Agricultural value chain in Imereti and Racha regions

Vinery-Wine-making

1. Introduction

The present research was carried out by the Czech University of Life Sciences Prague (Faculty of Tropical AgriSciences) in collaboration with People in Need and the Association of Young Economists of Georgia from July 2013 to June 2014. This study is a part of regional value chain analysis for the main products of agricultural sector in the Imereti region.

The goal of this analysis is to provide background information and baseline data for subsequent implementation stages of the project Enhancing Small Farmers' Cooperation and Productivity in Imereti Region financed in the framework of European Neighborhood Programme for Agriculture and Rural Development in Georgia (ENPARD Georgia)- Small Farmers Co-operation component.

This research would not have been possible without funding from the ENPARD Georgia and Czech Development Agency project "Support for Cooperatives in Imereti, Georgia".

2. Research methodology

The research team followed an approach that allowed handling several issues concurrently. Data collection was organized and methods selected in order to assess specific issues from different angles supported by a triangulation of qualitative and quantitative methods. After the identification of the 8 local products with the highest development potential (based on local expert and government officials interviews), we carried out a more detailed survey thematically focused around each selected product. For Vinery-Wine production value chain analysis following districts were covered:

- Zestaponi
- Terjola
- Bagdadi
- Ambrolauri

The field data focused on agricultural product in the Imereti Region was collected at following stages:

March to June 2014 - gathering field data for main products

July 2014 – April 2015- finalization of reports

For the analysis mainly qualitative research based on key-informants and group of farmers is used, which is designed to reveal a target group's range of behavior and the perceptions that drive it with reference to specific topics or issues. As a main qualitative research method is used method of semi-structured in-depth interview. Interviews were conducted with small number of key informants who must have first-hand knowledge about examined issue. Each interview took from 1.5 to 2 hours. Diversity of key informants was important to cover whole value chain from suppliers to the local market. It means to identify and interview different-sized farmers (from small subsistence to commercials), collectors, middlemen, processors, sellers on a local market, exporters, together with agro-shops selling seeds or seedlings and different kinds of tools, technology, pesticides, herbicides, fertilizers or other inputs.

Main field data collection instruments for vinery-wine included (special distribution is visualized in Figure 1):

- Focus group discussions with farmers engaged in viticulture and/or viniculture
- Interviews with vine growers and wine producers
- Interviews and observations of input suppliers
- Vinery-wine market screening

Figure 1. Information Gathering Point Mapping

However, it should be taken into consideration that qualitative research is only part of the project that generally reflects the most widespread information. The secondary quantitative and qualitative data is based on the unity of consolidated researches including official statistical data.

But still, it is necessary to bear in mind, that the qualitative research is only partially representative and captures mainly general and the most frequent information. The secondary quantitative and qualitative data relies heavily on an examination of existing, accumulated research, combining official government data with studies conducted by international organizations such as FAO,EU, etc.

Due to the lack of agricultural activity in Racha region, National Statistical Bureau of Georgia does not publish any specific data regarding the agricultural sector.

3. Viticulture & viniculture as a key sector of Georgian agriculture

Georgia has an 8,000 year history of history of 8 000 years of continuous wine making tradition, which is evidenced numerous archaeological discoveries. Georgians have shared the love for the grape the time immemorial and remains loyal to it through to modernity. Numerous displays related to wine making practices dating to millennia have been kept in Georgian museums.

Georgia's diverse natural conditions create the best environment for the development of high quality viticulture-winemaking according to the peculiarities of which the country's territory is divided into the following viticulture zones and micro-zones:

- Kakheti. Sub-zones: Shida Kakheti, Gare Kakheti;
- Kartli. Sub-zones: Kvemo, Shida and Zemo Kartli;
- Meskheti;
- Imereti. Sub-zones: Upper Imereti, Middle Imereti, Lower Imereti;
- Racha . Subzones: Racha;
- Black Sea Coastal zone. Subzones: Adjara, Guria, Samegrlo, Abkhazeti.

Imereti is one of the most diverse regions of Georgian wine making, climatic conditions and soil composition are very different, and so the wines are also different every. The varieties spread in Imereti are: Tsolikauri, Thiska, Krakhuna, Kvishkhuri, Dondghlabi, Bazaleturi, Kundza, Tklapa, Otskhanuri Sapere, Argvetuli Sapere, Rko, Adanasuri, Bzvanura, Black Dondghlabi, Dzelshavi, Aladasturi, Vani Chkhaveri, etc. Traditional winemaking here as well as in other regions is linked with qvevri, which is called Churi in Imereti. Unlike Kakhetian traditional wine here less must is added to chacha. After fermentation, the wine is left in Churi for about 2 months, and then removed the pulp, transfer to the barrels and process. The wine of Imeretian type has beautiful yellow color, full, quite harmonious and cheerful. Imereti is famous for Sviri Krakhuna, Obchuri Tsolikouri and Kvalituri Tsitska. The place of origin wines – Sviri should be noted among them, in which three sorts of grapes - Tsitska, Tsolikouri and Krakhuna are used.

Racha is distinguished other regions by scarcity of vineyards and rare grape varieties. The most widespread varieties are Tsulukidze Tetra and Tsolikouri, Aleksandrouli, Mudjuretuli, Rachuli Dzelshavi, Usakhelauri and Orbeluri. Racha encompasses the bigger section of Ambrolauri district. The vineyards here are grown mostly on the slopes of River Rioni gorge. The lower Racha is renowned for Khvanchkara micro-zone. Among the most notable wines in this region are Usakhelouri and the place of origin-named wines are Khvanchkara and Tvishi. Tvishi micro-zone climate provides high sugar content and acidity in Imeretian grape variety Tsolikouri, and exactly this micro-zone Tsolikouri is made naturally semi-sweet white wine Tvishi.

Presently, there are about 4,000 grape varieties known in the world, 525 of which are Georgian. The list of most common wines and relevant grape varieties and color for the target regions are as followings[1]:

[1] National Wine Agency, http://georgianwine.gov.ge/eng

Table 1. Wines and grapes varieties in Imereti Region

Wine name	Grape Variety	Color
Sviri	Tsitskaa, Tsolikouri,Kraxuna	White
Tsitska	Tsitska	White
Tsolikouri	Tsolikouri	White
Kraxuna	Kraxuna	White
Otskananuri Safere	Otskananuri Safere	Red

Table 2. Wines and grapes varieties in Imereti Region

Wine name	Grape Variety	Color
Khvanchkara	Aleqsandrouli, Mujuretuli	Red
Aleqsandrouli	Aleqsandrouli	Red
Mujuretuli	Mujuretuli	Red
Dzelshavi	Dzelshavi	Red
Tetra	Wulukidzis Tetra	White

Since 2000 the world's grape production has gone up somewhat. It is not a great increase, from 64.8 million tons to 69.1 million tons in 2012, in other words a 7% increase over 12 years, with an average of 66,4 million tones.

Table 3[2].

World Grape Production, million tones													
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Avarage
64.8	61.1	61.5	63.1	68.1	67.4	67.0	65.5	67.4	68.2	68.8	71.4	69.1	66.4

There has been a dramatic change in where in the world these grapes are grown though: in 2000 62.5% of all the world's grapes came from Europe, in 2012 that number has shrunk to 39% of the world's grapes. The big increases have been in Asia and in the Americas.

Table. 4. Continental evolution grapes production as % of global production 2000- 2012 [3]

	2000	2012
Europe	62.5%	39%
Aisa	19.4%	31.2%
America	12%	21%
Africa	4.3%	6.3%
Oceania	2%	2.7%

The top list of grape producing countries in 2012 is as followings: China, Italy, USA, Spain, France, Turkey, Chile, Argentina, India and Iran.

