REPUBLIKA E SHQIPERISE
KESHILLI I QARKUT KORÇE

INTERREG - IPA CBC
GREECE ALBANIA

CATALOGUING AND COMMERCIAL EVALUATION O LOCAL WINES' VARIETIES, KORCA REGION

WINCOME PROJECT

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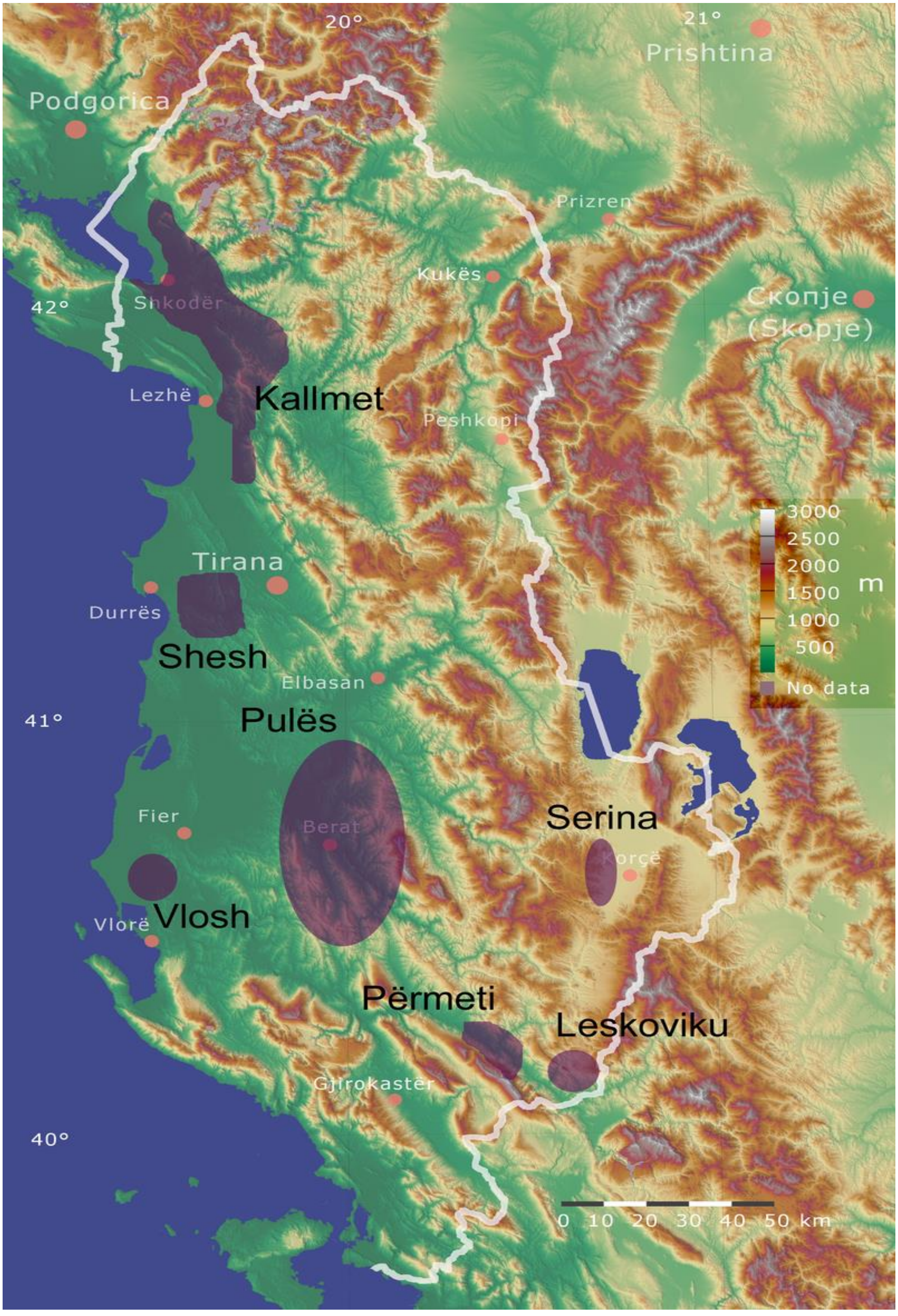


1. DESCRIPTION OF WINE SECTOR IN ALBANIA

1 .1 Background information

1.1.1 Overview of the wine production in Albania

Albania has a total area of 28750 km2 (2875000 ha), from which 695520 ha or 24.2% are agricultural land. There were 11373 ha vineyards or 1.63% of the total agricultural land. Albania belongs to the subtropical zone and is under the impact of a temperate Mediterranean climate. According to EU classification, Albania belongs to the zone C of vineyards cultivation, with three subzones: C III B, C III A, and CII. During the period 1970-1990, the total vineyard area increased to 20000 ha, of which 14000 ha (70%) were for wine production, and there was consolidated and developed an authentic wine production industry. During the 1990s (1990-1994), in the short term at least, has been a dramatic reduction in total vineyard area, from 20000 ha (1990) to 4300 ha (1994), and, after 2000s, was shown a slight increase to 7994 ha (2005), and to 10533 ha in 2016. In Albania (2016) was produced 205286 tons grape, by which 124436.7 tons (60.6%) were produced from vineyards and 80850 tons (39.4%) were produced from pergolas. There are some of 426 wineries with different wine production capacities, producing dry wines, sweet wine and raki for local consumption, and grape juice, brandy, and raki for export. In 2016, in Albania were produced 118744 hl wine, by which 97980 hl by small family wineries and 20764 hl by large wineries. Export of wine was 256 hl (in USA and Kosovo), while the import was 27975 hl. Wine consumption per capita was very low (146463 hl or 4.18 liters/capita), compared to EU and some regional countries, where the wine consumption per capita varies from 11.4 liters/capita (FYROM) to 43.3 liters/capita (Italy) (Spain – 24.2, Montenegro - 24.8, Serbia - 31, Greece 32.2, Austria – 36, Croatia 39 liters/capita), but it was slightly higher than Kosovo and Turkey, by 1.5 and 1.1 liters/capita, respectively. During the last 10 years, there is a tendency and an increased demand for wines produced by indigenous and local grapevine cultivars and ecotypes, such as white wine “E Bardha e Beratit”, “Shesh i Bardhë”, “Cëruja” and red wine “Kallmet”, “Shesh i Zi”, “Vlosh”, “Debinë e Zezë”, “Serin i Zi” and “Pamid”. Acoording to theNational General Development Strategy of Viticulture (2007), there was planned that the total vineyard area will be about 20000 ha in 2030, followed by the improvement of grapevine variety structure and production.

