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The Georgian Tea Sector: A Value Chain Study

ISET
International School of Economics at TSU
Policy Institute

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A Value Chain Study

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ENPARD: Support to Agriculture and Rural Development

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All errors remaining in this text are the responsibility of the authors.

ABBREVIATIONS AND ACRONYMS

ACDA	Agricultural Cooperatives Development Agency
CIS	Commonwealth of Independent States
CPI	Consumer Price Index
CTC	Cut-Tear-Curl
DCFTA	Deep and Comprehensive Free Trade Area
ENPARD	European Neighborhood Programme for Agriculture and Rural Development
EU	European Union
FAO	Food and Agriculture Organization
FAOSTAT	FAO Corporate Statistical Database
GEL	Georgian Lari
GeoStat	National Statistics Office of Georgia
HH	Household
ISET	International School of Economics at Tbilisi State University
ITC	International Trade Center
Ltd.	Limited Liability Company
L&B	Leaves and Bud
MoA	Ministry of Agriculture of Georgia
NGO	Non-Governmental Organization
RICC	Regional Information-Consultation Service Center
SWOT	Strengths, Weaknesses, Opportunities and Threats
UAE	United Arab Emirates
UK	United Kingdom
US	United States
USA	United States of America
USSR	Union of Soviet Socialist Republics
WTO	World Trade Organization

1. INTRODUCTION

Georgia is one of the northernmost tea producing countries in the world. The humid and subtropical Black Sea climate creates ideal conditions for growing tea in five regions of Western Georgia: Adjara, Guria, Samegrelo, Imereti and Abkhazia. The favorable climatic conditions for growing tea in the country were first identified in the mid-19th century and the first tea plantations were planted shortly thereafter.

During the communist era, Georgia was the main tea producer in the Soviet Union. The volume of local tea production was sufficient to meet demand from all of the USSR. The tea harvest peaked in 1985 at 152,000 tons. During this period, nearly 70,000 hectares of land were allocated to tea cultivation. In many villages in western Georgia, tea cultivation was a way of life. Nearly 180,000 people were involved in the various production stages of the tea value chain. It should be noted, however, that between 1950 and 1990, the emphasis on meeting production quotas came at the expense of maintaining quality.

Shortly after Georgia's independence from the Soviet Union, the tea sector collapsed amid civil war and the loss of markets. The tea sector rebounded in the late 1990s and early 2000s, yet only partially so as the fragile economic and political stability of the post-independence period left a mark on the overall productivity of the sector. Year after year, tea production has declined, leaving only 1,800 tons being produced today. Only about 11,000 hectares of tea plantations remain, of which only 1,700 hectares are operational (the rest require rehabilitation). The glorious past and current potential of the Georgian tea sector suggest that reviving tea production and processing could bring significant economic and social benefits to western Georgia's rural communities. The sector could play a role in alleviating rural poverty by providing families with steady jobs and livelihoods.

However, the current state of affairs in the Georgian tea sector is rather grim. Plantations are overgrown and enterprises engaged in processing are undercapitalized. Furthermore, given the nature of global competition, it has been challenging for Georgian producers and processors to gain a foothold on international markets. Georgia is currently a net importer of tea, which is surprising considering the sector's rich history and potential.

In this study, we assess a variety of challenges and opportunities facing the Georgian tea sector. We try to identify the most pressing issues facing the sector today. As will be shown, the major challenges to developing the tea sector are a lack of raw materials (i.e., the actual harvesting of tea), antiquated technology and facilities, credit and institutional constraints, lack of marketing knowledge and experience, and an absence of appropriate linkages between producers and other actors in the value chain. This study analyses and documents the tea value chain in Georgia, focusing on tea production, the cost of production and existing tea marketing (including export) channels to final consumers.

This study also analyses the role of agricultural cooperatives in the development of the Georgian tea sector. The first Stakeholders' Forum on the Tea Sector, organized in Kutaisi by the Cooperative for Assistance and Relief Everywhere (CARE) International in the Caucasus, the ISET Policy Institute, the Georgian Farmers' Association and the Regional Development Association in July 2015, was instrumental in raising awareness of cooperative production and processing in the tea sector. The majority of farmers understand the benefits of operating as a cooperative. Most of the tea cooperatives currently operating in the sector maintain small-scale factories that specialize in the sorting, processing and packaging of high-quality tea. As of October 2015, up to 30 tea cooperatives were registered in Georgia (including a handful of second-level cooperatives, which unite several production-focused cooperatives).

Of the total tea plantations across Georgia (comprising 10,760 hectares), only about 1,700 hectares are productive, of which 84% are privately owned. The rest are considered to be "wild", or overgrown, plantations, where state ownership is about 60%. Yet a large proportion of these overgrown plantations could certainly be brought back into production by encouraging private ownership (including the long-term lease of land).

There are no precise data available on the domestic consumption of tea in Georgia. According to experts and our estimations, Georgian tea consumption is about 2,000 tons per year. The majority of the tea being consumed in Georgia is branded. Yet it should be noted that nearly 80% of the tea consumed in Georgia is imported from abroad.

Based on the problems we identified in this study, we propose a set of recommendations with the aim of fostering the development of the tea sector in Georgia. The key recommendations center around the re-cultivation of tea plantations, focusing on high-quality tea production (including organic tea cultivation and processing), a revival of the forgotten popularity of Georgian tea and its promotion both inside and outside Georgia.

2. BACKGROUND

2.1 The Tea Sector around the World and in Georgia

The leaves of Camellia Sinensis, an evergreen bush, have been collected, processed and prepared for thousands of years. China is considered to be the traditional home of tea. Even though the tea trade began earlier, European nations started the global tea trade in the aftermath of British and Dutch conquests in the 17th and 18th centuries and the construction of tea plantations in India and Sri Lanka (Ceylon, at the time). The international tea trade is currently dominated by multinational companies with British and Dutch roots, such as Unilever, Tata Global Beverages and Twinings. Generally, global demand for tea has been increasing over time (Doborjginidze, 2008; Chang, 2015). The tea shrub or bush matures after 5-7 years and only then are its leaves ready for harvest. The productive lifetime of a single tea bush is more than 100 years. There are different types of tea, such as white, yellow, black, green, oolong and post-fermented, however, all are produced from the same leaves and buds of the tea plant. It is during the tea processing stage that tea is sorted into different end products.

After harvesting, leaves should be quickly delivered to the processing factory in order to prevent their quality from diminishing. The leaves are then dried and sometimes crushed. If crushed, the tea is then blended, packaged and branded to be sent to retail and wholesale markets for final consumption.

According to statistics from the Food and Agriculture Organization (FAO), tea was produced in 36 countries in 2013. Total global production was slightly more than 5 million tons in 2013. The main tea producing countries are China, India, Kenya, Sri Lanka, Turkey, Vietnam, Indonesia, Japan, Argentina and Bangladesh. According to FAO IGG Secretariat (Chang, 2015) and ITC data (2013), the top importer countries are Russia, the United Kingdom, the USA, Pakistan and Egypt. The main tea exporters are Kenya, China, Sri Lanka, India and Vietnam.

2.2 The Tea Sector in Georgia

Tea cultivation has been practiced in western Georgia since the mid-19th century, when Prince Gurieli brought the first tea bush and planted it in Guria (which can be found today, in the village of Gorabejeuli). Since then, tea has played a significant role in Georgian agriculture, especially during the Soviet era. The humid and subtropical climate of the regions of Adjara, Guria, Samegrelo, Abkhazia and Imereti are ideal for tea cultivation. Toward the end of the 19th century, the Chinese tea grower, Lao Jin Jao, arrived in Georgia to produce tea. About seven years after his arrival, his tea won the gold medal at the Paris World Expo in 1900. The success of Georgian tea inspired the startup of a Turkish tea plantation in Rize in the 1920s (Sakli, 2011).

The Soviet government actively encouraged the development of the tea sector from 1927 onwards. The volume of tea produced increased substantially, and by the mid-1950s Georgia was a leading producer of tea within the USSR, providing approximately 95% of the produce distributed across the Soviet Union (Nakhutsrishvili, 2012). However, high production yields came at a high cost: the compromise of quality. Traditional hand picking that was employed in the 1890s was replaced by mass mechanical harvesting. The harvested quantity peaked in 1985 at 152,000 tons (Hall, 2000), a colossal volume of production compared to the 1,800 tons produced today (Geostat, 2014). However, much of this tea was arguably of poor quality.

Between the fall of the Soviet Union and today, the tea sector in Georgia practically collapsed. Given the political and economic instability of the early 1990s, the Georgian government could not play a supervisory and organizational role in tea production. Nor was it fit for the task of helping reorient the Georgian tea industry towards new markets. The war of 1993-1995 in Abkhazia, a key tea-harvesting region in the northwestern corner of Georgia, also led to plummeting production levels. Many of the tea factories were abandoned and subsequently looted, with their capital being exported out of the country (mostly as scrap metal).

Due to the protracted halt in harvesting, tea plantations became overgrown. Re-cultivation is a costly activity, requiring approximately 7,000-8,000 GEL per hectare and, according to Anaseuli Experimental Tea Factory experts, it takes more than three years for rehabilitated plantations to become ready for exploitation. The meager incomes of local farmers (about 495 GEL a month on average (Geostat, 2013)) are insufficient to finance rehabilitation efforts. Farmers' low and uncertain incomes, in combination with relatively high interest rates set by private financial institutions, serve as key barriers to their access to credit. Moreover, banks do not accept tea plantations or processing equipment as collateral, and the overwhelming majority of small-scale farmers are unwilling to risk losing their private property to take out a loan.

Due to these financial constraints and the lack of necessary resources to rehabilitate overgrown plantations, the amount of land fit for harvesting tea is plummeting. According to Tengiz Svanidze from the Tea Producers' Association of Georgia, approximately 20,000 hectares of land were still suitable for tea harvesting in 2013; by May 2015 this quantity had halved to about 10,700 hectares. Furthermore, the hazelnut boom in western Georgia as well the increasing popularity of other cultures, such as blueberries and kiwi, have contributed to a massive replacement of tea plantations.

From face-to-face interviews with farmers, we have learned that growing one hectare of tea plantations requires about 30,000 GEL of investment and several years. If we recall that tea plantations covered 67,000 hectares in the 1980s, the amount of loss to the country cannot be understated.

A tea-weighing station in Batumi, Georgia, before 1915. Source: Wikimedia commons.

Box 1: Tea Industry in Soviet Georgia

Tea Growing

The entire Black Sea coast of Soviet Georgia is a vital agrarian zone with climatic and other conditions favorable for cultivating citrus fruits, grapes, tobacco and essential-oil crops. Tea is another important crop grown here. Everywhere, on the mountain slopes and in the valleys, one can see rows upon rows of spherical emerald-green tea trees.

The efforts of Georgian scientists who have succeeded in breeding cold- and drought-resistant tea varieties have made it possible to extend the tea cultivation zone farther to the north. Late in autumn and early in winter, tea trees produce white and pink flowers smelling of honey.

Tea cultivation requires much care and special knowledge. Round the year tea growers trim the trees, hoe and fertilize soil, cut the weeds, plant afforestation belts around tea plantations, drain excessive water and apply peat to retain moisture.

Tea leaves plucking is, however, the most important and labor-intensive operation, accounting for 70 per cent of all labor inputs into tea cultivation.

The tea-picking season lasts five to six months. It is a very painstaking job and tea pluckers, mostly women, are busy from early in the morning till late at night in any weather picking silver-green leaves from each tree. They dare not waste a minute because a fresh and healthy leave today will be coarse tomorrow. What can be done to make this tiresome an unhealthy job easier? Conventional combine harvesters cannot pluck proper leaves often hidden in the thick foliage of a tea tree.

But the efforts of Georgian scientists and engineers were not wasted and they designed the world's first tea harvesters for valley plantations. The Sakartvelo and ChA 900/650 harvesters are the firstlings and far from perfect, but work on their designs is continued.

Another major development was the designing and introduction of manually-controlled petrol-burning and battery-powered tools for trimming tea trees and leave plucking. They are indispensable and the plantations out of the range of the harvesters. From the initial processing factories tea is delivered to the tea packing factories, where tea varieties are blended and packed.

Source: Chiaureli V. (1988). Gifts of the Georgian Land. Tbilisi. Sabchota Sakartvelo

3. SCOPE OF THE STUDY

The main goal of this study is to identify approaches through which the competitiveness of the Georgian tea sector can be improved. We analyze and describe the complete tea sector value chain in Georgia. To this end, we propose different policy approaches aimed at improving overall productivity in the sector.

In particular, this study will

- Analyze existing forms of the tea value chain in Georgia and calculate the cost of production and value added across all stages of the value chain – from individual farmers to end markets.
- Examine the strengths, weaknesses, opportunities and threats facing the Georgian tea sector.
- Suggest options for improving the efficiency of the value chain in terms of increasing margins for farmers, considering associated costs and where value is being created in the sector.
- Analyze the dynamics of the supply and demand of tea, including market volumes, market shares and trends.
- Briefly examine and assess the processing infrastructure at existing tea factories and identify measures for improvement.
- Consider how other stakeholders (the government, private sector, etc.) may be involved in developing the tea sector.
- Assess relationships among actors along the vertical and horizontal linkages of the tea value chain, including dynamics among various interest groups (e.g. input suppliers, producers, processing factories, brokers, donor organizations, the government, etc.).
- Identify organizational forms (e.g. cooperatives) in the tea value chain in the vertical and horizontal linkages where smallholders can have a decisive role and stake across the chain.
- Develop a case study on a functioning cooperative.
- Suggest strategies for attracting farmer groups, including cooperatives, to increase investments in tea value chain enterprises.

3.1 Methods and Approaches

This report is based on both desk and field research. Moreover, we held the first Stakeholders' Forum on the Tea Sector in Kutaisi in July 2015. This was attended by representatives from the Georgian government, donors, private enterprises and tea cooperatives, and tea associations. The dialogue which took place during this forum also informed the development of this study.

Modern value chain analysis developed out of three main theories: the approach of the Global Commodity Chain, the filière approach and Michael Porter's Value Chain (Kaplinsky & Morris, 2001). Porter's Value Chain refers to intra-link activities (i.e. to the various activities at each link in the chain). Today, the term value chain typically refers to Porter's value system, which is also employed in this study. The metaphor of a chain refers to the sequence of activities in which most goods and services are produced (Humphrey, 2005).

Value chain analysis can combine different objectives because it is a tool, or a concept, rather than a methodology. Different methods are usually combined when conducting an in-depth value chain analysis, leading to a triangulation of methods. This is especially helpful when dealing with sectors or environments where reliable data is difficult to obtain.

In this study, the structure and competitiveness of the sector's value chain is analyzed visually (relying on flow charts and grid maps) and by using descriptive techniques such as SWOT analysis, context analysis and estimation of the share of value at each link in the chain. Data sources include literature studies, statistical files, direct observations and interviews.

3.1.1 Desk Research

Desk research involved collecting statistics and information from sources such as the Georgian Statistical Yearbook, past Soviet-era books and studies on the Georgian tea sector, FAOSTAT and ITC data, government strategy documents and information from tea associations in Georgia. Some local tea stakeholders were also very helpful in providing information about the tea sector in Georgia and its development over the years.

3.1.2 Field Research

Between June and August 2015, field research was conducted in four major tea producing regions of western Georgia: Adjara, Guria, Samegrelo, and Imereti. Semi-structured interviews were conducted face-to-face with local tea growers, members and directors of tea cooperatives, representatives from tea growers' associations, tea experts, factory owners and workers, and local government authorities. Researchers also visited major tea marketing outlets in Tbilisi.

Based on the interview data that were collected and analyzed, we subsequently conducted a number of research activities. In particular, we

- Assessed the strengths, weaknesses, opportunities and threats facing the current tea sector of Georgia, based on secondary data and insights from stakeholder interviews (primary data).
- Mapped the entire tea value chain (via flow charts and grid maps), based on the literature as well as our primary and secondary data.
- Identified the main tea farms/factories in the region.
- Mapped the locations of tea producing regions.
- Described the vertical and horizontal relationships among tea value chain actors.
- Assessed the added value at each link of the value chain.
- Conducted market analysis for tea, based on statistics and expert interviews.

Based on the results of these exercises, we developed specific recommendations regarding the development of the tea sector in Georgia.

3.2 Limitations

It should be noted that the available statistical data about tea plantations and tea production in Georgia are often of limited quality. While our field research helped clarify a number of issues related to tea cultivation and processing, there is still a limited evidence base regarding the costs faced by producers, processors and tea traders/brokers as well as their revenues. This is a consequence of the fact that some actors (particularly primary producers) do not maintain accounting records and/or are unwilling to give out that information.

Nevertheless, this study is the first attempt to analyze the tea value chain in Georgia. We hope this will help improve understanding of the challenges and opportunities facing the Georgian tea sector.

4. STUDY AREA

4.1 Short Description of the Tea-Producing Regions of Georgia

Figure 1: Tea Producing Regions in Georgia

Tea is produced in five regions in Georgia: Abkhazia, Guria, Samegrelo, Imereti and Adjara.[1] Table 1 displays detailed information about agricultural land and tea plantations in four of these regions.

Table 1: Facts and Figures about Tea Plantations in the Tea Producing Regions*

District	Agricultural Land (ha)**	Tea Plantations (ha)	Private Ownership (%)	State Ownership (%)	Productive (ha)	Out of Productive Private Ownership (%)	Out of Productive State Ownership (%)	Overgrown Tea Plantations (ha)	Overgrown Tea Plantations (ha)	
									Possible to put back into Production (ha)	Impossible to put back into Production (ha)
Total (4 regions)	566,679	10,760	47%	53%	1,696	84%	16%	9,020	5,972	3,048
Guria	50,015	3,839	69%	31%	789	83%	17%	3,050	2,202	848
Samegrelo	253,694	3,837	36%	64%	474	79%	21%	3,363	2,553	810
Imereti	192,480	2,155	26%	74%	38	100%	0%	2,085	978	1,107
Adjara	64,491	929	53%	47%	396	90%	10%	522	239	283

*Source: Ministry of Agriculture, 25 June 2015
**Source: Ministry of Agriculture, 2013

[1] There are limited data on the tea sector in Abkhazia. This study analysis tea sector only in Guria, Samegrelo and Imereti regions.

According to these data, Guria and Samegrelo are home to most of the plantations (each accounting for 36% of the total) and Guria is the leading region in terms of the area of productive plantations (accounting for 46% of total productive plantations in Georgia).

Despite the fact that Adjara has the smallest area of tea plantations (929 hectares), most of its plantations are productive (43%), compared to Guria (20%), Samegrelo (12%) and Imereti (2%).

The Samegrelo region has the wildest plantations (2,553 ha or 43% of total overgrown plantations in Georgia), followed by Guria (37%), Imereti (16%) and Adjara (4%).

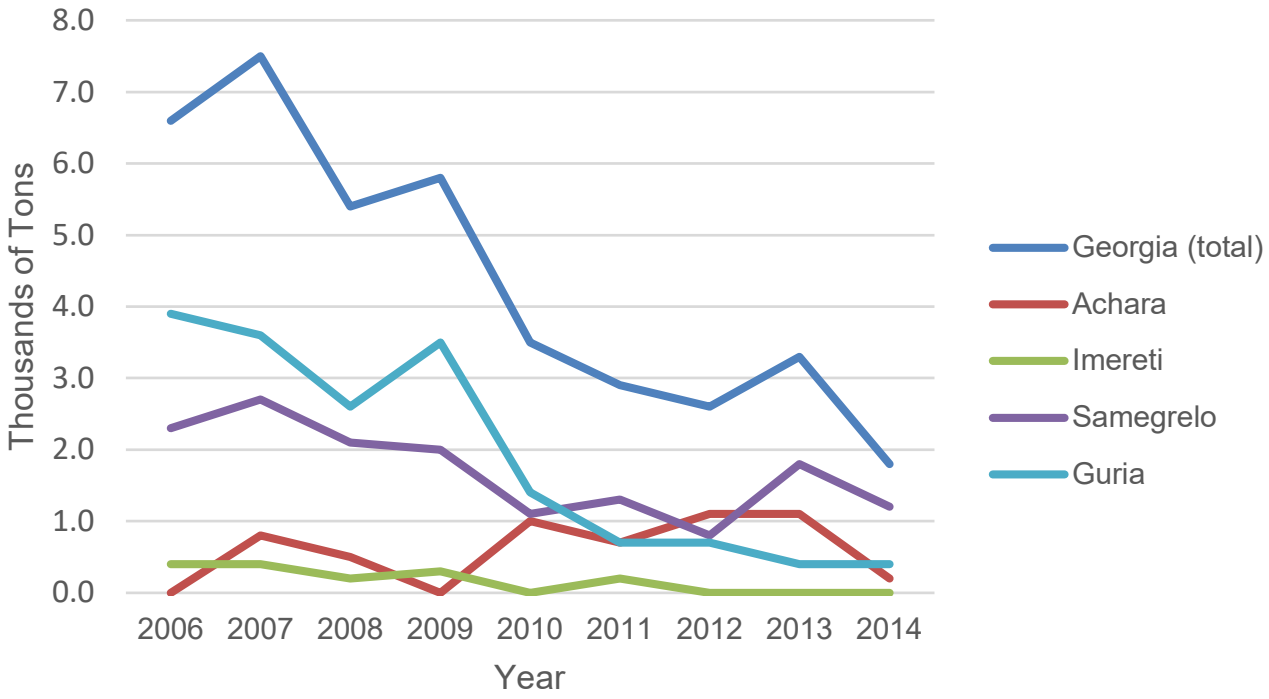
Tea plantation in the Tsalenjikha municipality, 2015.