[2] World's grape production 200-2012; BKWine Magazine; http://www.bkwine.com

[3] World's grape production 200-2012; BKWine Magazine; http://www.bkwine.com

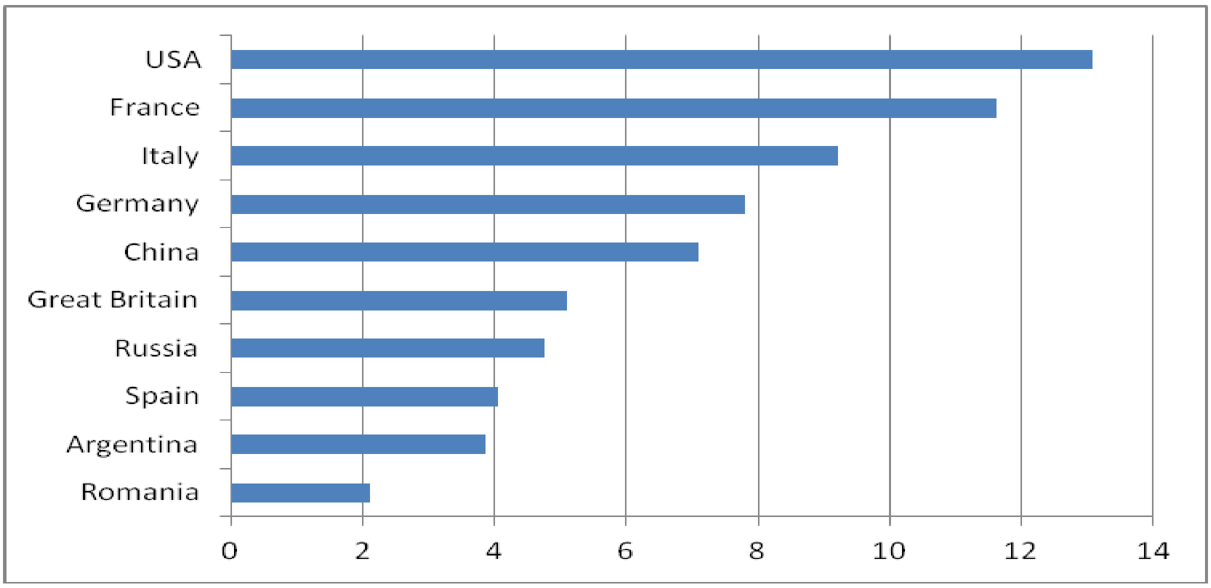
Among wine producing courtiers Italy and France keep leading position. In 2012, out of global wine production (25 721 000 tones) 15.9% and 15.8% relevantly came on mentioned countries. It also should be mentioned that in this rating Georgia is on 26th place with its 95 000 tone produced wine and share of 0.37% in global production. Generally, global wine production is slightly diminishing. In 2012 wine production was reduced by 6.3% in comparison of 2009. During the same period greatest drop in production took place in following courtiers: Romania (-39.5%); Hungary (-41.4%); Cyprus (-45.5%); Czech Republic (-22.6%), etc. It should be emphasized that in majority of EU courtiers wine production has been decreased.

Wine consumption is another important indicator for sector analysis. In 2012 the number one wine consuming country was USA (13% of global consumption); next is France with its share of 11.62%. Georgia, despite its low number of population has quite high level of wine consumption and the country accounts for 0.3% of global wine consumption and takes 40th position in the world rating.

Table 5 . Wine production by countries, thousand liters [4]

2012 RTG	Countries	2009	2010	2011	2012	% in Global Production 2012	% Change 2012/2009
1	Italy	4731400	4852500	4277200	4082900	15.87%	-13.71%
2	France	4626900	447000	4977800	4047700	15.74%	-12.52%
3	Spain	3609300	3536300	3339700	3150000	12.25%	-12.73%
5	China	960000	1089000	1156900	1381600	5.37%	43.92%
11	Russia	550000	540000	635000	620000	2.41%	12.73%
18	Ukraine	220000	200000	225000	215000	0.84%	-2.27%
26	**Georgia**	**85000**	**80000**	**90000**	**95000**	**0.37%**	**11.76%**
	World	27449200	26662800	26965300	25721000	100%	-6.30%

Diagram 1. Top ten wine consuming courtiers (% share in Global Consumption)[5]

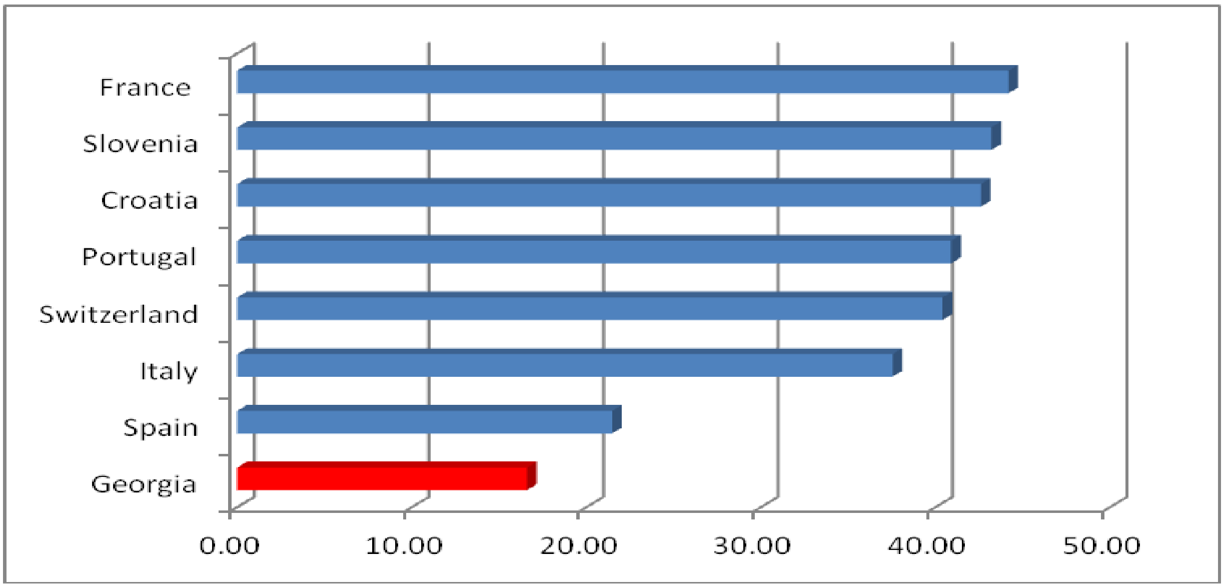


[4]Wine Intitute, World Statistics, http://www.wineinstitute.org/resources/statistics

[5] Wine Intitute, World Statistics, http://www.wineinstitute.org/resources/statistics

As for wine consumption per capita, the structure of top countries is a little bit different. The average global consumption per capita during 2009-2012 was 3.5 liters. The most active consumers of wine live in such courtiers as: France; Slovenia; Croatia; Macedonia; Portugal, etc. In these countries during 2009-2012 average per capita wine consumption was highest and accounted for 43liters. The same indicator for Georgia was 16.5 liters of wine.

Diagram 2. Wine consumption, per capita (liters, 2012)[6]



Hereby, it also should be mentioned that wine consumption per capita is being increasing the countries Georgia exports wine in.

Table 6. Per capita wine consumption trend for the countries Georgia exports wine in [7]

	2009	2010	2011	2012	% Change 2012/2009
Russia	7.34	8.42	8.42	8.59	17.0%
Belorus	5.67	6.15	6.01	6.62	16.8%
Ukraine	3.8	3.81	5.44	4.61	21.3%
Kazakhstan	1.69	1.77	1.91	2.04	20.9%

The vineyards area and quality is directly determining the potential of the country to produce the grapes and wine. The third part of the world's vineyards comes on three countries: Spain, France and Italy. Global area of vineyard is 7,009,726 hectares. During latest years, following countries had greatest increase in vineyard area: Israel (+40%); India (+39%); Peru (+25%) and Argentina (+23%).

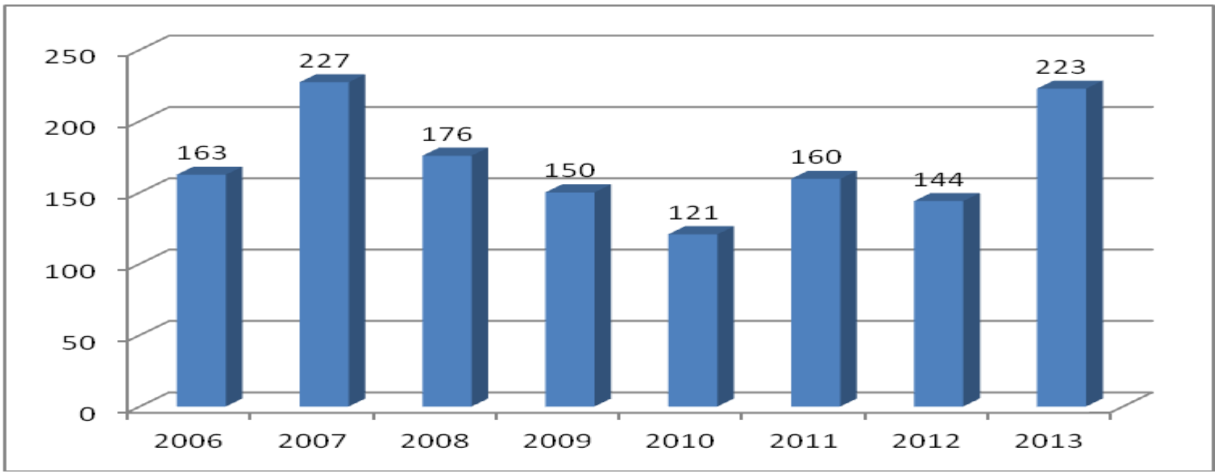
Georgia accounts for 0.8% of total world's vineyards. According to 2004 census, total vineyard area was 48 thousand hectares. In 1960 the same indicator was 77.9 thousand hectares, in 1970- 66.8 thousand hectare; and in 1984 – 87.9 thousand hectares. This data has not been officially updated so far. By 2014, According to Georgian Ministry of agriculture tentative areas of the vineyards in

[6] Wine Intitute, World Statistics, http://www.wineinstitute.org/resources/statistics
[7] Wine Intitute, World Statistics, http://www.wineinstitute.org/resources/statistics

Imereti region is 20 000 hectares and in Racha – 570 hectares.