1.1.2 Albania’s geographic position, climate and soils

Albania extends between 39°38’S (Konispol) and 42°39’N (Vermosh), and between 19°16’W (Sazan Island) and 21°4’E (Vernik in Korça). In the north, Albania joins the border with Montenegro and Kosovo, in the east with Macedonia, in the south with Greece, and in the south-west with Ionian Sea, and in the west with the Adriatic Sea. Total area of Albania is 2 875 000 ha, from which 695520 ha or 24.2% are agricultural land and 2179000 ha or 75.8% are forests, pastures, etc. Albania takes part on the subtropical zone and is under the impact of a temperate Mediterranean climate, with a mean rainfall of

800-1300 mm/year, 75% of them during winter and early spring, out of the vegetative period of grapevine, which mean that vineyard irrigation is a necessity, especially in hilly areas. Mean solar radiance in different places of the country is as below: Saranda 2730 hours, Fier 2792 hours, Durrës 2606 hours, Tirana 2560 hours, Korça 2456 hours, Shkodra 2520 hours, Kukësi 2035 hours [9], etc, fulfilling grapevine requirements all over the country, from Saranda to Kukësi, except high Albanian Viticulture and Wine Production63 mountainous areas. Extremes of grapevine cultivation are 1100-1300 m elevation in the south and 400-700 m elevation in the northern part. According to EU classification, Albania takes part on climatic zone C, with three subzones: C III B, C III A, and C II, as below:

A. *The first European Viticole Subzone, CIIIB*

The first European Viticole Subzone, CIIIB, rises up to 400 m elevation and encompasses coastal plains and hills surrounding the towns of Saranda, Vlora, Fieri, Kavaja, Lushnja, Durrës, Lezha, up to Velipoja in Shkodër (WVS, 2018). Yearlong mean temperature is 15-160C, mean temperature of the coldest month, January, is 5.6-7.5oC, mean temperature of July, the hottest month, is 26.4oC, minimal temperature is -5oC, and the number of days with frost is 5-6 days/year. In this zone, there are cultivated the main table grapevine cultivars, such as Black Magic, Victoria, Italia, and Michele Palieri, and except the main international wine varieties, such Tempranillo, Merlot, Cabernet, Trebiano, Sangiovese, Montepulciano, etc, there are being cultivated the main indigenous grapevine varieties for wine-making, such as: “Vlosh” by which is produced a dry red wine called “Vlosh” with light red color, with 11-12% alcohol. “Vlosh” wine is with low acidity and floral aroma. “Shesh i Bardhë” by which is produced a dry white wine called “Shesh i Bardhë”, with strawy color, with 12-13% alcohol, with good tannin content, and an attractive floral aroma. “Kallmet” by which is produced a light dry red wine called “Kallmet”, with light red color, with a specific variety aroma or blackberry aroma, with 11-12.5% alcohol.

B. *The Second European Viticole Subzone, CIIIA*

The Second European Viticole Subzone, CIIIA, includes areasbetween 400-800 m elevations and includes hilly-pre-mountainous areas, far of the sea effects. This subzone includes vineyards of the pre-mountaionus hills of Vlora, Elbasan, Tirana, Kruja, Berat, Skrapar, Mirdita, Tropoja, Mati, Kukës, Has, and Pogradec (WVS, 2018). Yearlong mean temperature is 12-13oC, mean temperature of the coldest month, January, is 2-4oC, mean temperature of July, the hottest month, is 25oC, minimal temperature is -10oC, the number of days with frost is 22-43 days/year, there are 15-20 snowing days, and snow cover varies from 20-40 cm. Except well-known international varieties, such as Merlot, Cabernet, Mavrud, Chardony, Tokay, etc, there are being cultivated the main indigenous grapevine varieties for wine-making, such as: “Pulës” by which is produced a dry white wine called “E Bardha e Beratit” (“White of Berat”), with 11.2-12.5% alcohol, with a special floral or forest herbs aroma. “Shesh i Zi” (“Black Shesh”) by which is produced a dry red wine called “Shesh i Zi”, with red to violet color, it contains 11-13% alcohol, with high tannins content, and a special or forest herbs and leavesaroma. “Kallmet”, known also as “Kadaraka”, “Skadarka”, “Nero di Scutari”, by which is produced a very well-known dry red wine called “Kallmet”. “Cëruja” by which is produced a dry white wine called “Cëruja e Matit” (“Cëruja of Mat”) with high alcoholic and tannins content. Wine has a special floral aroma.

C. *The Third European Viticole Subzone, CII*

The Third European Viticole Subzone, CII, rises over 800 m elevation and includes mountainous areas and surrounding vineyards of Korça, Përmeti, Mirdita, Dibra, Mati, Tirana, Skrapari, Berati, Pogradeci, Leskoviku and Tepelena [13]. Yearlong mean temperature is 10-11oC, mean temperature of the coldest month, January, is 0.5-2oC, mean temperature of July, the hottest month, is 19-20oC, minimal temperature is -13oC, sometimes temperature is lower than -16 to 17 oC, the number of days with frost is 35-45 days/year, there are 25-30 snowing days, and snow cover is up to 60 cm. Except well-known international varieties, such as “Merlot”, “Cabernet”, “Chardonay”, etc, there are being cultivated the main indigenous grapevine varieties for wine-making, such as: “Debina e Zezë”, by which is produced a red wine with the same name with a light red color, with 11-12% alcohol, with an apple aroma; “Serin i Zi”, cultivated mainly in Korça region, by which is produced a red wine with the same name, “Serin i Zi”, with a light red color and high tannins content, with forests fruit aroma; “Pamid”, cultivated mainly in areas surrounding Ohrid Lake, by which is produced a red wine with the same name, “Pamid”, a light red color wine which contains 11-12% alcohol, medium dry and forests fruit aroma, especially blackberry aroma.

2. STATUS OF LEGAL FRAMEWORK ON WINE

2.1 Quality policy for the wine sector

Currently wine sector is regulated by the **Law No 8443, date 21.1.1999 "On Vineyard, Wine, and other products produced from grape"**. The secondary/implementation legislation has never been enacted. The Law No 8443 is now considered outdated with respect to changes that have occurred in Albanian wine sector and the needs of private actors in the sector. Additionally, the current legislation is not in line with European Commission (EC) regulations[1]. Albania is not a regular member of the International Organization of Vine and Wine (OIV) which offers member states with a regulatory frame, definitions of viti-vinicultural products as well as their labelling, oenological practices and specifications of oenological products, methods of analysis and quality assurance in oenological laboratories. This corpus of rules facilitates international recognition of viti-vinicultural practices and products.

Based on that state of affairs, MARD has drafted a new draft law on Vineyard and Wine. The draft law has already approved by government by end of December 2020, and it is awaiting discussion and adoption at Albanian Parliament level. Three government decrees as implementation regulations, namely "***On the vineyard register, mandatory declarations and information collection to monitor wine market, accompanying documents on wine products loadings, and the registers to administer for the wine sector***", "***On determining the product categories, oenological practices and relevant limitations in the wine sector***", **and "*On protected designation of origin and protected geographical indications, and on labels and presenting information for some products of wine sector*"** are in the process of being prepared and it is expected to be adopted one the draft law "On vineyard and Wine" is adopted by the Albanian Parliament. The three pieces of legislation were planned to be adopted by the third quarter of 2019.[2]

The draft Law on Vineyard and Wine aims at (i) establishing rules for cultivation of vineyards intended to wine production, vineyard register, production potentials, production, labelling, marketing and controls of wine products in Albania; (ii) consumer protection; and (iii) prompting wine quality.

The Law stipulates the obligation to establish the vineyard register which is consisted of vineyard cadaster and updated data on grape and wine potential. All the main actors in the sector (vineyard farmers, harvesters, producers, processors and bottlers) should be registered in the register and provide data for keeping it up to date. A list of grape cultivars which are suitable for wine production should be prepared. The vineyards with cultivars not authorized with be uprooted.

The law provides rules and procedures for the approval of PDO, PGI and Traditional Specialty Guaranteed (TSG)for wine products. The application for getting approval for

[1] Regular Impact Assessment (RIA) for the draft law on Vineyard and Wine

[2]National Plan for European Integration 2019-2021.

these quality schemes is submitted to General Directorate of Intellectual Property (GDIP). The latter sent it to MARD for verification of technical specifications. Wine Commission (to be established in MARD), after examination and (if found in conformity with technical specifications) sent the application through MARD back to GDIP for registration.
The Law establishes rules on oenological practices and granting the authorization to place on the market only wine products produced in conformity with these rules.
Rules are also determined in terms of documentation wine product movement both in terms of traceability (food safety) and financial control. National Food Authority is responsible for controlling food safety as in any other food product.
Three Government decisions[3] are planned to be enacted by the fourth quarter of 2020. The first decision will regulate wine register, mandatory declarations and collection of information for monitoring wine market, accompanying documents for wine loading and registers to be administered for the wine sector. The second decision will regulate the category of wine products, enological practices and related limitations. Third decision will regulate quality schemes for the wine sector, namely PDO, PGI and TSG as well as mandatory information for consumers for certain wine products.