5. TEA SECTOR ANALYSIS IN GEORGIA

5.1 Tea Leaf Production in Georgia

We begin this section by plotting tea leaf production in the four main tea growing regions of Georgia from 2006 to 2014. According to the National Statistics Office of Georgia, the most productive plantations are in Guria (789 hectares), Samegrelo-Zemo Svaneti (474 hectares), Adjara (396 hectares), and Imereti (38 hectares). As we see from Figure 2, tea leaf production declined more than three times between 2006 and 2014. The major contributing factor to this was the large scale destruction of tea plantations during this period.

Figure 2: Tea Leaf Production in Georgia (total and by region)

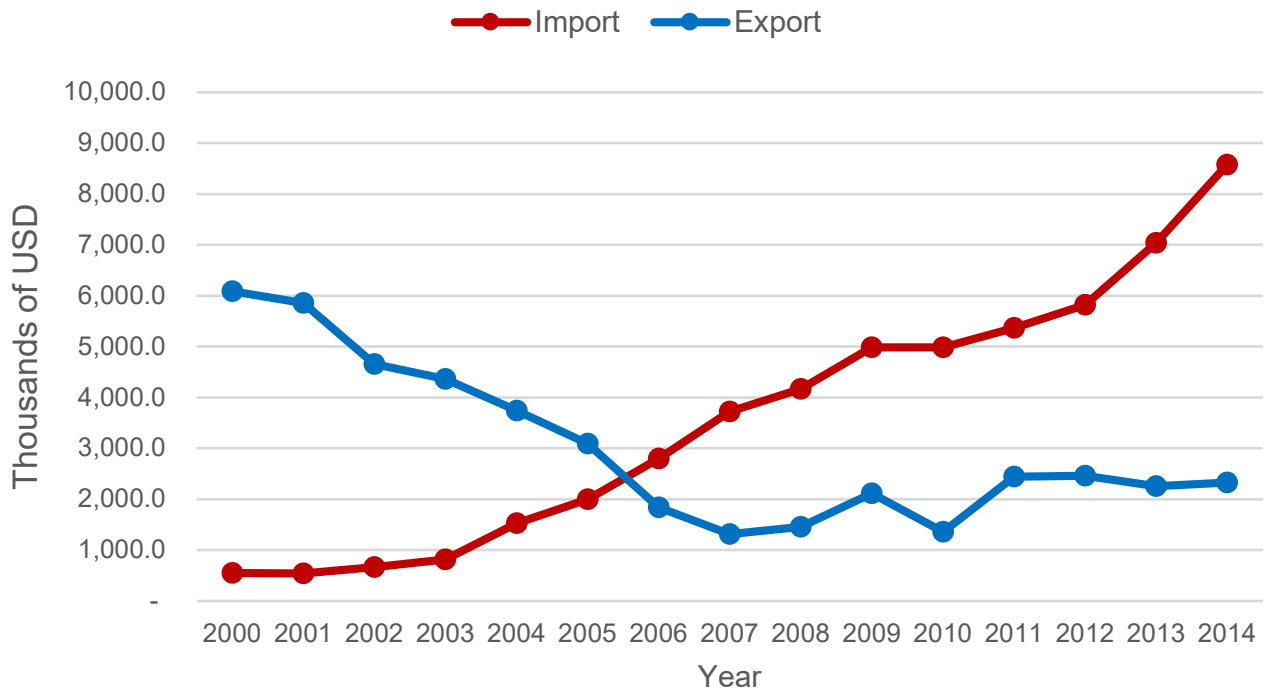


Source: Geostat

5.2 Exports and Imports of Tea

Georgia was well-known for its tea during Soviet times and was a major tea exporting nation. It continued to be a net exporting country until 2005. As Figure 3 suggests, starting from 2006 this trend reversed and for the first time in 150 years, Georgia became a net tea importing country. Figure A1 in the Annex also reveals that the export-import ratio dramatically declined over the same period.

Figure 3: Evolution of Tea Exports and Imports from 2000 to 2014 (by Trade Value)



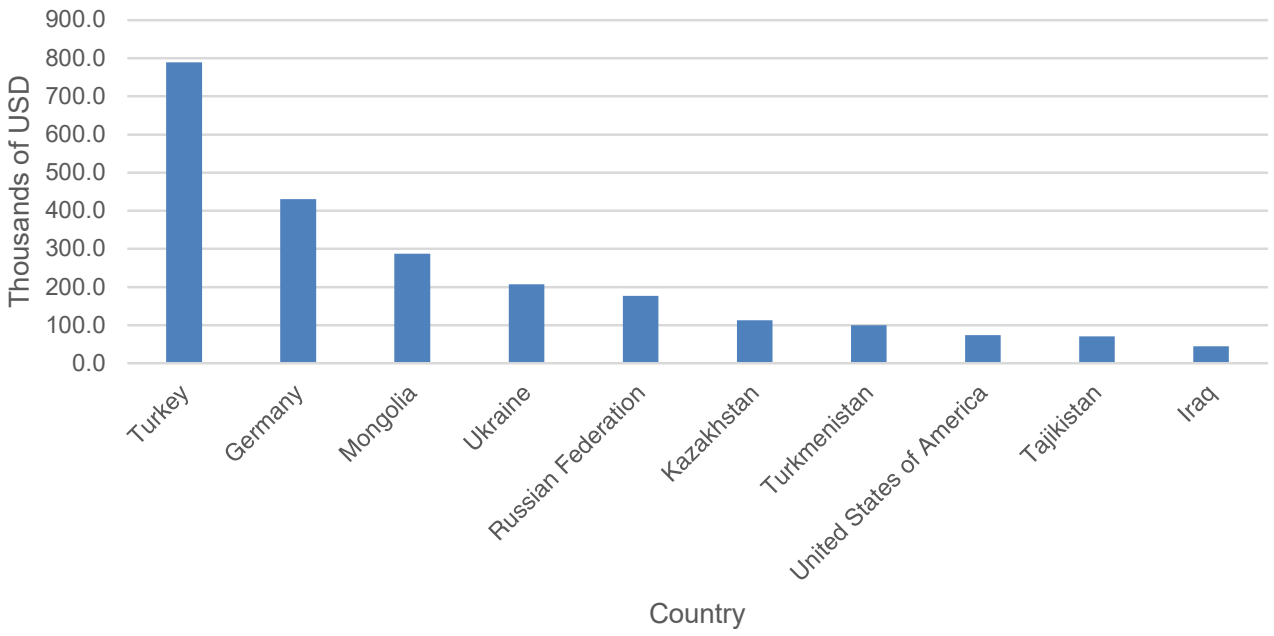
Source: Geostat

Another takeaway from Figure 3 is that between 2009 and 2014, the value of tea imports increased approximately twofold, while the value of tea exports remained more or less stable over that period.

Alternatively, Figure A2 (in the Annex) reveals a significant uptick in tea imports starting in 2006, which suggests that there has been an increase in domestic demand for tea. However, in spite of Georgia's production potential and growing demand, this has not been met with a proportional rise in domestic tea production.

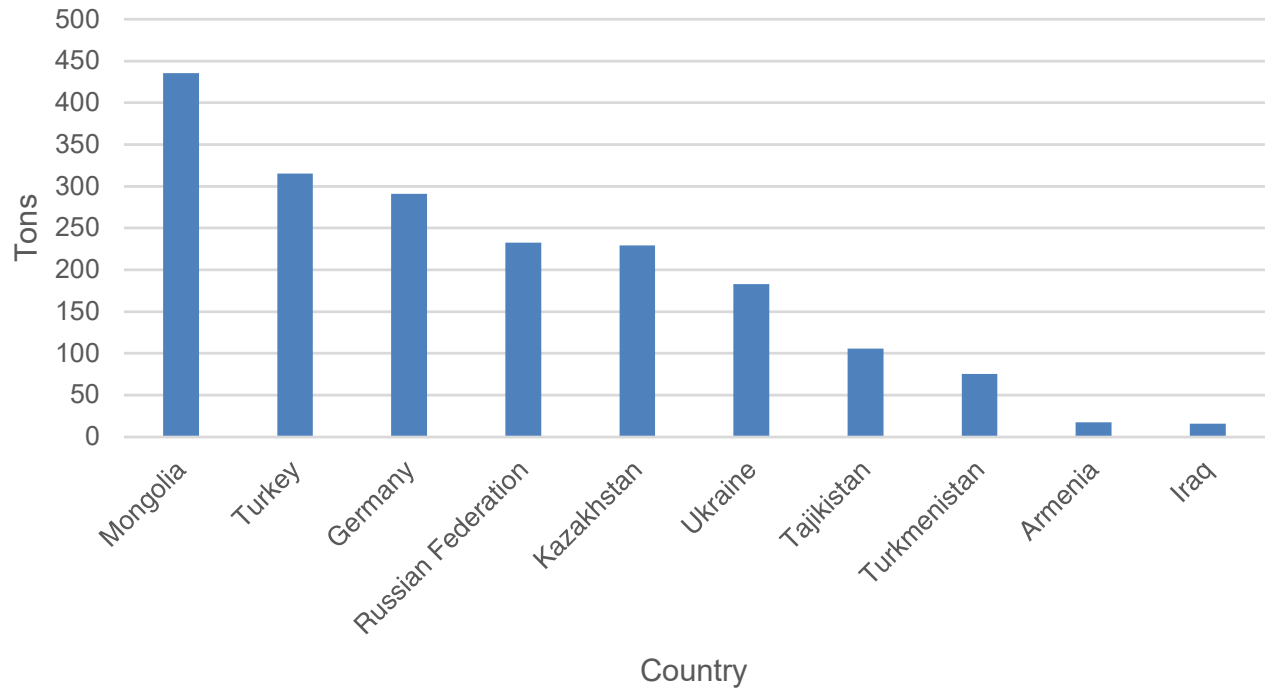
We further break down tea export and import data by countries. Figures 4 and 5 depict the trade values and trade volumes of tea exports to top Georgian tea export destinations, respectively. As can be observed, Georgian tea exporters are mainly focused on selling low-quality tea (as reflected in prices, see Figure 6 below) to post-Soviet countries in Central Asia. It has been difficult for Georgian tea exporters to make inroads into top tea importing countries such as Russia, the US, the UK and countries in the Middle East.

Figure 4: Top 10 Export Destination Countries for Georgian Tea in 2014 (by trade value)



Source: Geostat

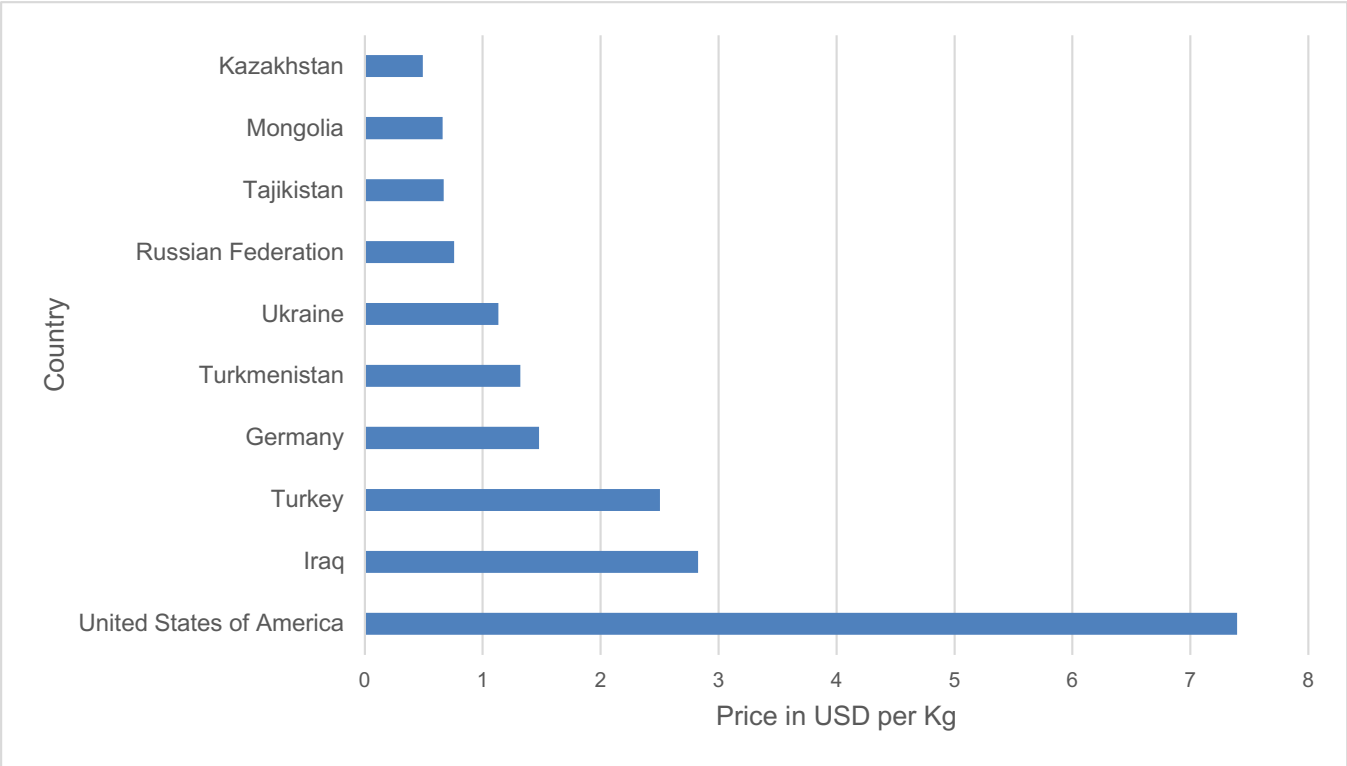
Figure 5: Top 10 Export Destination Countries for Georgian Tea in 2014 (by trade volume)



Source: Geostat

The situation is virtually the same if we depict the 2009-2013 averages of export values and volumes (see Figures A3 and A4 in the Annex).

Figure 6: Exported 1 Kg Tea Prices in Top 10 Export Destination Countries (by trade value) from Georgia in 2014



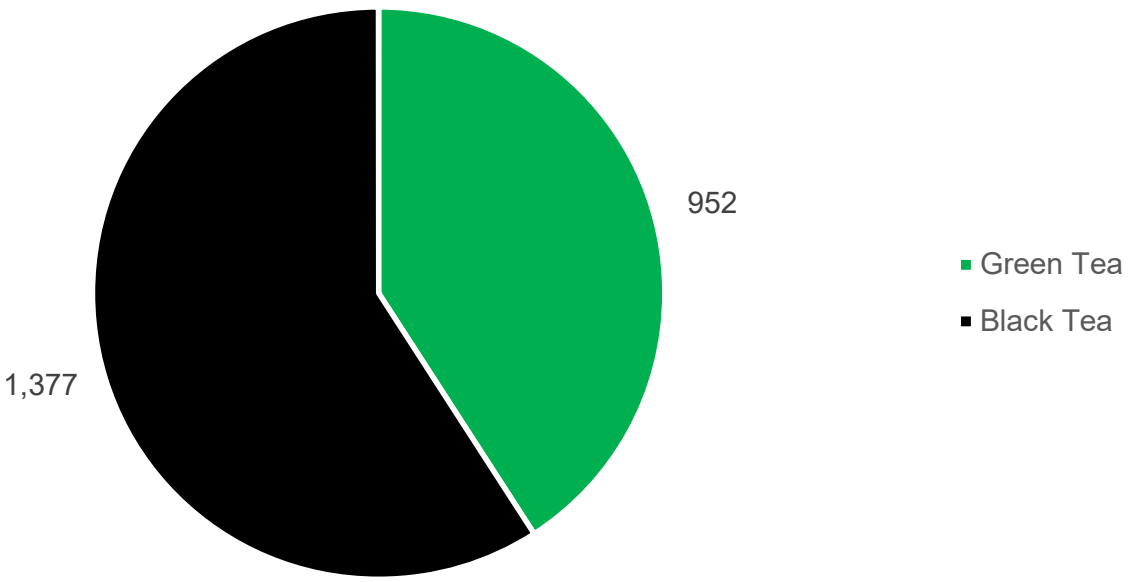
Source: Geostat

As discussed above, most Georgian tea exporters are oriented towards low-end markets. Indeed, according to Figure 6, most of the exported tea is sold at low prices.[2] The exception to this is United States, where high-quality tea was exported in 2014. However, judging by the trade value, the share of exports to the US in total exports was negligible.

Georgia mainly exports two categories of tea: green and black. Figure 7 displays the values of exports of green and black tea in 2014. Unless, exported black tea had high value, in terms of volume, 65% of exported tea was green in 2014. The evolution of tea exports for 2009-2014 by category are depicted in Figure A5 in the Annex. As can be seen, black tea exports are stable while green tea exports have a downward trend in last two years.

[2] What we report here are the average prices of exported tea registered by clearance service at the border. Prices are calculated by dividing export values by corresponding export volumes. While this masks the heterogeneity in tea prices across countries and product volumes, these are the only figures that can be reported due to data limitations.