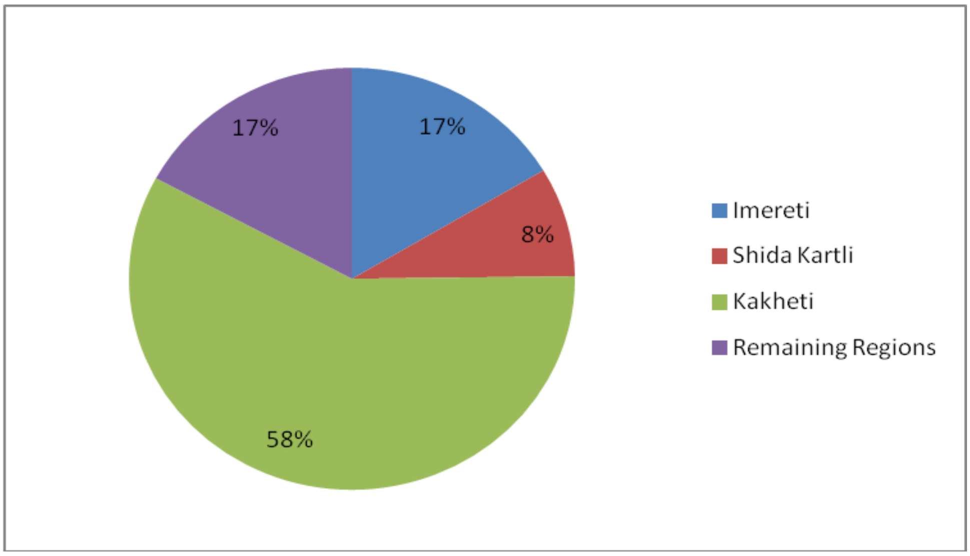
According to 2004 census data, 68% out of total 48 thousand hectares of vineyard comes of eastern part of Georgia – Kakheti, whereas in western Georgia lead Imereti with its 18% of share; Kartli region has 9% and remaining 5% comes on other parts of the country.

Diagram3. Grapes production in Georgia, Ths. Tones[8]**.**



In 2013, grapes production share in GPD was up to 1.4%. The greatest harvest of grapes – 227 Ths. tones was received in 2007. During next years diminishing trend was observed. Grapes harvest has started increasing since 2011 and by 2013 almost reached the 2007's volume. Hereby it also should be mentioned, that in 2013 36.2 Ths tones of grapes was produced in Imereti region, which is 17% of total countries production.

Diagram 4. Grape production by regions, 2013 [9]

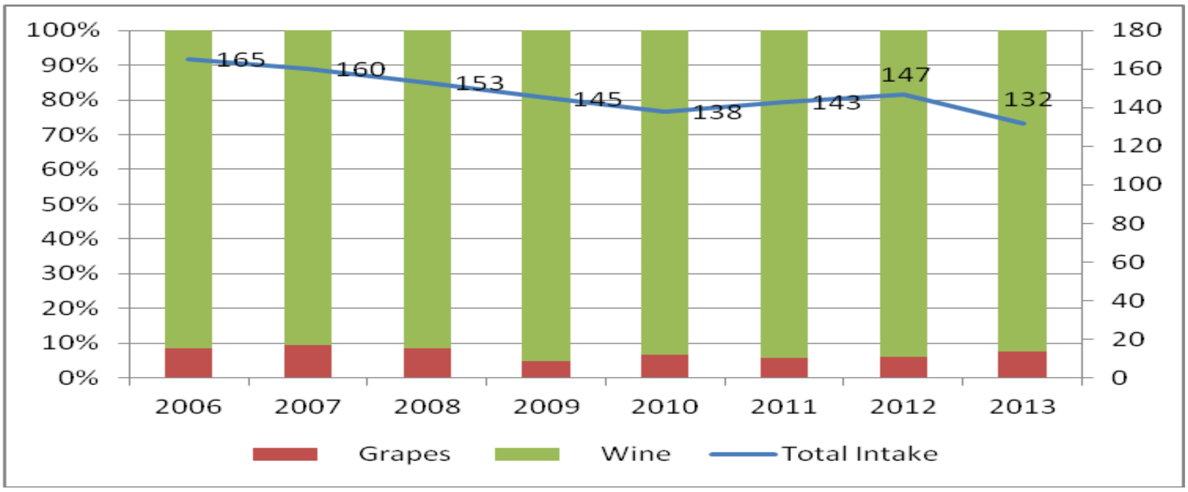


According to Geostat data, in 2013 Grapes' intake in Georgia was132 Ths tones, out of which 8%

[8] National Statistics office of Georgia, http://geostat.ge/
[9] National Statistics office of Georgia, http://geostat.ge/

comes on direct grape consumption and remaining 92% in form of wine. The highest intake indicator was declared in 2006 with 165 Ths tones of grapes, Self-sufficiency ratio reached 130% in 2013.

Diagram 5. Grape's intake in Georgia, tons[10]



The viticulture products in Georgia are used for the following four processing directions:

- Table grape production;
- Raisin grape production;
- Production of various types of wine, brandy and champagne;
- Production of Canned products such as: grape juice, jam, compote, marinade, mash and other soft drinks

On these terms, production of wine represents main and key direction for Georgian producers. In addition, Wine is a major agricultural export good in the country. Georgian wine became popular many centuries ago, though mainly it was oriented on the Russian and Soviet Union market. The 2006 embargo on exporting wines to Russia significantly changed its export geography. At the first stage, the embargo impeded further development of this sector. However, it forced wine producers to find alternative, more stable markets that were retained after the re-opening of the Russian market in 2013.

In 2012 Georgian wine was exported to 43 countries with volume of 23 million bottles. Among main exporting destinations were Ukraine, Kazakhstan, Belarus, China and Poland. Leading export market was Ukraine with 43.3% share in total export. Ukraine was followed by Kazakhstan with 18.9% and Belarus with 6.9% share in total export11.

In 2013 Georgian wine was exported to 46 countries with volume of 46.8 million bottles. Russia has reopened its market to Georgian wine exporters and became the leading export destination. New top five export markets were: Russia, Ukraine, Kazakhstan, Belarus and Poland.

As for 2014, National Wine Agency reports wine export to 21 countries with volume of 3 476 935 million bottles (0.75 lt) in April. In total for January-April 2014, Georgian wine was exported to 26

[10] National Statistics office of Georgia, http://geostat.ge/

[11] National Wine Agency, http://georgianwine.gov.ge/geo/

countries with volume of 18 965 119 million bottles, which exceeds data for the same period in 2013 by 180%. Main 5 export markets were: Russia, Ukraine, Kazakhstan, Poland and Latvia, where Russia leads by 70% share in total export. For April 2014, 13 313 742 (0.75 lt) bottles of wine were exported to Russia. By export volumes China and Lithuania were on 6th and 7th places.

In April 2014, total exported wine had value of 62 173 917 USD, which exceeds data for the same period in 2013 by 215%.

4 Viticulture & viniculture value chain

4.1 Production systems

Tentative areas of the vineyards in Imereti region is 20 000 hectares and in Racha – 570 hectares. In both regions rural households are run grape and wine production following traditions. Each family farm has 200-1000 grape vines, the harvested yield of which is mostly used for personal consumption. At the same time, about 40% of the yield is sold on the market in the form of grapes or wine.

Picture 1. Vineyard in Spring

It requires a lot of labor to care for grape vine trees. The soil is to be prepared 60-70 cm deep and each spring it is necessary to prune vines and treat soil between rows annually by hand or using special equipment. Family farms usually treat soil by hand or mini motto-block, whilst agribusinesses own middle-scale tractors (the so-called vineyard tractors) or rent them from mechanization centers, though some respondents reported a shortage of such tractors in mechanization centers.