2.2. Strategic documents

Vineyard and wine sector are considered as priority sectors by the Government of Albania (GoA) in the Inter Sectoral Agricultural and Rural Development Strategy (ISARD), 2014-2020. The main support is provided through three resources:

- the National Support Schemes,
- Recently through IPARD II program with a total of 94 million of euros for investments in agriculture have and are showing a considerable attention on wine sector.
- Other donor support mainly capacity building on improvement of legal and institutional base

IPARD II programe is supporting wine sector through Measure 3: "Investments in the processing and marketing of agricultural products" . Measure 3 provides grants with a minimum of 25 000 Euro and a maximum of 2 000 000 Euro. The percentage of public funding is 50% of the total eligible expenditures of the investment.
National budgetary support for vineyard sector (with relevance to EU Common Agricultural Policy (CAP) Pillar II structural and rural development) has been present over the years, except for the current year. Recent years, throughout National Supporting Schemes in Agriculture and Agro-processing, the GoA has supported the wine sector, mainly for new plantations, irrigation systems with emphasis on Albanian autochthonous varieties.
For example, in 2018 the vineyard producers could benefit from several measures: (i) 300.000 of ALL/hectare for vineyards cultivated with table grapes; (ii) 350,000 ALL/hectare for vineyards cultivated with autochthonous cultivars; (ii) 200,000 ALL/hectare for drop irrigation in vineyards with industrial or table grapes; (iv) Warehouses, collection points, refrigerated points, agro-processing receives in total 20 Million ALL.
Although the overall funding is oscillating, the funding for planting of vineyards has decreased during the years. The peak was reached during 2007-2011 were in addition to

[3] National Plan for European Integration 2019-2021.

plantation of vineyard, there was a separate measure on native cultivation of vineyards. An increasing trend appears also for the drop irrigation, but that figure is not broken down by subsector. During

2. STATUS OF LEGAL FRAMEWORK ON WINE

2019 there was an exemption of vineyard sector in the national schemes, due to the inclusion of the wine sector in the IPARD II program, to avoid overlap (although it is still possible to finance the sector through national schemes for investments whose value is below the IPARD II lower limit).

2.3 Relevant fiscal and trade policies

Wine producers are subject to all horizontal fiscal legislation. Additionally, wine producers are subject to Law on Excise Tax. They have to pay 30 ALL per litre sold wine for wines of Alcohol strength of up to 12.5 degrees and 400 All per litre for wines with Alcohol strength above 12.5 for quantities less than 10,000 HL; and per year and 100 ALL per litre and 120 ALL per litre respectively for quantities above 10,000 Hectoliters (HL),

Table 0-1.

Table 0-1: Excise tax for wine

	Alcohol strength up to 12.5%	Alcohol strength above 12.5%
Up to 10,000 HL	30	40
Above 10,000 HL	100	120

Source: Law No /2012, For Excises in the republic of Albania

According to the Law for Excises, exporters of wine are exempted from Excise tax.

Two fiscal horizontal policies, namely Value Added Tax (VAT) exemption of agricultural inputs and VAT exemption of imported machineries and equipment for investment purposes, benefit vineyard and wine sector. Vineyard farmers benefit from VAT exemption of agricultural inputs. Based on Law "On Value added Tax in the Republic of Albania and implementation dispositions, staring from January 2019, agricultural input (such as fertilizers, plant protection products, seeds and seedlings) provision is exempted from VAT. This was intended to reduce the price and therefore the cost of agricultural production including grape production. Filed interview support that such a measure has transited in input price decrease. Additionally, starting from 2013, all machineries and equipment used from invested purposes are exempted from VAT. This has been very important for reducing investment costs and motivating investment.

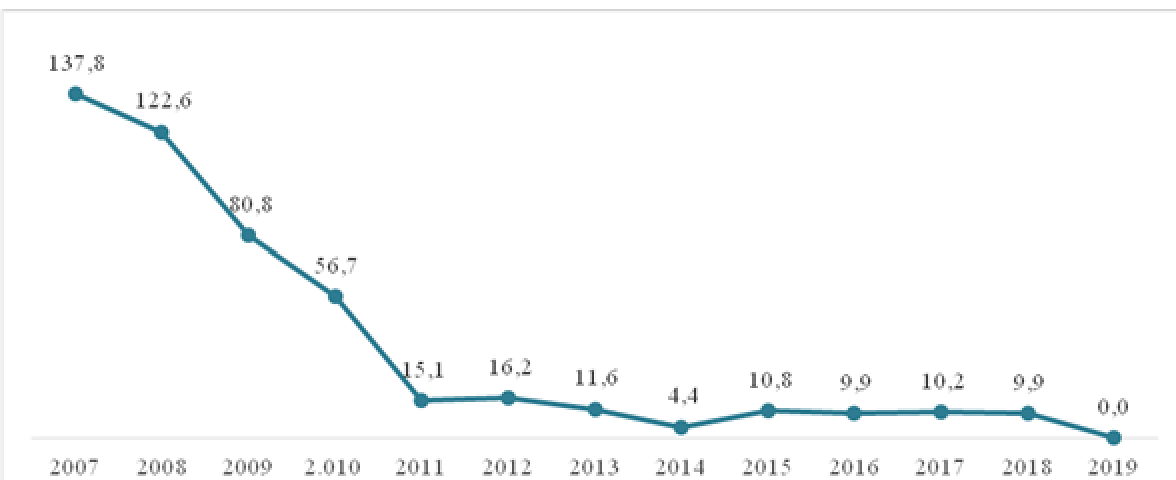
Domestic wine production enjoys quite some protection from international competition. Custom duty tariff for all categories of wine (code 2204) is 15% for all trading partners except for Central European Free Trade Agreement (CEFTA) countries which enjoy duty free access (General Directorate of Customs: http://www.dogana.gov.al/preferencat/).

On the negative side, the widespread informality in the wine sector badly hurts the formal sector. Given that informal wineries do not pay any taxes at all leads to unfair competition – they may compete format companies with lower prices.

3.NATIONAL SUPPORT SCHEMES & PROGRAMMES

Government has supported vineyard plantation starting from 2007. The total support provided for this measure amounts or ALL 486 Million (Euro 3.95 Mil; exchange rate 1 Euro=123 ALL). Supported with 3.6% of total National support scheme for the period 2007-2013, vineyard is one of the 10 top agricultural activities supported; the most supported sectors being livestock (cattle and ruminants) – through per animal head support (17.4% of total budget), olive plantation (16.5% of total budget), orchard plantation (7% of total budget).
The government support for the sector has been quite significant for the period 2007 through 2010 ranging from 57.5 ALL million to ALL 137.8 million. With an inflexion point in 2011, the support stagnated between 2011 through 2018 and stopped in 2019. The trend of government support for vineyard planted is depicted Figure 1.

Figure 1: Government support for vineyard plantation between 2007 and 2019



Source: Authors based on Albanian Rural Development Agency (ARDA) provided data

Table 0-2summarises regional distribution of government support for vineyard plantation. The regions most supported both in terms of projects and budget are Shkoder, Elbasan, Vlore, Gjirokastër, Lezha, Fier and Durrës. The regional distribution of government support does not follow the regional distribution of vineyard area (refer to **Error! Reference source not found.**) which may be considered as an indication for other than economic rationale of government support.