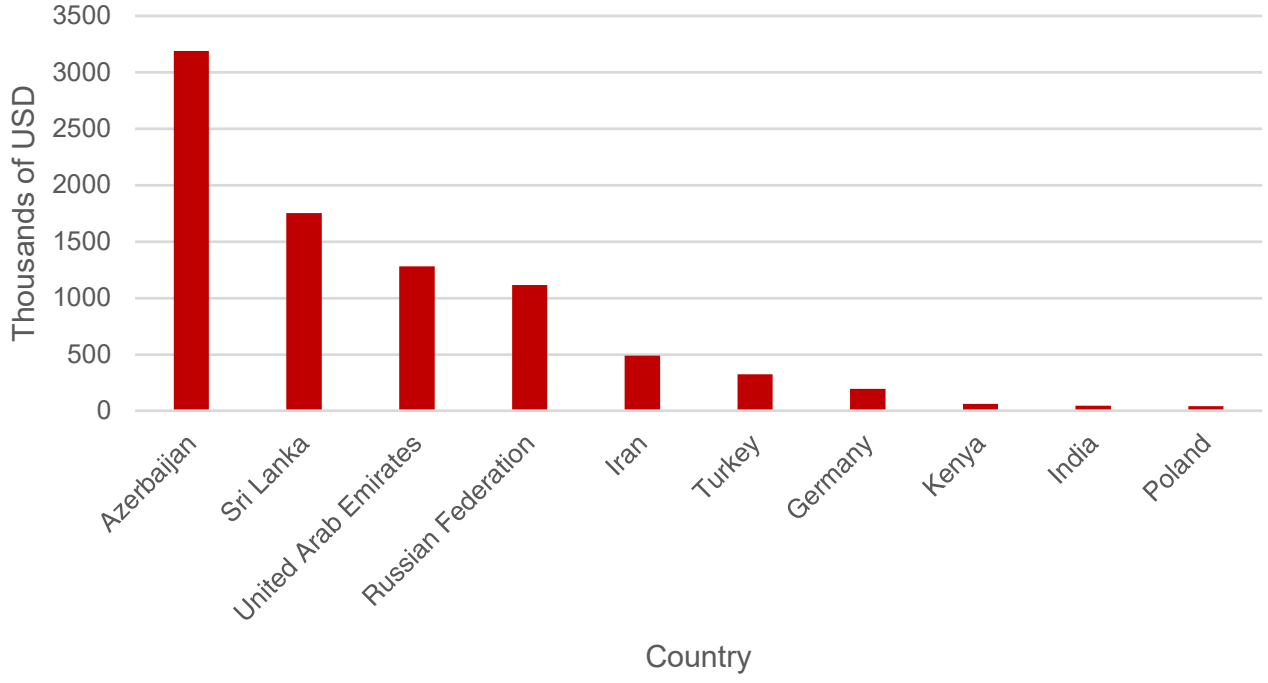
Figure 7: Value of Tea Exports from Georgia in 2014, by Category (in thousand USD)



Source: Geostat

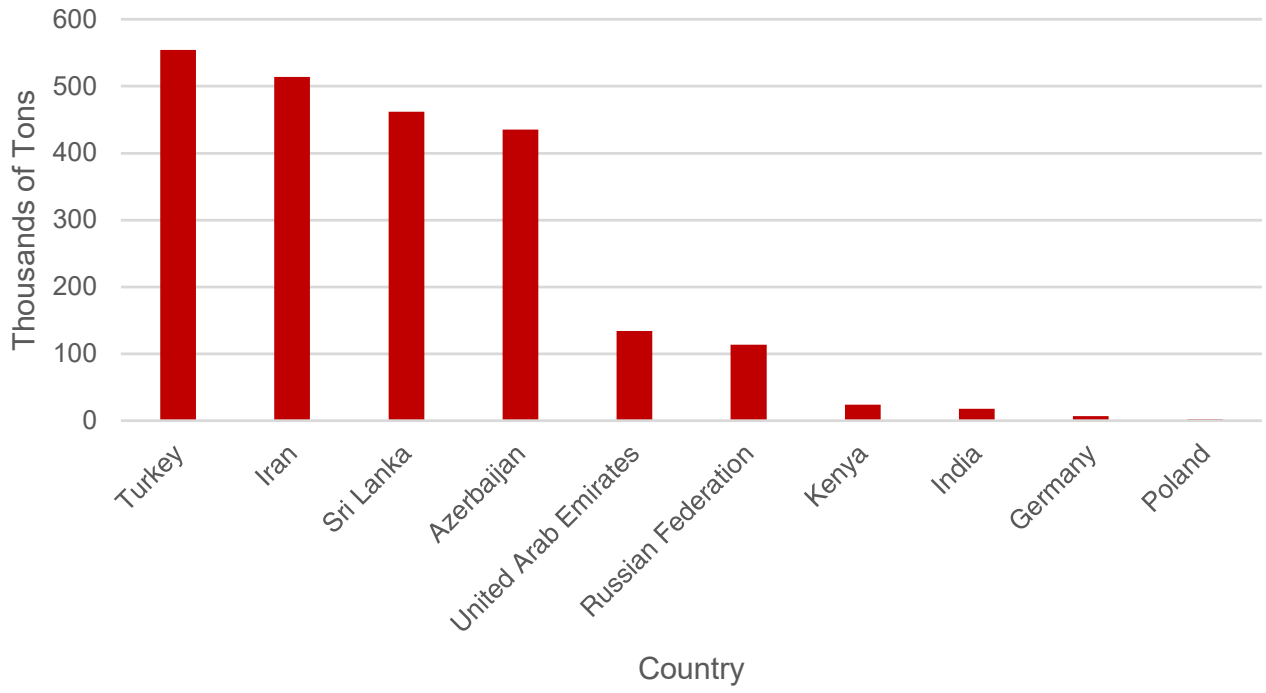
Next, we report tea imports by country. Figures 8 and 9 display the trade values and trade volumes of tea imports to Georgia in 2014 from top tea importing countries, respectively. Judging by trade value, the main import sources for tea in Georgia in 2014 were Azerbaijan, Sri Lanka, the UAE and the Russian Federation.

Figure 8: Top 10 Countries Importing Tea to Georgia in 2014 (by trade value)



Source: Geostat

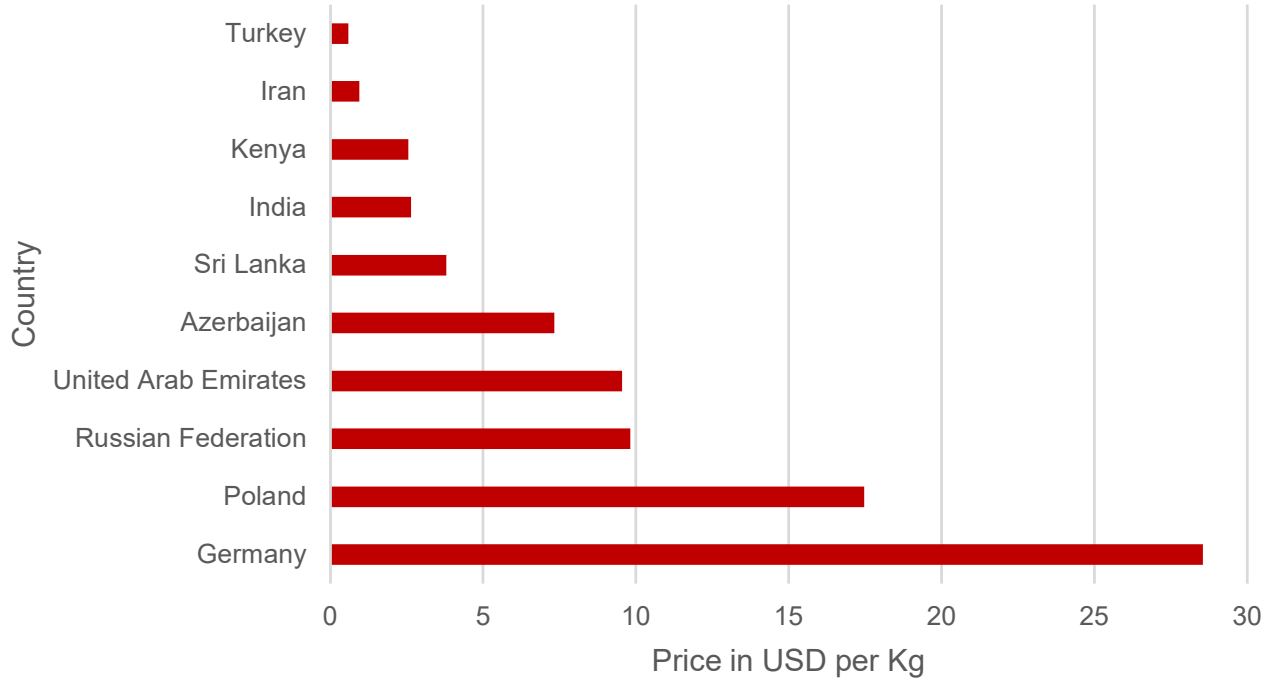
Figure 9: Top 10 Countries Importing Tea to Georgia in 2014 (by trade volume)



Source: Geostat

Turkey and Iran top the list of countries importing tea to Georgia by trade volume in 2014. According to Figures A6 and A7 in the Annex, the picture was similar between 2009 and 2013. The only major difference between this period and 2014 is that on average Azerbaijan imported the most tea in tons between 2009 and 2013 and was followed by Turkey and Iran. However, as is reflected in prices, Turkey and Iran are importing the lowest-quality tea (see Figure 10).

Figure 10: Imported 1 Kg Tea Prices from Top 10 Import Countries (by trade value) to Georgia in 2014

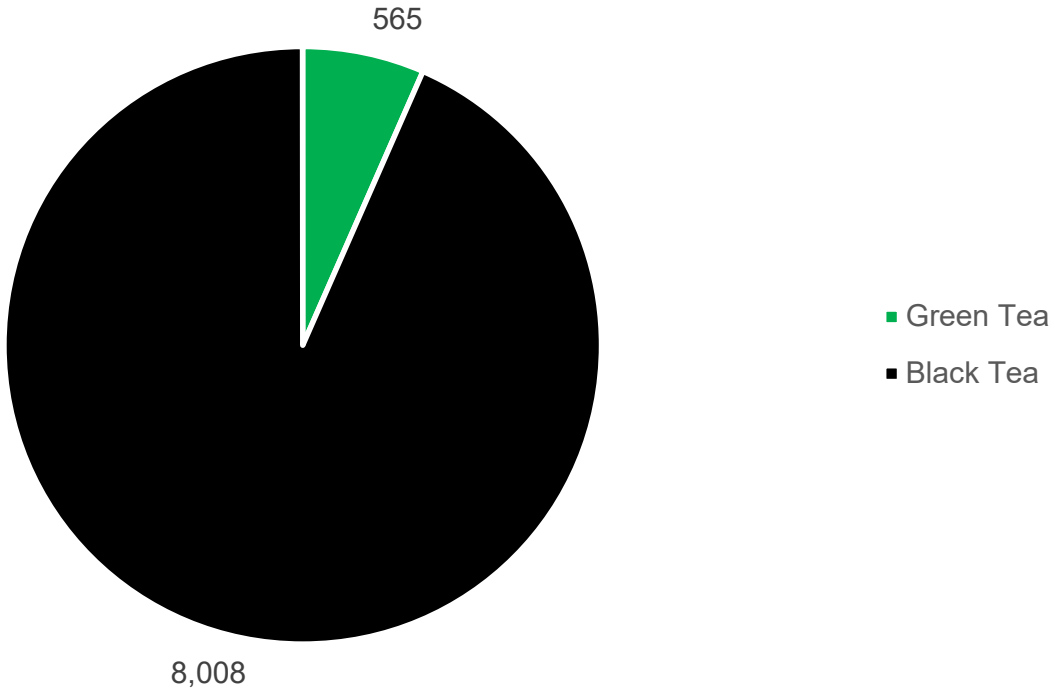


Source: Geostat

In general, according to Figure 10, imported tea is much more expensive[3] than the domestically produced tea exported abroad. Given the high prices of imported tea, higher-quality domestically produced tea could be competitive on the local market.

Figure 11 displays a breakdown of tea imports by category in 2014. It appears that Georgian consumers very much favor black over green tea. The picture is similar for the period 2009 to 2014 (see Figure A8 in the Annex).

Figure 11: Value of Tea Imports to Georgia in 2014, by Category (in thousand USD)



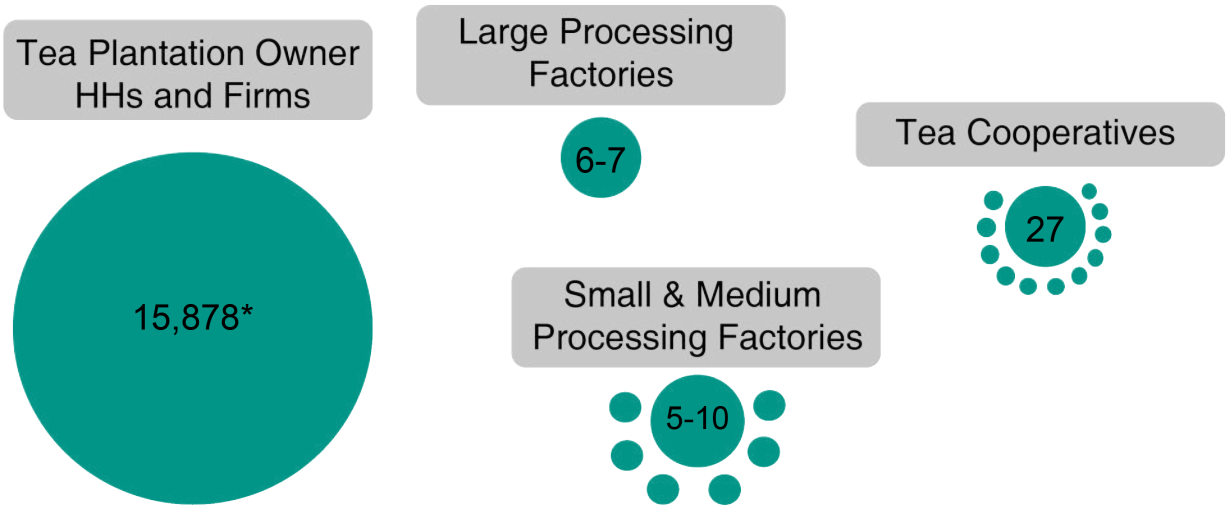
Source: Geostat

[3] As in the case of exports, import prices are calculated by dividing import values by corresponding import volumes.

6. STUDY RESULTS

6.1 The Georgian Tea Value Chain Actors

Figure 12: Key Actors of the Tea Value Chain in Georgia



*according to Geostat's 2004 census (the most recent available data so far). 2014 census data will be published in 2016

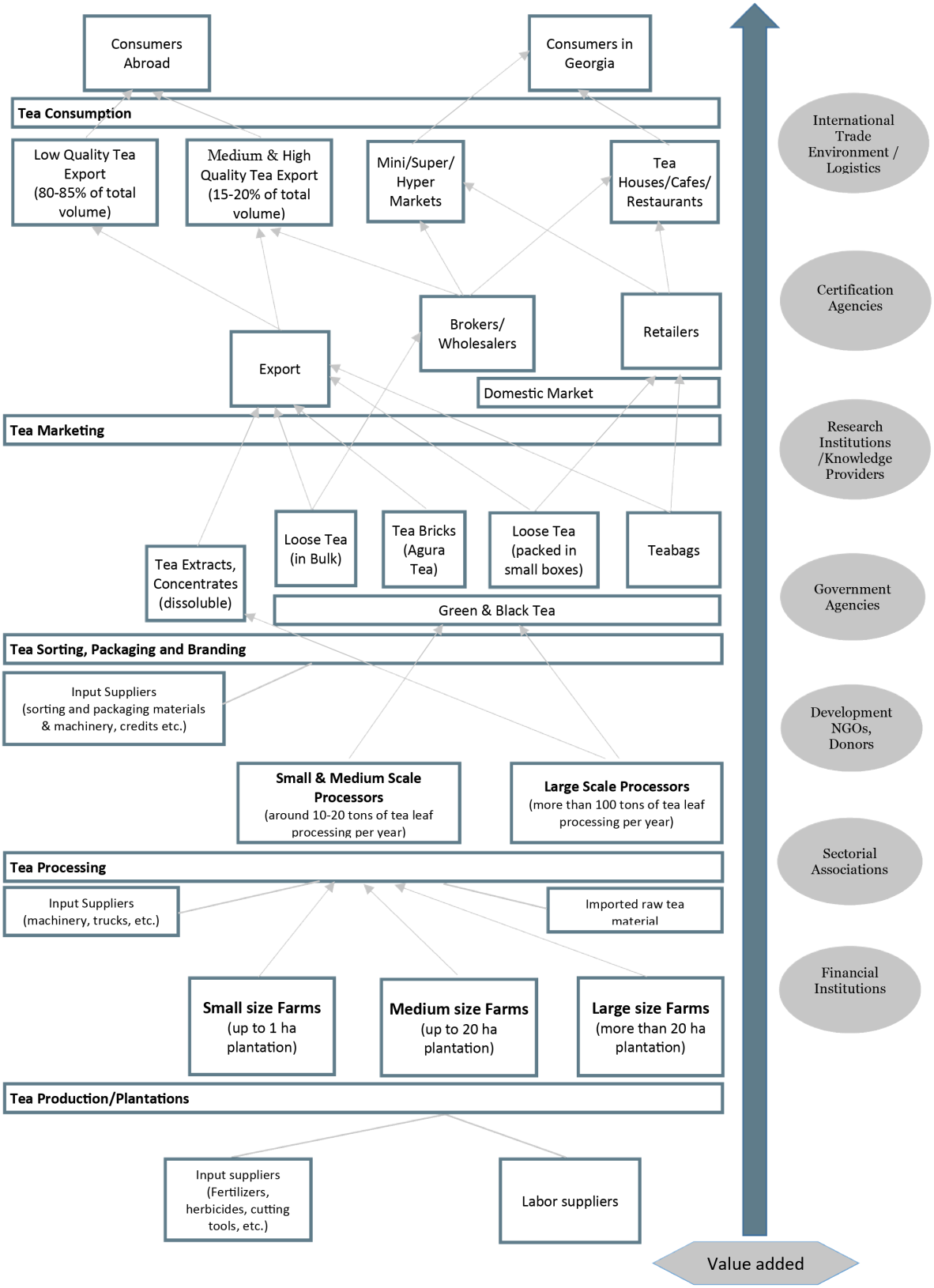
As can be seen from Figure 12 above, the value chain pyramid according to production possibilities can be modeled consisting of individual farmers, tea cooperatives, small and medium processing factories and large processing factories.

Tea rollers in a large processing factory, 2015.

7. MAPPING THE TEA VALUE CHAIN

7.1 Grid Map for the Tea Value Chain

Figure 13: Grid map for the Tea Value Chain in Georgia



Source: This grid map is updated from the Georgian sheep value chain study of Kochlamazashvili et al. (2014) and Sorg's study of the Georgian hazelnut value chain (2012).

7.2 Description of Main Stages

There are five stages along the Georgian tea value chain. It should be noted that the number of stages is not always the same, and that some activities are vertically integrated (e.g., production and collection/ transportation/processing). Nevertheless, the five stages can be characterized as follows:

1. Production
2. Collection / Transportation / Processing
3. Packaging / Sorting / Branding
4. Marketing / Exporting
5. Consumption

7.2.1 Stage 1: Tea Production

Tea leaves are harvested from tea bushes in plantations. According to the National Statistics Office of Georgia, 60% of tea plantations are owned and operated by households (2014). There are no recent data about the number of households owning plantations nor about their total size, but these data should be made available after the final results of the 2014 agricultural census are released. However, according to Geostat's previous 2004 agricultural census, about 16,000 families have tea plantations under their ownership. In 99% of cases, the area of each of these plantations is less than 1 hectare. Similar tea production patterns are present in China, and include traditional types (small farmers, households), cooperatives and industries (tea companies) (Fang et al., 2014).

Most of the plantations in Georgia are not fenced (and therefore tea bushes run the risk of being destroyed by livestock) and in many cases are overgrown. This results in low productivity. Cultivation, maintenance (e.g., pruning) and harvesting are done by hand. Although some large farms still have obsolete Soviet machinery in their possession, the quality of machine-harvested tea is extremely low. In terms of quality, tea harvested in such a manner is 6 leaves and a bud (6L&B) or more, which can only be used in low-quality tea production. The modern industry standard for quality tea, or so-called orange pekoe (OP), comprises one or two leaves and a bud (1L&B and 2L&B), and for volume tea, or so-called BOP (broken orange pekoe), comprises three leaves and a bud (3L&B) or more. For 1 kilogram of processed tea (so-called "made tea"), 4 to 4.5 kilograms of raw tea leaves are necessary (the tea conversion ratio varies between 4 to 4.5 kilograms (green leaf to usable tea)).

7.2.2 Stage 2: Collection / Transportation / Processing

Given that most households owning tea plantations have less than 1 hectare of land for cultivation, it does not make sense for all of them to process their harvested tea leaves. This role is taken on by factories (be they small, medium or large) that collect raw tea leaves from tea growers for processing. The collection takes place via truck, and in some cases old Soviet-era vehicles are used.

7.2.2.1 Tea Processing Methods

Tea leaf processing typically takes place using old Soviet-era machines, which can only be slightly renovated locally. These machines were developed with a focus on maintaining a high volume of production and not on maintaining or improving the quality of processed tea leaves. Modern standards require much higher-quality machinery and renovated buildings for processing, packaging and storage. There are two main methods of processing tea. The first is the standard, or orthodox, method (to be discussed below), and the second is the CTC[4] (cut-tear-curl) method. Given that only the first method is employed in Georgia, this will be the focus of our discussion.

7.2.2.1.1 Processing of Black Tea

Many people mistakenly think that black and green tea are produced from two different kinds of

Two leaves and a bud (2L&B) of Camellia Sinensis. Source: Wikimedia commons.

[4] CTC tea processing generally includes three stages cut – tear – curl or crush –tear – curl. CTC teas are quickly infusing, but it is generally considered that orthodox tea has better quality than CTC tea and is thus more expensive. CTC is bitterer than orthodox tea and the latter tends to be subtler with a better combination of flavors.

tea bushes. In reality, all varieties of tea are produced from the same tea bush (Camellia Sinensis). What gives teas their distinct characteristics is the way that the leaves are processed.

