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OLIVE OIL SECTOR STUDY

This study report provides information and recommendations which can be useful to orient entry strategies for financial institutions or for the preparation of financial services

OLIVE OIL SECTOR STUDY

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EXECUTIVE SUMMARY

Olive and olive oil sector is one of the main agrifood sectors in Albania. More than 100,000 farmers are involved in olive growing. Production of olive and olive oil has grown in Albania in recent years partially triggered by governmental subsidy schemes. However, the chronic weaknesses of the sector, i.e. low productivity or high price of raw material, have not been solved. Imports remain high while exports are very modest. The olive oil chain is considered a priority sector considering its import substitution but also export of high quality olive oil.

Production of olives has been characterized by a remarkable growth trend - almost tripled (to about 100,000 – 120,000 MT in the past years 2 years) when compared to early 2000ies, although there are strong oscillations from year to year. In addition, olive oil production has increased significantly, amounting to about 20,000 MT last year (2017). Since most olives are processed into olive oil, olive oil production increase followed the raw olives production trend. Production is still highly fragmented and productivity is quite low, as farmers are not providing appropriate agronomic services to the trees. High fragmentation and production costs imply that export potential is very limited, at least in terms of volume and price competition, considering also that Albania's neighbours are among the leading olive and olive oil producers worldwide. Nevertheless, there is a potential for selling to higher paying (domestic and especially export) market segments.

The objective of this study report is to provide an overview of the olive and olive oil sector in Albania by analysing recent developments and the current state, including opportunities, constraints and challenges, with special focus on investments needs/potentials. This study report provides information and recommendations which can be useful to orient entry strategies for financial institutions or for the preparation of financial services. But potential users of the current study findings and recommendations can be also government institutions, business associations, development agencies, academia and other interested stakeholders.

This study is developed from the technical expertise and financing of the Albania Agribusiness Support Facility (AASF). AASF is a financing framework developed by EBRD in cooperation with and with support from the Government of Albania which started its activities in 2016. The objective of the facility is to motivate Albanian financial institutions to support the agrifood sector. AASF provides access to finance for the agribusiness sector through senior loans and/or portfolio risk-sharing to both MFIs and banks. The final beneficiaries of AASF are farmers, entrepreneurs and companies that are engaged in primary agriculture, agricultural equipment production and trade, logistics, agribusiness service providers, agricultural processing, wholesale as well as retail traders.

Both secondary and primary information/data sources have been used to meet the study objectives; semi-structured interviews with value chain actors and sector experts were used as primary source of data collection. Data were analysed using various techniques including descriptive analysis, trend analysis, text analysis, SWOT analysis strategy. The combination of qualitative and quantitative analysis has been crucial to identify/understand trends, gaps and needs for investments.

The current study finds that major efforts are needed to improve farming technology (for new plantations and existing olive groves) for Albania to compete at low cost with olive oil imports from Mediterranean countries. Hence, there are opportunities to finance new plantations and reconstruction of existing olive groves plantations. While there have been huge investments in olive oil processing sector, there is a need to support technology renovation for a significant part

of processing plants (that are getting older or out-dated). It is recommended that the investment in technology renovation for experienced companies should be supported with priority when compared to new start-ups. Investments in building new olive oil factories should be considered with caution, considering the fact, that most olive oil processing units are operated far below their capacities. Given that olive oil the storage capacity is still largely made by sub-standard tanks, processors report a need to simply create the storing capacity for the whole olive oil industry (implying most olive oil processors). The investment in olive oil storing capacity is a major factor of olive oil quality together with fruit quality and processing technology and know-how. Bottling and labelling and packaging capacity in oil factories also represents an important opportunity for financial institutions and government support, given that only a handful of olive oil actors have such equipment. Two major projects related to olive sector waste processing industry may also be considered, namely olive oil refinery (from olive cake) and olive oil processing wastes project. Since they are large projects, it is advised that solid feasibility studies precede any financing decision.

The dualistic nature of olive oil sector, producing, on the one hand, decent quality olive oil at competitive prices for domestic consumption, and, on the other hand, producing high quality-high price olive oil for export purposes, imposes a dualistic approach for financial institutions. The first option is to support investment to increase efficiency and lower costs, while the second option is to support leading enterprises to improve quality combined with certification. The support to the sector should be considered in combination with public support. Olive value chain is considered a priority sector for Albanian government based in its export potential - the sector has been included in all public financial support schemes, including recent support schemes.

1. INTRODUCTION

Background

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 government of Albania. Despite recent growth, Albanian agriculture still faces various challenges including difficult access to credit; the agricultural sector receives only 2% of total credit for the economy.

Olive and olive oil sector is one of the main agrifood sectors in Albania. More than 100,000 farmers are involved in olive growing. Production of olives has almost tripled (around 100,000 MT in 2016) when compared to early 2000ies, although there are strong oscillations from year to year. In addition, olive oil production has increased significantly, amounting to about 20,000 MT last year (2017) – since most olives are processed into olive oil, olive oil production increase followed the raw olives production trend. Production is still highly fragmented and productivity is quite low, as farmers are not providing appropriate agronomic services to the trees. High fragmentation and production costs imply that export potential is very limited, at least in terms of volume and price competition, considering also that Albania's neighbours are leading olive and olive oil producers. On the demand side, with around 5 litres of olive oil consumption per capita per year, Albania lags behind Southern European countries (Mediterranean olive oil producing countries) whose consumption averages 9 to 10 litres per capita per year. It is important to highlight that Albanian consumers perceive a clear health benefit from olive oil consumption. Therefore, it becomes obvious that there is an unmet demand for olive oil. Given these circumstances, olive oil sector has been chosen mainly due to its import substitution potential. However, there is a potential for exporting/selling to higher paying segments.

This study is developed from the technical expertise and financing of the Albania Agribusiness Support Facility (AASF). AASF is a financing framework developed by EBRD in cooperation with and with support from the Government of Albania which started its activities in 2016.

The objective of the facility is to motivate Albanian financial institutions to support a vital sector of the Albanian economy with widely untapped potential - agriculture and agribusinesses. AASF provides access to finance for the agribusiness sector in two ways: senior loans and/or portfolio risk-sharing to both MFIs and banks. The institutions benefit from a first loss risk cover that was made available by the Government of Albania. AASF therefore represents an innovative financial instrument to encourage lending by financial institutions to the whole agribusiness value chain.

The final beneficiaries of AASF are farmers, entrepreneurs and companies that are engaged in primary agriculture, agricultural equipment production and trade, logistics, agribusiness service providers, agricultural processing, wholesale as well as retail traders. Agribusinesses may also benefit from the EBRD Advice for Small Businesses (ASB) program, which provides consultancy on strategy development, marketing, technical restructuring and other key institutional development areas by international and local experts.

The study objectives

This study's general objective is to provide an overview of the selected value chain in Albania by analysing recent developments and the current state, including opportunities, constraints and

challenges, with special focus on investments needs/potentials.