3.NATIONAL SUPPORT SCHEMES & PROGRAMMES

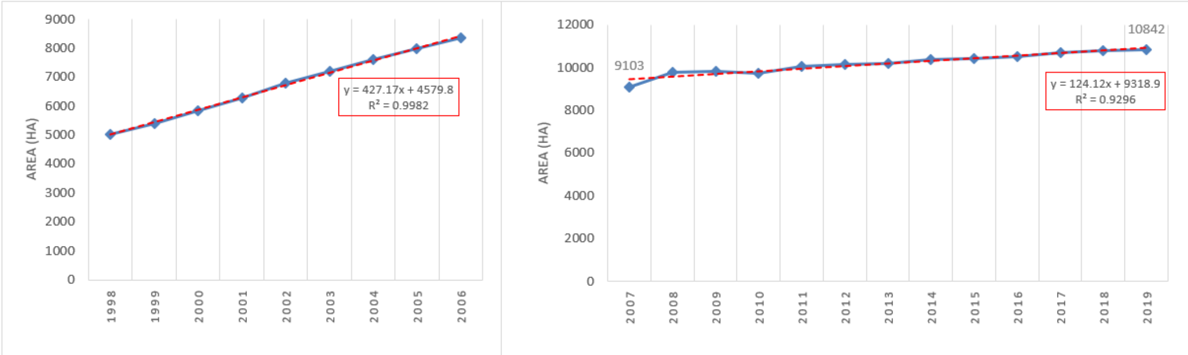
Table 0-2: Regional distribution of support for vineyard plantations (2007-2013)

Region	Funded projects	Area (ha)	Million ALL	Mln Euro
Shkoder	259	119	52.9	0.43
Elbasan	205	124	55.8	0.45
Vlore	203	154	66.2	0.54
Gjirokaster	195	145	67.2	0.55
Lezhe	178	103	50.4	0.41
Fier	175	185	38.4	0.31
Durres	171	220	30.8	0.25
Diber	154	69	31.1	0.25
Korce	124	61	26.7	0.22
Berat	98	58	23.6	0.19
Tirane	97	37	16.7	0.14
Kukes	87	55	26.3	0.21
Total 2007-2019	1,946	1,330	486	3.95

Source: Authors based on ARDA provided data

IMPACT OF NATIONAL SUPPORT SCHEME

The support to vineyard plantation does not seem to have generated any clear impact regarding expansion of vineyard area. The rate of yearly area increase before the support (1998 through 2006) was 3.5 times higher compared to rate of increase with the support (2007 through 2019) – The area yearly increase for the period before support (1998 through 2006) was 427.00 ha versus 124.00 ha for the period of support (2007 through 2019), **Error! Reference source not found.**. It suggests that financial support might be insufficient if not combined with other measures, including making land market operational – both sale and rental market.



Source: Authors based on INSTAT data

3.NATIONAL SUPPORT SCHEMES & PROGRAMMES

IPARD programme

The total IPARD support for grape and wine amounts to Euro 5.522 Million. Out of it, Euro 1.6 million or 28.9% is support to investment in primary production (Measure 1) and Euro 3.93 Million or 61.1% is support to wine producing industry (measure 3). There is no any investment for diversification (measure 7), Table 0-3.

Table 0-3: IPARD supported investment in Grape and wine sector

Grapes/wine	Measure 1	Measure 3	Both measures
Grapes	1,595,452.60		1,178,426
Winery		3,926,577.62	3,837,303
Total	*1,595,452.60*	*3,926,577.62*	*5,522,030.22*

Source: Authors based on data provide by ARDA

4.TRENDS AND PROSPECTS OF THE IDENTIFIED VINEYARD CULTIVATION

4.1 PRODUCTION TRENDS

4.1.1. Primary production

Albania has an old tradition in vineyard cultivation and wine making. After World War II, the area under plantation with vineyards increased drastically – from 2,430 Ha in 1950 to 12,320 Ha in 1970 and continued to expand until reaching the peak in 1980's with a total surface of 20,000 ha, organized in state-run cooperatives and farms. In the early 1990's, following the reforms, civil unrest and the abrupt dissolution of the cooperative-type system, the agricultural sector was severely damaged. The area of vineyards in Albania declined by about 75% between 1989 and 1994 as the complete collapse of the collective farming system caused a radical de-collectivization and fragmentation of Albanian agriculture. The productive performance of new vines planted in the first years of transition was characterized by several constraints such as small farm size and low efficiency in inputs use1.Since 2000, production of grapes has increased significantly – subsidies schemes in late 2000s gave a boost to increased cultivation and production. There was an attempt to promote the re-placing of old double-purpose (both processing and table/fresh consumption) cultivars with specialized ones.

Table 0-4: Investment during the period 2014 through 2017 **Source: Authors based on FEDInvest data (2018)**

Type of investment	1st inv %	2nd %	3rd %
Vineyard plantation	28.8	17.5	21.3
Agricultural equipment (tractor, other machinery, etc.)	23.8	3.8	8.8
Buy agricultural land	18.8	26.3	18.8
Buy livestock	18.8	17.5	13.8
Invest in agricultural buildings or	6.3	7.5	13.8

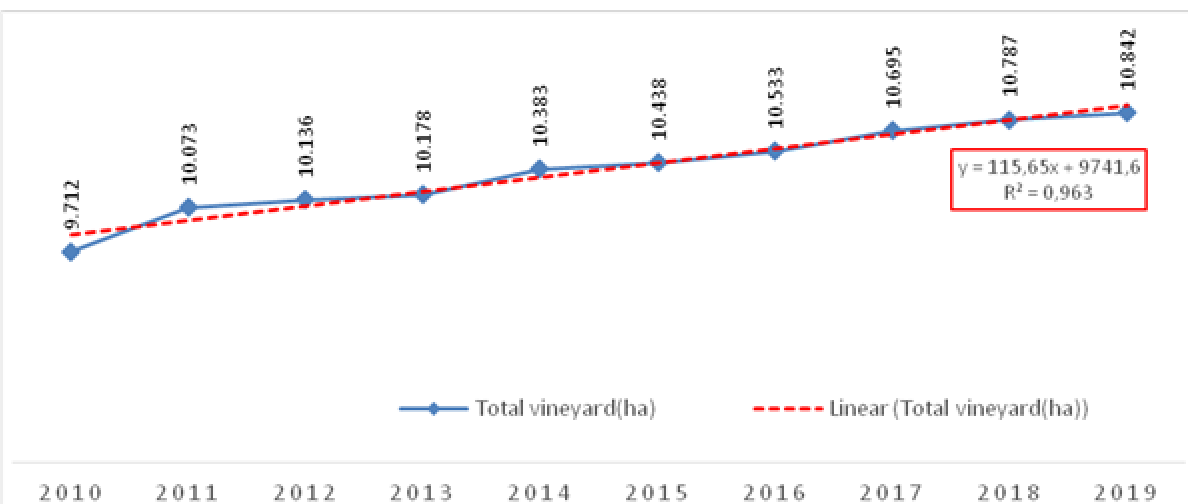
greenhouses			
House, apartment or building	2.5	20.0	8.8
Buy non-agricultural land	1.3	1.3	7.5
Non-agricultural private company	0.0	1.3	2.5
Other	0.0	5.0	5.0
Total	100.0	100.0	100.0

4.TRENDS AND PROSPECTS OF THE IDENTIFIED VINEYARD CULTIVATION

A recent conducted survey (Institute for Development and Research Alternatives (IDRA), 2020) also supports that the main type of investment conducted by farmers are vineyard plantations (mentioned by 47% of responding farmers with vineyard as important activity) and purchase of agricultural machinery (17% of responders). Investment in irrigation systems (17% of responders) and in storing facilities (11% of responders) are also important.