A grape vine requires constant care from blossom until harvest that includes the performing of the so-called 3-4 “green operations” (pruning, fixing it to sticks or wire), 3-5 fertilizations and other works. Grapes are harvested in September-October (it depends on grape variety). Households use traditional methods to make wines. Traditional wine production here, like in other regions, means that wine is made in churi (clay vessels). Unstemmed pressed grapes are added to pomace unlike Kakhetian wines. Once fermentation is completed, wine is stored in clay vessels for about two months, transferred to barrels, and is processed. The Imereti-type wine has a beautiful yellow color, is harmonious, expressive and flamboyant. Imereti is known for Sviruli Khakhuna, Obchuri Tsolikauri, and Kvalitauri Tsitska. As a rule, family farms do not bottle or label wines, they sell wine in bulk through direct deals. They use traditional method while producing the wine, which means keeping the wine in “Kvevri”, also called “Chur” in Imereti region.

In addition to family farms, there are 7-8 wineries in the region (e.g. Winery Khareba in Terjola, Family Wine Cellar in Baghdati, Winery GWS, Winery Bugeuli, Winery Khvanchkara in Ambrolauri) that produce different wines from local grape varieties. Some of them own vineyards but these grapes are not sufficient for their production and they buy them from family farms. The wine produced is stored in 750ml glass bottles and sold both on local and international markets.

The grape vines may be harvested within 4-5 years after being planted and reaches its full productivity in 10 years that continues for 40-45 years. Around 1000-1500 GEL is required per annum for grape care per 1 ha excluding labor costs. Lime and blue vitriol are the most common substances used for this purpose. Recently, farmers have started to use a bio fertilizer *Organic* and some other chemical fertilizers.

The most frequently used machinery by family farms is a hand mini tractor, whilst middle- and large-scale farms plant grape vines in a way that allows them to use high capacity and large-sized tractors.

In family farms, family members themselves are engaged in farming and they do not use hired labor. Middle-and large-scale farms mainly use hired labor to perform different operations. Research of farms located in the Imereti and Racha regions revealed that daily remuneration for the above labor is 20 GEL per day.

4.2 Productivity

Productivity in Viticulture & Viniculture Sector is to be measured in terms of different aspects and quantitative data. Hereby, it also should be mentioned, that for those grapes' varieties which require unique micro climate and relevantly give limited harvest, economic efficiency is much more high and hence retail price of wine also very expensive.

In the context of quantitative indicators of productivity following issues are measured: yield per hectare of vineyard; grapes harvested from one grape vine tree and quantity of wine produced from 1kg of grapes

Generally, productivity for grapes production depends a lot on grape variety itself, also proper care and natural climate conditions existing in a specific geographical location.

The conducted research revealed following meanings for above mentioned indicators: average productivity of grapes spread in the Imereti and Racha regions per rootstock is 2-3 kg, whilst wine production is about 45-55%. At the same time yield indicators for certain year is different and high affected by grape variety and weather conditions.

Yield per hectare is very different by grape varieties. This parameter for most spread grapes is as followings: Alexnadriuli – 5.5-6 tones; Tsitska – 8-10 tones; Tsolikouri – 10-12 Tones.

Below the most common grape varieties in the Imeret and Racha regions that are also used to make popular wines, are outlined.

White Grape Varieties/Wines:

Tsolikouri

The leading white grape of western Georgia, Tsolikouri originates in Kolkheti (ancient Colchis, the land of the Golden Fleece). The origins of its name remain debated and uncertain. The vine has medium-sized, conical bunches, which may have wings, and is of average density. The round, yellow-green berry itself is relatively thick-skinned, and thus is resistant to the primary fungal diseases, making it suitable for the more humid climate in western Georgia. It is not, however, frost resistant. A late bloomer (late May) and generous yielder, Tsolikouri matures in the mid-season, usually in the middle of October. Most Tsolikouri plantings are in Imereti and Guria, but it is also planted in Racha , Samegrelo, and Adjara.)

Tsitska

Grown throughout upper and central Imereti, Tsitska means "variety with small grapes the village of Tsitske or Tstiskiuri." (Iv. Javakhishvili). By current standards, however, the grape is of medium size, with thick skins. The medium-sized, generally conical bunches tend to be compact and dense. Budburst is generally mid-April, with ripening at the beginning of October. The vine has moderate vigor but with high yields. It is rather susceptible to oidium and plasmopara viticola, the pathogen of downy mildew.

When vinified to dryness, Tsitska wines suggest yellow fruits such as quince, melon, and pear, sometimes with a honeyed note. Tsitska may be blended with Tsolikouri, and sometimes Krakhuna, for PDO Sviri and other dry table wines. Tsitska grapes with 19.0-21% sugar content and 7-9g/l total acidity are regarded as best for table wine. But when cultivated for its naturally high acidity to range 9-12 g/l at harvest, it also is vinified for sparkling wine. Tsitska represented six percent of all grapes planted in Georgia in 2004, or 2839 hectares.

Krakhuna

Meaning "crispy" in a local Imeretian dialect, Krakhuna is indigenous to Imereti in western Georgia. It mostly is grown in the central part of the province, around Sviri, Obcha and Dimi. Its bunches are of medium size, dense and conical, with thin-skinned berries. Depending on the meteorological conditions of its site, Krakhuna tends to bud mid-season, and ripens later (late September in Imereti). It grows well on various types of soils, produces moderate to high yields, and accumulates sugar easily while retaining its acidity. It can be a challenge to grow, given the relatively humid climate in the West and the grape's thin skin. Thus, it is particularly susceptible to disease, especially oidium. For vitis vinifera, Krakhuna is relatively resistant to downy mildew. It may be blended with Tsolikouri and Tsitska for the Gelati blend. Whether Krakhuna is fermented either in the European and traditional Georgian manner, it offers notes of intensely ripe banana and apricots, with honeyed tones. Produced in qvevri, Krakhuna wines are deep amber, with chalky tannins, stone fruit flavors with tropical notes and a slight herbal tinge. With its considerable flavor profile and broad structure, Krakhuna wines have the potential to develop in bottle. Georgians also serve Krakhuna as a table grape. There 36 were hectares in production as of 2004.

RED GRAPES

Aleksandrouli

The indigenous "vine of Alexander," Aleksandrouli has been nurtured for a long time in the mountainous hillsides of Racha in western Georgia. Long thought to be a completely distinct variety Mujuretuli, they are now known to be separate varieties with a common ancestor. The most notable plantings of Aleksandrouli are in the Ambrolauri, Oni and Tsageri districts on the Rioni River, which tumbles down the Caucasus Mountains into the Black Sea. Though it could grow any in the country, is drought-resistant and can grow well on many different types of soils, until recently it was rarely seen out of Racha . Ketskhoveli et al., noted that it produces particularly high-quality wine on sunny, south- and southwestern-facing vineyards with stony and calcareous soils, such as those on the right bank of the Rioni in lower Racha, most famously in the PDO Khvanchkara, but also in Tola, Bostana, Chorjo, Chrebalo, Joshkhi, and Sadmeli. They note, too, that Aleksandrouli also does comparatively well on heavy clay soils.

Aleksandrouli's conical bunches can range medium to large in size, typically with no shoulders, with average density. The grape berry is round, of average size, and dark blue in color. Naturally low yielding, Aleksandrouli is typically cane-pruned with one fruiting cane. It can grow up to 800 meters above sea level, and, as fitting for a mountainous variety, frost-resistant. The berries are quite susceptible to downy mildew but resistant to powdery. Budburst occurs in the first three weeks of April with harvest in the first half of October. The juice will have sugar levels of 22-27% and total acidity between 5-7g/l. The exact harvest time will depend on the ultimate style of wine intended.

Aleksandrouli historic fame enanates its partnership with Mujuretuli in producing the distinctive, naturally semi-sweet Khvanchkara. Whether fermented for dry or semi-sweet wines, Aleksandrouli is typically blended with Mujuretuli, but sometimes with Ojaleshi or Usakhelouri. Its flavor profile usually includes red berries, cherries and mulberries ("tuta"). As a dry wine Kartli, tobacco, pepper and meaty flavors adds complexity to the fruit; its chewy character and supple tannins suggest considerable potential to improve in bottle. Aleksandrouli grapes the high-altitude zones of Ambrolauri and Tsageri also can be fine table grapes.
161 hectares of Aleksandrouli were reported in 2004, mostly in the Ambrolauri district of Racha (152ha.)

Mujuretuli

Literally, " Mujureti," Mujuretuli is, with Aleksandrouli, best known as forming the other half of the cult partnership that is Khvanchkara. Recent research shows them to be two distinct varieties with a common ancestor; Maghradze hypothesizes that Mujuretuli originated in Racha with Alexsandrouli as a variation. Like its relative, it is largely cultivated along the Rioni River in western Georgia, in the Ambrolauri and Tsageri districts.

Monovarietal plantings of Mujuretuli are rare; it is mostly interplanted with Aleksandrouli in limestone and carbonate rocky soils.