More specifically, the study: (i) provides an overview of the main production trends, international trade trends and market trends; (ii) provides a 'snapshot' of value chain structure, flows and value chain governances with special focus on 'leaders in the value chain'; (iii) synthesizes the main points in a value chain through a SWOT analysis strategy, and (iv) recommend on the main opportunities for (investment financing, working capital financing, and value chain financing) the financial institutions.

This study report provides information and recommendations, which can be useful to orient entry strategies for financial institutions or for the preparation of financial services.

Methodology

Both secondary and primary information/data sources have been used to meet the study objectives; semi-structured interviews with value chain actors and sector experts were used as a primary source of data. Data were analysed using various techniques including descriptive analysis, trend analysis, text analysis, SWOT analysis strategy. Value chain analysis was adopted as general framework for analysis. Methodology is described in more details in the following section.

The target group

The value chain study is primarily designed for the Financial Institutions, but this study report can serve as a useful background in the decision-making process of other relevant stakeholders such as Ministry of Agriculture (MARD), development agencies, and private sector actors (e.g. companies, associations).

What the study is and is not

The report is a rapid appraisal and, considering the limited available resources and time, it deals particularly with the value chain financing need and hence financing opportunities for financial institutions. The study is designed in such a way that it is easy to read in terms of structure/flow and level of information details, suiting to the needs of the reading decision-making (e.g. bankers). The study is designed to serve as a 'tool' for executive staff rather than a research study per se.

The report structure

The report is structured as follows: the second section consists of the description of the methodology. The third section provides an extensive analysis of production and international trade trends. Section four describes the value chain structure, flows and actors profile. Section five consists of production technology processes overview to make the reader familiar with main technological processes and relevant costs highlighting timing when such processes/costs occur, as well as harvesting/production (proxy for the timing of sales). Section six provides a SWOT analysis with focus on investments needs/potentials, whereas the last section concludes the main findings of the study.

2. METHODOLOGY

Sector selection

The olive oil value chain study is part of a set of sector studies provided to financial institutions by AASF for the most important agricultural sectors in Albanian agriculture. Therefore, the first stage consisted of the prioritization of the sectors or subsectors or (group of) products for which there is the biggest demand/potential for growth and investments – considering export market potential or import substitution potential. Two groups of factors were considered when designing the list of products to be analysed, namely market potential and other factors leading to product competitive advantages. Market potential is examined in two angles, export potential and import substitution potentials. Export potential considers revealed export performance combined with international demand for the given product - when exports grow over time and this coincides with increasing international demand this product is said to have export potentials. Import substitution potentials consider potentials to meet domestic demand. Other consideration leading to competitive advantage include supply side factors, such as labour to land ratio, tradition and skills and, established linkages among actors on the value chain, including also well-established linkages between Albanian actors and international buyers.

The olive oil value chain is considered a priority sector considering its import substitution but also export of high quality olive oil.

Data collection

The study combines qualitative and quantitative methodology. This allows for a better understanding of the status and dynamics of the relevant product chain. The study combines analysis of secondary and primary data. For various issues/indicators, analysis was based on the secondary data (including sectorial/ structural data).

The secondary data was retrieved from MARD (Ministry of Agriculture and Rural Development), INSTAT (Albanian Institute of Statistics), UNSTAT COMTRADE (for international trade), FAOSTAT (for production and consumption) and EUROSTAT (for production and international trade), etc. In addition, a review of other relevant studies and reports was carried out. The constraint faced is that for some indicators (related to domestic production and trade) there are no available statistics, while for some others there are no recent statistics. However, regarding international trade, latest data are available and were analysed. When applicable, data from other countries or regions were collected for comparative analysis purpose.

The focus of this value chain report is on olive oil, but when applicable information is provided also on table olives.

The primary data collection consisted of semi structured in-depth interviews carried out with key informants, representing value chain actors and sector experts. A snowball survey was used to identify the main actors and experts for each value chain for the semi-structured interviews (part of the primary qualitative research). In-depth interviews with key informed stakeholders (alongside desk research), enabled the obtaining of up-to-date understanding about the main patterns for the key sectors. A limited number of interviews with key informed value chain players / stakeholders were carried out.

Data analysis

Regarding data/information analysis, secondary statistical data has been subject of standard descriptive analysis including tables and graphs depicting statistic and historical trends. Comparison of production and consumption trends with world, European and some cases with neighbouring countries was done, when applicable/necessary. Regarding VC expert/actors interviews, notes are analysed by using simple content summarizing approach and qualitative content analysis techniques, with the aim to sum up the most relevant and interesting topics emerged from the interviews. Value chain analysis was adopted as general framework for analysis of value chain structure and (products, financial, and information) flows.

3. TRENDS AND PROSPECTS OF THE IDENTIFIED VC

3.1. PRODUCTION TRENDS

3.1.1. Primary production

The olive and olive oil sector is one of the main agrifood sectors in Albania. More than 100,000 farmers are involved in olive growing. Cultivation of olives has grown in Albania especially in the late 2000ies and early 2010ies partially triggered by governmental subsidy schemes- olive primary production has been the beneficiary of the largest governmental (national) support scheme. However, the chronic weaknesses of the sector, i.e. low productivity, high price of raw material have not been solved.

The Albanian production of olives has been increasing faster than the world production trends. Production has almost tripled (to about 100,000 MT in 2016) in Albania when compared to early 2000ies, although there are strong oscillations from year to year. When analysing olive production in more detail, it is usually distinguished between table olives and olives for olive oil production.

Table 1: World production trends of olives (000 MT)

Country	2000	2005	2010	2014	2015	2016
Albania	36	30	70	98	96	99
EU	10,496	10,714	13,460	9,612	11,161	11,687
World	15,654	15,965	20,418	16,209	19,341	19,267
Europe	10,528	10,743	13,527	9,705	11,256	11,785

Source: FAOSTAT (2018)

Regionalization

Production of olives for olive oil processing is highly concentrated in the regions of Fier, Vlore and Elbasan, which together make up for almost 75% of the total production. In these regions there is also a high concentration of olive oil mills/processors.

Table 2: Regional distribution of the production of olive for olive oil (2016)

Region	MT	Share	Cumulative
Fier	28,702	37%	37.1%
Vlore	13,768	18%	54.9%
Elbasan	13,547	17%	72.4%
Berat	7,409	10%	81.9%
Tirane	5,016	6%	88.4%
Durres	4,375	6%	94.1%
Lezhe	2,197	3%	96.9%
Gjirokaster	1,816	2%	99.2%
Shkoder	588	1%	100.0%
Total	77,419	100%	

Source: INSTAT (2017)

Production of table olives is strongly concentrated in the region of Berat which produces more than 65% of the total domestic production. In Berat, there are also several enterprises which are engaged in processing of table olives (e.g. preserved table olives).

