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Identification of Training Needs of Farmers in Georgia

Master's Thesis

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I. Declaration

“I hereby declare that this thesis entitled Identification of Training Needs of Farmers in Georgia is my own work and all the sources have been quoted and acknowledged by means of complete references.

I agree with use of the thesis by the library of the Czech University of Life Sciences Prague for study purposes. “

Prague, 27th April 2017

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II. Acknowledgement

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Abstract

Since, Georgia is still transitional country, agriculture went through many changes in last decades and the process of transition is conspicuous until now. The main changes in agriculture were: decreased share of GDP, decreased agricultural production, export and import composition, the raise of private farms and reduction of a households' plot size. These changes caused specific problems the farmers must face until nowadays. Thus, Ministry of agriculture together with others introduced reforms supporting agricultural cooperatives. Jointing these small farmers to bigger competitive organization seems as a good opportunity and necessary for development of Georgia. As the education and training is one of the principles of cooperatives, the current strategies assume the identification of farmers and members of cooperatives training needs could be one of the possible solutions to develop agricultural cooperatives in Georgia. The research questions were: what were the training needs of the members of newly established cooperatives within the ENPARD programme. This paper attempts to identify, categorise and prioritise training needs of members of cooperatives established or supported within the ENPARD programme. Training needs were identified using point continuum Likert scale method and Training needs index. This assessment identified training needs of members of wine, herbs and dairy cooperatives. There were interviewed 30 members of seven cooperatives. The results showed, that it would be worthwhile train the members on most of the areas interviewed. The strongest training needs had members of wine cooperatives, then members of dairy cooperatives, then members of herbs cooperatives. Regarding the common areas for all cooperatives, the members felt high training needs in all areas concerning women and youth empowerment and operation of coop and concerning marketing and management were in high training need. The discussion revealed that there are some similar features with other studies conducted in past Imereti region. The outcomes suggested the trainings of the organizations participated in ENPARD programme should continue, because members of cooperatives still feel enormous gaps in their needs.

Keywords: agri-cooperatives, advisory services, training needs, training needs assessment, farmers, cooperatives, Georgia, Imereti, ENPARD

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V. List of the abbreviations used in the thesis

ACDA – Agricultural Cooperatives Development Agency
AYEG – Association of Young Economists of Georgia
CDVM - Categorical Dependent Variable Models
CIS – Commonwealth of Independent States
CNFA Georgia – Rural Economic Development in Southern Regions of Georgia
Coop – Cooperative
CULS – Czech University of Life Sciences
DBBAT - Direct Beneficiaries Baseline/Endline Assessment Tool
EC – European Commission
EU – European Union
ENI - European Neighbourhood Instrument
ENPARD – European Neighbourhood Programme for Agriculture and Development
EPRC – Economic Policy Research Center
FAO – Food and Agriculture Organization
GDP – Gross Domestic Product
GEL – Georgian Lari
GoG – Government of Georgia
ICA – International Co-operative Alliance
ILO – International Labour Organization
ISET – International School of Economics at Tbilisi State University
MoA – Ministry of Agriculture Georgia
PIN – People in Need
TNA – Training Needs Assessment
UNDP – United Nations Development Programme
USAID – United States Agency for International Development
USDA – United States Department of Agriculture
SIDA – Swedish International Development Cooperation Agency
WB – World Bank

1. INTRODUCTION

Agriculture in Georgia went through many changes in last decades. These changes started with the USSR disintegration in 1991. The country became transitional and the process of transition is conspicuous until now. The transition of the country is a difficult process of disintegration of the former political and economic system.

Agricultural system in Georgia has undergone through the changes as well. This sector changed in share of GDP, share of arable land, sectoral structure of production, the amount of agricultural production, employment, or export and import composition. One of the significant change was also change in the structure of agricultural output by farm category, when the agricultural enterprises reduced and households' plots and private farms raised. This change has been connected to many problems in agriculture appearing until today. Because these private farms are from 95% held by smallholders, who are not able to be effective in production, management, marketing, and their skills and knowledge are at a very low level etc.

Jointing these small farmers to bigger competitive organizations seems as a good opportunity and necessary development in Georgia. Principally, due to the indisputable advantages for small farmers. These farmers' organizations are mainly agricultural cooperatives. These cooperatives enable farmers to produce more efficiently, boost their competitiveness, improve their skills and knowledge by trainings etc.

There was established supporting program of the European Union called ENPARD in 2012, which provide support to such small farmers joined in the cooperatives.