After 2000, Albania has experienced a growing trend of vineyards areas. During 2000ies, area under grape has been growing rapidly – it almost doubled. The growing trend in vineyard plantation continued in the last decade as well (Figure 2).

Figure 2: The trend of vineyard area in Albania for the period 2010-2019



Source: Authors based on INSTAT (2020)

From the Figure 2, one may observe that, during last decade the vineyard area has increased by 115 ha per year (refer to equation in the picture).

An important trend to note is the upstream integration of wineries – wineries investing in their own vineyard. The trend is clearer for wineries having strategically chosen to produce high quality wine.
According to field interviews with farmers and processors and the recent survey (IDRA 2020), the main types of investment planed are vineyard plantation, purchase of agricultural machineries, investment in irrigation systems and – for large armers – investment in anti-hail nets as well.
The main source of funding is farmers own money and quite often informal funding from relatives and friends.

4.TRENDS AND PROSPECTS OF THE IDENTIFIED VINEYARD CULTIVATION

4.1.2. Processing

Wine production in Albania is relatively small compared to other countries of the region. As we can see from Table 4 below, in 2014 Albania's production of wine was only 18 million litres, which is only around 35% of Macedonian production, and only 10% of Serbia production (the latest avail-able data back date to 2014).
FAOSTAT reports oscillating figures for wine production, based on estimates. The estimate is ca 30 million litres but that varies from year to year. According to previous studies/surveys, production of wine at farm level mounts to ca 10 million litres (production of rakia is higher and has been even higher in the past), while that from agroindustry ca 2 million2 (although very likely under-reported).
According to the customs, there were collected taxes for 1.5 million litres of (domestically pro-duced) wine during January – November 2017. A similar figure was reposted for the previous year. most wine produced in Albania is sold informally (almost all wine produced on farm, but also part of the wine produced/sold by professional wineries), therefore estimates from tax authorities do not provide an accurate understanding about the volume of wine production and sales.

4.1.3. Regionalization

The leading region in terms of grape, particularly vineyard grape production is the region of Fier, contributing to more than 20% of the total domestic production. other important producing regions are Berat, Elbasan and Vlora, which together with Fier make up about 59% of the total production. Berat, Permet (in the region of Gjirokaster) and Lezha are the most reputable areas for quality wines. Berat is one the most important region for wine production in Albania and home of one the largest cluster of wineries (22 processing units), including “luani”, one of the former large scale state wineries, which was privatised and “Çobo”, which has been the among the first Albanian win-eries to pursue a policy of quality linked to the territory. Permet is another area known for quality wines. lezha is an area with a few wineries, but which is closely associated to the grape variety “Kallmet” which has its core production are in this region and which is appreciated by Albanian consumers. other production clusters are located in Fier and Vlora and the area between Tirana and Durres. Overall, production of quality wine is small compared to the potential.

4.TRENDS AND PROSPECTS OF THE IDENTIFIED VINEYARD CULTIVATION

Table 3: Regional distribution of grape production

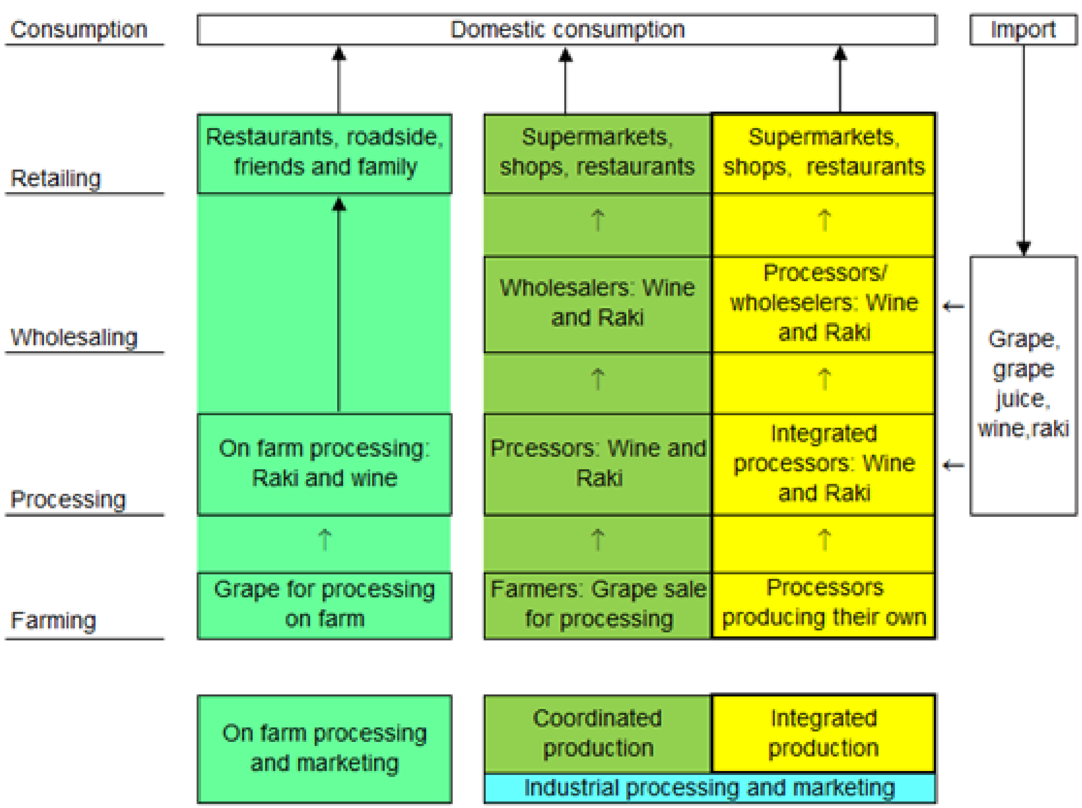
Source: INSTAT (2017)

DESCRIPTION (TON)	*VINEYARD GRAPE (TON)*	*PERGOLA (TON)*	*TOTAL*
Fier	33,835	9,471	43,306
Berat	17,104	16,165	33,269
Elbasan	13,888	10,146	24,034
Vlore	10,248	9,599	19,847
Tirane	9,365	7,267	16,632
Durres	11,730	3,967	15,697
Korce	8,334	3,945	12,279
Gjirokaster	6,297	5,632	11,929
Shkoder	5,067	5,606	10,673
Lezhe	3,784	3,309	7,093
Diber	1,862	3,606	5,468
Kukes	979	3,936	4,915
TOTAL	**122,493**	**82,649**	**205,142**

5.VALUE CHAIN OF WINE SECTOR

5.1 Value chain map

Error! Reference source not found. maps the wine value chain[4] actors and the main channels through which grape flows from farmers to end use consumer.



[4] As in Albania, the term "value chain" is commonly adopted to describe the structure of a sector and the relations between actors (which, by the way is the same definition used by Food and Agriculture Organization (FAO), in our studies we use the term *value chain* as synonymous of *commodity chain*.

The three main actors in the wine value chain are grape producing farmers, wine processing farmers and wine processors. The latter may be categorized into two groups - integrated processors and coordinated processors.

5.VALUE CHAIN OF WINE SECTOR

5.2 Potentials and needs of the sector/ Key sector trends

Most agriculture holdings in Albania are mixed and (semi)subsistence farm and most farms cultivate grape, both vineyards and pergola. That having said, slightly more than one in ten farmers (35,666 farmers out of 320,000 farms in Albania) have vineyards. Data suggest that there is slow but steady upward trend of investments in vineyard plantation.