A relatively vigorous vine, Mujuretuli's conical, winged bunches are of medium size and can be quite loose. The medium-sized berry is dark blue and oval, and can be rather long. Budburst is mid-April with maturity in early October. Mujuretuli is highly susceptible to downy mildew and sensitive to powdery mildew; like Aleksandrouli, it is both frost and drought resistant. There were 58 hectares of Mujuretuli reported in 2004, all in the Ambrolauri district of Racha .

Usakhelouri

Literally, the "grape with no name," Usakhelouri is indigenous to western Georgia. It is also known with the name Okureshuli. Some of the vine's characteristics – very small berries, unequal berry size, uneven ripening, have led some to theorize that the vine is botanically and genetically similar to the wild vines of the area. Usakhelouri vines in Imereti were largely grubbed up in the late Soviet period.

Usakhelouri produces best on loamy, calcareous hillsides such as those in Racha . The leaves typically have three distinct lobes. Bunches are medium-sized and dense, more cylindrical than conical, occasionally winged. Berries are round and black but with a bloom that imparts a violet tinge. It buds early (in Racha , in the first ten days of April) and ripens relatively late (in the end of September). The grape skin is thin and detaches easily the flesh, but is highly susceptible to fungal diseases. ver it is planted, it can accumulate high sugars easily and retain high acidity.

Usakhelouri currently is produced both in qvevri and in neutral open-top containers, with no new wood maturation. The latter method generates a vibrant, high-toned nose of lilacs, violets, mint and pepper; the palate is similarly high-toned and peppery with very high acidity, light tannins and sometimes a feral note. There were 57 hectares planted as of 2004, of which 49 hectares were in the Gurjaani district of southwest Kakheti and 8 in the Tsageri district of Racha . All are family holdings.

Otskhanuri Sapere

Another grape with the same linguistic root, but genetically distinct Saperavi, Otskhanuri Sapere is linked to Otskhana, a village in western Georgia hence meaning "Otskhana's colorful." Considered to be one of the oldest Georgian varieties, Otskhanuri Sapere grows only in the western part of the country, mostly in Racha and Imereti.

Otskhanuri Sapere has medium size leaves with three or five lobes; the teeth are triangular with sharp tips. Its medium-sized bunches are cylindrical-conical, composed of various-sized small and medium round berries. The berries themselves are dark blue. Budburst occurs in mid-April, with ripening in early October. It is susceptible to millerandage, hence uneven ripening and a problem with shot berries, or "hens and chicks." It has average resistance toward most fungal diseases but is comparatively resistant toward grey rot (Botrytis cinerea), allowing it to remain on the vine even if it is a humid and rainy autumn – an advantage in western Georgia's humid climate.

Otskhanuri Sapere wines are of an intense ruby color, and a distinctive flavor profile. Firmly structured and tannic, with high acidity, when young it exhibits bright flavors of cherries, forest fruits, plums and herbs. Grippy and toothsome when young, the wines peak after 10-15 years of aging, but can age for an additional 20-30 years. There were but 5 hectares in production reported in 2004, all family holdings in Imereti.

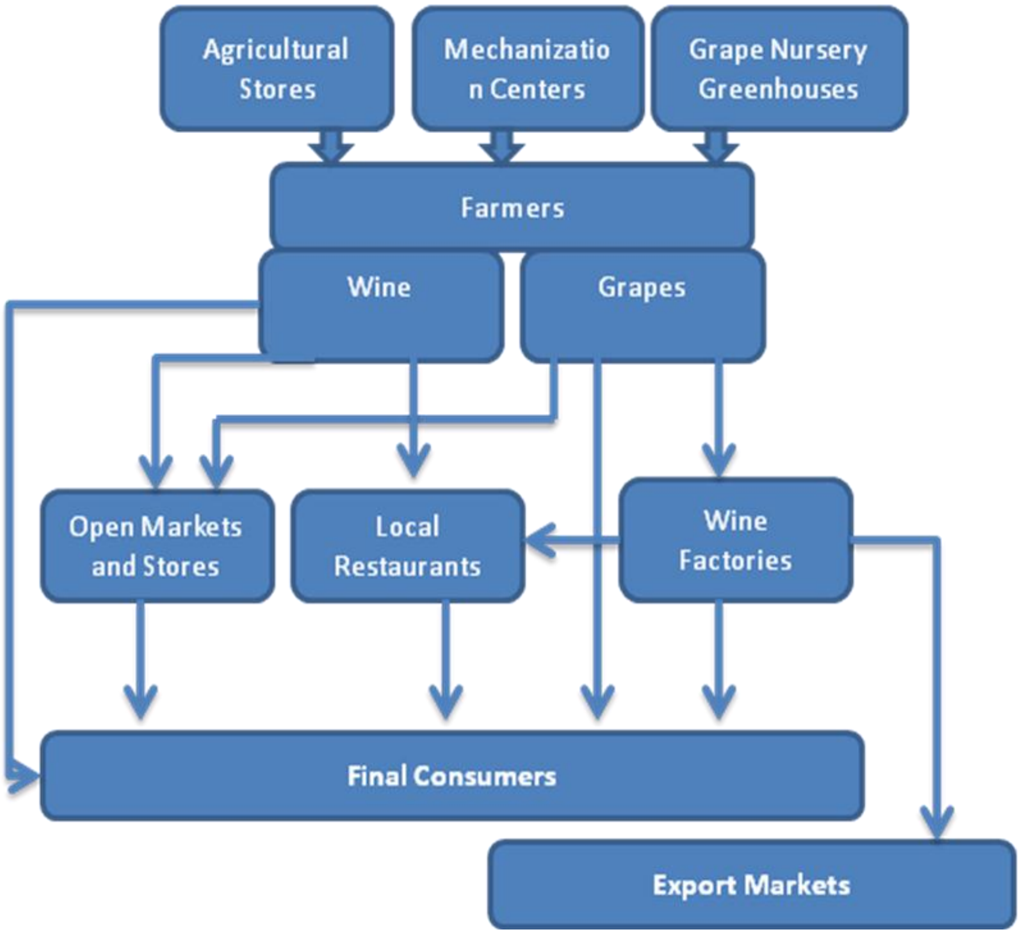
4.3 Value chain typical for Imereti and Racha regions

In the Imereti and Racha regions, family farms usually have 200-1000 grape vines. Most of the harvested grapes (about 70%) are processed in family farms, whilst the rest are sold for consumption. Almost all grape varieties with higher prices, such as Aleksandreuli and Mujureuli, are bought by wineries; as for less expensive grapes like Tsitska, Tsolikauri and others, they are mainly bought by private persons who make wine for personal consumption. In this case, grapes are sold through personal contacts and relations. They are bought by residents of nearby cities from direct producers.

About 50% of wine made by grape producers is used for personal consumption, the rest is intended for sale through personal contacts. There are only a few family farms in the Imereti and Racha regions that bottle and label the produced wine using very basic technology. The majority of family farms store and sell on-site in bulk (100-300 liters per deal) to direct consumers. The situation is different in the case of wineries. The majority of them have automated production lines that are able to produce high quality wines if supplied with quality grapes as well as grape vodka as an additional product.

As a rule, large wineries have their own stores where people can taste wine. They bottle their wines in different sized containers, the most widespread being glass and plastic ones. The more expensive wine is stored in glass bottles and is mainly intended for export; the less expensive wine is stored in 3, 5 and 10-liter plastic containers and sold on the local market. The plastic containers are cheaper and wine stored in these containers is sold at a lower price. However, local wine lovers consume this wine to a lesser extent and prefer the wine produced in family farms. The main exporters from the Imereti and Racha regions are Winery Khareba, Winery GVS, Winery Bugeuli and Winery Khvanchkara.

Scheme 1. Vinery and Wine value chain map for Imereti and Racha region



4.4 Product prices

Prices on grapes and wine are extremely diversified, depending on season and grapes varieties. Also, there is big gap between the similar type wine prices produced by family holding and winery factories. In addition, the yield received in certain year (which is resulted by weather conditions) also directly affects the prices.

Grape prices

The freak weather conditions of the 2014 year, which included a spring frost, hailstorms and a drought, greatly affected the vineyards of Racha region. Not only that, the growers were beset with problems of grapevine diseases and sparrow attacks in fall, causing a drastic reduction in yields in both regions. Indeed, the growers still benefited from the vintage, as they were able to sell their rare grape varieties of Aleksandrouli, Mujuretuli and Usakhelouri, for a record breaking price. The growers from Racha region expected the prices of Aleksandrouli and Mujuretuli to be 10-12 Gel. In the end, the market price for these varietals was set at 8 Gel per kilogram. Still, it has not left the growers discontent since the prices of Aleksandrouli and Mujuretuli have hit a new high – 8 Gel per kilogram in the history of this national currency. Even during the Soviet time, these varietals didn't cost this much and even before Russia placed an embargo on wine and other alcoholic drinks from Georgia (in 2006), the companies had not paid for Aleksandrouli and Mujuretuli grapes more than 4-5 Gel per kilogram.