The research dealt with the farmers joined in the cooperatives. The research was important to conduct in response to the current situation in Imereti region. A review of relevant literature reveals that members of cooperatives lack agricultural education and training, and that there is needed a support of agricultural development, because the farmers use out-of-date technologies, receive low incomes and they are not competitive (CULS, 2012). Based on the identification of training needs, supporting programmes can be implemented. These programmes could improve farmers' living standard through participating in cooperatives. Identification of training needs is, therefore, important to develop agricultural cooperatives fulfilling their specific needs.

The research questions of this study were following:

- What are the training needs of the members of newly established cooperatives within the ENPARD programme?

Specifically, what training needs the members of cooperatives have concerning wine, herbs and dairy production, accounting and management, marketing, women and youth empowerment, and operation of cooperative?

- What is the willingness of members of cooperatives to participate in future trainings?
- How are the members of cooperatives satisfied with previous trainings?

2. LITERATURE REVIEW

This chapter attempts to provide an overview on contribution of agricultural cooperatives to rural development in Georgia and to emphasize the importance of training in agriculture.

2.1 Insights into Georgian Agriculture

Georgia is a country in southwestern Asia, bordering the Black Sea, located between Turkey and Russia. For the past 100 years, Georgia was predominantly forcibly incorporated into the USSR until the Soviet Union dissolved in 1991. However, Georgia is an independent country now, the Russian troops still remain deployed in separatist regions of Abkhazia and South Ossetia (CIA, 2014/2015).

2.1.1 Transitional process in Georgia

Since, Georgia was part of the Soviet Union, the country went through lots of changes from the 90s. These changes are quite similar in all transitional countries. The transition of the country is a difficult process of disintegration of the former political and economic system. Structure of agriculture also went through different changes, like land reforms or privatisation. Issue of poverty appears in transition countries as Georgia as well (Mizik, 2010).

Regarding particular transitional changes in agriculture in Georgia, there were changes in agricultural area, which significantly decreased from 3 229 (in 1993) to 2,517 thousands of ha (in 2007), whereof share of arable land decreased from 25% to 18% (Mizik, 2010). There was decrease of sectoral structure of production both the crops and livestock. Despite the fact, that agricultural land and production decreased, agricultural employment increased in Georgia. Agricultural export increased by 451%, import by 501% in 2007 (Mizik, 2010). Price development, which is an important indicator of the added value in agriculture, was really significant in Georgia; producer prices for wheat, maize, barley, beef, pork, or milk significantly decreased. Regarding the structure of agricultural output by farm category, the agricultural enterprises reduced from 52% in 1990 to 10% in 2007 and households' plots and private farms raise from 48% in 1990 to 90% in 2007. For example, in other transitional countries in Caucasus – Armenia and Azerbaijan, the process was quicker (Mizik, 2010).

2.1.2 Challenges of Georgian Agriculture

Despite the undergone rapid economic growth in the last decade, Georgia is one of the poorest countries in the Europe and Central Asia region of the World Bank. There is a low GDP per capita (US\$ 3,757 in 2015; WB, 2017a), low skill primary sector or low wage (WB, 2014). The growth of total unemployment slightly decreased in last years but it is still quite high (11.5% in 2016; WB, 2017b),

According to FAO (2012a) and Government of Georgia (2017), the main problems and obstacles in agriculture in Georgia are land fragmentation, a lack of cooperation, and lack of training and education, lack of access to veterinary and plant protection services, lack of modern technology, capital and basic knowledge, low productivity, high dependency on imported products, or lack of demand for obtaining information and knowledge among farmers, which will be according to EPRC (2013) necessary for the development of agriculture.

The reasons causing the current situation in agriculture are: underdevelopment of technologies, shortage of qualified human resources, problems related to bankrupted infrastructure; a shortage of capital, underdeveloped land market, a high degree of fragmentation of small-size farms, weakness of a relevant state policy, and lack of state funding (EPRC, 2013).

Agriculture represents 9.1 % of GDP (Government of Georgia, 2017), the share of agriculture of total GDP is a good indicator for measuring the importance of the sector (Mizik, 2010). Earlier, respectively after Georgia's independence, the share of agriculture of total GDP was larger compared to the current share. Main products are grapes, citrus fruits, hazelnuts, tea, vegetables, potatoes, and livestock products (CIA, 2014/2015). Georgian agriculture is not effective, because there is a low productivity (Forkel, 2009; EPRC, 2013). Therefore, Georgia is dependent on imports of agricultural products. Georgia's import is relatively strong dependent on the Russian market, but weakened its instability especially due to the trade embargo (Forkel, 2009). As, the share of agriculture of total GDP is the best indicator of agricultural role in country, the import has a considerable role in country's economy as well (Mizik, 2010).