Processing black tea involves plucking, withering, rolling, oxidizing and drying tea leaves. The top two leaves are picked with their buds during the season, generally by hand. The withering stage involves decreasing the humidity in leaves and allowing for enzymatic oxidation. After that, the tea leaves are rolled and twisted, which releases natural juices from the cells of the leaves. This process can be undertaken using special machinery as well as being done by hand, but it is time consuming. After the rolling stage, black teas require further oxidation and this generally takes place in a dark room with a controlled climate. During the process of fermentation, tea acquires a lot of taste and aromatic compounds. The last step in the primary production of black tea is drying the leaves. Once a desired level of oxidation is achieved, the tea is heated in order to prevent further degradation. The final development of flavor happens during the drying stage, which has to be executed very carefully and requires skilled labor.

7.2.2.1.2 Processing of Green Tea

As already mentioned, green and black tea are produced from the same bush. What makes green tea different is that it is steamed before rolling to fully destroy the activity of enzymes and prevent enzymatic oxidation. The other steps of production are similar in both cases (although green tea does not need the fermentation step).

Georgia has an advantage in producing green tea as it is not necessary to rely on the shadowing of tea bushes – a practice prevalent throughout Asia due to the elevated levels of ultraviolet radiation in the region.

7.2.3 Stage 3: Packaging, Sorting and Branding

The packaging of tea is done by hand in small- and medium-size companies, whereas large companies employ packaging lines. There are four types of tea produced in Georgia: (1) loose tea in bulk, (2) loose tea in small boxes (packaged), (3) tea bricks (Agura tea) and (4) tea bags. Only black and green tea categories are produced in Georgia. Dissoluble tea extracts/concentrates are also produced (by one company in Tsalenjikha). The only company that actively pursues branding and has a relatively well defined marketing strategy is Gurieli. Other small-scale processors engage in branding through elaborate packaging and designs of tea boxes, although they have limited access to advertising and therefore fall short of informing consumers about their brands.

Tea packaging done by hand, 2015.

7.2.4 Stage 4: Marketing

Georgian tea is sold both locally and internationally. Quite a substantial part of locally produced tea is exported. This is mainly low-quality tea (loose tea in bulk and tea bricks). However, tea imports exceed exports by a substantial margin. The domestic market is dominated by imported tea (mainly tea bags), and local supply does not meet local demand. The Georgian tea market is highly competitive, with many well-known international tea brands present: Maryam (Azerbaijan), Azertea (Azerbaijan), Greenfield (UK), Lipton (USA), Ahmad (UK), etc. Georgian brands are also represented. These include Gurieli, Anaseuli, Shemokmedi, Petra, Lazi, Tkibuli tea, etc. Among these, Gurieli (Geoplant), which is the main Georgian player on the domestic market (but holding a modest share), also exports tea to Latvia, Lithuania, Estonia, the Czech Republic, Poland and Russia.

There are 6-7 large scale factories in Georgia that harvest tea leaves from their own plantations, process them and make different types of tea. Most of these companies are focused on the production of low-quality tea, which accounts for 90-95% of their total production. This low-quality tea is sold to export markets (e.g. Mongolia, Turkmenistan). The remaining production is high- and medium-quality tea for the high-end domestic and foreign markets. There are others specializing in high-quality teaproduction. For example, the Anaseuli company produces some high-quality organic tea. Moreover,

the Lazi company produces tea concentrates used in medicine and beverage production that are sold on domestic as well as international markets.

Low-quality tea is harvested using machinery and hand scissors. On average, it is possible to pick about 5 tons of tea leaves per hectare (mostly 5-6 leaves and bud). It takes only about 3.5 kg of tea leaves to produce 1 kg of low-quality (dried) tea. In the majority of cases, the low-quality tea value chain is vertically integrated with the same company being in charge of tea leaf production, processing and marketing.

The Gurieli company has a slightly different value chain system. The company produces teabags packaged in volumes of 50 and 100 grams (or 25 and 50 teabags) – the most demanded product on the market. According to the Gurieli company, they need to import raw materials for producing black tea. The imported tea leaves are then mixed with the local harvest, packaged, branded and sold on domestic and international markets. In contrast, according to Gurieli, green tea is entirely made from domestically produced tea leaves. Gurieli holds about 20% of the domestic market share of branded tea consumption.

7.2.5 Stage 5: Consumption and Domestic Market of Tea

As was mentioned above, there are no precise data available on the domestic consumption of tea in Georgia. According to experts and our estimations[5], Georgia consumes about 2,000 tons of tea annually. The majority of the tea being consumed is branded. However, it should be noted that nearly 80% of the tea consumed in Georgia is imported from abroad.

Tea price data[6] on the local market are available from Geostat. Figure A9 in the Annex displays the evolution of inflation adjusted tea prices in the Georgian market from 2006 to 2014. It can be seen that tea prices fluctuate around 30 GEL per kilogram.

7.3 The External Environment Influencing Linkages in the Tea Value Chain

In this section, we identify external factors that influence or have the potential to influence the development of the tea sector in Georgia.

7.3.1 Government Agencies

Thus far, the government of Georgia has no clear long-term strategy for how to develop the tea sector. Land tax (including on tea plantations) has increased 2-3 times over the last decade. Rental prices of state owned tea plantations is also expensive for their quality, which hinders the development of the sector. Fortunately, the Ministry of Agriculture is going to allocate some 3.5 million GEL from the ministry's 2016 budget for tea sector development (see below). In this context, the government is working on a long-term development strategy for the tea sector as well.

7.3.2 Development NGOs, Donors

In cooperation with the Georgian government, some donors and NGOs have already started supporting the tea sector. The lead project is ENPARD Georgia, which already supports three tea cooperatives, with some more potentially added during the project. The ENPARD project is implemented by four consortia, of which one, the CARE consortium, has supported the three cooperatives.

Before the ENPARD project, the Norwegian Development Agency attempted to develop tea cooperatives in 2011-2012 in the Guria region. They facilitated the establishment of cooperatives and purchased some machinery/equipment for tea producer/processor cooperatives.

7.3.3 Sectorial Associations

There are two associations in this sector: the Tea Producers' Association and the Tea Processors' Association. The goals of these organizations are to facilitate the development of tea production, processing and marketing in the long term, to advocate their interests at local and state government levels, and to promote Georgian tea internationally. Both associations need support in capacity building to better advocate the sector and help tea stakeholders to develop.

7.3.4 Financial Institutions

Microfinance organizations and banks are well developed in Georgia, but interest rates on agricultural loans are very high. Meanwhile, collateral requirements for liquidity are unaffordable for most tea producers and processors. However, there are a few cases in which processors have received preferential credits with interest rates subsidized by the government.

[5] In 2014, local production of tea was 1,800 tons, (-) export was 1,900 tons and (+) import 2,200 tons. If we calculate using that formula, we see that 2,100 tons were consumed domestically.

[6] Geostat calculates the price of 1 kilogram tea by multiplying the average price of different types of 50 g tea bags by 20.

7.3.5 Research Institutions / Knowledge Providers

There is still a tea research institute in Anaseuli, which is openly approached by the tea stakeholders. This institute is a very good starting point for modern research development, but renovation and capacity building is needed. Furthermore, interest in studying tea production/processing among the young generation is very low. There are also tea taster classes at the Agrarian University of Georgia. However, in general terms, research centers and knowledge providers are quite weak compared to the modern requirements of the global tea industry.

7.3.6 International Trade Environment / Logistics

Georgia is a member of the WTO. It also has some preferential trade relationships with the EU (DCFTA), CIS countries and Turkey. Georgia has General Schemes of Preference (GSP) with the US, Norway, Switzerland, Canada, and Japan. Additionally, negotiations on a free trade agreement with European Free Trade Association countries (Iceland, Liechtenstein, Norway and Switzerland) are expected to be finalized next year. Also, free trade negotiations with China have started this year. Despite these developments, there are some worries from producers that bilateral free trade agreements may lead to more competition.

Infrastructure for sea, ground, and air transportation is generally quite developed in Georgia, so in theory there should be few logistical barriers to exporting Georgian tea.

7.3.7 Certification Agencies

There is one local organization (Caucassert Ltd.) that conducts organic certification for tea. This is recognized by the states of the European Union. In addition, some governmental agencies issue export certificates for exporters at a low price and in a very short time.

7.4 Value Flow Charts

7.4.1 Flow Chart of Black Tea in Georgia (Medium- and High-Quality Loose Tea)

Figure 14: Flow Chart of Black Tea in Georgia (Medium- and High-Quality Loose Tea)

7.4.2 Added Value by Actors at Each Link

7.4.2.1 Farmer:

The price received by farmers for 1 kilogram of tea leaves ranges from 1.8 to 2.2 GEL. The cost of production per kilogram is difficult to estimate, due to a lack of bookkeeping at the farm level. However, according to our estimates, costs are about 50% of the selling price, ranging between 0.9-1.1 GEL per kilogram.

In Georgia, a well-attended 1 hectare tea plantation yields 3 tons[7] of tea leaves on average (up to 3L&B) per year. Tea is usually harvested 3-4 times between April and September. Table A2 in the Annex shows the costs and benefits for a farmer with a 1 hectare well-attended plantation, assuming an average price of 2 GEL per kilogram of tea leaves. The costs for 1 kg of tea leaves has been calculated based on the costs, an average family farm (1 ha) indicated for its 3 tons of tea leaves. Detailed information about farmers' costs can be found in Table A2 in the Annex.

7.4.2.2 Processor:

The processor is purchasing raw material for 1.8-2.2 GEL per kilogram. As it takes 4-4.5 kilograms to get 1 kilogram of made tea, the processor's cost

[7] According to a CERMA report (2003), yields in Georgia are very low at 400 kg of made tea per hectare (from 1,600-1,800 kg of tea leaves); whereas correctly managed bushes in Georgia's climate should be able to achieve 3,000 kg of tea leaves per hectare (from 600-750 kg of made tea).

for raw materials to make that amount is 8-9 GEL.

According to the data from our field research, small-scale factories process 1 ton of tea leaves into 150 kilograms of high-quality (2L&B) tea (60%) and 100 kilograms of medium-quality (3L&B) tea (40%). Thus, from 1 ton of tea leaves, the processing company receives 250 kilograms of made loose tea.

The wholesale price of high-quality loose tea (in bulk) ranged from 20-30 GEL per kilogram in 2015. The price for medium-quality loose tea (in bulk) is about 12 GEL, roughly half that of high-quality tea.

Thus, if we calculate the revenues per 1 ton of tea leaves for a company (with average selling wholesale prices of 25 GEL for high-quality and 12 GEL for medium-quality tea), these will be 3,750 GEL from high-quality tea and 1,200 GEL from medium-quality tea. That would amount to 4,950 GEL

Tea drier (making high-quality tea), 2015.

As for costs, the wholesale price of 1 kilogram of tea leaves is about 1.8-2.2 GEL (in 2015). For 1 ton of tea leaves, the processing company spends 2,000 GEL on average (2 GEL per kilogram). Detailed information about processors' costs and benefits can be found in Table A3 in the Annex.

7.4.2.3 Broker:

Brokers purchase tea from tea processors. The price paid by brokers is around 25 GEL per kilogram for high-quality tea. Brokers then mix a variety of different teas and engage in packaging and branding. They sell the end product to retailers and wholesalers domestically and/or abroad. The price the broker receives from retailers and wholesalers in the domestic market is about 100 GEL per kilogram.

7.4.2.4 Retailer:

Retailers in Georgia are the mini/super/hypermarkets as well as cafes/restaurants, hotels and tea houses. The price consumers pay for 1 kilogram of high-quality tea is often about 130 GEL. Consumers usually buy in smaller portions, like 50 or 100 grams of teabags, or loose tea in nicely-packaged small boxes.[8]

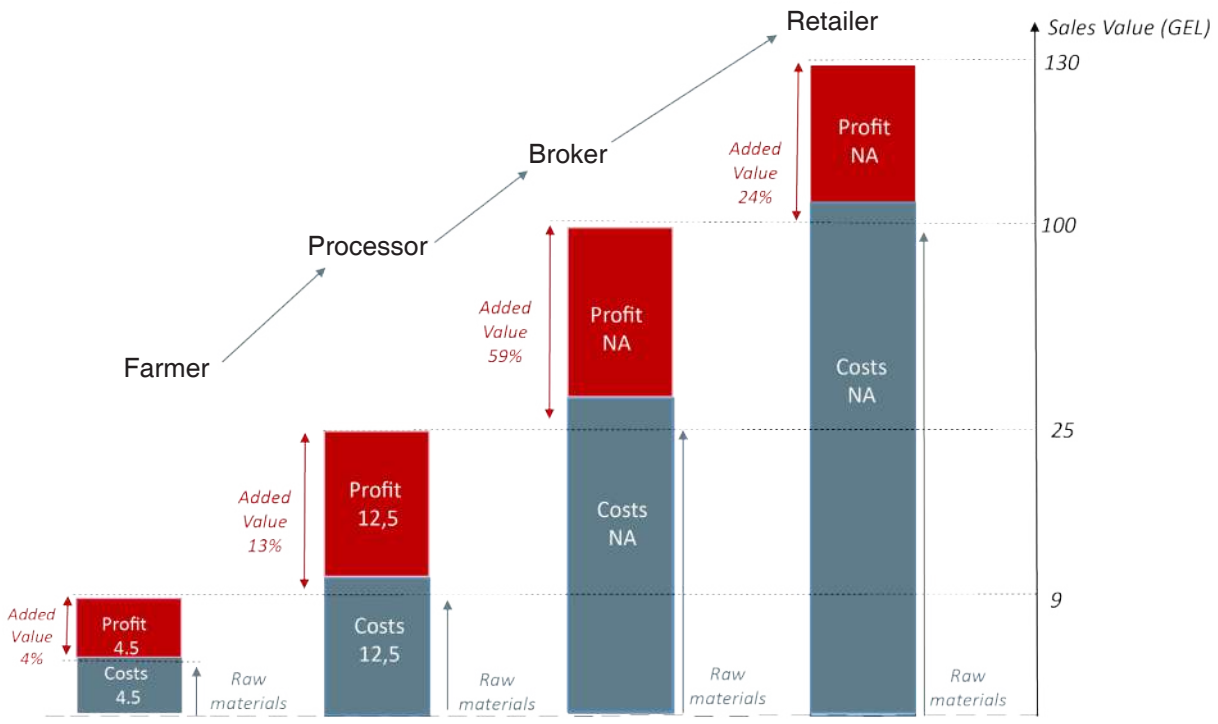
We acknowledge that these numbers are rough estimates and in practice one would observe a lot of heterogeneity in the prices being charged at various stages of the value chain. Table 2 and Figure 15 provide a summary of value added activities through the entire value chain.

Table 2: Added Value by Actors at Each Link (per 1 kg of High-Quality Made Tea)

Stage of Production	Sales Value of Materials or Product (GEL)	Costs (GEL)	Profit (GEL)	Value Added (GEL)
	4.5			
Farmer	9	4.5	4.5	4.5
Processor	25	12.5	12.5	16
Broker	100	NA	NA	75
Retailer	130	NA	NA	30
Total Value Added				126.5

[8] The nominal price of a 50 g tea box (of 25 teabags) varies between 2.3-3.0 GEL in Tbilisi supermarkets (as of November 2015).

Figure 15: Key Benefits and Value Added Activities



The profit margins in the high-quality tea value chain are seemingly quite attractive. For example, the margins for farmers and processors are 50% and 30%, respectively. Field research data suggests that the profit margins for brokers and retailers should be quite substantial as well. This is in line with the general evidence that the highest profit margins are achieved during blending and branding (Fang et al., 2014). Unfortunately, we do not have access to relevant data to make precise calculations. When it comes to value added, the percentage shares among key value chain actors are as follows: farmers 4%, processors 13%, brokers 59% and retailers 24%.

The profit margins in the medium-quality tea value chain are also quite attractive, especially if we consider two main facts: (1) this type of tea is the most demanded tea on the market (used in teabags), and (2) while producing high-quality tea, leftovers are used for medium-quality tea production. This is additional revenue for the tea processing company. However, in order to compete with many national and international companies, these companies need to engage in aggressive branding and marketing campaigns.

Table 3: Added Value by Actors at Each Link (per 1 kg of Low-Quality Made Tea, 4-6 leaves and a bud)[9]

Stage of Production	Sales Value of Materials or Product (GEL)	Costs (GEL)	Profit (GEL)	Value Added (GEL)
	2.14			
Processor	3.5	3.14	0.36	1.36
Retailer abroad	NA	NA	NA	NA
Total Value Added				NA

[9] Calculations are performed assuming a 2.4 USD/GEL exchange rate.

The profit margins in the low-quality tea value chain are not attractive because of a very low price and high production costs that are exacerbated by an absence of economies of scale. Georgian low-quality tea producing companies are thus at a competitive disadvantage against their international competitors (see a detailed analysis of the value added at each link for low-quality tea in Tables A5 and A6 in the Annex). Moreover, Georgian low-quality tea exporters are losing their traditional markets, as reflected in a dramatic decline in tea exports (see Figure 3 above).

7.5 Key Actors and their Relationships[10]

7.5.1 Horizontal Value Chain Relationships

During the interviews, the following horizontal value chain linkages in the tea sector were identified. The results are presented in Table 4 below.

Table 4: Horizontal Value Chain Relationships

RELATIONSHIP	DESCRIPTION OF RELATIONSHIP
Among input and service providers (including workers)	The situation is quite competitive among input suppliers (fertilizers, herbicides, plowing machinery etc.), but the quality of inputs is low and the prices are high (especially given the depreciation of the GEL). All credit suppliers (banks or micro-financial organizations) are quite competitive, but they keep interest rates very high for farmers, and require high value collateral (e.g. a house/flat in the city). There is a shortage of good agronomists/tea tasters with modern knowledge, their average age is more than 50 years.
Farmers to farmers	There is a wide range of tea farmers/farms in Georgia. According to Geostat's 2004 census (the only available data so far), 15,878 households or firms recorded tea plantations. Of these, 99% were of less than 1 ha. Farmers share experience and knowledge with each other. Many of them started cooperating under the new circumstances of the development of agricultural cooperatives in Georgia. However, the situation among different farmer groups and individual farmers is not very close in some ways – for instance, they do not have strong collective marketing efforts.
Processors to processors	There are two main categories of processing plants: small and medium-sized enterprises and large processors. The first category includes household-level processing, as well as small- and medium-size enterprises (Ltd. or cooperatives). The relationships among them are quite competitive due to their efforts to purchase and process raw tea leaves. In spite of that, they do cooperate and share experiences with each other. There is less cooperation among large processing plants, because of the competition for selling final products (on domestic or international markets).
Traders to traders	Traders include retailers, wholesalers (brokers) and exporters. The relationships among traders are very competitive and they do not really cooperate with each other.
Among consumers	The domestic market is dominated by imported tea. Advertisements also feature imported tea products. Georgian consumers thus tend to bypass locally produced tea. This is primarily because of the limited tea options available and because the current quality (in terms of sorting, packaging and branding) is not particularly good, according to customers.

[10] Calculations are performed assuming a 2.4 USD/GEL exchange rate.

7.5.2 Vertical Value Chain Relationships

During the interviews, the vertical value chain linkages in the tea sector were identified and are presented below (Table 5).

Table 5: Vertical Value Chain Relationships

RELATIONSHIP	DESCRIPTION OF RELATIONSHIP
Input suppliers, service providers and farmers	The majority of tea farms belong to households, and they rarely hire agricultural workers. Medium- and large-size farms employ additional labor, and demand for that is quite high during the harvesting season. However, tough working conditions in the plantations and low salaries push villagers to find other jobs inside or outside the country. The new generation does not want to work on tea farms. As a result of the labor shortage, salaries keep increasing year by year. Furthermore, farmers have little incentive to keep good workers; the same attitude was discovered from the workers' side as well. There is limited use of formal contracts and payments are made on a daily basis or on volume harvested. Inputs (fertilizers, herbicides, etc.) are provided by many different entities, but their quality and price are frequently unreasonable. Most farmers do not apply fertilizers and herbicides to their plantations, mainly due to liquidity constraints and short-sighted behavior. Agricultural loans are very expensive and require high-value collateral. Although the government has some cheap agricultural loans, these loans go through the banks and the tea plantation owners still have difficulties in getting them because of the abovementioned reasons.
Farmers and processors	Relationships among farmers and processors are quite good. There are concerns regarding long-term relationships and being business partners. Buying with credit and paying these back on time is not a problem, but a challenge might be the quality of tea leaves. Sometimes, processors request a certain quality of leaves (e.g. 2-3 leaves and bud), but the tea leaf producer farmer supplies a lesser quality, which (in a few cases) is something that is discussed among the parties. The processors collect the tea leaves by themselves, but in some rare cases there are collectors in between these two value chain actors. The tea leaf price and supply schedule are discussed beforehand and agreed by the parties.
Processors and traders (retailers, wholesalers (brokers) and exporters)	Relationships among processors and traders are good and business oriented. Tea delivery on credit and paying that back is sometimes an issue, but in most cases payment takes place on time. Most tea processors and traders lack creativity, they do not know how to better sell their products to the market (e.g., sorting, packaging, branding, promoting, diversifying the products, etc.) and/or lack the finances to do so. The proper place on the shelves are sometimes discussed among the parties.
Tea traders and consumers	The consumers are not well aware about the benefits of Georgian tea. Also, people do not really feel pride in buying local Georgian products (according to the Kar.ge movement[11]). The poor quality of sorting, packaging and branding is a further problem for capturing customers' attention and encouraging them to buy the products. There is also a lack of tea tasting and competition among tea producers in Georgia to let customers know the quality of teas.

