversification of dairy processing, including fruit yogurt and yogurt drinks	Support for increasing the number of animals, supporting in particular large farms
Donor support for investment and technical assistance to improve standards		

Sufficient amount of by-products of animal origin (skins and others)		Support for the improvement and completion of technology in small and medium-sized dairies
		Support for the construction/renovation of stables
		Support for waste processing and disposal systems
		Support for cooling systems for milk collection
		Support for the animal by-products processing industry
		Support investments in safety and quality control capacity at the processor level, targeting medium and large operators.
<b>THREATS (T) (-)</b>	<b>STRATEGY FOR S (+) / T (-)</b>	<b>STRATEGY FOR W (-) / T (-)</b>
Lack of significant exports to date – limited supply and security issues		Supporting investment related to supply and security (as above)

**Source: Prepared by the authors**

## 6. Conclusions

In general, the production of dairy products is destined for the domestic market, so the increase in production is mainly driven by the increase in domestic demand. The dairy trade balance shows a structural deficit, but much lower than the (international trade) deficit in the meat trade (so, within the livestock sector, dairy seems to outperform meat production). Due to market conditions and production limitations (costs for animal feed in Albania are higher than in other countries of the region), the trade deficit of dairy products should be considered structural due to deficiencies in standards and due to the structural limitation (related to the small size of the farm) of the livestock sector.

Milk production comes mainly from small semi-specialized farms and mixed activity farms. Cow's milk comes mainly from lowland and hilly areas; the breeding of small animals for milk is concentrated in the south, where the specialized cheese factories are also located.

This study informs financial institutions and other parties interested in supporting the dairy sector about the main opportunities to finance this sector. These opportunities include support to increase the number of heads (cows, sheep and goats), financing the construction of animal stables, supporting the cold chain at the processor level, supporting the improvement of milk technology and increasing capacities. Other investments that can be considered for support are the support of businesses related to the use of waste from milk processing, or even support for larger projects that deal with the processing of waste, improve the technology of animal feed production, the conditions of pastures or investments related to standards for agriculture or processing.

Milk collection and transport is one of the weakest points in the value chain. In most cases, the milk is not kept under refrigeration conditions during the entire storage period on the farm and during transport to the processing plant. Therefore, there is a clear opportunity to finance this stage of the value chain, with a preference for large processors and aggregators.

Investments are expected in dairies with a capacity of 4-10 MT per day (medium for Albanian standards) in function of the slow consolidation of the processing sectors, in order to increase efficiency, improve quality and introduce better packaging and new products. Investments for the establishment of new milk processing businesses (start ups) can also be taken into consideration, although very carefully, since they are high risk.

Business support related to waste from milk processing, waste processing plants, animal feed production technology, improvement of pasture conditions and investments related to agricultural and processing standards can also be considered. The dairy sector is considered a priority sector for the Albanian government. The current policy of partial grants has important implications for financial institutions - they have

the possibility to co-finance investments (stables, cold chain, milk processing, etc.) for the investment of 100% of the amount, of which at least 50% can be a short-term loan (the part that must be reimbursed by the grant after the completion of investment) and a maximum of 50% long-term loan for the part to be paid by the beneficiary.

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