Almost half of Georgia's population lives in rural areas. The vast majority of farmers are smallholders with small family holdings and farming has subsistence character (Forkel, 2009). Almost 95% farmers are smallholders in Georgia and hence they

have not enough capital for investments and they are not able to cover demand for great markets (ENPARD, 2015b). That is why, the agriculture has a very low input and why is the country dependent of external resources. This subsistence character of agriculture started after Georgia's independence in 1991, when a land reform allowed a development of a subsistence farming for rural farmers (Forkel, 2009).

In addition, the land is used only from 6% as arable, because the agriculture is limited due to hilly areas of Caucasus Mountains spread in whole country (CIA, 2014/2015). The agriculture lacks farming machineries, adequate financial supports for investments, and farmers have very limited production (Forkel, 2009).

2.1.3 Solutions to current agricultural situation

According to EPRC (2013), the government should create a favourable environment for the development of agriculture that encourage innovations and investments in agriculture, raise the interest of the private sector and reinforce its competitiveness. The objectives of current agricultural policy are to increase competitiveness of farmers and agricultural employees, support the development of full cycle production that creates added value, support institutional development and training, develop the regional and agricultural infrastructure, increase food security, and protect environment and biodiversity (EPRC, 2013).

There have been recently implemented several projects/programs for development agriculture, for example “support of small-size farmers in conduction spring works”, project on soft agricultural loans, program on supporting corn production, program on intensification of wheat seeds, program on support of wine production, or program on 100 new agricultural enterprises. These projects and programs were implemented by Georgian government and Ministry of Agriculture and Economy (EPRC, 2013).

There were opened several consultations and farmers service centres in country to provide consultation services mainly to farmers and agricultural employees. These centres are equipped with modern agricultural techniques. Centres familiarize farmers with modern technologies, they can obtain professional skills and experiences there. Within the centre, there was built a training centre to provide courses in various areas, both way theoretical and practical training (EPRC, 2013).

In 2012, there was prepared the Agriculture Sector Development Strategy for years 2012-2022 in cooperation of European Union and Ministry of Agriculture of Georgia. This strategy goals on enhancing competitiveness of entrepreneurs and farmers, institutional development of the agricultural sector, develop the value chain, develop the regional and agriculture infrastructure and ensure food security. This strategy is aligned with ENPARD Programme objectives which are to improve rural livelihoods by facilitating inclusive economic growth and sustainable development of rural areas, contribute to food security by ensuring more sustainable provision of affordable food, while at the same time contributing to increasing food safety and raising quality standards to better benefit from export markets, and Improve administration of agriculture and rural areas by developing institutional and stakeholders' capacities, including design and management of agricultural strategy (FAO, 2012a).

ENPARD programme was implemented in 2013 in order to reduce rural poverty. The total budget for ENPARD in Georgia for 2013-2019 is €102 million. The ENPARD programme main goals are (ENPARD, 2015c):

- To build capacity and support government institutions in the reform of the agriculture and rural development sector;
- To improve employment and living conditions of rural populations by strengthening farmers' cooperation skills and access to resources; and
- To promote diversified social and economic opportunities in rural areas, particularly for women and youth, in due respect to the environment and the cultural heritage.

European Neighbourhood Instrument (ENI) was developed for years 2014-2020 as Single Support Framework for EU Support to Georgia (2014-2017). This instrument next to others focuses on Agriculture and Rural Development in order to improve living conditions and diversify employment opportunities. Based on need of agricultural modernisation and reduction of dependency upon primary agriculture as a source of household income, the instrument implement particular interventions (EC, 2014).

2.2 Agricultural cooperatives

This chapter attempts to provide an overview on what are agricultural cooperatives, what are their principles, and what cooperatives enable to their members.

2.2.1 What are the agricultural cooperatives?

According to International Co-operative Alliance (2017), a co-operative is “*an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise*”. The statement was adopted in 1995 together with definition of co-operative values and principles (ICA, 2015). Cooperatives are organizations established in associative forms in order to develop agriculture and economy. They are professional associations with legal personality established by individuals belonging to the same profession (Gherman et al., 2016). Co-operative values are: self-help, self-responsibility, democracy, equality, equity and solidarity. The principles are described in the chapter below (ICA, 2015).