Table 3: Regional distribution of the production of table olives (2016)

Region	MT	Share
Berat	15,241	70%
Fier	2,590	12%
Elbasan	1,555	7%
Gjirokaster	628	3%
Tirane	493	2%
Shkoder	485	2%
Vlore	282	1%
Durres	199	1%
Lezhe	184	1%
Total	21,656	100%

Source: INSTAT (2017)

3.1.2 Processing

Olive oil production has increased significantly, amounting to about 20,000 MT last year (2017) – since most olives are used for olive oil, olive oil production increase is triggered by increase in production of raw olives. Notwithstanding increase in primary production there is still processing overcapacity (most processing units are not utilized at full capacity). This view is shared also by interviewed processors, who stated that having excessive processing capacities, implies that new investments in new processing capacity might not be feasible.

Table 4: Balance of Olive Oil Production (MT)

Category	2000	2005	2010	2013	2017
Production	1,875	3,454	7,816	10,996	20,000*
Exports	27.5	1.6	15.3	16.2	10*
Imports	663.6	815.4	1201.3	976.8	802
Total domestic supply	2,511	4,268	9,002	11,957	20,792
Import/supply Ratio	26%	19%	13%	8%	4%

Source: INSTAT (Production), UNSTAT (Trade) (* Estimates)

Despite the recent increase, the production of olive oil in Albania is negligible when compared to European production (which is dominated by Italy, Greece (neighbouring countries to Albania) and Spain).

Table 5: World Production Trends of Olive oil (000 MT)

Country	2000	2005	2010	2014	2017
Albania	2	4	8		20*
EU	1,913	1,921	2,308	2,317	:
World	2,523	2,569	3,169	3,050	2,854*
Europe	1,911	1,923	2,308	2,317	:
Southern Europe	1,908	1,918	2,302	2,312	:

Source: FAOSTAT (2018) and MAFCP (2010) Statistical Yearbook; * Estimates

3.2. INTERNATIONAL TRADE TRENDS

Albanian import of olive oil has been increasing over the years, by more than 4 times since 2000, reaching US\$ 5.5 million in 2016 (Table 6). In the last years (including 2016 and 2017), according to UNSTAT statistics, about half of the value of import consist of virgin or extra virgin olive oil and the other half from other (lower quality, cheaper) type of olive oil (including pomace oil/olio di sansa). Meanwhile, exports are low – the best performance was reached in 2016, when exports were reported US\$ 149.2 thousand, but still 33 times lower when compared to imports.

Table 6: Olive oil international trade

Year	Export		Import		Balance	
	MT	000 USD	MT	000 USD	Value	Quantity
2000	275	43.8	663.6	1256.8	4.1%	3.5%
2005	1.6	13.6	815.4	3877.6	0.2%	0.3%
2010	15.3	79.4	1201.3	3814.0	1.3%	2.1%
2013	16.2	91.0	976.8	3669.3	1.7%	2.5%
2015	2.1	8.5	1277.3	5112.7	0.2%	0.2%
2016	41.1	149.2	1378.8	5500.0	3.0%	2.7%

Source: UNSTAT (2018)

Most imports come from Italy - almost 65%. Italy is one of the leading producing and exporting countries for olive oil, and has strong trade ties with Albania.

Table 7: Olive oil imports by country (2016)

Country	000 US\$	MT	Share (MT)	US\$/kg
Total	5500	1379	100	4.0
Italy	3284	877	64	3.7
Greece	1567	323	23	4.9
Spain	649	179	13	3.6

Source: UNSTAT (2018)

3.3. MARKET

3.3.1. International market

Trends in EU¹

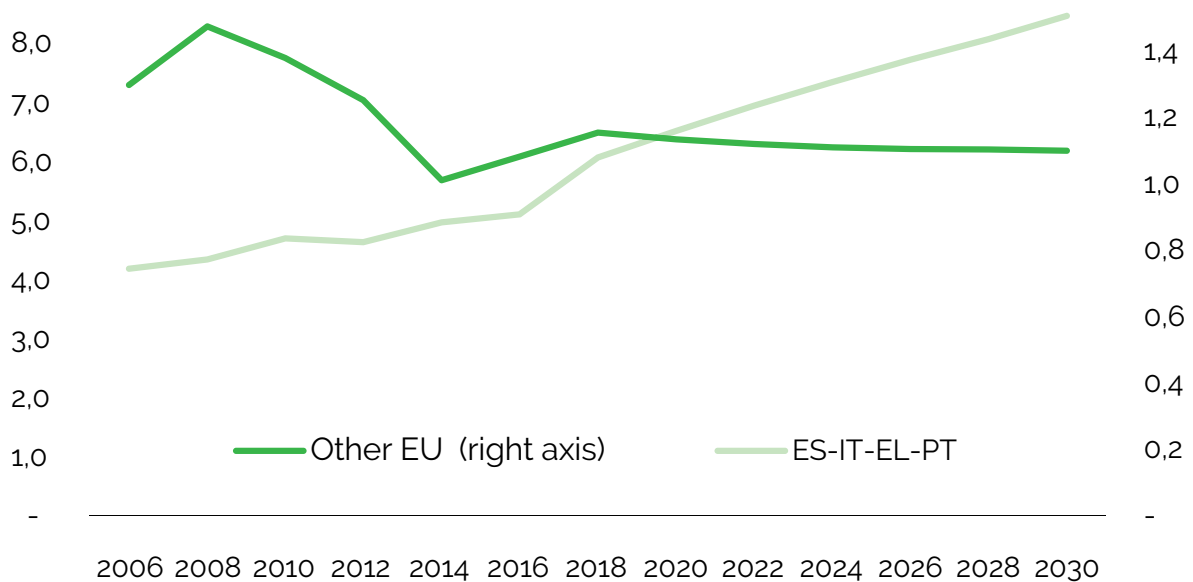
The world production of olive oil is dominated by EU, which accounts for more than 65% of world olive oil production and is the main supplier of global exports. The EU production is dominated by four main producing countries: Spain, Italy, Greece and Portugal (these countries represent together about 99 % of EU production) – thus, two of the four EU (and world) leading producers are neighbouring countries of Albania, exposing Albania to direct strong competition, both in its local market and in prospective exports attempts to European markets in the future.

In recent years, EU olive oil production has been characterized by high fluctuations despite significant investments in irrigated production systems. For example, in 2016/2017 production dropped by about 25% due to unfavourable climatic conditions and damage in olive groves caused by diseases.

The EU olive oil sector foresees further structural improvement in the coming years such as the conversion of production into more productive production systems, particularly: (i) the increase of irrigated areas; and (ii) the extension of production areas replacing other crops in traditional producing regions.

By 2030, EU production is expected to rise by one third compared to the years 2014-2016. The further development of irrigated and intensive olive plantations could reduce production variability. However, the economic viability of traditional groves will struggle in good production years, when prices will drop. This is due to traditional groves' lower productivity and higher production costs. Therefore, the need for these systems to create value, particularly by using quality labels such as geographical indication (GI) and organic certification will become more prevalent – this development is highly relevant for Albanian production, which is largely extensive and cannot be competitive cost-wise with mass EU intensive olive groves production. The optimization in the use of olive processing waste and by-products will be also an issue/concern, as the disposal costs are increasing, in parallel with the introduction and enforcement of stricter rules for environment protection. In addition, the potential of olive processing by-products and waste as livestock feed or natural fertilizer can be a viable option to address this topic.