[11] http://iset-pi.ge/index.php/en/iset-economist-blog-2/entry/give-your-country-a-holiday-gift-buy-small-buy-local-buy-georgian

8. A SWOT ANALYSIS OF THE GEORGIAN TEA SECTOR

Table 6: A SWOT Analysis of the Georgian Tea Sector

	STRENGTHS (S)	WEAKNESSES (W)
Production	• Tea is a sub-tropical plant which is resistant to weather shocks that often hit Georgia (frost, hailstorms, floods, etc.). • There are no tea plant diseases in Georgia (a cold winter is a natural remedy, protecting tea plantations). • Georgia was the main tea producing region in the Soviet Union. It has a huge tradition of tea cultivation and the Georgian "brand" could easily be restored. • There is a good climate for tea production. The Black Sea and the Caucasus mountains create good conditions for quality tea growing. • Most tea plantations in Georgia do not require irrigation or drainage infrastructure. • Georgia's tea plantations do not require artificial shadowing (like in Japan). • Tea roots are very strong and can survive for many decades, if not for centuries. They are also fire-resistant. • Tea is harvested many times a year (3-4 harvests from April to September). • Tea grows in acidic soil, which is common in Georgia's tea growing regions. • Georgia is one of the northernmost locations for tea production in the world, which lends some special flavors and aromas to the tea (e.g., an aroma of roses). • The plantations and tea bushes are very natural; herbicides and fertilizers have not been used for more than 25 years.	• There are no tea nurseries remaining in the country. • Plantations have been dramatically decreasing in size and overall productivity; many have become abandoned and/or overgrown. • Most plantations belong to the state and are not being maintained. Renting these plantations is quite expensive for farmers and processors. • The property tax on land has increased. • Weeds (fern) are growing throughout many of the plantations. • Most of the old abandoned plantations are in need of re-cultivation. Most of these kinds of plantations do not have fences and therefore many of the tea bushes can be damaged by livestock. • Cultivating new tea plantations is quite expensive and time consuming (5-7 times more expensive than the re-cultivation of an abandoned plantation). • Compared to 1985, only 2.5% of former tea plantations are still functional (from 67,000 hectares in 1985 to only 1,700 hectares in 2014). • It is only possible to harvest tea for six months in Georgia, compared to the main tea producing countries, where harvests take place throughout the year. • Many people from tea producing regions are forgetting how to harvest good quality tea leaves. • The productivity levels of tea plantations are low. • Most of the tea harvested in Georgia is categorized as more than two leaves and bud (2L&B), which only allows the production of low-quality final teas.

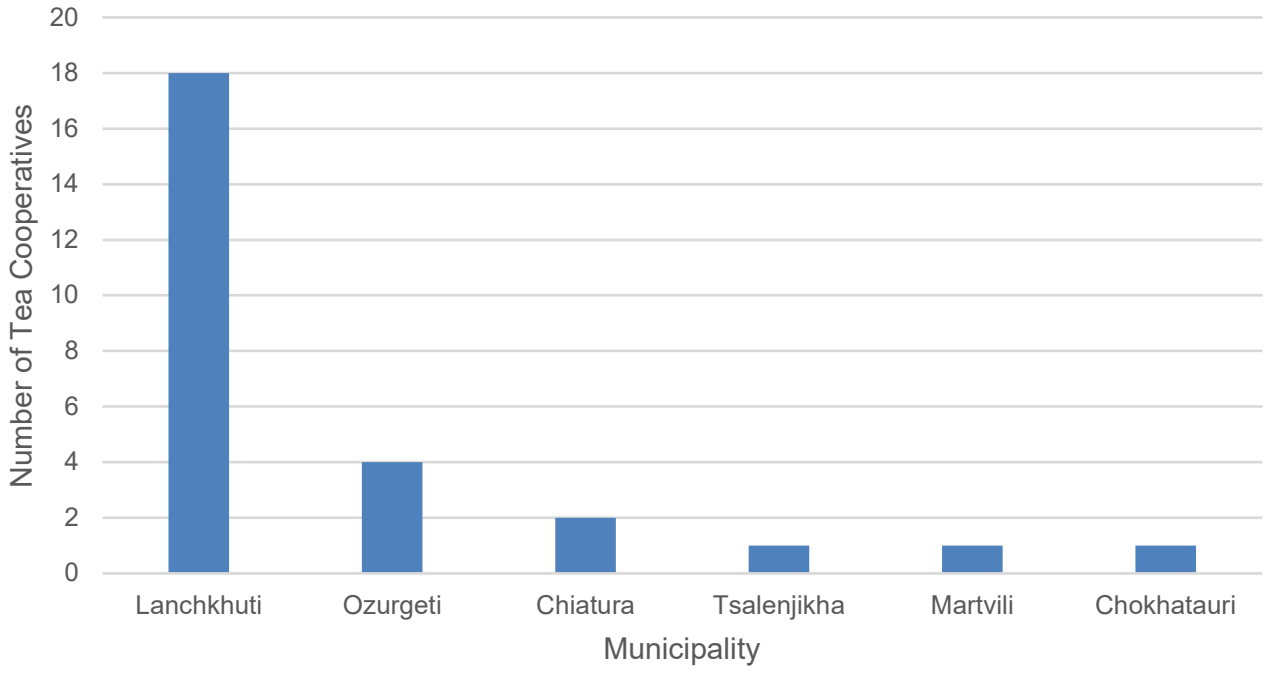
Processing	• Green tea, in particular, is highly recommended for production in Georgia. • During Soviet times, Georgia was a producer of tea processing machinery and other equipment needed for tea production thus creating a strong institutional memory.	• Lack of tea leaves to process. • The price of energy is quite high, which comprises a substantial portion of overall production costs. • Processing equipment is old and outdated, but still functional. • Most tea processing factories were destroyed and looted after the collapse of the Soviet Union.
Marketing	• Export declaration is simplified and inexpensive in Georgia. • Demand for tea has been increasing in Georgia and around the world. • The price of tea is inelastic. In addition, the price of orthodox tea continues to increase. • Georgian tea was well-known during the Soviet Union and thus the Georgian tea "brand" could easily be revitalized.	• Selling on credit is problematic in some cases. • Tea is storable for only up to one year. • Weak marketing strategies are being employed by small- and medium-sized enterprises. • Unilateral trade barriers imposed by neighboring countries.
Socio-Economic & Environment	• The Anaseuli tea laboratory and research center is still in operation. • During the Soviet Union, about 180,000 people were involved in the tea value chain. Thus, Georgia has a good institutional memory regarding tea. • Agricultural cooperatives have been forming and developing over the last two years (up to 30 cooperatives to date). • Tea is consumed by almost every family or household several times a day.	• High interest rates on bank financing for the tea sector; banks are not accepting plantations or processing equipment as forms of collateral. • A substantial part of the labor force from the tea producing regions goes to Turkey for work given that there are not many opportunities to find jobs locally. • Lack of contemporary knowledge about how to process tea. • There have not been any governmental programs directed at the tea sector in recent years, resulting in a lack of capital, infrastructure and development opportunities in the sector.
	OPPORTUNITIES (O)	**THREATS (T)**
Production	• Default environmental conditions eliminate the necessity of using chemicals. These favor production of bio/organic tea, which is a high-value product. • Opportunities to re-cultivate tea plantations at a much lower cost than if new tea bushes were planted. • There is the possibility to re-cultivate up to 10,000 hectares of tea plantations.	• Tea plantations are being replaced by other cultures (hazelnuts, blueberries, kiwi etc.) given that producers are receiving higher prices for these commodities. • Harvesting tea without protective suits can cause some health problems (fertility problems for women and joint disorders). • No strategy to fight against diseases that affect tea bushes in the event that there is an outbreak in plantations in the future.

Processing	• New, modern processing machinery (and renovation of factory buildings) can improve the quality of the final product.	• Loss of input suppliers. • Input price fluctuations that could dramatically reduce revenue or increase costs and force tea processors out of business. • Unfavorable changes in the law that would constrain the ability of existing tea processors to continue their everyday operations.
Marketing	• Proximity to the European market, especially under the DCFTA. • There is the possibility to sell Georgian tea to members of the Georgian diaspora around the world, as well as to those from former Soviet republics who remember the old Georgian tea brand. • The tea import-export ratio (by value) is very high (3.6 in 2014). Thus, there is room for locally produced tea, if the quality and price is competitive.	• Inexperience with successful marketing strategies that may lead to resource waste and low returns on marketing investment. • Loss of existing markets due to a change of consumer tastes, a Russian trade embargo, an introduction of export tariffs, and/or the loss of competitive advantage to new entrants.
Socio-Economic & Environment	• Cheap sources of credit are available due to subsidies from the government of Georgia, but collateral is a problem in most cases. • Some people from tea producing regions are going to Turkey to work in the tea sector in the season, and bringing back to Georgia the knowledge and experience they acquired there. • The Georgian government is working on a tea development strategy. • The tea sector requires a lot of labor and can thus employ many people.	• Absence of health protection practices and protective equipment. • Excessive use of fertilizers and herbicides may cause environmental damage. • Formation of a monopolist market structure. • Saturation of local markets with imported tea products.

9. TEA COOPERATIVES

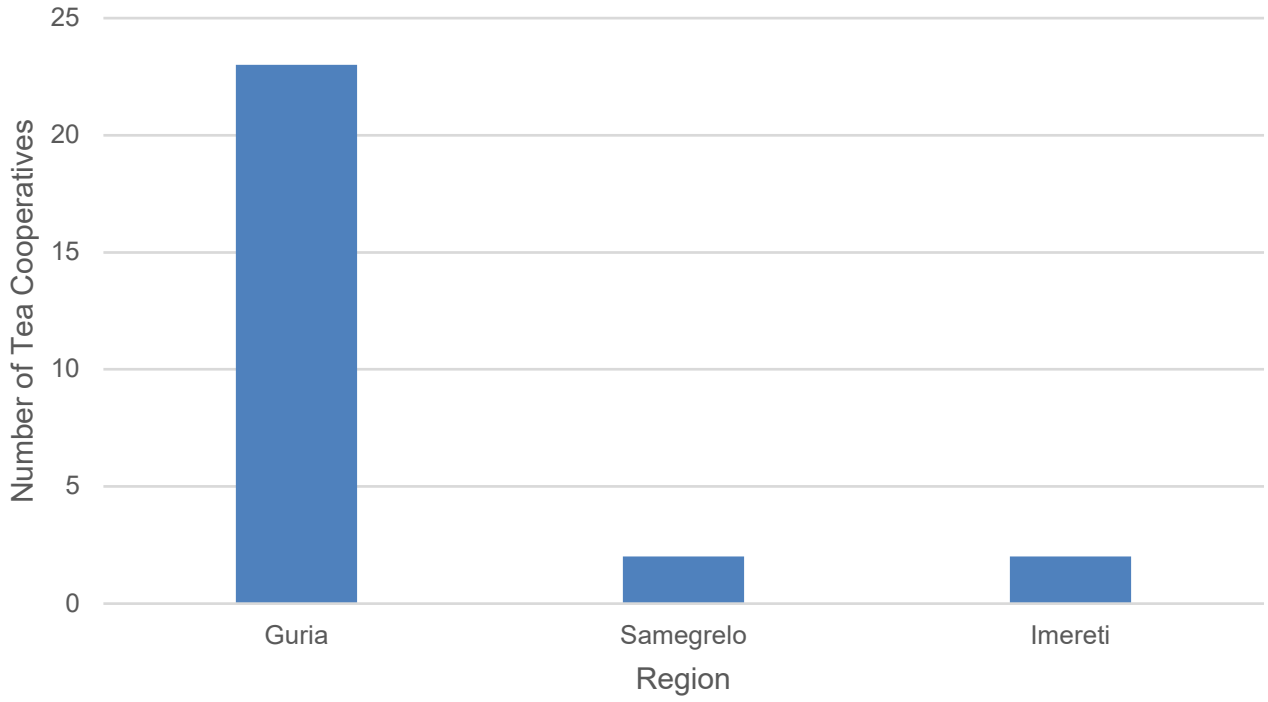
As of July 2015, there were 27 registered tea cooperatives in Georgia. Most of which are in Guria, especially in the Lanchkhuti municipality. Several cooperatives also operate in the Samegrelo-Zemo Svaneti and Imereti regions. There are no registered tea cooperatives in Adjara as of yet. Figures 16 and 17 provide detailed information about the distribution of tea cooperatives across municipalities.

Figure 16: Tea Cooperatives across Municipalities of Georgia



Source: Agricultural Cooperative Development Agency (ACDA), July 2015.

Figure 17: Tea Cooperatives across Regions of Georgia



Source: Agricultural Cooperative Development Agency (ACDA), July 2015.

Those 27 tea cooperatives have about 150 members. They collectively own (or rent) approximately 165 hectares of tea plantations, but only about a third are productive plantations. Most of the tea cooperatives are tea leaf producers, and only six of them have been processing tea leaves. Together, they produced 7 tons of medium- and high-quality tea in 2014.

Box 2: Case Study "Cooperation Amid Chaos: The Case of Guria Company 14"

In the early 1990s, prospects for the Georgian economy looked bleak. Devastation caused by civil and regional wars was followed by the total collapse of the Soviet supply chain. Villages, farms and plantations were abandoned and factories and their technological capabilities were destroyed. If, amid the chaos that ensued, brave entrepreneurs wanted to startup their own businesses and establish themselves in a non-existent market, they would have to start an entire value chain from scratch – from gaining access to input materials, to production and eventually to selling to the market.

Against all odds, and partly due to their commitment and love of their profession (and perhaps due to their Gurulian character), two farmers, Avtandil (Avto) Lomtatidze and Merab Dolidze, decided to work together and establish one of the first tea processing factories in the country. Their confidence was boosted by their skills in processing tea. Merab – an experienced engineer – was instrumental in assembling the tea processing line. Avto was a chemist by education and a tea technologist by training. His main responsibility was to make sure that tea processing was running smoothly and that the final product met desired quality standards.

About five years later, Giorgi Trapaidze – a third farmer from Guria with experience in agricultural processing – entertained the idea of producing tea and also started up a business. He quickly became friends with Avto and Merab, formed an informal cooperative agreement and has operated a tea business with them ever since. The triumvirate of Giorgi, Avto and Merab cooperated on many dimensions, including sharing tea processing know how, supporting each other during shortages of tea leaves, sharing transportation and distribution costs and engaging in joint marketing.

"I was asking Merab for advice. If I had an excess supply of tea leaves that I could not process, I could rely on Avto and Merab to take and process it and avoid waste. We were mixing each other's tea and selling it as one product to cut distributional costs and exploit greater economies of scale." – Giorgi Trapaidze.

This kind of cooperative arrangement was making everybody better off.

In 2011, Lodo Ltd. (a variation of the last names of the two original founders – Lomtatidze and Dolidze) was founded. Through it, the trio sold tea to the local market. In 2011 and 2012, they formed a partnership with the Marneuli Food Factory (MFF), which was purchasing tea from them and selling it under the MFF brand name. In 2012 and 2013, their tea was packaged and sold by Shota Bitadze – a tea broker selling tea locally as well as internationally. Through Bitadze, tea processed in Guria was sold in Ukraine.

Cooperation that Paid Off

In February 2014, a consortium of NGOs (CARE International in the Caucasus, the Georgian Farmers' Association, the Regional Development Association, and the ISET Policy Institute) was holding regional meetings aimed at informing farmers about the technical and financial assistance provided by the consortium due to the European Neighborhood Programme for Agriculture and Rural Development (ENPARD). Giorgi and his partners were invited to attend the meeting.

The eligibility criteria for receiving financial and technical support specified that aspiring cooperatives needed to have a minimum number of five members. Giorgi had eight Guruli farmers, including himself, lined up for establishing a cooperative. And with all the cooperative experience they had amassed over the course of many years of partnership, the ENPARD grant seemed like a very attractive prospect. Under the leadership of Giorgi, they quickly received official cooperative status

from the Agricultural Cooperatives Development Agency (ACDA) and submitted a grant application to CARE.

As anticipated, they qualified for ENPARD support and, starting from the second half of 2014, started operating as a tea cooperative under the name of "Guria Company 14".

ENPARD Contribution: Advantages of Being a Cooperative

The ENPARD grant came with a number of perks. Guria Company 14 was able to purchase three different kinds of rollers, in addition to an aroma oven, a tea drying machine, equipment for green tea processing, a tea sorting machine and a truck for transporting tea. With all the new technology available to them, they are now well-equipped to concentrate their efforts on making high-quality tea.

The grant money was also used to fence and re-cultivate (with heavy pruning) a 5-hectare tea plantation. While the first harvest is still three years away, when the plantation bears fruit overall production costs will be significantly reduced.

Besides these tangible benefits, the establishment of a formal cooperative brought structural and organizational improvements to their operations. First of all, the cooperative has a democratically elected leader (Giorgi Trapaidze). Moreover, the work is split among the cooperative's members according to their skills and ability. For example, before tea is processed it needs to be properly dried. According to Giorgi, getting the timing right is vital for having a high-quality end product and with many years of experience, he is taking charge. "You need to feel the tea," he stated.

The existence of legitimate authority and specialized labor, according to Baldassarri and Grossman (2011), are significant steps towards solving the so-called collective action problem (Olson, 1965) in cooperatives. If, before the formation of the cooperative, every one of their members was responsible for accounting, contract formation, and networking, after forming a cooperative these actions are coordinated by the head of the cooperative, thereby promoting specialization, a division of labor and improved productivity overall.

Being an ENPARD-supported cooperative comes with increased responsibility and organization.

"Our obligations increased. We are more focused and more mobilized. Our conscience does not allow us to leave the work unfinished"- Giorgi said.

Life in the Cooperative

The main activities of the cooperative include obtaining raw materials, processing tea and marketing.

The main suppliers of raw tea leaves for this cooperative are small-scale farmers from around the region who own plantations ranging in size from 1,000 square meters to 1 hectare. The cooperative has about 100 suppliers of tea leaves in the surrounding villages. They visit each supplier and purchase material directly at the farm gate. The degree of trust is very high between the cooperative and farmers. There are no cases of cheating and farmers deliver the desired quality tea leaves.

At the processing stage, the cooperative employs 15 workers, including cooperative members. As was mentioned above, everybody is assigned a task according to the best of their abilities. During the busy harvest period laborers work in day-night shifts. Their processing line can process 2 tons of fresh tea leaves in 24 hours. In 2015, they processed about 10 tons of fresh tea leaf and received 2.5 tons of dry tea (they, could of course, process much more if they had a sufficient supply of tea leaves). From these, 1.5 tons was high-quality twisted black tea and 1 ton was relatively low-quality black tea. Occasionally, the cooperative processes the raw material of other firms and charges for the service.

Some of the product (bulk tea) is sold through Bitadze Ltd. The cooperative also sells in two other markets. They sell bulk tea in Akhalkalaki. They also do packaging and sell packaged tea in the local market in Chokhatauri.

Problems, Challenges and Plans for the Future

The main problem the cooperative faces is a lack of raw tea leaves. They are currently only

working at limited capacity and could potentially process a much higher volume of tea leaves.

The lack of raw tea leaves is partly due to low productivity on existing plantations. According to Giorgi, farmers could improve their yields if they cultivate their land and use fertilizer.

"When using fertilizer, farmers would be able to harvest tea six times per year instead of three and increase their yield twice." – Giorgi Trapaidze.