There were 2.6 million cooperatives with over 1 billion members in 145 countries in the world in 2014, whereas the highest number is in Asia. Cooperatives participate over 10% of the GDP worldwide. Cooperatives’ success can be measured by Cooperative Economy Index and Social Progress Index. These indexes, which include items like employment, grow revenue ratios, basic human needs, opportunity and access to knowledge, which can compare diverse organizations across diverse countries and give information about cooperative economies globally (Grace et al., 2014).

The most common type of cooperative in the world is an agricultural cooperative (Grace et al., 2014), which is composed from producers and workers in agriculture. The cooperative is established based on authorization given in advance by the competent authorities and under the conditions provided by the law. Members of cooperatives choose to be part of cooperative because of various aspects, especially in order to face the obstacles arising during their entrepreneurship. Cooperative’s objectives are to promote of the domain, represent the interest of the members, lobby activities, negotiation of public policies etc. (Gherman et al., 2016).

Cooperatives are composed especially from small farmers, which have been earlier produced products for subsistence farming and who are not able to earn their own living as particular farmer. The cooperatives are made by grassroots farms to get over the market failures (Lerman and Sedik, 2014).

2.2.2 What agricultural cooperatives enable?

Agricultural cooperatives enable better opportunities for economic development, especially increase their productivity, improve bargaining power and hence improve the competitiveness, enable better access to education and training, better access to market services and higher income.

Cooperatives play an important role in supporting small agricultural producers and youth and women as well; jointing farmers together could be a good solution to be independent and have an enough income (FAO, 2012b). The common problem of farmers worldwide is the small size of land holdings, that is why it is important for farmers to join together to gain economies of scale (Grace et al., 2014). Economies of scale are, according to Jing and Bailey (2015), an important element to achieve greater long-run economic viability of cooperatives.

Cooperatives enable farmers economic and personal development, better access to market, better access to technology, strengthen the competitiveness, increase bargaining power, ensure food security, and decline the costs (ICA, 2015). Those particular benefits ensure improving living standard of farmers. Farmers' coops are now on the rise due to the activities of the Ministry of Agriculture of Georgia, supported by the EU and FAO experts and civil society organizations in Georgia.

2.2.3 Principles of cooperatives

There are seven cooperative principles agreed by international community:

1. Voluntary and Open Membership: cooperative is open to everybody who is able to use its services and willing to accept the responsibilities without any discrimination.
2. Democratic Member Control: it is used democratic principle on how the cooperative is controlled and the equal voting rights are used.
3. Member Economic Participation: each member equitable contributes with its capital and controls their cooperative.
4. Autonomy and Independence: cooperatives are independent and autonomous organisations, in case of agreements with other organisations, cooperatives do so on terms ensuring democratic control.

5. Education, Training and Information: Cooperative provides to its members additional education including theoretical and practical training, new experiences and information.
6. Cooperation among Cooperatives: cooperatives join forces together so they can achieve common goals.
7. Concern for Community: cooperative support sustainable developments of the communities (ICA, 2015).

One of the principles of the cooperative performance is to provide trainings to their members (ICA, 2015). Training is the systematic approach affecting individuals' knowledge, skills, and attitudes in order to improve individual and cooperative effectiveness; it has positive impact on the performance and outcomes. Regarding the benefits of training, it depends on type of training, skills trained, and measure used to effectiveness (Aguinis and Kraiger, 2009). In order to implement trainings, it is necessary to identify the training needs of training participants. Training needs exist when there is a gap between current and desired situation (Watkins et al., 2012); method of training needs assessment is often used (Rossett, 1983; Alkinani, 2013). This method is the first step for training implementation and it includes activities identifying the problems; it is an useful tool for making better decisions in the future and provides information leading to solution and makes training purposeful and effective (Hassan & Stephenson, 2005; Watkins et al., 2012).

2.3 Trainings in cooperative

The training together with an education are one of the principles of cooperative (ICA, 2015).

The training and education are in cooperatives also in terms of International Labour Standards, namely R193 – Promotion of Cooperatives Recommendation, 2002 (No. 193), which defines that the cooperatives should be encouraged on the basis of cooperative values and principles; whereas, amongst the others, the training and education should be used for development of human resource capacities and knowledge, the training should be promoted at all levels of the national education and training systems, provided to improved productivity and competitiveness, and facilitated access to international training methods and techniques (ILO, 2002).

2.3.1 Importance of trainings in cooperative

The education and training are primarily the key component of enterprise sustainability. They enable additional professional competence and knowledge. According to the study (Roelants et al., 2014), it was proofed, that training and education of cooperative members are fundamental factors in the economic sustainability of cooperatives. Next to formal training and education, the opportunity for training can represent every decision-making process (Roelants et al., 2014).