1 This section is partially based on EC (2017). EU Agricultural Outlook for the Agricultural Markets and Income 2017-2030

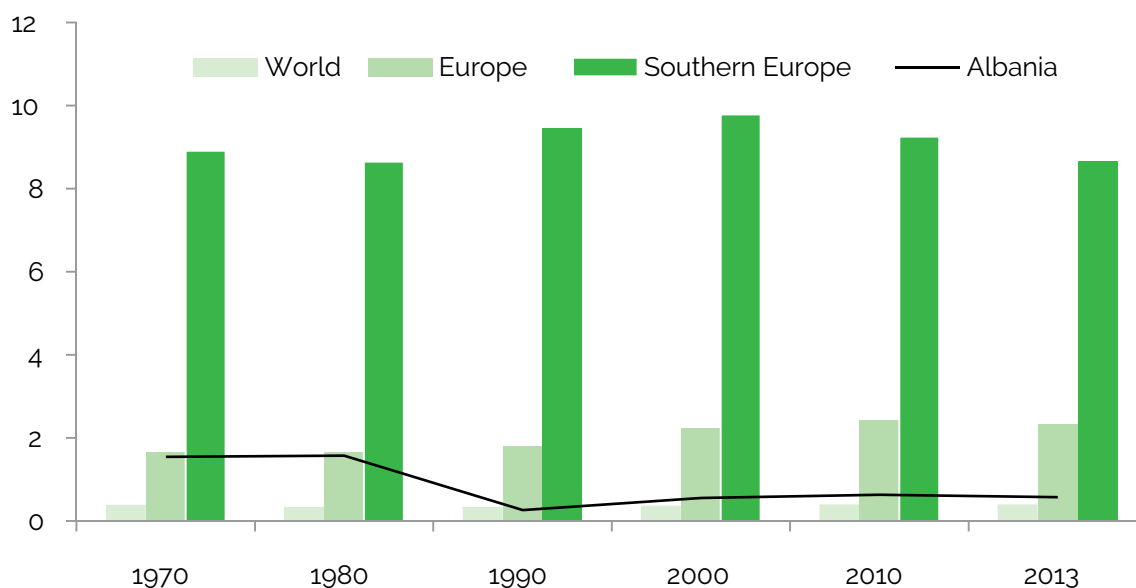
Figure 1: EU olive oil per capita consumption forecast (kg)

Source: EC (2017)

To conclude, Albania has limited competitive advantaged in olive oil export, due to high cost of production, low volumes and questionable quality and quantity standards. However, a handful of companies have managed to find their own market niches and export high quality olive oil. Albanian principal olive oil industry actors should target the domestic market where there are important opportunities to satisfy the growing demand.

3.3.2. Domestic market

Olive oil consumption in Albania has strongly declined during early transition. One reason is the decrease in the domestic production (of olive and olive oil) as a large proportion of olive plantations/groves were heavily damaged during the transition. Apparent consumption of olive oil in Albania - which according to FAOSTAT statistics is less than 1 litre/capita - is higher than the global average consumption per capita although much lower when compared to southern Europe, implying great potential for increasing consumption. However, one factor behind this gap may be under-reporting of informally produced olive oil, which is the main form of olive oil processing. According to estimates, the annual olive oil production is around 10,000 to 20,000 MT, and when considering the population, consumption of olive oil per capita could be approximately 5 litres. According to these estimates, consumption per capita would be higher compared to FAOSTAT statistics, but still lower when compared to EU consumption trends. This implies that there is space/potential that the domestic consumption (demand) may increase in the coming years (with further increase in income and consumer awareness about health benefit of olive oil consumption).

Figure 2: Apparent consumption of olive oil in Albania, Europe and world (Kg/capita)

Source: FAOSTAT (2018)

The origin of production tends to be quite an important factor for most Albanian consumers. According to various studies, most consumers choose their products based on origin (domestic versus imports). Generally, there is a strong consumer preference for domestic food products. Also, within the domestic product group, there are significant differences in perceptions based on the region of production within Albania. Most consumers view the region/area of origin as either important or very important when deciding to buy Albanian products. Natural conditions and genetic material (plants or varieties) can be perceived as being related to the origin of preferred regional products².

Previous studies³ have found a strong preference of Albanian consumers for domestic olive oil in Albania and willingness to pay a premium for local olive oil. High prices are considered one of the few reliable proxies for quality. Further studies show that most consumers prefer olive oil from the regions of Berat and Vlore. Berat is the leading producer of table olive in Albania. As such, olive oil and table olives from Berat represent potential for market development. Production of olive and olive oil has strong tradition and long history in these regions, thus there is a potential to develop regional brands, including GI or PDO⁴.

Most Albanian consumers view organic products as safer and healthier compared to other (conventional) products. However, most consumers are not familiar with organic certification and its requirements. There is a general lack of understanding about what constitutes organic

2 Imami, D., Skreli, E., Zhllima, E., Cela, A., & Sokoli, O. (2015). Consumer preferences for typical local products in Albania. *Economia agro-alimentare*.

3 Imami, D., Chan-Halbrendt, C., Zhang, Q., & Zhllima, E. (2011). Conjoint analysis of consumer preferences for lamb meat in central and southwest urban Albania. *International Food and Agribusiness Management Review*, 14(3).

4 Imami, D., Skreli, E., Zhllima, E., Cela, A., & Sokoli, O. (2015). Consumer preferences for typical local products in Albania. *Economia agro-alimentare*.

food among Albanian consumers⁵. The market for organic food in Albania is still small, but the consumers' preference for organic food represents a potential for market development in general, and for olive oil specifically, which can be developed in the future with the increase in income and awareness about good organic olive oil.

Overall, the development of GI and organic certification could trigger demand for new investments.