However, the present-biased farmers (Duflo, 2011) tend to delay investing more resources in tea plantations – a perfect recipe for continual low productivity.

Another reason for the limited production of tea leaves is the high rent on tea plantations owned by the government and high costs associated with re-cultivating existing plantations. These problems are exacerbated by the fact that access to credit and finance is a major constraint. Banks require solid collateral, while the collateral value of a tea plantation is a miserable 500 GEL per hectare.

There are also legal problems that could be lethal to tea processing cooperatives. According to the latest amendments to the Law on Agricultural Cooperatives, cooperatives will not be allowed to purchase more than 30% of raw material from non-members and must produce the rest by themselves. According to Giorgi, his cooperative's ability to operate properly will be constrained by the new legislation unless they significantly increase the size of the cooperative. This seems unrealistic, at least in the short term, partially due to the absence of a proper institutional and legal setup that would leave the main decision-making power in the hands of the founders of the cooperative, and partially due to the nihilistic attitude of farmers towards the idea of cooperatives.

Despite all these challenges, Giorgi remains hopeful for the future. The cooperative expects to produce tea leaves from their own plantations and they also plan to employ more workers. He is also considering investing in re-cultivating additional tea plantations. In the next year, they plan to produce green tea. With the help of the ENPARD grant they also want to standardize their tea and try their luck on export markets.

Tea harvester lady from Guria. July, 2015. (Photo: Teona Makatsaria)

10. THE POTENTIAL OF THE TEA SECTOR

10.1 Employment Opportunities

Despite the fact that many tea plantations are no longer productive, the tea sector has great potential to reinvigorate rural life in Georgia's tea producing regions.

In the interviews we conducted in these villages, we learned that many unemployed people seek seasonal jobs abroad (mainly in Turkey) as laborers on tea or hazelnut plantations. Tea production is labor-intensive and, as it is almost exclusively harvested by female workers, is gender specific work (Groosman, 2011). However, according to the directors and operators of several tea processing farms and cooperatives, which have the ability to process large quantities of tea but cannot do so due to a lack of raw material, reinvigorating the tea sector and putting whatever is left from the tea plantations to productive use could have an enormous impact on reducing local unemployment levels. That, in turn, would reduce urban and international migration and contribute towards social cohesion in these small rural communities.

Furthermore, Georgia is becoming a popular destination for tourists. The tea producing regions, especially the mountains of Chiatura, the prehistoric caves and beautiful greenery of the Samegrelo highlands, and the landscapes of Guria and Adjara can all be turned into tourist attractions by combining tea production with entertainment, thus giving rise to the newly emerging concept of tea tourism. Tea tourism is becoming a thriving industry in India's Darjeeling region[12], in the Fujian province of China[13], and even in the mountains of Uganda[14] where all the necessary tourist infrastructure, including luxury hotels and resorts, are being built and contribute to the economic development of the local regions. Efforts aimed at developing tea tourism can kill two birds with one stone – it would increase the popularity of Georgia as an attractive tourist spot, as well as help promote brand recognition of locally produced tea products.

10.2 Incremental Income Generated for the Rural Areas and Pro-poor

Individual farmers could generate income from working in the tea sector in two ways. First of all, they could take care of plantations and produce tea leaves themselves. According to our calculations (based on data collected during field interviews), without working full time, the average farmer could earn up to 6,000 GEL annually per 1 hectare of tea plantation – a modest sum for poor farmers living in rural areas. It may be the case that fertilizer use could further boost yields and profits. Recent research by Duflo, Kremer & Robinson (2009) has demonstrated that farmers, despite knowing the benefits of fertilizer use, may significantly underinvest in fertilizer due to present biased preferences. However, the same research suggests that cleverly designed small-scale and cost-effective subsidies can nudge farmers towards using fertilizer. This is not to say that Georgian farmers have to exclusively focus on using chemicals. As we argue below, Georgian tea has the potential to serve high-end markets with high-quality organic tea. However, increasing productivity at the expense of quality and serving secondary markets could be a viable diversification strategy.

Alternatively, farmers can work for those tea processing factories that own tea plantations and require labor input for picking tea leaves. During interviews, several firm managers claimed they would be happy to pay 20-30 GEL to tea pickers per day. That is equivalent to a 400-900 GEL monthly income – again, not an insignificant amount for villagers.

10.3 Environmental Impact

Having tea plantations has several positive environmental impacts. First of all, due to unique climate conditions, tea plantations in Georgia are not vulnerable to diseases and do not require use of pesticides. Therefore, growing tea in Georgia does not lead to soil degradation and is an environmentally friendly practice.

Tea bushes develop a very deep and strong root structure that can prevent landslides, mudflows and other environmental calamities, especially in high mountain areas.

[12] For more information, see: http://www.telegraph.co.uk/travel/destinations/asia/india/9781293/Darjeeling-tea-at-the-top-of-the-Himalayas.html

[13] For more information, see: http://edition.cnn.com/2014/06/22/travel/china-tea-travel/

[14] For more information, see: https://sunshineteas.wordpress.com/2015/04/19/tea-tourism-in-uganda/

11. DISCUSSION AND RECOMMENDATIONS

11.1 Main Constraints in the Tea Value Chain

In this section, we will identify the main factors contributing to the low productivity of Georgian tea plantations.

11.1.1 Production Constraints

First and foremost, the lack of proper machinery and tools that are necessary for cultivating plantations serve as a constraint for production. In most cases, farmers lack agricultural knowledge about the appropriate methods for increasing yields.

Moreover, due to a combination of liquidity constraints and behavioral biases such as impatience (Duflo 2011), farmers abstain from making profitable investments in the use of fertilizer and herbicides.

The lack of a labor force experienced in high-quality tea harvesting can itself be a problem. Some of the tea producer and processor farmers we interviewed mentioned that they repeatedly face the problem of recruiting skilled workers. They identify several contributing factors, such as the absence of an intergenerational transmission of tea harvesting skills due to the long period of discontinuity in tea production, the absence of training programs, pull factors such as employment opportunities abroad, and urban migration that disincentivizes the rural young from staying in villages and working in plantations.

Another factor that deters farmers from investing in re-cultivating plantations is the high rent on government-owned plantations, which can amount to 350-450 GEL per hectare per year. The plantations are also not fit for exploitation and require heavy pruning. Considering the fact that after pruning it takes up to three years for plantations to become productive, investors facing large immediate sunk costs are easily turned away from committing resources to the tea sector.

11.1.2 Processing Constraints

As mentioned above, the main constraint in the processing stage is the lack of raw materials. Many tea producer and processor farmers we talked to are processing way below their operational capabilities. For example, the cooperative Guria Company 14 has a capacity to process 2 tons of tea leaves per day. However, due to the lack of input supply, the cooperative produced only 10 tons of raw material during 2015.

Other tea processors are facing more fundamental problems, such as a lack of new machinery and proper facilities that are essential for processing high-quality tea. Upgrading factories and purchasing technology (that is usually imported from China and Japan) usually costs thousands of dollars. Liquidity constraints and limited access to finance (due to the high collateral value required) are the main obstacles that keep farmers away from developing high-quality tea processing lines. Initiatives like ENPARD are significant steps toward easing the liquidity constraints faced by cooperatives. In particular, ENPARD provides grant money that could be used to upgrade facilities and machinery.
The ability of farmers to focus on high-quality tea production is further constrained by their lack of knowledge about tea processing technology, which keeps them from producing different tea varieties that would significantly increase their marketing potential by making their products more visible and attractive for consumers.

New legislation will reportedly constrain cooperatives' ability to process more than 30% of purchased raw material. This law will have a significant detrimental effect on the ability of tea processing cooperatives to continue operating as many of them do not own plantations and process tea leaves that are purchased from small-scale farmers. The law will thus be an obstacle to achieving the government's declared aim of supporting cooperative formation in Georgian agriculture.

11.1.3 Marketing Constraints

Almost all tea processing farmers/factories and cooperatives lack proper marketing skills. As a result, they do not possess well-defined advertising and branding strategies. This significantly impairs their ability to gain entry to new markets. Even in the local Georgian market, Georgian tea lacks popularity because consumers are not informed about the advantages of locally produced tea. In fact, they are often not even aware of the existence of local small-scale tea producers.

Access to new markets is further constrained by the lack of product differentiation. It is very difficult to gain access to export markets in developed countries due to quality requirements and significant trade barriers. Moreover, inexperience in networking prevents tea processing farmers from contracts with cafes, tea

houses, restaurants, hotels, etc. to significantly boost their visibility and sales. This problem is exacerbated by the inability of small-scale farmers to consistently supply product according to the requirements of the contracts.

11.2 Recommendations

As we have previously established, due to factors like fierce competition, low profit margins and decreasing prices, high local labor costs and the impossibility of large-scale industrial production because of the small area of Georgian tea plantations, production of low-quality tea is not a viable long-term strategy for the Georgian tea sector's development. Instead, due to favorable climatic conditions and the continued brand recognition among post-Soviet consumers, it is recommended that the Georgian tea sector focus on producing a high-quality niche product serving high-end export markets.

Development and promotion of a high-quality Georgian tea brand (including organic tea) could be achieved, for example, via the formation of public-private partnerships. Tea could be treated as a premium brand, like wine, and the government may need to take measures to promote Georgian tea worldwide, including bringing Georgian tea producers to international exhibitions and tea-related conferences. Private companies must also strive to create and secure a high-quality image of Georgian tea. They may need to come to an understanding that compromising on quality by mixing imported cheap, low-quality raw material with local production will damage the brand and will be a losing strategy for everybody in the long run. The government may also need to take measures to prevent brand name abuse. It may require private processing firms, operating under the Georgian tea brand, to disclose the origins and quality of the raw materials used in making their final product.

However, to make the production of high-quality Georgian brand tea sustainable, the tea sector must overcome three major constraints outlined in the previous sub-section: constraints in production, processing and marketing.

First of all, to address the issue of limited tea leaf production, it is essential for the government and the private sector to coordinate their efforts to re-cultivate existing plantations. The Georgian government is currently considering allocating 3.5 million GEL for the development of the tea sector in the 2016 budget. Most of these funds will likely be spent on pruning and fencing plantations as, according to the budget document, the government plans to rehabilitate approximately 2,000 hectares of tea plantations. This is good news for the Georgian tea industry. However, the government is advised to proceed with caution and to implement the plan in a responsible manner in order to ensure that once these plantations are rehabilitated and ready for harvesting they will not be abandoned or allocated to other uses. The government may be able to achieve this objective through the use of indirect subsidies (rent and tax exemptions), preferential loans and cost-sharing programs like "Produce in Georgia". Another strategy would be for the government to engage various value chain actors and promote the creation of large, vertically integrated supply chains (e.g. cooperatives). For example, to satisfy demand for raw material for medium- and large-scale processors, the government could facilitate linkages between farmers and processors that would make it easier for processing firms to receive a more stable supply of a substantial amount of tea leaves from newly cultivated tea plantations owned by small-scale individual farmers. However, this offer should come with the condition that processing factories must partner with individual farmers and, in addition to payment for raw materials, they should be offered dividends. This way, the vertically integrated supply chain will overcome the production constraints that large factories face, the processing constraints that small farmers face and individual farmers will have greater stimuli to work and take care of their plantations as they will receive a portion of value added that is larger at the later stages of the value chain. Moreover, more value chain actors can be integrated in this particular cooperative, including tea wholesalers, brokers and exporters that have experience in packaging, branding and marketing. When working together it will be easier for tea value chain actors to understand that protection of the quality and brand image of their produce is in their best interest.

As the knowledge gap of farmers is a significant constraint affecting the tea sector, an export-oriented branding strategy would significantly benefit from the development of vocational education centers specialized in agricultural management, marketing and tea processing technologies. Moreover, the government and private sector can cooperate to raise a new generation with the skills necessary for the sector's development. This can be achieved by bringing international experts into Georgia to teach as well as by sending local students abroad to acquire knowledge (under the condition of returning to Georgia and applying their acquired skills for the tea sector's development). There is not much time left to implement these procedures. Although the memory of the Georgian tea brand still exists (in post-Soviet countries and among the diaspora of those countries), it may soon fade away.

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ANNEX

Box A 1: Communiqué about the Stakeholders' Forum on the Tea Sector

On 1 July 2015, the Stakeholders' Forum on the Tea Sector took place at the Bagrati Hotel in Kutaisi. This was the first event in a series of dialogues about agriculture and rural development in Georgia organized by the ISET Policy Institute in partnership with CARE International in the Caucasus, the Regional Development Association, and the Georgian Farmers' Association, within the framework of the EU-funded ENPARD project "Cooperation for Rural Prosperity in Georgia". Similar forums are also being organized by other ENPARD consortia for various relevant value chains.

The main goal of this forum was to analyze the challenges and opportunities faced by the various actors involved in the tea sector, including input suppliers, farmers, cooperatives, processors, market intermediaries, consumers and exporters, with the overall goals of improving productivity in the sector, connecting farmers with new business opportunities, exploring new export markets, and developing and managing Georgian tea brands.

The forum was attended by Juan Echanove (Delegation of the European Union to Georgia), Gocha Tsopurashvili (Ministry of Agriculture of Georgia), Giorgi Misheladze (Agricultural Cooperative Development Agency), Nino Zambakhidze (Georgian Farmers' Association), Adam Pellillo (ISET Policy Institute), Shota Bitadze (Bitadze, Ltd.), Tengiz Svanidze (Tea Producers' Association of Georgia), Silvia Sanjuan (CARE International in the Caucasus), representatives from the Food and Agriculture Organization of the United Nations (UN FAO Georgia), Oxfam, and tea producers' cooperatives (including Guria Compani 2014, Nagomari Tea, Chibati, Duki, Mamati 2020, Tea Essence, Fandiseuli 2014, Kibula 2014, Mountain Tea, Kontchkati 2015, and Eco-migrant, among others). There were also representatives from the regional information and consultation centers of the Ministry of Agriculture, from regional and municipal governments, from scientific institutions and from the private sector, including Georgian Tea, Natura Tea Company, Bitadze, Ltd., Geo Plant, Ltd. (Gurieli), Aroma 91, Ltd., Institute of Tea, and Subtropical Cultures and Tea Industry.
Nino Zambakhidze and Juan Echanove opened the forum with a discussion regarding the sector's importance in Georgia. Adam Pellillo from ISET-PI presented facts and figures about the sector and introduced the goals and structure of the forum. According to the latest data from Geostat, tea leaf production in Georgia decreased from 6,600 tons to 1,800 thousand tons during 2006-2014. In 2014, the total value of tea exports varied across tea type, from black tea (1,377,000 USD) to green tea (952,000 USD). In contrast, the total value of tea imports was much larger, with about 8,008,000 USD being spent on imported black tea and approximately 565,000 USD spent on green tea. There are a number of actors involved in the sector with potentially thousands of household producers, 27 agricultural cooperatives, a handful of small- and medium-scale processors, and four large-scale processors.

At the beginning of the forum, Gocha Tsopurashvili, Deputy Minister of Agriculture, discussed the current situation in Georgia with regard to tea plantations. According to Mr. Tsopurashvili, up to 9,000 ha of tea plantations could be rehabilitated. Yet, currently, only 1,970 ha of plantations are in production. The Ministry of Agriculture has developed a Tea Rehabilitation Strategy and a 5-year action plan. Also, a sectorial committee has been created, mainly aimed at addressing the description and rehabilitation of inactive tea plantations (enclosing, semi-heavy pruning, etc.) and to searching for proper techniques and financial resources for re-cultivation. Collaboration with the private sector is seen to be of crucial importance, yet external factors and the interests of various stakeholders must also be taken into account.
Given that the rehabilitation of tea plantations is rather expensive, the Deputy Minister encouraged precise definitions of priorities of the areas to be tackled first. The main investments will be undertaken in Guria, Samegrelo and Adjara. The Georgian National Agency for Standards and Metrology should define quality standards for tea. Also, the need for geographical indicators should be considered. The next stage involves supporting small enterprises. Bringing tea seedlings from China and general cooperation on tea production is also planned.

According to Nino Zambakhidze, the Head of the Georgian Farmers' Association (GFA), GFA will collect questions from farmers regarding problems in the tea sector and will work with the ministry to ensure timely and accurate responses to farmers' concerns.

George Misheladze, Chairman of the Agricultural

Cooperative Development Agency (ACDA), said that there are 27 registered tea cooperatives in Georgia, including second-level cooperatives. According to Misheladze, the government's vision is to promote the development of agricultural cooperatives and the ACDA will be cooperating with other government agencies and donor organizations to help farmers cultivate tea plantations. Cooperation provides them with the opportunity to produce high-quality tea that will replace low-quality imported products.

Shota Bitadze, tea industry expert and president of Bitadze, Ltd., explained that one of the biggest problems in the tea sector is the lack of production and processing standards. Spearheading a tea standardization process that will be accepted by all tea producers is necessary. Moreover, improving existing tea varieties by establishing nurseries and demonstration plantations is critical to the success of the industry. Each region should have model tea factories with their own plantations and raw materials. The government's intervention, Mr. Bitadze added, is important to help tea exports. According to him, tea plantations can be owned by the government while cooperatives will have the opportunity to lease them. Tea plantations should be certified in order to determine which ones should be re-cultivated. Producers should be aware of the right technologies in order to produce high-quality products, while the National Food Agency should control the products' quality.

Tengiz Svanidze, Director of the Tea Producers' Association of Georgia, alerted the forum participants about the importance of the domestic market. Georgian tea brands should strengthen their position in the local Georgian market as the majority of imported tea is low-quality and full of chemical additives. Also, there is a deficit of tea leaves in Georgia and the size of operational tea plantations continues to decrease.

Mikheil Tchkuaseli, the Director of Gurieli, shared his opinions, claiming that there is enough space for all actors in the tea market if a proper connection is established among large and small enterprises (including smallholder farmers and agricultural cooperatives). Gurieli expressed its readiness to purchase tea leaves from local farmers/cooperatives. He further argued that it is essential to make adjustments in production and processing, for example, using Japanese and Chinese tea varieties and processing methods that may increase the value of Georgian tea brands in domestic and international markets. Furthermore, it is necessary to ban the use of herbicides and pesticides so that Georgian tea can be branded and marketed as organic, thereby increasing its value to consumers.

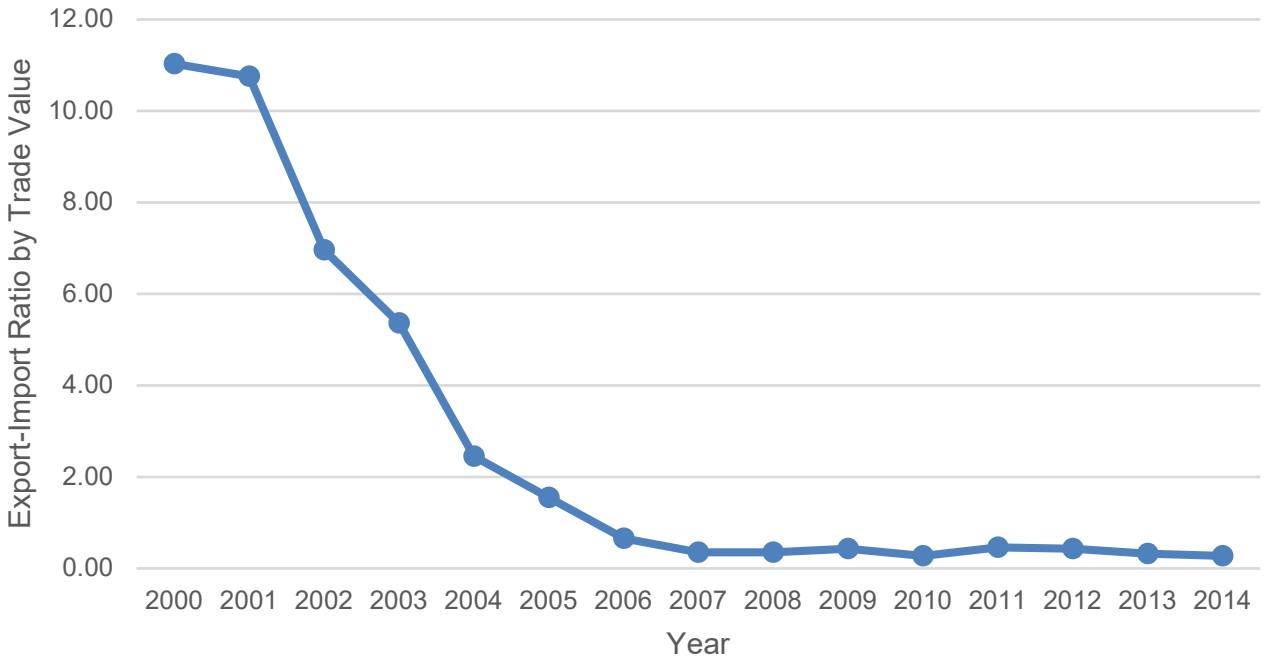
A representative of the Guria Company 2014 cooperative talked about the necessity of involving farmer cooperatives in tea sector related policy-making processes. Supporting tea producers is key, he argued. The government should hand over tea processing plants and plantations to tea producers through leasing arrangements, provide them with agricultural credit with low interest rates, and exempt them from paying land taxes for 3-5 years.