To achieve sustainable development, the training of human capital is very important, because people can adopt sustainable technologies with necessary vision and knowledge. The training allows effective performance with high competitiveness (Mesa and Machado, 2009).

2.3.2 Training needs assessment

In the study, it was used the method of Training needs assessment (TNA), which determines if training need exists and what training is required (Japan International Cooperation Agency, 2009). TNA is the process of data collection and analysis, where the needs of individuals, groups, organizations or communities are identified (Gilan et al., 2012). TNA provides necessary information about current performance, knowledge level and perceptions of stakeholders about the problems. We use TNA to determine whether training is the right solution to detected problems (Cekada, 2010).

Needs assessment is the first step in implementation of any educational programs (Gilan et al., 2012). Essentially, needs assessment determines the need for training and identifies what training is needed (Sorenson, 2002). When there is a training need or discrepancy (Rossett, 1987), there is a gap between current and desired situation, and it is needed to support a training program, which can minimize or eliminate the gaps (Sorenson, 2002; Japan International Cooperation Agency, 2009). Sorenson (2002) explains, that needs assessment provides us specific answers about why training is needed and that there is considered the factors “who, what, when, and where”.

According to Rossett (1987), there are five purposes for needs assessment. There are several techniques and tools within TNA. Extant data analysis represents results of employee performance. Needs assessment, used in this study, Rossett (1987) defines as “*the way we go out and seek opinions on the optimal, actuals, feelings, causes and*

solutions from a variety of sources.” Subject Matter Analysis involves seeking the nature and shape of knowledge which people need to possess to do the work effectively (Rossett, 1987).

2.4 Agricultural cooperatives in Georgia

Agricultural cooperatives have a really rich history in Georgia, from the beginning in Soviet Union nearly 100 years ago until today. The development of agricultural cooperatives was influenced by perceptions of people based on experiences from Soviet Union, but now the situation is different, because cooperatives are much better understood especially due to the efforts of the Ministry of Agriculture of Georgia (MoA) supported by the EU and FAO and many other NGOs.

2.4.1 History of cooperatives in Georgia

The development of cooperatives started in 1920s, when it was proclaimed the vision of cooperatives in whole USSR and Georgia as well. There were established mainly production cooperatives, which were implemented during collectivization by the end of 1920s, when the agriculture in whole Soviet Union was transformed to collective farms (Lerman and Sedik, 2014).

After the collapse of the USSR in 1992, there were initiated numerous agrarian reforms in all post-socialist countries. The large-scale collectives and production cooperatives were replaced by very small family farms. The average farm size in Georgia diminished to 0.96 hectare in 2012. Those small family farms started to face the issues causing them the subsistence problems. Based on experiences from Soviet Union, the development of the cooperatives is limited, because of common perceptions about cooperatives. Furthermore, the farmers have lack of information and experiences with agricultural alternatives (Lerman and Sedik, 2014).

2.4.2 Support to agricultural cooperatives in Georgia

Since, the small-scale farmers faced to many problems in Georgia, there was founded Agency for the Development of Agricultural Cooperatives (ACDA) within the Ministry of Agriculture in Georgia in order to introduce new Law of Agricultural Cooperatives in 2013. This step was unique among the CIS countries. The ACDA was established with aim to:

- support the administration of government measures and provide strategy for the development of cooperatives,
- provide the trainings, advice and information to cooperatives,
- monitor and evaluate the cooperatives,
- organize the conferences, consultations and seminars, and
- fund and terminate the status of an agricultural cooperative (Lerman and Sedik, 2014).

Before establishing ACDA, there were provided trainings to agronomists by Ministry of Agriculture of Georgia throughout Georgia until 2012, who provided their knowledge to all farmers in agro-technical and agro-economic fields. Alongside MoA, there were provided trainings concerning technical assistance provided by FAO (FAO, 2012c). There were also conducted numerous trainings by different international organizations until 2012 (EU, SIDA, UNFAO, USAID, Mercy Corps, CNFA Georgia, USDA, UNDP etc.) and local NGOs. The areas of trainings were focused on primary production, agricultural managers, service providers, dairy and livestock, veterinary and plant protection, food safety etc. (FAO, 2012a).

Along ACDA, there was implemented the EU programme ENPARD in 2013 (ENPARD, 2015a), which supports farmers' development and allows them earn a good living. This programme ends in 2019. The programme supports Ministry of agriculture in Georgia defined national strategy on farmers' capacity building, land issues, food security and food safety, and environment conservation (Ministry of Agriculture, 2015), where the trainings are aimed mainly at training courses for farmers and development of cooperatives (FAO, 2012a). According to FAO (2012a), there was still lack of farmers' organizations and its development should be demanded to address the issues.