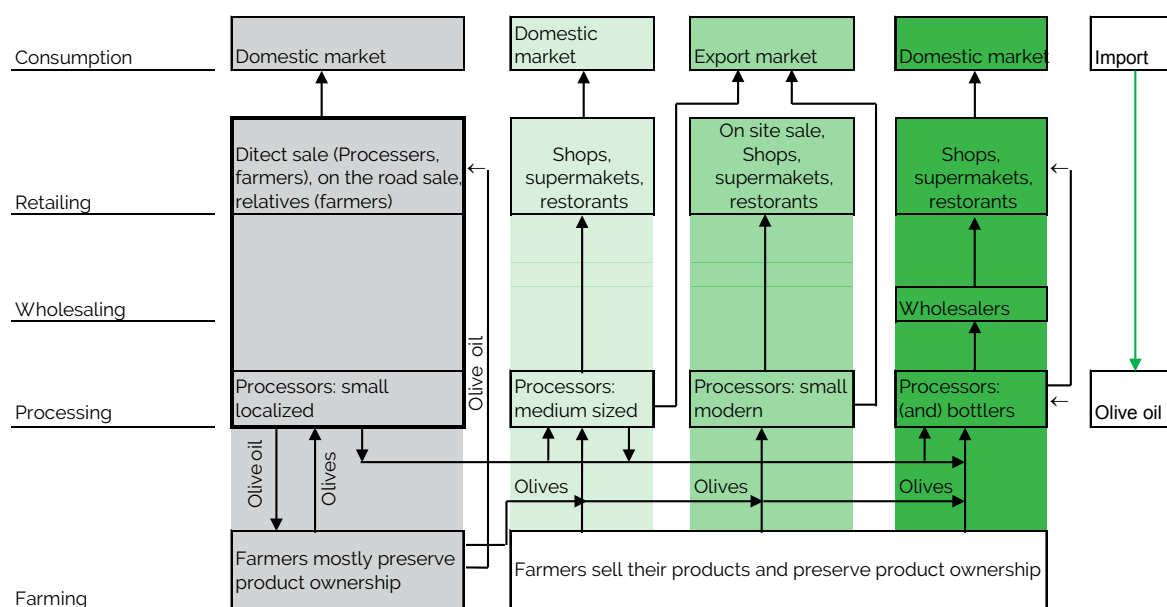
5 Imami, D., Skreli, E., Zhllima, E., & Chan, C. (2017). Consumer attitudes towards organic food in the Western Balkans-the case of Albania. *Economia agro-alimentare*.
Leonetti, L., Imami, D., Stafanllari, A., & Zhllima, E. (2009). The olive and olive oil value chain in Albania. Development Solutions Associates.

4. VALUE CHAIN STRUCTURE AND KEY ACTORS

4.1. VALUE CHAIN STRUCTURE AND ACTORS PROFILE

The Figure 3 maps the olive oil value chain actors and the main channels through which olives flow from farmers to end use consumer.

Figure 3: Olive oil value chain map



Source: Authors' own design

The two main actors in the olive oil value chain are farmers and olive oil processors. Most farmers are small (less than 0.5 hectares of olive groves/plantation). Processors may be categorized into those small localized processors (service providers), medium sized processors, industrial processors (bottlers), and small modern processors. The two latter categories also export high quality olive oil. In the following discussion, profiles of value chain actors will be described in more detail following the value chain flows and governance.

Farmers

It is estimated that more than 100,000 farmers are involved in olive growing. However, most farms have a small number of olive trees, used mostly for self-consumption and less than 1% has more than 0.5 Ha or 5 dynym.

Table 8: Olive commercial farms (6 dynym and above), for 2017 (dynym)

Cows	Number	%
Between 6 and 10 dn	380	54%
Between 11 and 20 dn	218	31%
Between 21 and 50 dn	78	11%
over 51 dn	28	4%
Total	704	100%

Source: Data form MARD analysed by the authors. Note: 1 dynym = 0.1 Ha

In terms of regional concentration (which is described in the previous section), production of olive for olive oil is highly concentrated in the regions of Fier, Vlore and Elbasan accounting for almost 75% of the total production. In these regions there is also a high concentration of olive oil mills/processors. While for table olives, Berat is by far the most specialized region for table olive production.

Processors

The olive oil processing industry is represented by 400 to 450 olive processors, who could be categorized into four groups of small and localized processors, small modern processors, medium sized processors, and industrial processors/bottlers.

Small and localized processors include most processors based in villages. There are about 400 processors, of a capacity 0.8-1.5 MT/hour. Small and localized processors use their processing lines mainly to provide processing services to farmers and to produce limited quantities of own olive oil. Facilities, processing technology and knowhow of these processors are heterogeneous: many (if not most) processing units is made of inadequate premises with out-dated equipment, but there are also units operating good second-hand processing lines or new ones – some obtained with the support of different development projects. The storage capacity of this category of processors is generally limited and the quality of tanks is also generally poor.

Small modern processors (less than a dozen) have invested in complete technology (processing, storing and marketing) and produce high quality olive oil. They too use their processing lines to provide processing services to farmers but they also produce usually up to 10 MT of olive oil, which they sell usually directly to households. Processors in this category tend to produce high quality olive oil including extra virgin olive oil and even organic (two of them also export modes quantities to countries like USA, Switzerland).

Medium sized processors have a higher production capacity. The processing capacity is above 1.5 MT/hour – there are about 25 such factories.

More than 90% of olives processed by the above processor categories are done as service to third party (e.g. farmers processing their own olives and retaining oil, against a fee). Thus, most olive oil is sold informally. They produce different types of olive oil. Most (more than 90%) of the above categories of olive oil processors have no proper storage capacities (do not have stainless storing tanks, which are indispensable to preserve olive oil quality). Only few (about 5) have (basic) packaging and bottle filling equipment – the others do such operations manually.

Industrial processors/bottlers typically produce and sell high quantities of olive oil at the range to/about 80 MTs a year. The main business of these companies is bottling and selling olive oil. The largest companies have also their own processing lines. According to interviews, some of these processors buy olive oil in bulk from other oil mills or local producers (often low quality olive oil, stored for several years) or/and import cheap low quality olive oil, however they all sell olive oil as local olive oil, in some cases using local/territorial names, misleading consumers about the real origin of olive oil. According to interviewed olive oil processors, one of the main actions expected by the government/policy-makers is to regulate the trade of olive oil, especially in terms of quality and origin falsification. Such law enforcement action would boost local production of high quality olive oil, and would lead to more necessary and affordable new investments in the sector (not to mention the benefit of the consumers from accessing higher quality olive oil in retail shelves).

So far, establishing large factories/processing units have proven to be risky. In one case of the investment in a large olive oil factory, was not successful. Indeed, large processing plants can hardly compete with smaller processors who channel most of the processed olive oil informally (thus at lower cost when compared to a large processors which by default should operate formally).

Waste processing/use is limited – olive cake is used/sold to agroindustry, greenhouse farmers and so on for heating. No olive oil is extracted from it. Overall, the current treatment of olive waste is not up to the requirements/standards, which implies that investments may be needed in that regard. However, that would be feasible only with reliable law enforcement in place. According to interviewed experts, the project to establish a pomace oil refinery might have major implications – it would be a major investment that would potentially deeply change the structure of the value chain.

In summary, the olive processors have invested in rather good processing technology, but that is getting out-dated (thus there is need to invest to modernize existing plants), and proper storing capacity and bottling and labelling are rather non-existent.