The price of Usakhelouri, which is one of the most expensive and rare grape varieties, was set to soar to a record high in 2014. The growers from Okureshi were able to sell Usakhelouri grapes, grown in their vineyards, for 14-15 Gel per kilogram. Obviously, prices have been forced up by a drastic reduction in yields. Last year, for instance, Usakhelouri grape cost only 10 Gel per kilogram.

Not that much, but the prices for Imeretian grape varieties have also increased in 2014. Still, the yield is so low and the demand – so high that the price of Tsolikouri grapes, for example, ranges from 1,20 to 1,50Gel per kilogram, Tsitska's avarge proice was 1.5 GEL. Relatively rare varieties, such as Krakhuna, cost even more – 2Gel per kilogram. The prices per kilogram of these varieties last year was as followings: Tsolikouri – 1 GEL; Tsitska – 1,10Gel and Krakhuna - 1,40Gel.

Wine Prices

The price of bulk wine produced by households varies seasonally. in August-September it is 50-70 % higher than in December-January. This is caused by the fact that in autumn the market is flooded with wines whilst when their stocks become less, the prices increase. The price difference between wines is caused by their quality and taste. Most expensive wines are Usakhelouri and Khvanchkara.

Table 7. Average prices for wine produced by family farms, 2014

Wine Name	Price per liter, GEL
Tsitska	4-5 GEL
Tsolikouri	4-5 GEL
Tsitska-Tsolikouri	5 GEL
Kraxuna	6 GEL
Khvanchkara	20-25 GEL
Usaxelouri	30 GEL
Otskananuri	13-15 GEL

Seasonality is not an issue for prices set by wine factories and it is much higher then the prices set by family farms. In addition, the wines produced by these factories are bottles and labeled properly. These wines carry brand name. In addition, it also should be mentioned that majority of bottled wines are intended for export purposes. The information on export prices by certain wine types /producers are not available. Though, according to official unified statistical data, in 2013 Georgia exported 35.91 million liters of wine with total cost of 129.51 million USD. Hence, we can conclude that average price per liter of exported wine was 3.6 USD. Hereby, it also should be emphasized that this is an average price, whereas the export prices of high class wines starts from 15 USD and goes much higher.

Wine factories target local market as well. They do produce and keep in cellars expensive wines types to be sold on Georgian Market. Thought these wines are more intended for niche markets, which includes very limited number of buyers. These types of wines are mainly bought as a present for foreign guests. One of the most expensive Georgian wine available on local market is Usakhelouri, 1 bottle of which costs 150-170GEL (bottled in 2007). The prices of Khvanchkara is also relatively high – price of one bottle varies from 45 to 70 GEL depending on the year and producer.

The retail prices on wines in winery stores and large supermarkets vary a little depending on production year and producing factory. The average retail prices for the wines produced by the factors from the grape varieties spread in Imereti and Racha regions are as followings:

Table 8. Retail prices for the wines produced by winery factories

Wine Name	Average price per Bottle (0.75ML)
Tsitska	21 GEL
Tsolikouri	17 GEL
Tvishi (Tsitska-Tsolikouri)	18 GEL
Kraxuna	21 GEL
Khvanchkara	44 GEL
Usaxelouri	83 GEL
Otskananuri	30 GEL

Comparing the retail prices for the same type of wine produced by household and winery factory, the difference is huge. It is mainly resulted due to number of issues: householders do not pay and taxes, they do not use any modern technology and systems, also in majority of cases families do not bottle or label the wine. At the same time, due to same reasons.

Table 9. Comparison of wine prices by producers - households and factories

Wine Name	Household's average price per 0,75L	Winery Factory's average price per 0,75L	% difference in price
Tsitska	3.8	21	**560%**
Tsolikouri	3.8	17	**453%**
Tsitska-Tsolikouri	3.8	18	**480%**
Kraxuna	4.5	21	**467%**
Khvanchkara	18.8	44	**235%**
Usaxelouri	22.5	83	**369%**
Otskananuri	11.3	30	**267%**

5 Competitiveness diamond – input conditions, demand conditions, related industries, context

5.1 Input conditions

Picture 2. Georgian Traditional winepress

The following key recourses are necessary for production of grapes, namely:

Grape Vine Supplies. The grape vines are bred in greenhouse nurseries where they are grafted. The rootstocks are usually bought in Kakheti, and then they are grafted to the bud of a certain grape variety and sold for 2-2.5 GEL. In addition, In Tvishi (Lechkhumi – outside targeted region) there is a rootstock nursery where it is possible to buy certified high quality rootstock at 7-8 GEL per rootstock. The price is relatively high as they are imported from US and Europe but grape vines produced from them are more resistant and require less fertilization.

Disease Control Means. The most common diseases in the case of grape vines are powdery mildew and worms. that should be prevented by using special chemicals. In these cases, certain farmers use a traditional method that is known as the Bordo Mix (that is made from a mixture of copper sulfate and slaked lim) which is ecologically clean but some farmers are dissatisfied with the quality of copper available at the market and they often use different chemical fertilizers that better protect plants from diseases, though they are not ecologically clean. A total of 1200 GEL worth of chemicals are necessary per ha of vineyard; a similar cost in terms of labor resources for fertilization and the so-called green operations is also required.

The common chemicals used for this purpose are mainly of foreign origin and they may be purchased at farmer shops of any city and settlement at approximately identical price.

Other production tools. The family farms usually use a traditional winepress to make wine that may be found in almost all families as well as handcrafted mechanical and electronic press. The juice made is poured in “qvevri” (churi) where it is fermented and transferred to metal, glass or plastic barrels for 1.5-2 months.

There are several agricultural stores in each region where it is possible to buy equipment and tools necessary for viticulture. The mid-size producers4 that bottle wine use simple printing equipment that simultaneously serves 2-3 bottles. This equipment costs 3,000 GEL or more. Large wineries own automated production lines that ensure meeting modern requirements in wine production.

5.2 Demand

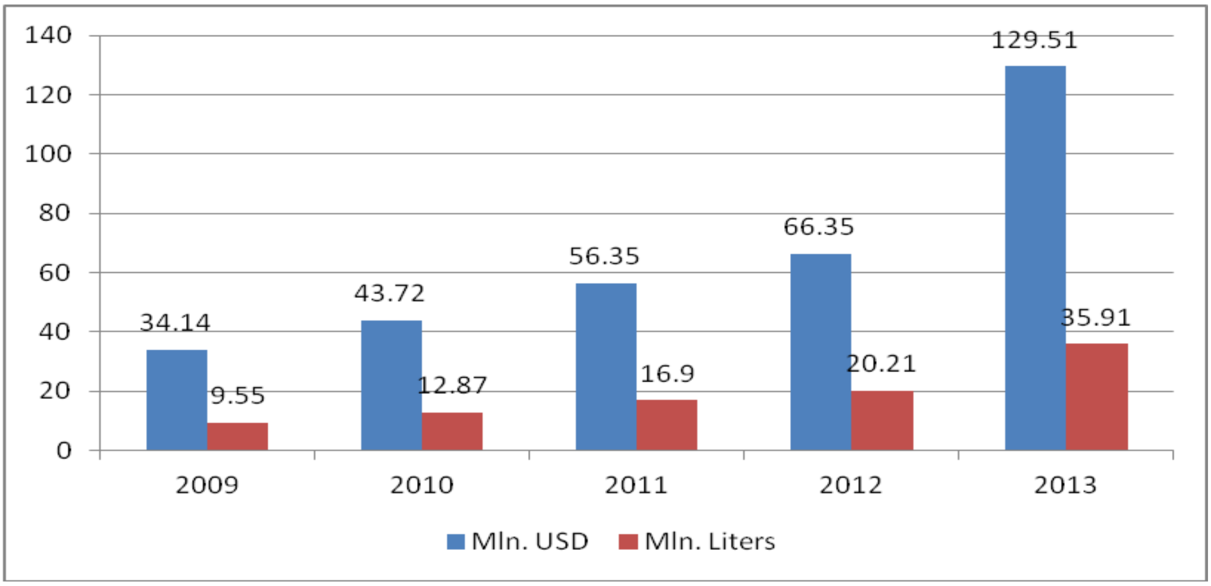
Wine is inseparable part of Georgian culture, traditions and being. Wine is the product one can find in almost every Georgian family. Wine consumption is quite high and in many of cases even families living in urban areas do their best to buy the grapes and produce wine by themselves.