Ministry of Agriculture of Georgia is now cooperating with FAO regarding ENPARD programme. Project "*Capacity Development of the Ministry of Agriculture*" is implementing Agricultural Development Strategy and Action Plan meeting the specific ENPARD requirements. Regarding the project, there were organized policy workshops to improve the efficiency of the MoA with implementing Strategy for Agricultural Development; monitored overall implementation; established policy group; developed and implemented training programs on value chain analysis, analysis of statistical methods, financing instruments and models, and geographic information systems. Based

on this project, there were registered new cooperatives, provided consultations and advice in centres, strengthened farmers cooperation, improved extension service provision and advisory capabilities, strengthened institutions for agricultural information, or improved donor coordination (FAO, 2015).

There were about 100 small cooperatives and associations in 2012, nowadays there are registered more than 14,000 farmers in 1,647 cooperatives within ENPARD programme in 2017. 250,000 people received advice on farming through 59 Information and Consultation centers. Since the programme has started, cooperatives have increased their net income by 21%, cooperatives' employment more than doubled and share of women has increased in cooperatives, now every third cooperative member is a woman. The figure 1 shows the map of all supported cooperatives in whole Georgia until 2017 (ENPARD, 2017b).

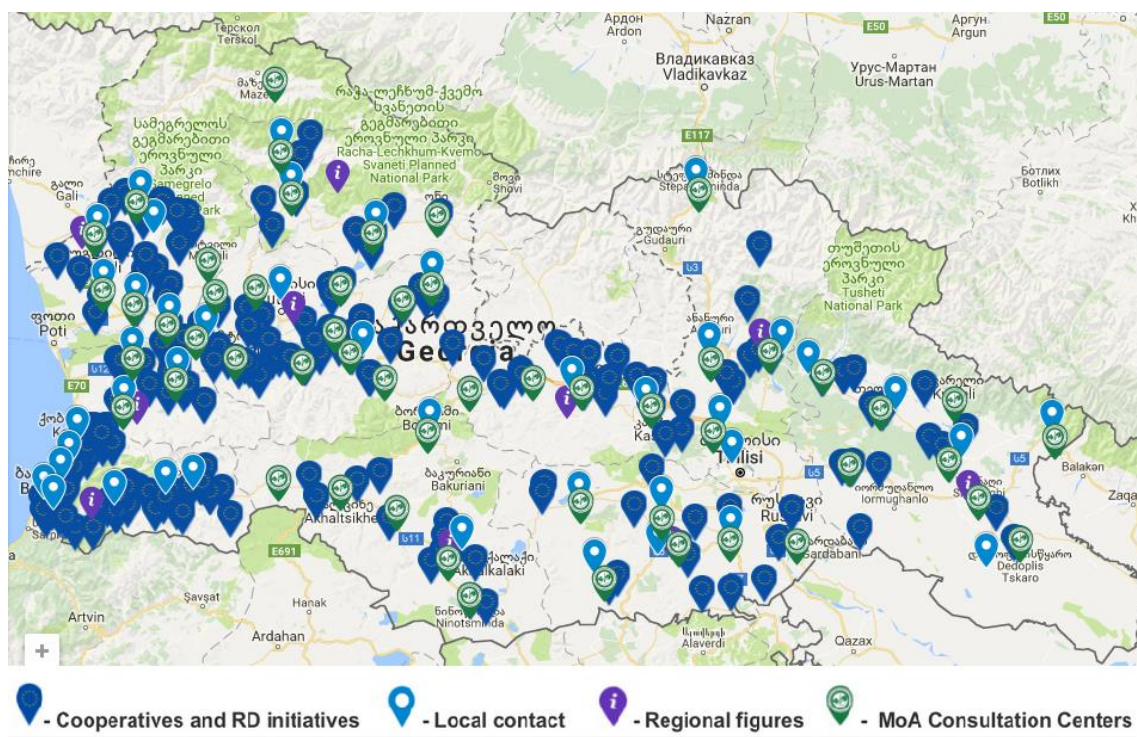


Figure 1: Granted cooperatives from ENPARD programme in Georgia (ENPARD, 2017a)

According to ENPARD (2015a), the trainings are conducted by Mercy Corps and People in Need in Imereti region. Trainings are focused on primary production, agricultural management, service providers, dairy and livestock, veterinary and plant protection, food safety and others (FAO, 2012a).