4.2. VALUE CHAIN FLOWS AND CHAIN GOVERNANCE

Value chain flows

Product flows. As schematically represented in Figure 3, there are four channels through which the produce flows from farm to processing and consumption. The main actors by channels are small localized processor, small modern processor, medium sized processor, and industrial processor (bottler). In the case of small localized processor channel, processors perform a service function for the farmers - they process the suppliers' olives into olive oil against cash payments (e.g. 700-1000 ALL/kv) or in-kind fee (an agreed quantity of olive oil is retained by the processor). These processors have no direct links to retailers or supermarkets and sell their own olive oil mostly directly to households/consumers visiting their villages but also to bottling companies, small shops or restaurants. In the case of small modern processors channel, processors also serve farmers, as in the preceding channel. Nevertheless, high quality olive oil processors tend to avoid in-kind payment to preserve the quality of their own olive oil (by not mixing it). In this channel, the largest part of sales is made directly to households, so that their marketing costs are very low (in touristic areas, such as South Coastal parts of Albania, local and foreign tourists mostly from the neighbouring countries buy large quantities of olive oil). Very rarely, if ever, they sell their own olive oil to bottling companies. As mentioned before, high quality of Albanian exports of olive oil comes from this category

of processors. Medium sized companies are supplied with olives from growers in the area where they are based, from other different parts of the country but also purchase olive oil from small localized processors. They sell their olive oil to larger bottling companies, to restaurants, to consumers and even export. Some of them bottle their own branded olive oil to retailers, supermarkets and to restaurants.

Industrial processors/bottlers procure the olive oil from small localized processors, medium size processors but also by farmers directly (farmers store process their olives using the service of processors and store the olive oil – in some cases for up to 3 or 4 years. The bottlers also import large quantities of olive oil. They have organized sales forces and distribute directly to tens or hundreds retail outlets, wholesale markets and restaurants all over the country. Each of them has an estimated several delivery vans with a driver and a salesperson. The marketing costs of this category of processors are therefore quite high.

Information flows. The flow of information among actors in the chain is rather limited. Only in few cases, particularly in small modern processors' channels, farmers are advised from processors, especially regarding post-harvesting activities. This is especially the case for organic olive oil processors. Generally, market information is scarce. Financial flows. The financial relationships between farmer and olive oil processors is simple – farmers pay a fee which may be in kind (olive oil) or financial for the service offered by processors. In case when processors buy olive from farmers, they usually pay farmers in very short time often using bank loans.

Value chain governance

Given that the olive oil processing industry is designed as a servicing industry, in which processors offer olive oil processing to farmers, and financial transactions are overwhelmingly on spot payments, the chain governance (organization) is rather missing or weak. Having said that, some leaders in the chain have established durable relationships with olive farmers, such as organic olive oil producer Mr. Vesaf Musai (Box 1).

Box 1: Value chain coordination – the case of organic certification

Musai SHPK is a high-quality olive oil producer, exporting organic olive oil directly to USA and European markets. Mr. Vesaf Musai (owner and manager of Musai SHPK) has long-term relations with a core group of large farmers (about 10 farmers with up to 10 MT production each) – in some cases also based on written contracts. Mr. Musai usually pays farmers upon delivering the olives, but in some cases, he also provides them pre-finance to cover the costs that take place in conjunction to services done to olives. The price is not specified in the agreement/contract, since they follow market prices adding a premium for quality, but the agreement specifies conditions including that the processor will buy from the farmer and that the farmer will sell to the processor. Mr. Musai monitors carefully the field olive groves before and during the harvesting of olive to ensure quality.

There is a potential to grow organic production in the olive oil sector. Support for organic certification should be combined with investment support of simple equipment for harvesting and storage to enable efficiently the farmers' conversion to organic production. Support for organic certification should be done in close collaboration with processors (as mentioned above, Mr. Musai monitors carefully the field olive groves before and during the harvesting of olive to ensure quality). Thus, the engagement of processors at all stages of support for farmers is necessary and useful – and new investments focused on organic olive oil can/should consider value chain approach.

Mr Musai have also plans to strengthen the relationships with farmers, by supporting them form a cooperative in order to procure jointly nets, boxes, transportation means and tree shakers, and advise them in group.

Source: Authors own elaboration based on semi-structured interviews.

5. PRODUCTION TECHNOLOGY PROCESSES

Below is the calendar of the main olive production processes which are related to production costs. Harvest is the most costly process related to olive since it is done manually.

Table 9: The calendar of the main olive production processes

Main type of expenditures	Janu-ary	Febru-ary	March	April	May	Octo-ber	No- vember	De- cember
1. Winter pruning								
2. Basic & complement fertilizer								
3. Harvest								

Source: Expert assessment, ~~based on desk review and interviews~~

Production/harvesting starts in October and lasts up to December, while in the South-West coast even in January. The bulk of production is harvested between the third decade of October and the second decade of December. Most table olives in Berat are collected during October and the rest in November.

Harvesting time also depends on the planned next steps in processing or sales: processors producing extra virgin olive oil prefer olives to be collected early, as acidity is lower. The timing of collection is also a function of variety. For example, in Vlora (Novosela), Frantoia is collected in October, whereas Kalinjoti olives are usually collected in November and December.

A more complete picture of the harvesting calendar is provided in table 8 below.

Table 10: Olive harvesting calendar by region/area

District	October			November			December			January		
	1	2	3	1	2	3	1	2	3	1	2	3
Berat												
Durres												
Elbasani												
Fier												
Gjirokaster												
Lezhe												
Shkoder												
Tirana												
Vlora												
S.W.Coast												

Source: DSA (2009)

6. SWOT ANALYSIS AND FINANCING NEEDS

6.1. SWOT ANALYSIS STRATEGY

The following SWOT analysis strategy is conducted with the objective of identifying financing opportunity in the olive oil sector.

Table 11 : Olive oil sector: SWOT analysis strategy

STRENGTHS (+)		WEAKNESSES (-)	
Production base with good potential and in phase of expansion		Fragmentation of olive production base	
Improving know-how base in processing and in some technical services.		Excessive farm-gate price of olives	
Cultivation of local varieties with a very good commercial potential		Low quality of olives, due to poor agronomic, harvesting and post-harvesting practices.	
Processing capacity oil mills can absorb larger production without additional investments.		Insufficient know-how and inadequate awareness of producers about market quality criteria	
Some small oil mills have reached high quality standards, gaining national and international awards		High degree of informality at processing level.	
		Partially dilapidated olive oil processing lines	
		Lack of oil storing capacities affecting olive oil quality	
		Insufficient investment in bottling and labelling	
		Lack of olive oil refinery (pomace oil)	
		Lack of investment in olive oil waste processing	
OPPORTUNITIES (+)	S (+) / O (+) STRATEGY	W (-) / O (+) STRATEGY	
High and increasing domestic demand for olive oil		Support planting/replanting olive groves for relatively large farmers	
Some export demand for high quality olive oil		Support planting (completing) in existing olive groves	
Favourable government policy for the sector	Support planting/replanting of local olive varieties	Support renovation on olive oil processing lines	
		Support investment in storing capacity	
		Support bottling and labelling equipment	
		Support refinery projects	
		Support waste processing projects	
THREATS (-)	S (+) / T (-) STRATEGY	W (-) / T (-) STRATEGY	
Fierce competition from other Mediterranean countries (Italy, Greece, Spain)	Support high quality (extra virgin, organic)	Improve farming technology	
		Generate added-value products from olive oil waste and by-products	

6.2. FINANCING NEEDS

6.2.1. Investment trends and financing needs

Investment and financing trends

At farm level, there has been a sharp trend of establishing new olive plantations and increasing the area under olives. New plantations are established using up to data technology (field interviews). The trend has first been supported by government subsidy scheme and now farmers continue to plant even without government support.