Some of the proposals receiving a certain degree of agreement amongst the participants were:

- Implementing reforms in the tea sector, supporting tea cooperatives and connecting the value chain actors in the sector.
- Mobilization of additional financial resources, particularly from the private sector, to support the re-cultivation of tea plantations.
- Development of mechanisms for selling/leasing state-owned plantations.
- Prioritization of domestic markets, potentially following a branding strategy that emphasizes the organic qualities of Georgian tea production and processing.
- Establishment of linkages between farmers' groups and tea cooperatives and large-scale processing facilities.
- The potential profitability of following an import-replacement marketing strategy.

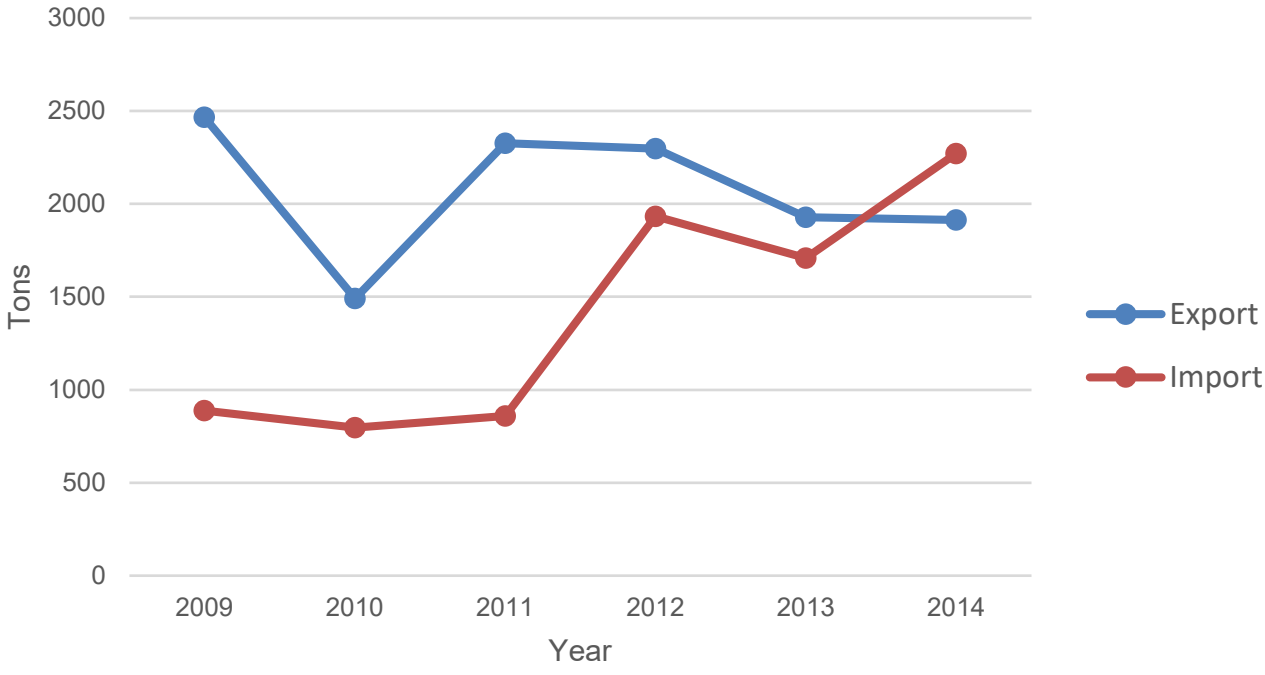
Silvia Sanjuan, director of the project organizing the forum, thanked the participants for their active participation and reminded them that the dialogue platform on tea would be kept open and the project will follow up the main challenges and opportunities discussed during the forum, keeping the different stakeholders informed about the progress made, and organizing meetings for in-depth discussions on tea and tea farming issues.
At the closing of the forum, Gocha Tsopurashvili, Deputy Minister of Agriculture, noted that the organizations involved in agricultural production would be strengthened and, during this process, the tea sector would receive special attention. Agricultural insurance will also become one of the main priorities for producers, the Deputy Minister added, though the first stage involves an assessment of the current conditions of existing tea plantations.

Figure A1: Export-Import Ratio by Trade Value from 2000 to 2014



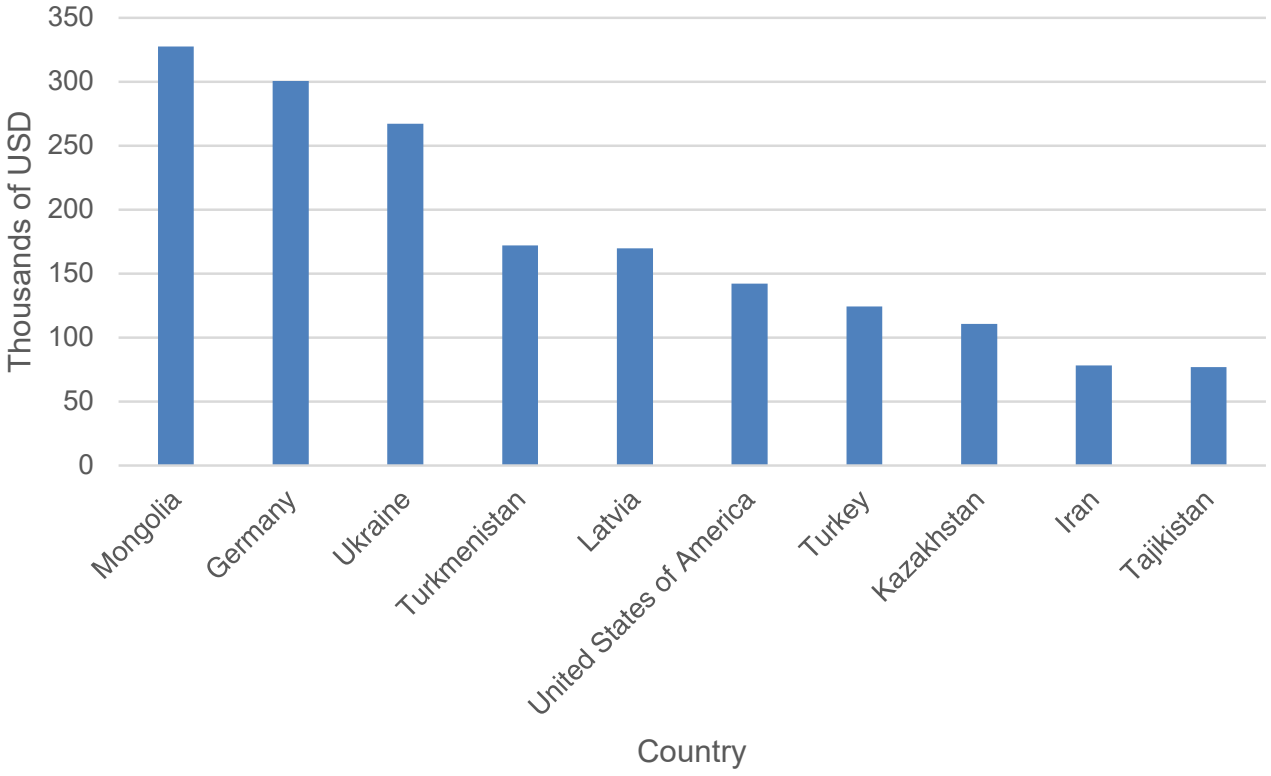
Source: Geostat

Figure A2: Evolution of Tea Export and Import Volumes from 2009 to 2014



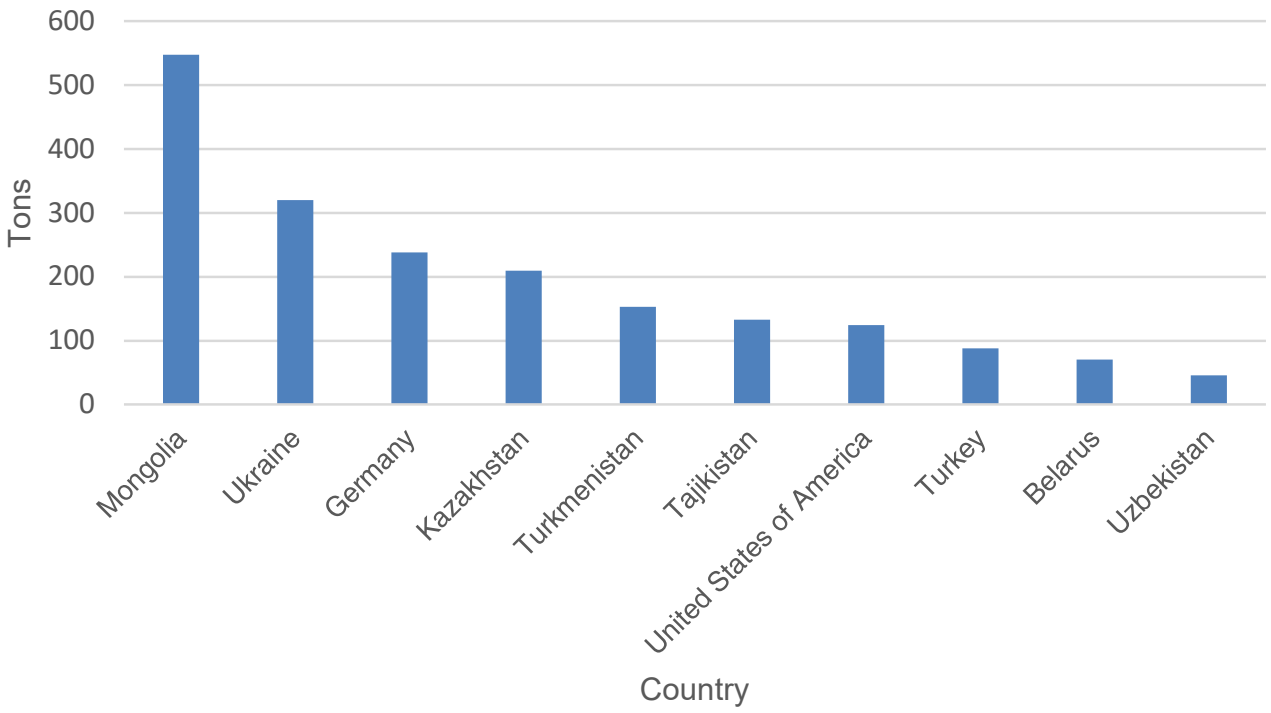
Source: Geostat

Figure A3: Top 10 Tea Export Destination Countries from Georgia by Trade Value (2009-2013 average)



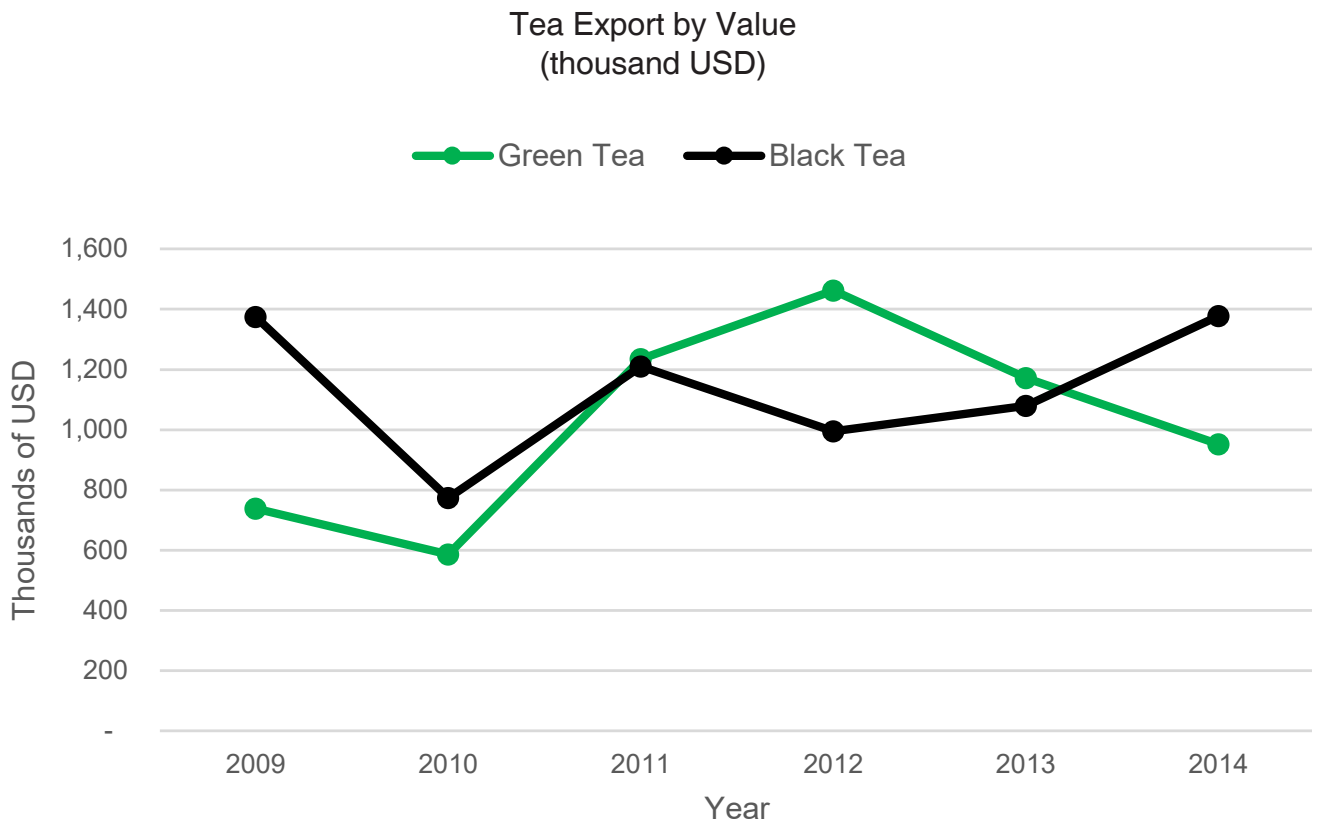
Source: Geostat

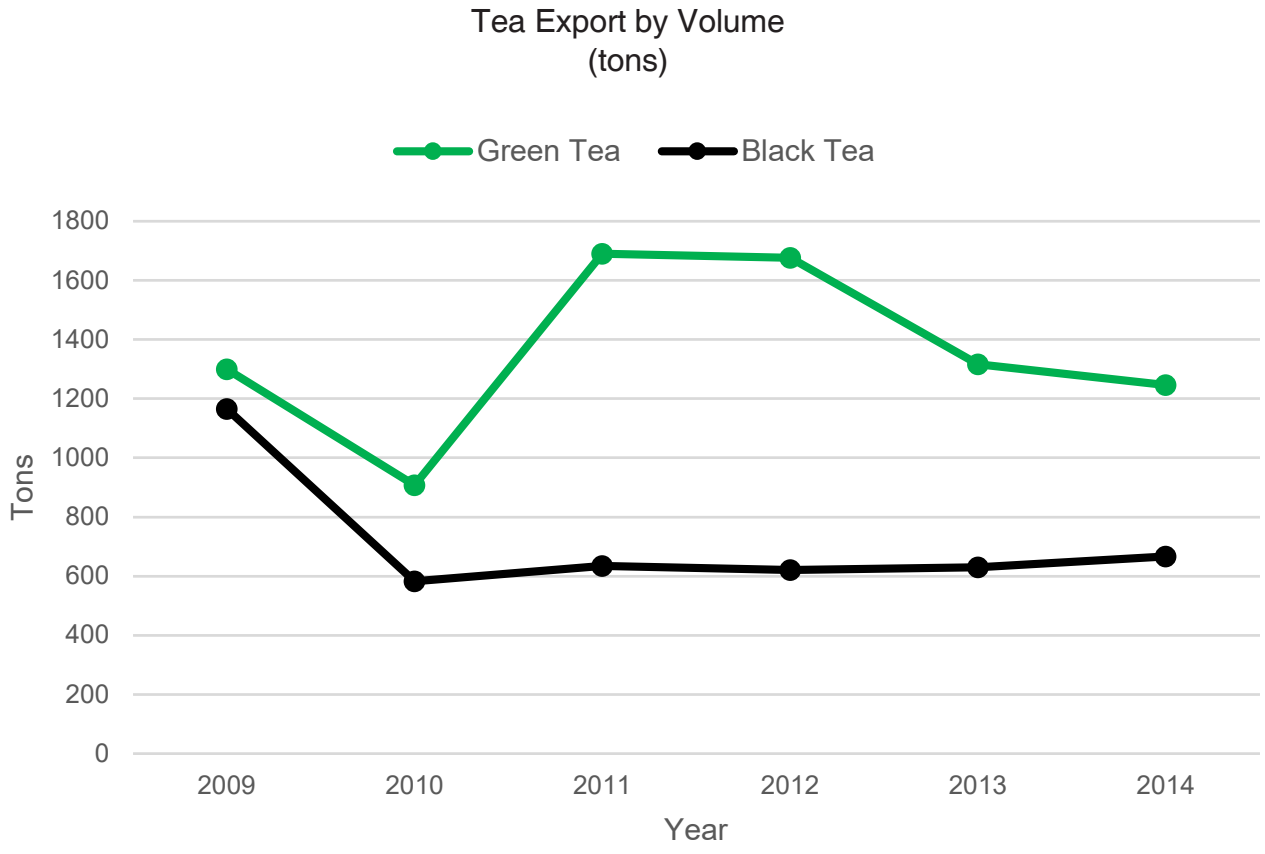
Figure A4: Top 10 Tea Export Destination Countries from Georgia by Trade Volume (2009-2013 average)



Source: Geostat

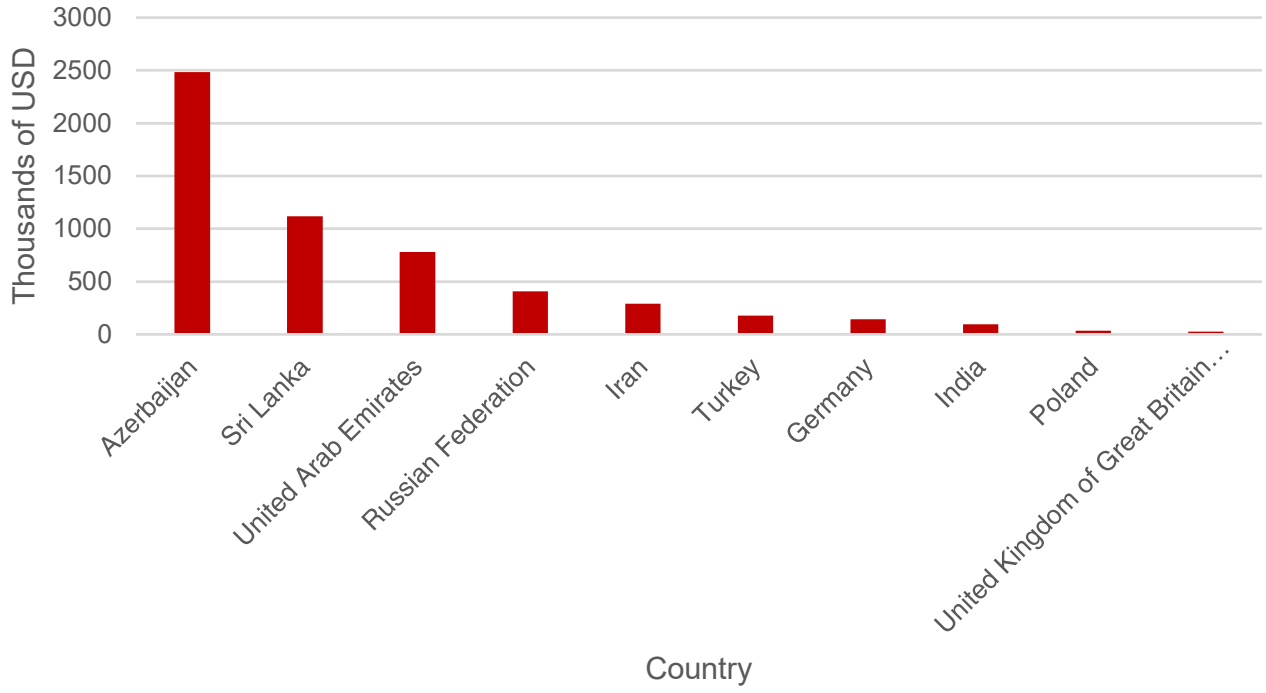
Figure A5: Evolution of Tea Exports from Georgia by Categories (2009-2014)