There were organized numerous trainings within ENPARD by several organizations. The activities and trainings organized were following:

Table 1: Training providers and their trainings within ENPARD programme

Training provider	Project name and time range	Training topics and objectives	Number of supported farmers/ cooperatives
PIN	<i>Enhancing Small Farmers' Cooperation and Productivity in Imereti and Racha Regions</i>	<ul style="list-style-type: none"> - Organization and management of agribusiness cooperatives, - Business plan development, - Value chains and technologies, - Basics of marketing of farm produce / agricultural commodities, - Grapevine nursery technologies, - Poultry farming technologies, - Preparation of apiary and bees for honey flow, - Pest management at vineyards, - Transmissible diseases of livestock, - Non-contagious diseases of livestock, - Effective collection of beekeeping products, - Food safety in dairy chains, - Food safety and HACCP system development, - Modern methods of grapevine cultivation, - Quality control in dairy sector, - Modern greenhouse technologies, - Modern methods of vinification, - Agribusiness cooperatives – basic principles, communications, finance, - Financial accounting in agribusiness cooperatives, and - Procurement of inputs and services 	22 trainings for 984 trainees
OXFAM	<i>Towards a New Direction: Supporting Agricultural Co-operation in Georgia</i>	<ul style="list-style-type: none"> - finalising business plans, - capacity building of cooperatives, - supporting in registration of agricultural cooperative, - contracting, - procurement of machineries, and - help with construction and installation. 	13 demo plots and 64 trainings for 40 farmers groups or co-operatives with minimum involvement of women, small-holder farmers,

			regional information and consulting centres, local authorities, private businesses, and rural communities,
Mercy Corps	<i>Strengthening Farmers Cooperatives In Rural Municipalities of Georgia” with duration 2014-2017</i>	<ul style="list-style-type: none"> - operational and technical support - Mercy Corps created cooperative needs assessment and selected cooperatives were provided with the trainings. - The trainings were focused on animal health and technical trainings, trainings on cooperation and organizational structure, business management and planning, financial management and accountancy and tax issues. - The programme also improves and increase the linkages between cooperatives and agricultural service providers 	targets 70 cooperatives, 60 agricultural service providers and 100,000 farming households, Mercy Corps provide their services to 342 cooperatives
CARE Austria	Cooperation for Rural Prosperity in Georgia” with duration 2014-2017	<ul style="list-style-type: none"> - monitoring of the cooperatives to improved organizational development, business planning, technical aspects of production and processing, and grant application. - CARE Austria cooperates with Georgian Farmers Association (GFA) 	aims its project to about 3,000 farmers from more than 200 villages in Racha-Lechkhumi region.

Based on the information from: PIN, 2015a, OXFAM, 2016, Mercy Corps, 2015, CARE Austria, 2016.

This study was conducted within the project “*Enhancing Small Farmers’ Cooperation and Productivity in Imereti and Racha Regions*” implemented by consortium of NGOs People in Need (PIN) in Georgia, Elkana, the Association of Young Economists of Georgia and experts from the CULS. The project has been realized in years 2014-2017 and has been funded from ENPARD. The project’s goal is to achieve economies of scale among the farmers through the development of business-oriented farmers’ cooperatives and the support of a more favourable agribusiness environment (Schmied and Putkaradze, 2016). Overall objective of the PIN operation in Georgia is the reduction of rural poverty in Imereti and Racha regions. Target group of the project

is composed from 200 semi-commercial farmers and entrepreneurs and 330 - 450 members of newly-established cooperatives. Results of the project will be more efficient business practices which increase farmers' income, increased agricultural yields and volume of sales, and improved agribusiness environment and agriculture sector legislation (PIN, 2015b).

According to studies (PIN/CULS/AYEG, 2015a; PIN/CULS/AYEG, 2015b), despite the interest of farmers in trainings, the farmers in Imereti region have limited access to information about training opportunities, receiving knowledge and experiences.

Based on the experiences to date, we consider the training needs as extremely important for future trainings implementation and overall development of cooperatives in Imereti region. Thus, the training needs assessment was necessary to achieve the objective of all strategies.

3. AIMS OF THE THESIS

The main objective of the study was to identify training needs of the members of newly established cooperatives within ENPARD programme in Imereti and Racha region. The training needs were divided into three clusters:

- Production of coop (the level of skills, knowledge and experiences in wine, herbs, and dairy production),
- Operation of coop (marketing, accounting and management), and
- Human resources development (women and youth empowerment).

The results of the study will serve better operation of newly established cooperatives involved in ENPARD programme and the agricultural development in country.