In 2019 Albania produced 23,470 tons of wine. After a steep increase between 2000 and 2013 (wine production increase 5 times, from 7413 tons in 2000 to 38,000 tons in 2013), wine production dropped drastically to 23,300 tons in 2014 and remained almost stable till 2019. Though stagnation seems to be the trend in wine production, a more detailed analysis (based on field interviews) suggests an upward trend particularly for wineries producing high and medium quality wine, though they represent 10-15% of total winery number.

The prospect of positive trend in wine sector is also supported by still unmet domestic demand. Wine is considered an import substitution sector, with little chances of exports. The per wine per capita consumption in Albania (10.8 litre per capital in 2017) remain behind compared to Serbia, Montenegro and of course main EU countries. Given the change in Albanian consumers preferences (moving from strong drinks, such as rakia, to wine), and given the prospect of income increased, one may expect increased demand for domestic wine.

The domestic supply in Albania is clearly dominated by domestic production (the import to domestic supply 1/12). Still, imports remain significant - Albania imports regularly between 2000 and 2500 tons of wine per year.

Given the above trend, it is assessed that the wine sector in Albania sees slow but steady expansion for primary production and high and medium quality wine sector and stagnating for low quality wine as the sector dashboard below explains.

Sub-sector	**Expansion/contraction (**1-5 strong	**Consolidation**

	shrinking-strong expansion)					(1-5 stagnant-changing fast)				
	1	2	3	4	5	1	2	3	4	5
Primary production										
Wine processing – medium to high quality										
Wine processing – medium quality										
Wine processing – Table										

Figure 3: Wine sector key development trends during last five years and future expected trends

Source: Authors based on field interviews and expert assessment

Note: Pandemic impact has also been considered

5.VALUE CHAIN OF WINE SECTOR

Public support to wine sector has been significant, particularly from IPARD programme. The support provided to the sector from National Support Scheme for the period 2007 through 2019 amounts or ALL 486 Million (Euro 3.95 Mil; exchange rate 1 Euro=123 ALL), and the support from IPARD amounts to Euro 5.5 Million.

The number of commercial vineyard farmers is rather small. Farmers with vineyards larger than 0.50 ha is 2,656.00 with a corresponding vineyard area of 2,949.00 ha, the number of farms having more than 1 ha of vineyard is 708 with a corresponding vineyard area of 1306, and the number of larger farms having more than 2.00 ha of vineyard is 137, with corresponding vineyard area of 544.00 ha. There is an emergent (slow but steady) trend of vineyard size increase particularly from wine producing farms and from integrated wineries.

The main areas of grape production lie between the hills and the coast of central Albania. The leading region in terms of vineyard area is the Fier region, contributing with about 19.5% of total vineyard area. Other important producing regions are Elbasan, Vlora and Berat, which together with Fier make up more than half (54.4%) of total vineyard area. Similar pattern is observed in term of pergola trees. However, Shkodra (ranked second) and Lezha report high number of pergola trees.

The yield of vineyard averages 111 kv/ha; it varies immensely however among regions ranging from 62.4 kv per ha in Korça and 171.1 kv/ha in Fier. At municipality level, vineyard yield in Lushnja and Divjaka municipalities (Fier region) goes as high as 240 kv/ha. To the contrary, Tirana, Berat and Vlora municipalities have yield lower that 100 kv/ha - with 97 kv/ha for Tirana, 80 kv/ha for Berat and 70 kv/ha for Vlora. Country's average yield almost doubled (increased 1.9 times) between 1998 and 2014 (from 65.9 kv/ha to 125.2 kv/ha), and dropped significantly with from 2014 to 2019 (from 125.2 kv/ha to 111 kv/ha).

Both domestic (autochthonous) and imported wine cultivars are used for producing grape intended to wine. Most used domestic cultivars are Sheshi i Zi and Sheshi i Bardhë (between 50% and 60% of production), followed Kallmet, Vlosh, Cerruja, Pulsi, etc. Imported wine cultivars are Merlot (between 10% and 15% of production), Cabernet Sauvignon (10% of production), Chardonnay, Riesling, Petit Verdon, Shiraz, Vranac, etc. It is estimated that 70% of wine grape come from domestic cultivars and the remaining 30% from the imported wine cultivars. Though no winery has registered any PDO or PGI, there is a tendency from wineries producing high quality wine to prefer domestic varieties (Kallmet, Vlosh, Puls, Cerruja and others). Tourism, especially, foreign tourism has been a driving force to shift to local varieties as well as to widen the segment of higher quality, expensive local wines. This may also be considered as a promising trend for participating in quality schemes.

While the production of wine coming from the wineries producing medium and low-quality wine is the largest, there is a trend which is expected to result in expansion of production from wineries producing high quality wine. This is happing through investment of high-quality producing wine (both in vineyards and expansion of wine processing capacity) but also by upgrading of a significant number of wineries producing medium quality wine. Some of these wineries have started or have plans to invest in capacity extension, cellar construction and wine aging in wood barrels.

5.VALUE CHAIN OF WINE SECTOR

The above trend is supported by emerging preference for domestic wine because of improved quality of domestic wine and – as put by one winery operators – “while imported wines have familiarized Albanian consumers with high prices, the latest are now questioning the quality of imported wines”. On the other hand, demand is also expected to be affected by foreign tourist who prefer domestic wine.

There is a continuing trend toward vertical integration – wineries invest in vineyard. Many high quality and medium quality producing wineries have planted their own vineyard; and they have plans to enlarge the vineyard area. This is mainly due to a difficult relationship between of wineries with grape supplying farmers.

Participation in quality schemes is negligible. Only 5 ha of vineyard with e corresponding production of 7 tons in process of registration. Further there is not any wineries that have registered any PDO or PGI. That having said, field interview informs about plans from some wineries to convert to organic. On the other hand, the focus of domestic cultivars by wineries producing high quality wine support the potential for participating in the quality schemes.

The informality remains widespread in the wine sector. Many low-quality producing wineries and all farmers producing home wine are informal. They make an unfair competition for formal wineries through dumping the wine prices.

There is slow but steady increase in vineyard area and wine supply from wineries producing high and medium quality wine. Production technology and marketing know-how among the high-quality producers has improved significantly. The high and medium quality wine is expected to “gain terrain” against imported quality wine because of changes in preference of Albanian consumers (they have started to prefer quality domestic wine) and because foreign tourist prefer domestic wines.

Local consumption trends, as well growing tourism trends (exception should be highlighted for the COVID19 2020 and 2021 years) has driven and will continue to drive growing demand for wine, especially for high quality wine.

6. MARKET

6.1 International Market Trends

The EU is the world's leading producer of wine, representing 160 million hl or over 60 % of world production in 2016. Three member States (Italy, France and Spain) account for more than 80 % of the EU production. On the other hand, the EU is the largest consumer of EU wines (130 million hl), with five member States accounting for more than 70 % of this EU consumption (France, Italy, Spain, Germany and the UK). EU total wine consumption is expected to stabilize after a long period of decline. The EU is expected to maintain a steady growth in wine exports, thanks to strong demand for GI wines and sparkling wines. overall these developments will lead to a small decrease of EU production. In the EU-15 (EU old member states), per capita consumption decreased by 4 litres to 27 litres per capita - by contrast, wine consumption in the EU-New 13 member states has significantly increased over the last decade (+2 litres per capita, up to 14 litres) caused by the economic growth and substitution of beer by wine (similarly, in Albania, there is observed a trend of replacement of consumption of rakia with wine).The increase in average yield is not expected to offset the impact of the decline in area on production. As a result, production is projected to continue slightly declining, although with annual variability due to climate conditions.