At processing level, there have been cases of start-ups, though expert assessment support that current processing capacity is much higher than supply of raw olives and may absorb future increases of olive supply. Thus, there is no need to invest in additional processing capacities, in general. Investment in technology renovation and increasing proper storage capacity are rare and made mainly by small modern processors. These types of investments have been financed using a loans and government and donor agency grants.

Investment financing needs

Following the SWOT analysis strategy and investment trends, investment financing needs are summarised in the Table 12.

Table 12: Investment financing needs

Type of investment	Farmers	Processors	Bottlers
1. Investments in planting or replanting of olive groves, with priority of local / autochthone olive cultivars	Yes		
2. Support planting (completing) in existing olive groves	Yes		
3. Irrigation systems: equipment, tools and machines to improve irrigation and fertigation, drip irrigation and irrigation wells	Yes		
4. Support special machineries for olive groves (shakers, grinders, etc.)	Yes	Yes	
5. Harvesting and post-harvesting tools, equipment and premises	Yes	Yes	
6. Renovation of current processing lines		Yes	
7. Investments related to olive production agritourism (testing and exposition rooms)	Yes	Yes	
8. Support olive oil storing capacity	Yes	Yes	
9. Investment for introduction of quality controlled production and schemes (organic production, GI etc.)	Yes	Yes	Yes
10. Bottling, labelling and packaging lines		Yes	Yes
11. Olive oil refinery		Yes	Yes
12. Processing of olive oil waste		Yes	Yes

Source: Prepared by authors

Huge efforts are needed to improve farming technology (for new plantations and existing olive groves) for Albania to compete at low cost with olive oil imports from Mediterranean countries. Hence, there are opportunities to finance new plantations and reconstruction of existing olive groves plantations. While there have been huge investments in olive oil processing sector, there is a need to support technology renovation for a significant part of processing plants (that are getting older or out-dated). It is recommended that the investment in technology renovation for experienced companies should be supported with priority compared to new start-ups. Investments in building new olive oil factories should be considered with caution, considering the fact, that most olive oil processing units are operated far below their capacity. Given that olive oil proper storing capacity is rather missing (as shown above), processors report a need to simply develop the storing capacity for the whole olive oil industry (implying most olive oil processors). The investment in olive oil storing capacity is a major factor of olive oil quality together with fruit quality and processing technology and know-how. Bottling and labelling and packaging capacity in oil mills and industrial processors also represents an important opportunity for financial institutions and government support, given that only a handful of oil oils have such equipment. Two major projects related to olive sector waste processing industry may also be considered, namely olive oil refinery and olive oil processing wastes project. Since they are large projects, it is advised that solid feasibility studies precede any financing decision.

The main opportunity in financing related to value chain development comes from increasing demand and market opportunities for high quality and quality-controlled products, such as organic products, products with protected origin (GI), products with specific characteristics or guaranteed by collective marks. The orientation towards quality requires not only investments to improve quality along the whole value chain (services for quality control of production, disease control organic methods etc., appropriate containers and logistic for raw olive transports, services for traceability and quality certification), but would also require additional financial means for marketing and other intangible assets.

Box 2: Public support schemes for Albanian agriculture

There are two major public support schemes for Albanian Agriculture, namely Annual National Support Schemes (ANSS), and EU like Rural Development Programme, IPARD. While the latter aims at enhancing competitiveness and implementing EU (safety, quality and environment) standards and targets the most competitive businesses, ANSS has multiple policy objectives and a broader coverage.

Objectives and measures for ANSS-2018 area summarized below:

- Increase of competitiveness by providing support to investment (new plantations, investments in agro processing and marketing), supporting innovation technologies, and certification and insurance
- Vertical and horizontal and business formalization
- Diversification of rural activities, including support to SMEs and particularly support to rural tourism in combination with government programme of 100 villages.

While the ANSS have traditionally provided support for meeting multiple policy objectives, including increased competitiveness, recently there has been a growing attention towards meeting the standards.

National subsidy schemes have traditionally been changing from year to year (often drastically). The budget allocated for ANSS for 2018 is Euro 20 million. For investment support, similar scheme of partial grant policy (at least 50% public support) is valid.

Another major Program is EU like Rural Development Programme, IPARD II, which enables support for investment aiming at improving competitiveness and meeting national and EU standards, through co-financing investment by a grant (e.g. 50% however the exact value depends on a number of criteria). It is expected that IPARD calls for applications (which will also highlight the details of the eligibility criteria) will start in the second half of 2018. For this programme a budget has been approved of 71 Mill Eur from EC and 24 Mill Eur grant from Albanian government (75% EU: 25% Albanian government), so there is a 94 Mill Eur grant available for investments at farm and processing level during 2014 – 2020.

6.2.2. Operating capital financing needs

Working capital financing trends

The relationships between farmers and processors are usually on the spot, cash-based or in-kind-based transactions – farmers pay a fee for the service rendered by processors. Reportedly, this kind of transaction accounts for ca 95% of processing (field interviews). In case processors buy olives to process their own olive oil, some may use short term loans to pay the supplying farmers. This is especially the case of small modern processors who produce high quality olive oil.

Working capital financing needs

Given the nature of relationship between farmers and processors and the fact the olive oil may be sold right after being produced - technically, there is no requirement for aging such as in case of cheese and wine, etc. - the need for working short term capital (to pay the farmers) is less manifested compared to other (above-mentioned) sectors. The need for working capital is limited to a small number of companies that buy the olives and have established closer relationships with supplying farmers.

6.2.3. Value chain financing

The opportunity of value chain financing in olive oil sector is very limited given the nature of relationships (on the spot, cash or in kind based) between farmers and processors. This contrasts with the milk and apple sector where the relationships between farmer and consolidators/processors tend to be more durable. Having said that, financial institutions may consider using small modern processors and their 'agents' to reach farmers, since this category of processors tend to have more stable relations with their supplying farmers and in case cases pre-finance them (as shown above).

7. CONCLUSIONS

Production of olive and olive oil is an old tradition and has an important role in agriculture and rural development in Albania. Albania's production of olives has been increasing faster than the world production. Production of olives has almost tripled (to about 100,000 MT in 2016) when compared to early 2000ies, although there are strong oscillations from year to year. Also olive oil production has increased significantly, amounting to about 20,000 MT last year (2017). Since most olives are used for olive oil, olive oil production increase followed the raw olives production trend. Production is still highly fragmented and productivity is quite low, as farmers are not providing appropriate agronomic services to the trees.