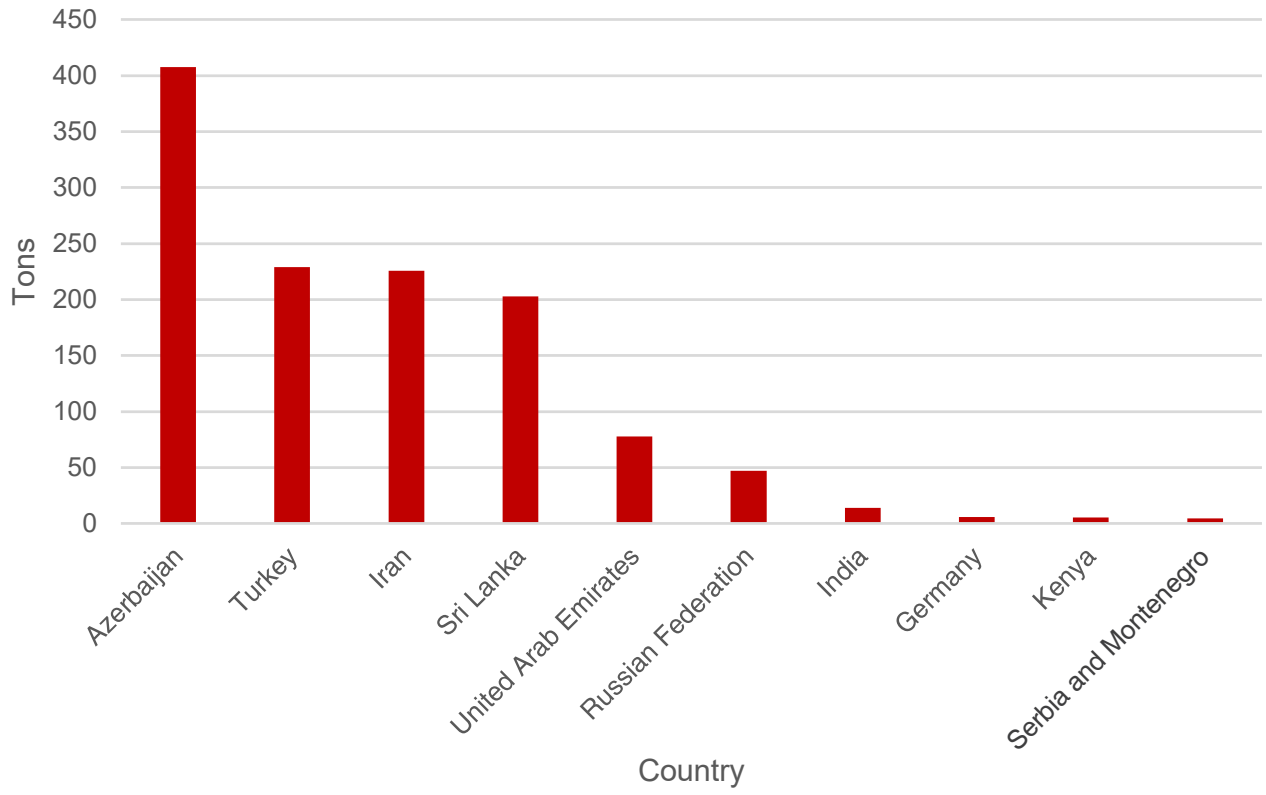
Source: Geostat, ITC

Figure A6: Top 10 Countries Importing Tea to Georgia by Trade Value (2009-2013 average)



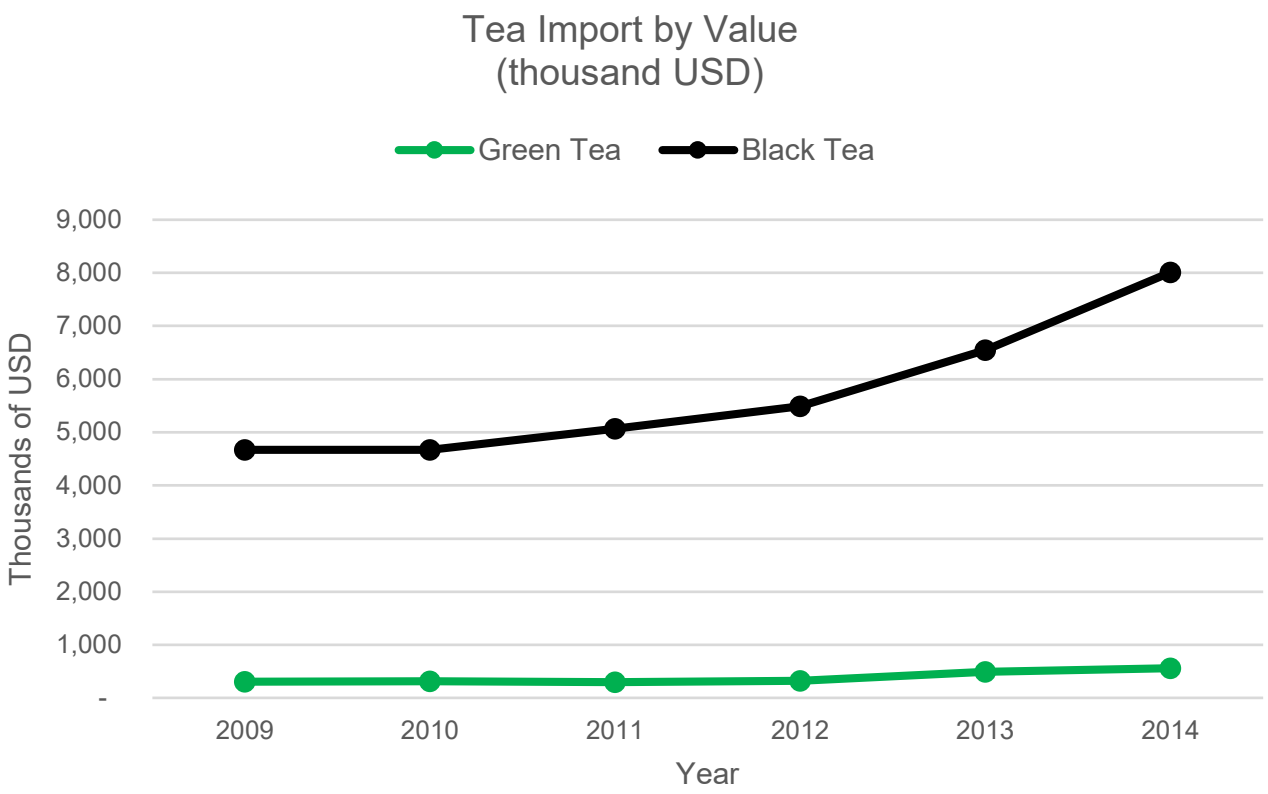
Source: Geostat

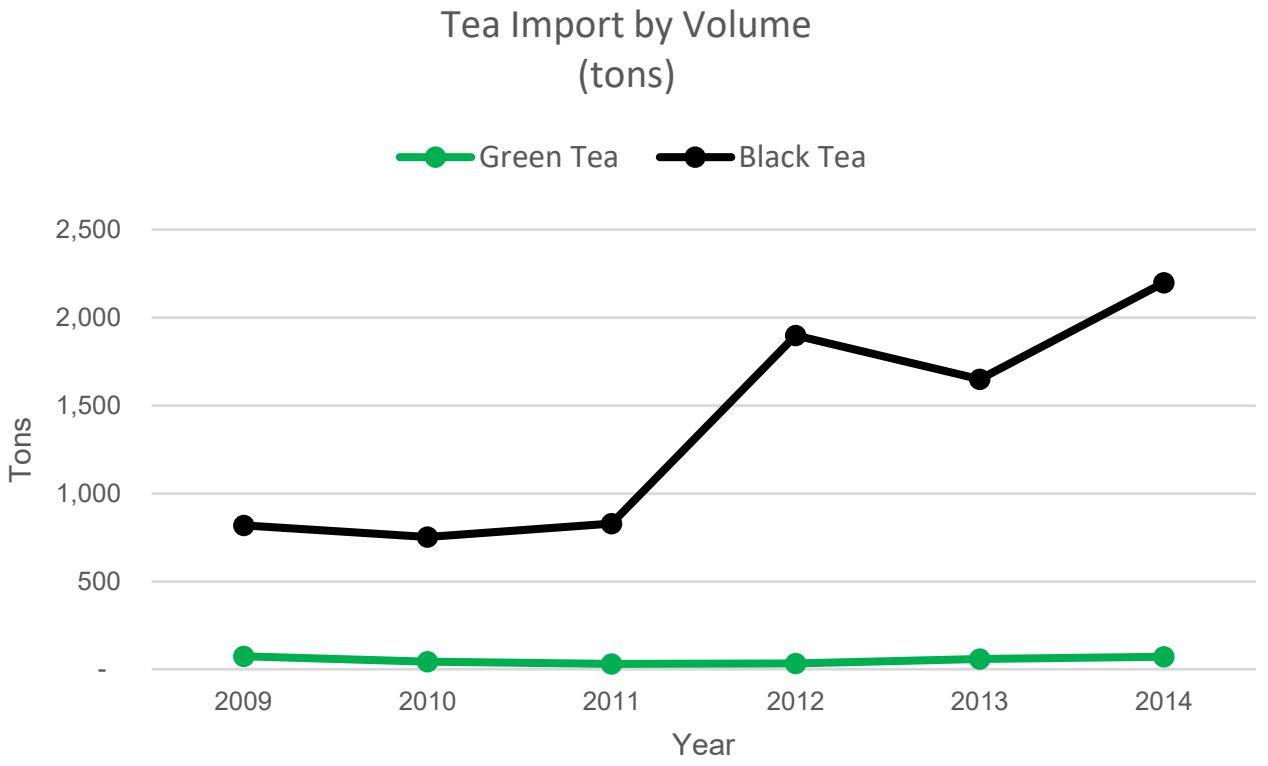
Figure A7: Top 10 Countries Importing Tea to Georgia by Trade Volume (2009-2013 average)



Source: Geostat

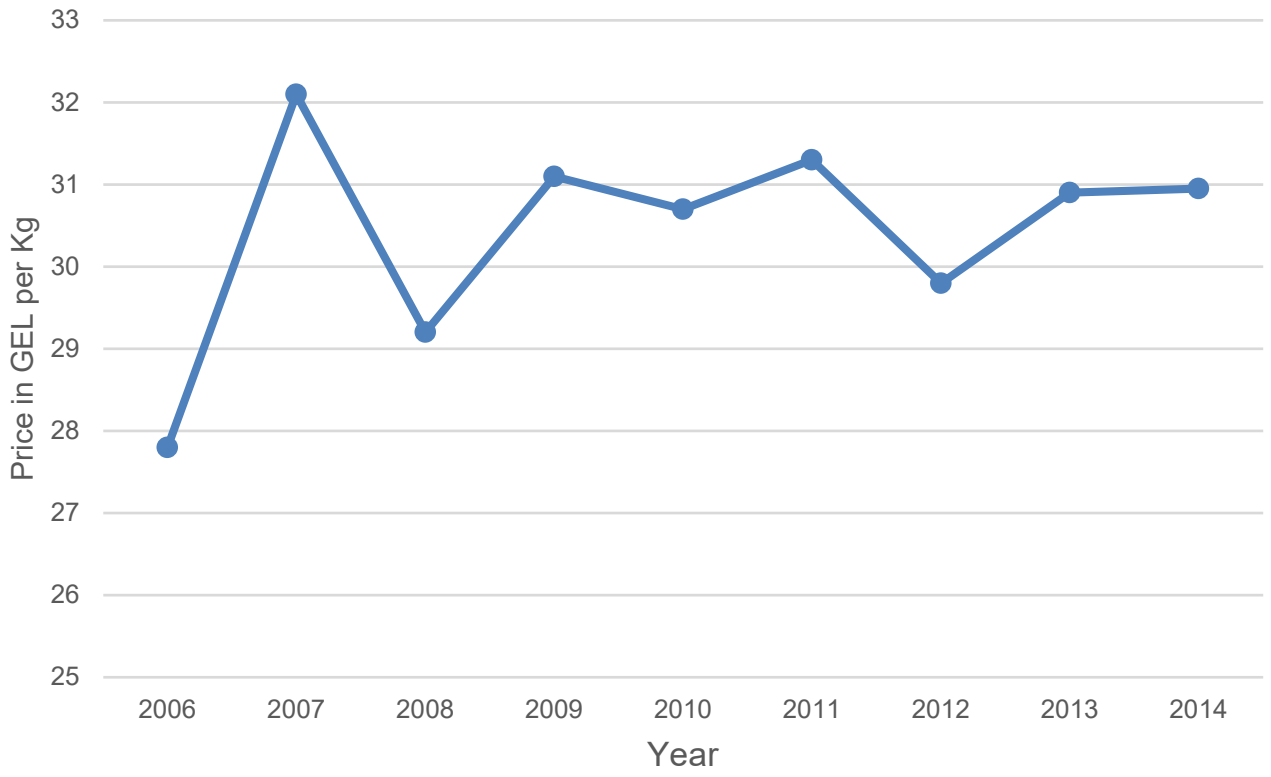
Figure A8: Evolution of Tea Imports to Georgia by Categories (2009-2014)





Source: Geostat, ITC

Figure A9: Evolution of Average Tea Prices on Georgian Market from 2006-2014



Source: Geostat

Table A1: List of Interviewed People

#	Interviewed Person	Organization	Location
Visits (Face to Face Interviews)			
1	Mikheil Chkuaseli, Gocha Dzneladze	LTD Geoplant	Ozurgeti
2	Giorgi Khuchua	Anaseuli Tea Company	Ozurgeti, Anaseuli
3	Temur Jashi	LTD Agrofirma Kobuleti	Kobuleti, Kvirike
4	Irakli Glonti	LTD Milmartea	Ozurgeti, Shemokmedi
5	Gela Zoidze	Cooperative Chibati	Lanchkhuti, Chibati
6	Giorgi Trapaidze, Avtandil Lomtatidze	Cooperative Guria Company - 14	Chokhatauri, Khidistavi (Kvenobani)
7	Tariel Nebieridze	Cooperative Mamati 2020	Lanchkuti, Mamati
8	Davit Teneishvili	Cooperative Bakhvis Chai	Ozurgeti, Bakhvi
9	Valeri Kapanadze	Cooperative Mtis Chai	Chiatura, Nigozeti
Phone Calls			
1	Levan Pipia	LTD Jvari 91	Tsalenjikha
2	Ucha Dalakishvili	LTD Tkibuli Tea	Tkibuli
3	Nadim Didmanidze	LTD Adjara Invest Chai	Khelvachauri
4	Shota Didmanidze	LTD Naziri and Company	Khelvachauri
5	Levan Oqropiridze	LTD Emiri	Kobuleti
Face to Face Meetings with Experts			
1	Tamaz Kunchulia	MoA	Tbilisi
2	Guram Iobishvili	RICC Ozurgeti	Tbilisi
3	Shota Bitadze	LTD Bitadze	Tbilisi
4	Tengiz Svanidze	Association of Tea Producers	Tbilisi
5	Tamaz Mikadze	Association of Tea Processors	Tbilisi
6	Goderdzi Goderdzishvili	CARE	Tbilisi
7	Simon Appleby	YFN Georgia	Tbilisi
Focus Groups			
1	Nargiza Gvinjilia	Cooperative Chais Surneli	Tsalenjikha
	Vepkhia Belkania	Cooperative Gorgasali	
	Goneri Salia	LTD Lazi	
2	Gela Zoidze	Cooperative Chibati	Lanchkhuti, Chibati
	Zaza Urushadze	Governor of Lanchkhuti	
3	Members of RICC	RICC	Tsalenjikha
Stakeholders' Forum on the Tea Sector			
1	About 120 participants	Stakeholders of tea sector	Kutaisi
Tea Festival in Tbilisi during Tbilisoba			
1	About 10 tea producers	Small, medium and large tea producer or marketing companies	Tbilisi

Table A2: Costs and Benefits for a Small Farm (or Household), Owning a 1 Hectare Well-Attended Productive Tea Plantation

Expenses	Costs Per Kilogram Tea Leaves (GEL)	Total Costs for 3 tons (Average) (GEL)
Land cultivation (hoeing, plowing in between rows)	0.13	400
Fertilizers	0.10	300
Harvester's salary	0.50	1,500
Transportation	0.08	250
Herbicides	0.07	200
Fencing maintenance	0.03	100
Pruning and cleaning	0.07	200
Land tax	0.02	70
Total	**1.00**	**3020**
Revenues	**Wholesale Price Per Kilogram (GEL)**	**Total Revenues (GEL)**
Tea leaves	2	6,000
Profit	**Total in GEL**	
Total Profit	**2,980**	
Tax	**0**	
Net Profit	**2,980**	

Table A3: Costs and Benefits for Small Processing Factories, Purchasing and Processing 1 Ton of Tea Leaves and Making Medium- and High-Quality Made Tea and Selling at Wholesale Markets in Bulk

Expenses	Costs Per Kilogram Made Tea (GEL)	Total Costs (Average) (GEL)
Raw material (tea leaves)	2 x 4.5 = 9	2,250
Transportation / Delivery	0.20	50
Electricity / Gas / Coal	1.00	250
Labor cost / Salaries	1.20	300
Packaging materials	0.50	125
Distribution	0.50	125
Depreciation / Repairing	0.10	25
Total	**12.5**	**3125**
Revenues	**Wholesale Price Per Kilogram (GEL)**	**Total Revenues (GEL)**
High-quality loose tea (in bulk)	25	3,750
Medium-quality loose tea (in bulk)	12	1,200
Total		**4950**
Profit	**Total in GEL**	
Total Profit	**1,825**	
Tax (20%)	**325**	
Net Profit	**1,500**	
Net Profit Margin	**30%**	

Note: some companies do packaging and branding for their medium-quality tea, which is sold in teabags on the market. In this case, value added is high and reaches about 35 GEL per kg. Of course, costs are also higher, but revenues cover them and the profit for the company increases.

Table A4: Costs and Benefits for Large Factories, Producing Low-Quality Tea (in Bulk and Tea Bricks) and Supplying Low-End Markets

Expenses	Costs Per Kilogram Low Quality Tea Leaf (GEL)	Costs per 1 Ha tea plantation with 5 tons of tea leaf (Average) (GEL)
Land cultivation (hoeing, plowing in between rows)	0.10	500
Fertilizers	0.08	400
Harvester's salary	0.17	850
Harvest equipment costs	0.04	200
Transportation	0.08	400
Herbicides	0.07	350
Fencing maintenance	0.02	100
Pruning and cleaning	0.04	200
Land tax	0.01	70
Total	**0.61**	**3,070**

Table A5: Costs and Benefits for Large Processing Factories, Producing and Exporting Low-Quality Tea

Expenses	Costs per kg low quality tea (GEL)	Percentage share in total production costs
Raw material (tea leaves)	0.61 Gel x 3.5 kg = 2.14	68%
Electricity / Gas / Coal	0.60	19%
Labor cost / Salaries	0.20	6%
Packaging materials	0.05	1.5%
Distribution	0.05	1.5%
Depreciation / Repairing	0.10	4%
Total	**3.14**	**100%**
Revenues	**Wholesale price per kg exported tea (GEL)**	
Low-quality loose tea (bulk or bricks)	3.5[15]	
Profit per kg	**GEL**	
Total profit	**0.46**	
Tax (20%)	**0.092**	
Net Profit	**0.368**	
Net Profit Margin	**10.5%**	

[15] Given the exchange rate of November 2015, 1 USD = 2.4 GEL.

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