Demand on wine is also very high in Restaurants and bars. They offer customers wide range of wines - produced as by family holdings, also winery factories; Some of traditional restaurants also produce their own branded wines. Supermarket chains and specialized wine stores also have big choice of wine varieties. Large wine factories run their own branded wine stores in large cities.

Local population either buy the grapes and produce wine or buy the wine from the family holding based on personal contacts. During last period winery factories also started producing bulk wine targeted on local markets. As mentioned above, the demand on bottled wine is low on local market. Based on expert assessment, only 15-20% of produced bottled wine is sold on Georgian market, whereas remaining part is intent for export.

Generally, Georgian wine possesses exceptional export potential. Official trade data demonstrates that export indicators (in quantity and in USD) and the number of courtiers are increasing. It's obvious, that the diversified export markets create certain guarantees for the producers. 2006 Russian embargo was the good lesson on this.

Diagram 6. Export data for Georgian Wine[12]



According National Wine Agency data, in 2013 Georgian wine was exported to 46 countries with volume of 59 067 337 bottles, which exceeds data for the same period in 2013 by 26%. Top five export markets were: Russia, Ukraine, Kazakhstan, Belarus and Poland, where Russia leads by 70% share in total export. In the list of top ten countries there also are: China, Latvia, Estonia and Germany.

It is notably that the demand on Georgian wine is increasing in number of countries. According to official data significant improvements in wine export took place for following countries: China (34%); Japan (32%); Germany (23%); Poland (22%); Kazakhstan (21%); Latvia (18%) and Belarus (13%).

Approximately 76 000 tones of wine was consumed in Georgia, in 2013. It should be mentioned that during previous years annual consumption per capita was relatively similar with average 16.5 liters.

[12] National Statistics office of Georgia, http://geostat.ge/

Presumably the market size will not be increased through consumption, but in case of proper economic development of the Country, the demand on wines with higher quality and hence with higher prices will go up.

5.2 Related industries

Vinery & wine making sector has a great possibility for diversification, which is only partially implemented as by the family farms also by winery factories. As usually farmers, always produce the Vodka along with wine.

Vodka Production. Vodka is an additional product in wine production that is made after grapes are crushed from grape pomace and mash is left over after fermentation by distillation in special equipment. Vodka has high alcohol content, about 60-65 percent. Its productivity depends on grape variety and sugar content. From grape varieties cultivated in Imereti region such as Tsitska and

Tsolikauri, 60-70 tons of vodka is produced from 1 ton of grapes after wine is made. Almost all family farms produce vodka for personal consumption; according to experts, only 10% of the produced vodka is intended forsale. The family farms sell distilled draft vodka that is sometimes called chacha on-site or at nearby markets.

Its sale price is about 5 GEL per liter. The prices change during the year similar to those of wines. The family farms make brandy from vodka by placing it into oak barrels and ageing for several years. Similar to vodka, its importance on the market is low.

Picture 3 . Wine cellar in Household

Wineries located in the Imereti and Racha regions also produce grape vodka and brandy (for example, Winery Khareba), though its share does not exceed 5% of their total sales.

Table Grapes. Some family farms as well as larger farms in the region are engaged in the production of table grapes. The table grapes are planted in the form of pavilions and therefore they are planted at a distance of 3m x 1.5m. For this purpose, the high-productivity seedless American grape variety is used to produce about 80-90 kg of high-quality grapes per grape vine plant. The table grapes are sold at 2-4 GEL. The lowest price is in autumn when grapes are harvested and increases as stocks decrease.

Grape Juice. Several producers in the region make grape juice for which a press and unstemming equipment is used. Then, it is fermented in reservoirs, cooled in special refrigerators, properly filtered and bottled. Its volume, and therefore its share in sales, is not high.

Grapes' seed oil. Grapes' seed gives oil, which contains high number of various biologically active substances and is widely used as in culinary also in cosmetology. In Georgia this type of oil is not popular so far. But at the same time this product have a great potential for export. In target regions just one company - winery "khareba" is producing seed oil. The retail price of 250gr bottle is 17.80 GEL. Seed oil is also available in winery stores. Producing oil from the grapes' seeds may become important source of additional income for the farmer living in Imereti and Racha regions.

Wine tourism. Unlike kakheti, wine tourism in not developed in Imereti and Racha regions at all. If one considers that these regions by themselves are quite attractive in terms of tourism in general, wine tourism may become one of the most important sectors for diversification for local farmers. The main attractions for wine tourism are wineries, vineyards and historical and cultural destinations. Hence, whole agriculture and service sectors will benefit from developing wine tourism in the regions. Hereby it also should be motioned, that without sound governmental support, this sector has very low chances for development.

5.4 Competition

In the Imereti and Racha regions vineyards do not produce many grapes so it is not a big deal for farers to sell grapes and wine. Both family farms and wineries are able to sell almost all harvested yield and produced wine prior to a new harvest. Therefore, the competition between producers is not that high.

In the Racha region, competition between wineries that buy grapes from farmers is high only in cases of rare and high-priced grape varieities such as Aleksandreuli and Mujureuli. As a result, in 2013 the above grape varieties were sold at 7-8 GEL per kg compared to 4-5 GEL in previous years.

There is no competition between wine procuring factories and family farms. Despite in majority of cases they produce wines with similar name, their target markets are absolutely different and accordingly the product visual and price is also different.

Competition in the international markets is relatively high, where Georgia's competitors are France, Italy, Spain, Australia and Chile. However, if Georgian products are well positioned and maintain good quality, they find a proper place in the market due to their unique taste.

6 Strategic productivity and quality

6.1 Grape and wine production - food safety and quality

The Law of Georgia on Vine and Wine regulates economic activities of physical and legal persons engaged in viticulture and viniculture including production, sale, storage, transportation, export and import of products of grape origin. The goal of the law is to provide support to the development of viticulture and viniculture as a priority economic sector, production and sale of competitive grapes, wine, and other alcoholic beverages of grape origin, and protection of consumer market from counterfeited and low-quality products. The law imposes full cycle regulations for grape and wine-related production from seedling production to sale of products at local and international markets.

The law determines a regulatory body that is a legal person of public law – the Georgian Wine

National Agency - that operates under the supervision of the Georgian Ministry of Agriculture.

The agency is responsible for maintaining control over activities carried out in viticulture and viniculture sector and in cases of violation of the relevant Georgian legislation and other normative acts, to implement actions as defined by the Georgian legislation. It supervises production and planting of rootstocks, engrafted seedlings and scion-rooted seedlings. The National Wine Agency determines and maintains an information database of areas of vineyards, circulation of products and stocks existing at wineries.

6.2 Phyosanitary, hygiene and quality requirements for export products

In accordance with Georgian Law on Vine and Wine, it is mandatory to certify local wines with denominations of origin. Certification of table and other wines as well as strong alcoholic beverages' is voluntary. In this case, it is sufficient to submit a declaration of conformity (on the basis of a report produced by accreditated testing laboratory). Wine degustation is mandatory for local wines with denominations of origin that are intended for export to issue a certificate of conformity; for other wines, it is voluntary and is carried out by a permanent degustation commission of the agency as and when requested. The testing laboratories are accredited by the Unified National Accreditation Body - Accreditation Center. The exporter is required to notify the agency on the consignment of certified wine intended for export three days prior to export and the agency makes a decision to take a sample for referral laboratory examination. The agency has a right to take additional samples from the relevant certified consignment no later than three days after notification and submission to a testing laboratory to compare them with samples submitted by the exporter. It is prohibited to export or sell wines from this certified consignment before expiration of this period.

The winery factories that export their products strictly follow above mentioned procedures and norms, whereas the family farms which sell their products only on local markets, operate beyond any regulation. In addition, customers also do not require from them any quality control system or related documentation. The make buying decision considering the reputation of the farmer and simple degustation of the wine.

7 Operational production – processing, transportation, diseases, biological threats

7.1 Processing

Presently, tradtional, non-industiral methods are still actively applied in the viticulture and viniculture sector. These methods cannot ensure high productivity though. In most cases, this takes place in family farms that do not own large vineyards and only have a few hundred grape vines. They process grapes and make wine traditionally, by hand. But hereby it also should be emphasized that, in case of implementation of proper actions, the wine produced via traditional method may become an unique product, including in terms of realizing export potential. For instance, in Kakheti there are few family farms that produce wine in absolutely transitional manner and just by hand, later they bottle the wine with small scale machinery and export their product with extremity high prices in Japan and Italy.

Wineries that often have their own vineyards use automated high-tech production lines and modern facilities to store produced wine.

7.2 Transportation

The viticulture sector does not require intensive use of transportation means. Vehicles are required to transport harvested grapes from vineyards to the processing site. Medium and large businesses have special vehicles for this purpose, whilst small producers rent them.