Albania has no competitive advantages in exporting wine to EU countries or competitive advantages in exporting wine to countries in the region, at least at medium term. Albania has however huge opportunity to meet domestic demand which is quite high, as supported by low relative consumption (refer to apparent consumption below). Export to niche markets, such the Albanian diaspora may be considered.

6.2 Consumer demand and preferences

Consumption of wine has increased significantly since early transition due to increased income and market liberalization. However, the average per capita supply is still far below the European average, and lags behind the European, particularly the South European on average. one reason might be the fact that in parts of Albania, local (homemade, thus not reflected in official statistics) production and consumption of rakia has been traditionally the main alcoholic beverage4. Serbia has the highest consumption per capita of wine from Balkan countries, while Macedonia has the lowest consumption per capita.

It is common for Albanian consumers to buy wine and rakia directly from producers (farmers). The average Albanian consumer is accustomed to a traditional, farm-made wine. A new segment of demand, characterized by more globalised tastes and lifestyles is growing, in parallel with an af-fluent middle class of city inhabitants. At the same time, a slow process of qualification of demand is also on going, with increasing awareness for food safety and market segmentation in function of available budgets. Interestingly, it is common also in urban areas

6. MARKET

for households to produce their own rakia (using grape bought in the local market) and to lesser extent, production of wine. many produce their own rakia and wine, as a hobby, while, for others, the main reason is to ensure that the rakia they drink is produced purely from grape, and not spoiled. 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 is either important or very important when deciding to buy Albanian products. Natural conditions and genetic material (plants and breeds) can be perceived as being related to the origin of preferred regional products5. In the case of wine, the preference for local wine is not as dominant compared to imported wine (different from olive oil) – EU, especially Italian wines have a strong presence in the country. How-ever, according to a previous consumer study6, there is a potential niche markets for Albanian local wine, and there is identified a consumer groups that are willing to pay higher prices. Consumers have stated preference for wine from some regions such as Permet, Vlore and lezha, where there is also a tradition of grape production and processing. The majority of respondent's state that they are willing to pay a premium for the preferred origin7. Development of quality scheme, such as Geographical Indications (GI) represents a potential. There are autochthon varieties closely related to specific areas (eg. Serina in Korca, Vlosh in Vlora, Pules in Berat, Kallmet in Lezha). Such a relation between a specific cultivar and a specific geo-graphical area represents a potential for developing wine quality scheme, including GI but not limited to. Thus, development of GI would trigger new investments (eg. in new plantations and in improving processing and marketing capacities).

6.3 Production Technology Processes

The main pruning of grapevines is carried out in winter. In early spring, the Shoot Thinning follows, and after that, if required, Pinching back Shoot Tips. In vineyards, summer pruning - also called "green pruning" - has high labor intensity. However, for vigorous vines, as well as for high quality, it may be necessary. Another important operational expense is chemical treatments, spraying (4-8 sprays depending of zone and altitude). Integrated diseases and pest management should be applied to reduce the number of sprays with chemicals. Processes mechanization can reduce costs, but that is more viable for rather larger farms. Below are shown the monthly dynamics of production related processes which are reflected in expenditures (indicative scheme, because there may be variation depending on several factors,

6.MARKET

including location and variety). Depending on location and variety, harvest takes place from August to October.

7.COMPERATIVE WINEMAKING TECHNIQUES

The aim of the study was to investigate physic-chemical and sensory properties between red wines from black grapes (VitisviniferaL.) produced in different regions of Albania (Tirana, Durres, Berat, Korca). Albania belongs chronologically to the old world of wine producing countries. The ancient Roman writ-er Elder described Illyrian wine as being very sweet or luscious and refers to it as taking the third rank among all the wines [8]. Albania is a mountains Mediterrean . Favorable climate and fertile soil of the mountainous areas of the country are well suited to viticulture. The wine production is associated main-ly with countries of moderate climate with long, hot summers. However, the vineyards are located also in countries of cooler climate [10, 17]. The country can be separated into four wine regions, which are main-ly defined by their altitude: Western lowland that ris-es to 300 m (Tirana, Durresi, Shkodra, Lezha, Lushnja, Fier, Vlora, and Delvina); Central hilly region which varies between 300 and 600 m altitude (Elbasan, Kruje, Gramsh, Berat, Permet, Librazhd, and Mirdita); Eastern sub-mountainous region which lies between 600 and 800 m (Pogradec, Korca, Leskovic, and Peshkopi); and (4) Mountains wines are also grown as high as 1,000 m

Many factors such as: variety, soil, climate, grow-ing conditions and winemaking techniques influence the fruit composition and therefore, the style of wine that can be produced. Varieties from the Vinifera group are most widely used for winemaking. Approximately 5,000 types' of varieties are recognized, but only fifteen types of grape-varieties are able to produce excellent wines (Cabernet sauvignon, Merlot, Pinot noir). Wine is an alcoholic beverage produced through the partial or total fermentation of grapes. Fermentation processes are done by the yeast Saccharomyces, whereby the sugars in the fruit juice are metabolized into alcohol and dioxide carbon, that later react to form organic acid, aldehydes, esters and other chemical components [1, 3]. Wine is characterized by the following colors: white, rose and red. Wine can be classified by human experts or by physicochemical laboratory experiments. Physicochemical and sensory analyses of wine are import-ant in establishing their quality and authenticity. Evaluation prevents illegal adulteration and assures quality for the wine market [18]. The aim of the study was to investigate physicochemical and sensory properties between red wines from black grapes (Vitis vinifera L.) produced in different regions of Albania (Tirana, Durres, Berat, Korca, and Librazhd).

Red wines from black grapes (Vitis vinifera L.) available in Albanian market were characterized for physico-chemical and sensory properties produced in different regions of Albania (Tirana, Durres, Berat, and Korca). Following red wines were purchased: No. 1 -

Cabernet Souvignon from Librazhd; No. 2 - Merlot from Korca; No. 3 - Shesh i zi from Durres; No. 4 - Mixed varieties Cabernet Souvignon, Shesh i Zi and Merlot from Berat; and No. 5 - Mixed varieties

7.COMPERATIVE WINEMAKING TECHNIQUES

Merlot and Cabernet Sauvignon from Tirana. We started wine analysis with the sensory properties like color, taste and aroma. Color intensity and hue of wines were calculated using optical methods. Physically, the color is a light characteristic, measurable in terms of intensity

and wavelength. The intensity and hue of color in tested red wines were determined spectrophotmetrically by measuring the absorbance at: 420, 520 and 620 nm [11]. Polyphenol index was determined by measuring the absorbance at 280 nm [12]. For spectrophotometric measurements, spectrophotometer UV-2100C was used. Then different physicochemical parameters for each wine were determined: dry matter, ash, density, total acidity, and volatile acidity, alcohol content, reduced sugars, free and total SO2, pH, and polyphenol index following the analytical methods described in Albanian standard. Tests were performed in triplicate for each sample. For the determination of the density, the psychometric method was used. For this purpose, pyrometers with a volume of 50 mL and an analytical balance with an accuracy of 0.0001 g were used. Based on the determination of the density of wine and distillate, the extract was determined (g/L). Ash content of wines was determined by gravimetric method. Con-tent of alcohol in wine was determined by SSH 1446-1:1987 method [19]. The pH measurement of red wine was obtained with a pH meter (PHS-3CW microprocessor pH meter) was calibrated with standard solutions buffered. Total and free acidity were determined by analytical methods according to, SSH 1446-3:1987 [21], and SSH 1446-4:1987 [22]. All titrated acids in the wine are the sum of compounds treatable by standard alkaline solution to pH 7. Carbonic acid is not included in total acidity. The amount of acetic acid in wine, which at too high of levels can lead to an unpleasant, vinegar taste. Sweetness of the wine is determined by the amount of residual sugar in the wine after fermentation, relative to the acidity present in the wine. Con-centration of reduced sugars was determined with Fe-hling method SSH 1446-2:1987 [20]. Free and total SO2were determined by titration of the standard solution of iodine, SSH 1446-7:1987 [23], and SSH 1446-6:1987 [24] respectively. Free form of SO2 prevents microbial growth and the oxidation of wine.