The olive oil is mainly destined to domestic market – there are still large potentials to meet domestic demand since olive oil apparent consumption is low compared to other Mediterranean countries olive oil producers. High fragmentation and production costs, imply that Albania has a cost disadvantage in terms of export potential, considering also that Albania's neighbours are leading olive and olive oil producers. That said, Albania may export high quality, organically certified olive oil. It is currently happening at a very small scale.

The production of olives has increased based on supply conditions (climate, soil and tradition), but it has also been incentivized by government subsidies, first given to the establishment of a relatively modern processing base and then, after 2007, to the expansion of production base (new cultivation) partially due to subsidy support.

Domestic production is improving in terms of quality and quantity, but suffers from high price of raw olives mainly due to low yields of old olive groves. Production is still highly fragmented and productivity is quite low, as farmers are not providing appropriate agronomic services to the trees.

Albania has limited competitive advantage in exports of olive oil, due to high cost of production, low volumes and questionable quality standards. While handful of companies have managed however to find their own market niches and export high quality, Albania, and principally olive oil industry actors, should target the domestic market where there are important opportunities to satisfy the still unmet and growing demand. Furthermore, there is potential that the domestic consumption (demand) may increase in the coming years (with further increase in income and consumer awareness).

The market for organic food in Albania is still small, but the consumers' preference for organic food represents a potential for market development in general, and for olive oil specifically, which can be developed in the future with the increase in income and awareness about good organic olive oil.

According to some interviewed olive oil processors, one of the main actions expected by the government/policy-makers is to regulate the trade of olive oil, especially in terms of quality and origin falsification. Such law enforcement action would boost local production of high quality olive oil and would make more necessary and affordable new investments in the sector (not to mention the benefit of the consumers from accessing higher quality olive oil in retail shelves).

Most farmers are small. They prefer to use the oil mills as service providers. They pay a fee for the olive processing and take oil back. The oil quality is often poor because of inappropriate postharvest practices and storage.

Processing industry is mostly divided into four segments: (i) small local processors, whose main revenue comes from processing olives of growers, also processing and selling some olive oil on their own; (ii) small producers of high-quality olive; (iii) medium-size processors, which are mostly selling in bulk to bottlers, even if some are also bottling, and (iv) medium and large-sized bottlers, producing some olive oil and buying the rest in bulk; these are the producers of bottled olive oil sold in most shops.

Many (if not most) processing units are made of inadequate premises with out-dated equipment, but there are also units operating good second-hand processing lines or new ones, obtained with the support of different development projects. Waste processing/use is limited – olive cake is used/sold to agroindustry, greenhouse farmers etc. for heating. No olive oil is extracted from it. Overall, the current treatment of olive waste is not up to the requirements/standards, which implies that investments may be needed in that regard, but that would be feasible only when there will be law enforcement in place.

The current study informs the financial institutions and other interested parties in supporting this sector about the main opportunities to finance the sector. The main investment to be considered are establishment of new olive plantations particularly using autochthonous cultivars and improving the technology of existing groves; investment in harvesting and post-harvesting tools, equipment and premises; renovation of current processing lines; support olive oil storing capacity; support bottling and labelling line; and supporting large projects such as olive oil refinery and processing of olive oil processing wastes. Since Albania has quite good production conditions, FI may consider financing investments in quality schemes such as Geographic Indications (GI), Protected Designation of Origin (PDO) and organic production. This may be an alternative to low cost export which, as mentioned above, is not a feasible alternative for Albania.

The dualistic nature of olive oil sector - producing decent quality-competitive price olive oil intended for domestic consumption, on one hand, and producing high quality-high price olive oil intended for export, on the other, imposes a dualistic approach for financial institutions. The first option would be to support investment to increase efficiency and lower costs, and second option would be to support leading enterprises to improve quality combined with certification. The support to the sector should be considered in combination with public support.

Olive sector is considered a priority sector for Albanian government. The sector has been included in all public financial support schemes, including recent support schemes. The current partial grant policy has important implications for financial institutions - they have the opportunity to fully pre-finance the investment and co-finance the investment (e.g. 50% for the part not covered by the subsidy and own savings). Current (2018) government subsidy scheme also provides for group application based on a simple notary agreement among group members. Group application is a good opportunity to be considered by both farmer groups and financial institutions.

8. REFERENCES

- DSA (2009). Olive and olive oil value chain study (Technical report).
- EC (2017). EU Agricultural Outlook for the Agricultural Markets and Income 2017-2030.
- FAOSTAT (2018). Database available at <http://www.fao.org/faostat/en/>?
- Imami, D., Skreli, E., Zhllima, E., Cela, A., & Sokoli, O. (2015). Consumer preferences for typical local products in Albania. *Economia Agro-alimentare*.
- Imami, D., Chan-Halbrendt, C., Zhang, Q., & Zhllima, E. (2011). Conjoint analysis of consumer preferences for lamb meat in central and southwest urban Albania. *International Food and Agribusiness Management Review*, 14(3).
- Imami, D., Skreli, E., Zhllima, E., & Chan, C. (2017). Consumer attitudes towards organic food in the Western Balkans-the case of Albania. *Economia agro-alimentare*.
- INSTAT (2017). Database available at www.instat.gov.al
- Leonetti, L., Imami, D., Stafanllari, A., & Zhllima, E. (2009). The olive and olive oil value chain in Albania. Development Solutions Associates.
- MAFCP (2010). Statistical Yearbook
- UNSTAT (2018). Trade database <https://comtrade.un.org/data/>

9. ANNEXES

Table 13: Distribution of larger farms by region

Region	Between 6 and 10 dn	Between 11 and 20 dn	Between 21 and 50 dn	over 51 dn
Berat	171	96	22	4
Durres	22	26	6	1
Elbasan	44	3	4	1
Fier	3	5	9	4
Gjiroka	3	9	1	2
Lezhe	36	17	11	1
Shkoder	6	6	3	10
Tirane	33	20	13	2
Vlore	62	36	9	3
Total	380	218	78	28

Source: Data form MARD analysed by the authors.

Table 14: World Cultivation Trends of Olives (000 Ha)

Country	2000	2005	2010	2014	2015	2016
Albania	33	29	34	40	42	39
Montenegro	:	:	0.1	0.1	0.1	0.1
EU	4,644	4,825	4,862	4,891	4,837	5,029
World	8,352	9,189	9,899	10,171	10,278	10,650
Europe	4,678	4,847	4,889	4,926	4,874	5,063
Southern Europe	4,662	4,829	4,873	4,909	4,857	5,046

Source: FAOSTAT (2018)

Table 15: World Yield Trends of Olives (MT/Ha)

Country	2000	2005	2010	2014	2015	2016
Albania	1.1	1.1	2.1	2.5	2.3	2.5
Montenegro	:	:	8.8	3.1	2.7	2.8
EU	2.3	2.2	2.8	2.0	2.3	2.3
World	1.9	1.7	2.1	1.6	1.9	1.8
Europe	2.3	2.2	2.8	2.0	2.3	2.3
Southern Europe	2.3	2.2	2.8	2.0	2.3	2.3

Source: FAOSTAT (2018)



Tiranë, 2019