As for transportation of wine, winery factories own relevant transportation park, or have contracted certain distribution companies. Family farms pride wine to open markets and restaurants by various available vehicles with medium size plastic containers. Although, in majority of cases, the final customer or wholesalers provide transportation of wine themselves.

7.3 Diseases and chemical threats

The common diseases are mildew, ash and worms. Vine growers use Bordo Mix and other chemicals to control these diseases. Grape vines are treated 3-5 times (May-July) a year to ensure a proper level of productivity. The family farms use mechanical tools, whilst large farms use special mechanization equipment.

8 Supply chain management – flow of goods and information

The majority of wineries have special vehicles for transportation of grapes and bottled wine within the country. Outside the country, the products are transported by forwarding companies that mainly use road and sea means of transport. For example, wine is transported to Ukraine in containers (15,000 bottles per container) by ferry and it is worth 3,500 USD.

Family farms very rarely use a distribution network, whilst bigger farms develop their own distribution network or use the services of distribution companies. As for distribution outside Georgia, big exporters set up a special representation office and distribution network in countries (such as Ukraine) with high consumption, whilst in countries with less consumption this is done through so-called external distributers.

In terms of information flow, winery factories have own personnel, which are responsible for obtaining and upgrading information on breeds, new technologies, markets, etc. Also these factories and relatively large family farms do apply internet recourses and have access to `information prepared and disseminated by National wine agency and wine associations. The latest organizations also support wine making companies to participate in various exhibition, symposiums and forums. But these opportunities are not available for small family farms.

9 Know-How, institutions, social capital, human resources

9.1 Know-how and access to extension services

The family farms have accumulated knowledge of viticulture and viniculture throughout centuries. In most cases, farmers get new knowledge by sharing information between them. Despite they fail to upgrade knowledge on modern technologies, pesticides, etc, traditional method of wine making actually is the important know-how. In case of additional support, including governmental policy, farmers may receive special benefits – from prospective of export and wine tourism development opportunities. For example wine Krakhuna (which is spread in Imereti) is produced by the local winery factory in two forms - one is produced with standard methods and costs 21 GEL, another is made by traditional method in “Kvevri” and onebottle costs 44.5 GEL. Hence, if traditional methods are properly promoted and local family farmers supported to bottle their product, they will gain incredible opportunity to penetrate various markets and thus significantly increase the income.

There is a shortage of formal short-term training courses that will enable interested persons to gain comprehensive base knowledge or update/modify their skills and expertise. A several-month viticulture certificate training program of level III is offered by a VET in Ambrolauri with USAID support. In addition, from time to time, different donor organizations arrange training courses related to specific issues of viticulture. Unfortunately, family farms frequently do not have information on these courses. Moreover, as viticulture training programs are usually delivered in Tbilisi, it is difficult for family farms to attend them. In this regard, larger producers have much greater opportunities and this is positively reflected on their business.

9.2 Formal education opportunities

In Georgia, several universities offer undergraduate and graduate programs in viticulture and viniculture (for example, Georgian Agrarian Univerisity - Institute of Viticulture and Viniculture, Tbilisi).

Beyond this, there are several NGOs, among them Wine associations, which offer various training courses in viticulture. Also some universities provide trainees with certified course. For instance Ilia State university offers certified courses in winery and wine tourism.

9.3 Social Capital and Cooperation

The level of cooperation in this sector is rather low; several cooperatives operating in the region cannot make any significant impact. However, there is informal cooperation between individual producers who share information on disease control chemicals, sellers and other issues.

The research revealed that family farms are not interested and are rather reluctant to set up cooperatives and there was barely a solitary success story in this regard. One of the impediments to development of cooperatives is that farmers are not willing to unite vineyards.

10 Institutions and business environment

10.1 Business environment

Viticulture and viniculture is one of the most developed sectors in Georgian agriculture from a business point of view. The favorable business environment also plays a positive role here. In this regard, first of all, it is necessary to highlight a liberal tax system that grants a number of benefits to producers (namely, agricultural enterprises with annual turnover not exceeding 200,000 GEL are exempt from all taxes) as well as exporters (export is exempt from VAT with a right to obtain VAT credit). The local grape and wine market is almost free from informal barriers and any producer can freely operate on the market.

There are a number of associations that unite grape and wine producers in Georgia that also operate in Imereti and Racha regions:

- **Georgian Wine Association (GWA**). The association represents the Georgian wine sector on local and international markets. The goal of the association is to further promote Georgian wines and increase their sales on the international markets.

- **Association of Qvevri Wine**. The association unites small producers of qvevri wine to further promote it.

- **Fund of Georgian Traditional Wines**. The fund is aimed toward the revival and maintance of old indeginous grape varieties and promotion of wines made from these varieties by traditional technology as well as preservation and protection of traditional wine vessels. The fund is a founder of the Georgian Wine Cultural Center.

10.2 Government support

The research revealed that the following directions are areas where local producers seek government support:

- **Identification of new markets** and support to struggle against counterfeit products on these markets;

- **Increased access to modern mechanization equipment/tools and technologies** through availability of beneficial long-term credit resources or leasing opportunities; Modern education. Farmers also consider it important to get information on new developments in the sector on issues such as grapevine care, disease control means, and their use etc.

The Georgian Wine National Agency responsible for supporting grape and wine production in the country has been actively engaged in the promotion of Georgian wine internationally.

Currently, in accordance with the agency's strategy, the strategic markets for Georgian wine are UK, USA, Poland, China, Russia, Kazakhstan, Ukraine and the Baltic countires. Georgian wine will be positioned on these markets for wine enthusiasts, professionals, innovators and gourmet experts. To maximize the effectiveness of the marketing campaign, a local marketing company will be identified in each country, referred to as a Wine Ambassador, which will determine communication channels. Russia will have a locomotive role in post-Soviet countries; in Western Europe, the same role will be granted to the UK that as it is a leader in this sector and the biggest wine importer country as well as to Poland which is one of the most rapidly developing markets in Eastern Europe where Georgian wine's brand recognition and the positive perception of Georgia as a whole has been increasing. .

The following communication channels and methods are planned for implementation in 2014: arrangement of press tours, bringing wine journalists and bloggers; more active engagement of social media, development of image/advertising commercials and visual advertisements, participation in international trade fairs and exhibitions (ProWein in Dusseldorf and Shanghai); arrangement of degustation and IWINETC in Georgia where more than 200 reputable persons engage in wine tourism. In addition, articles on Georgian viticulture and viniculture will be prepared and published for foreign journalists specialized in the wine sphere; catalogs and brochures will be published and trainings/seminars will be provided by qualified specialists from different countries, exchange programs will be arranged to share modern wine producer countries' techniques; Georgia will host the annual WWTG annual meeting.

Development of Viticulture and viniculture is declared state priority. In 2014-2017 BDD (Basic Data and Directors) document of the country the vision and actions to be taken for the sector's development is described in details. Some of key statements are as following: identifying new markets and protection from falsification; organizing international and local exhibitions, degustation, press-tours, etc; developing adds to promote Georgian wine on international level; detailed registration and accounting of vineyards; supporting of creation and development of vine nursery greenhouses; conducting archeological researches to reveal viniculture issues; supporting farmer in sales of grapes, etc.

11 Conclusions and recommendations

11.1 SWOT

S • High quality of products • Long history of viniculture • Unique grape varieties • High brand recognition • State policy targeted on local production	**W** • Shortage of modern equipment and technologies • Low access to finance • Lack of managerial experience among small farmers
O • Introduction of modern international technologies • Development of Cooperation • Attraction of investments • Exporting to new markets • Wine tourism development	**T** • Disease risk factors (mildew, ash) • Supply/use of low-quality fertilizers • Higher competition at international markets

11.2 Potential for improving or upgrading the viticulture value chain from small farmers' perspective

Vine nurseries. It is necessary to further develop nurseries where quality grape rootstocks will be grown and spread, grape vines of which will be of a higher level of resistance and productivity;

Production of ecologically clean bio products. As wine production resources are limited in Georgia it is necessary to focus on production of ecologically clean high-quality products that will be competitive on mid- and high-end international market segments;

Enhancing cooperatives in this sector. Presently, small farms are not able to purchase modern expensive equipment and technologies necessary for production of high-quality products and an increase in productivity of the sector, in general. In this regard, one effective solution may be cooperatives that will significantly improve their access to the needed equipment and technologies;

Identification and penetration in new markets. It is necessary to identify new markets to increase production capacity and further stimulate the sector. The National Wine Agency has been actively engaged in this sphere.

Utilizing diversification opportunities. Farmers operating the viticulture sector may significantly benefit if they will find ways to diversify in related sectors. Their income will increase if farmers will be able to produce Vodka, brandy, seeds' oil. Also Imereti and Racha regions have high potential for development of wine tourism.

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