The physicochemical and sensory parameters of red wines can be influenced by the plant's environment, different areas, varieties, viticulture and enological practices and can be used as a way of characterizing the wine quality. - Wines produced in different regions of Albania (Tira-na, Durres, Berat, Korca, and Librazhd) were in accordance with the limits recommended by the national law of the Albanian Republic and the European Union law. The red wines differed in dry matter, ash, alcohol content, total acidity, volatile acidity, fixed acidity, reduced sugars, free and total Sulphur dioxide, pH and polyphenol index, due to differences in the wine-ma-ing processes and by the use of different grape varieties for wine production. - Based on the results we noted that all the samples can be consumed without affecting the health.

8.CASE STUDY KORCA REGION

FIGURE 2. LESKOVIK VINEYARD, KORCA REGION

Stretching in the sub-mountainous areas, the Korca region has very favorable conditions, geographical position with a variety of climates and microclimates and land reliefs, sunlight, abundant rainfall in autumn and winter that create sufficient water reserves, have made viticulture since time immemorial early to be an important agricultural activity in our region. Viticulture development is considered as an important branch of agricultural development in the future, because it is considered a profitable business and the investments made are repaid in a period of 7-9 years. Compared to some other agricultural crops, the incomes created per unit of agricultural area, especially in hilly and mountainous areas, are several times higher. The development of viticulture and related products, including wine production, is one of the fastest and most sustainable ways to increase the level of employment and income not only for rural households but also economy as a whole. Also, the development of this activity affects the alleviation of poverty and the reduction of the phenomenon of migration of the population of rural areas.

8.CASE STUDY KORCA REGION

The development of the wine production industry aims to complement the consumer taste with local products, and as such this industry takes into account the vineyards, local producers (wineries and factories), packaging providers and local traders. Meanwhile, the importers of these products from the Balkan region undoubtedly remain a very important factor in this market. This product occupies a modest share of household expenses but which increases from year to year as a result of increasing the economic level and improving the food diet. The competition of imported products is quite fierce as good wine offers the possibility of price liberalization which translates into quality wine price paid by the consumer. Meeting the standards of production and product hygiene, product certification, conditions for increasing food safety, storage and trade according to all norms of the European community are some of the issues that are worrying the entrepreneur of the Korca region. The new investments that will be made in this sector need to be based on real data on the situation of the sector in macro and micro levels as well as free trade agreements in the region. Also, the level of wine consumption per year per capita is higher in the countries of the European continent, with an average per capita of about 40 liters per year. For the countries of the Balkan region, especially for the countries of the Western Balkans and especially for the Korca Region, in addition to other shortcomings, from the few data that are published, it is clear that the level of wine consumption per capita is very low. The current area planted with vineyards in the Korca Region is small compared to other crops. Until the 90s, the area of viticulture has increased significantly, reaching up to 1109 ha. Major changes after 90 were also accompanied by land fragmentation and massive damage to viticulture. Since 1995, the planting of new vineyards in the conditions of small family farms has begun and in recent years this area is growing from year to year. The current varietal structure of the vineyards is considered inappropriate. About 90 percent of the vineyards are planted with grape varieties for wine production, of which 60 percent for red wines and 40 percent for white wines while demand from industry and consumers is very high for wine varieties. red. The increase of areas with vineyards has resulted in the increase of grape production, but anyway since domestic production is not enough, domestic consumer demand has been met by imports of raw materials, grapes and wines.

Vineyard area and production by municipalities

Municipalities	Total (Ha)	Vineyards in production (Ha)	Produce (Ton)

Korçë	362	351	1,586
Maliq	168	166	861
Pustec	66	66	524
Pogradec	280	255	1,500
Kolonjë	125	122	670
Devoll	109	107	380
Total	1,109	1,067	5,521

8.CASE STUDY KORCA REGION

Korca region has 1067 ha with vineyards and 282 ha with pergolas. Total grape production reaches 9700 tons with an average yield of 51.8 kv / ha. Viticulture areas, grape production and yield of grape production have increased from year to year. However, the area planted with vineyards is the lowest that our region has had in the last 40 years. Before the year 90 in the Korca Region there was a larger area with vineyards than today, which shows that there are all the technical possibilities and professional experience to increase the areas planted with viticulture. In addition to increasing domestic wine production, a good part of it can be provided by imports. For the climate of the Korca Region and the tradition of viticulture cultivation that the farmers of this region have had, the orientation of investments in this sector is important for these reasons:

-The initial investment does not represent a high cost, compared to the initial investment other crops.

-The coefficient of timely return of the initial investment is low, so the investment returns very quickly.

-Employment in this sector is more stable than in some other sectors and cultures.

The increase of the area with viticulture will create new opportunities for entering the market with the production of industrialized wine, the increase of exports of viticulture products and by-products. Supporting farmers in typical grape production areas, especially varieties used for wine production, will affect not only their employment, but also the increase of employment in rural areas but also the increase of income of families of them and the economy as a whole. The increase of areas with viticulture will create new opportunities for entering the market with the production of industrialized wine. Today in the region of Korca there is a tendency for the creation of wine production canteens but in the last 10-15 years, quality wine is still not appearing in the market comparable to those coming from the global market and especially from Italy, Spain and France.

Local producers get the raw material for grapes from three main sources:

a) Own farms which are increasing from year to year (with slow growth)

b) Farms in the region where they work;

c) Macedonia and Kosovo.

In the Korca Region, several wineries have been set up, but the stability of the wine quality has been variable, as a considerable part of the raw material they use is imported from different countries and consequently the technical specifications are different. Few wineries in the Korca region have their own vineyards and those that do do not manage to fully use their production capacities. They are forced to buy raw materials from third parties. This story has been repeated for about the last 15 years, despite some improvements that have been undertaken in this regard. In these conditions and especially due to the lack of quality, the Wine Market in Albania, at least during the next 10 years, is thought to be still dominated to a considerable extent by imported wines.

8.CASE STUDY KORCA REGION

In the Korca region there are no regular statistics regarding the types of wines produced in the country and especially regarding their consumption. The lack of statistics complicates the concrete analysis regarding the segmentation of the wine market in the country. However, from the sporadic data of wine producers, licensed wineries aim to produce good quality wine, combining in a profitable balance the price with its quality, and this market segment is growing, which is explained by the increase in domestic consumer demand. for good quality wines. However, the market segment of good quality wine and high price is dominated by imported wine, while domestic wine dominates the market segment of poor quality and low price. The key is to increase consumer confidence and awareness of the quality of wines in our region.

REFERENCES

1. "Facilitation of the exchange through advice on harmonized wine regulations in all Western Balkan Countries" -Report of National expert for Albania, March 2019
2. Evaluation of the CAP measures applicable to the wine sector, EU Commission.
3. AAFS / Wine sector study
4. Study of physic-chemical and sensory properties of red wines from black grapes (vitis vinifera l.) In different areas of Albania.
5. Carrying out selected sectoral analysis as a solid ground for the preparation of IPARD III programme and of Strategy for Agriculture, Rural Development and Fishery 2021-2027 (Wine Sector Study Report).