The specific objectives of the study were:

1. to determine areas of trainings needed among members of selected cooperatives in Imereti and Racha regions, specifically training needs of cooperatives focused on wine, herbs and dairy production;
2. to determine areas of trainings needed among members of selected cooperatives in Imereti and Racha regions, specifically training needs of cooperatives concerning the accounting and management, marketing, and women and youth empowerment, and operation of cooperative;
3. to evaluate the willingness of members of selected cooperatives to participate in trainings, reasons for participation in trainings, willingness to pay for trainings, willingness of time dedication to trainings, and
4. to evaluate the satisfaction of the members of selected cooperatives with previous trainings attended.

3.1 Hypotheses testing

It was analysed, whether there is any dependence between variables which could influence needs of training. The variables analysed were: gender, age, achieved education, total income, membership in professional farming organization and any other

membership in Georgian farming organization at 5% level of significance. The dependency show if the achieved education is influenced by gender. Hypothesis are:

1) *H₀: Gender does not influence achieved education.*

H₁: Gender does influence achieved education.

2) *H₀: Age does not influence farming experience.*

H₁: Age does influence farming experience.

3) *H₀: Education does not influence membership in GFA or PFA.*

H₁: Education does influence membership in GFA or PFA.

It was analysed, whether there is any dependence between the amount, the respondents are willing to pay for future trainings, and their income at 5% level of significance.

4) *H₀: There is independence of amount, who are respondents willing to pay for future trainings and their income*

H₁: There is significant dependence of amount, who are respondents willing to pay for future trainings and their income

It was analysed, whether there is any dependence between age and willingness to participate in future trainings at 5% level of significance.

5) *H₀: Age does not influence willingness to participate in future trainings.*

H₁: Age does influence willingness to participate in future trainings.

There will be compared total income of men and women and the differences.

4. METHODS

At first, the research assembles factual background information, analyses potential problem needs and determines design of needs analysis for data collection. As the sampling method was chosen non probability convenience sampling. Convenience sampling is a non-probability sampling technique where the subjects more readily accessible to the researcher are more likely to be included (Lee-Jen Wu et al., 2014). The research method used is both, quantitative and qualitative, because of the total number of the respondents in population, which was 100 respondents from 11 cooperatives.

4.1 Primary and secondary data

The research was based on two data sources – primary and secondary data. Secondary data was obtained from ENPARD monitoring data set conducted by People in Need in spring 2015. The survey of People in Need used Direct Beneficiaries Baseline/Endline Assessment Tool (DBBAT), where the target group were members of cooperatives involved in ENPARD programme. The following variables were used from DBBAT for this research: age, gender, highest level of education, years of coop membership, position in coop, types of services supplied, number of trainings provided by the coop, satisfaction with trainings organized by the coop, opinions on advantages of being member of the coop, membership in any other organization, and participation in any governmental trainings.

Secondary data was completed by primary data which was obtained from research among cooperatives in summer 2015. The research was based on questionnaires, interviews and observations among seven cooperatives involved in ENPARD programme in Imereti region, one of them was from Racha region.

4.2 Target groups

The survey targeted two principle groups:

1. First target group were in total 30 members of seven cooperatives joined to European Union ENPARD programme implemented by People in Need. These

cooperatives were Dovlati, Jvarisa XXI, Lelo 2014, Mshvildi, Sazano, Sargo and Terjolis gvino. These cooperatives were chosen because of participation in PIN project mentioned above. These cooperatives deal with wine, herbs, and dairy production. The list of researched cooperatives is in table 2.

Table 2: Overview of interviewed cooperatives

Number of coop	Name of Coop	Location	Main product	Number of respondents (N=30)
1	Megvineoba Sazano	Terjola	Wine	3
2	Terjolis gvino	Terjola	Wine	5
3	Mshvildi	Baghdadi	Wine	3
4	Jvarisa XXI	Ambrolauri	Wine	3
5	Sargo	Kharagauli	Milk	4
6	Lelo 2014	Khoni	Dairy	7
7	Dovlati	Tskhaltubo	Herbs	5

2. Second target group were key informants. They were the providers of the trainings. Those providers was organization ACDA, People in Need, and Elkana. Those organizations were chosen because they were willing to provide the information about trainings.

4.3 Target area

Data collection on identification of training needs of farmers was conducted in Imereti region in Georgia. One cooperative was from Racha region. The regions were chosen because of the realization of the project where CULS is participating. The survey was conducted in the municipality Ambrolauri, Baghdati, Khoni, Kharagauli, and Terjola. Figure 2 shows geographical position of the surveyed cooperatives.

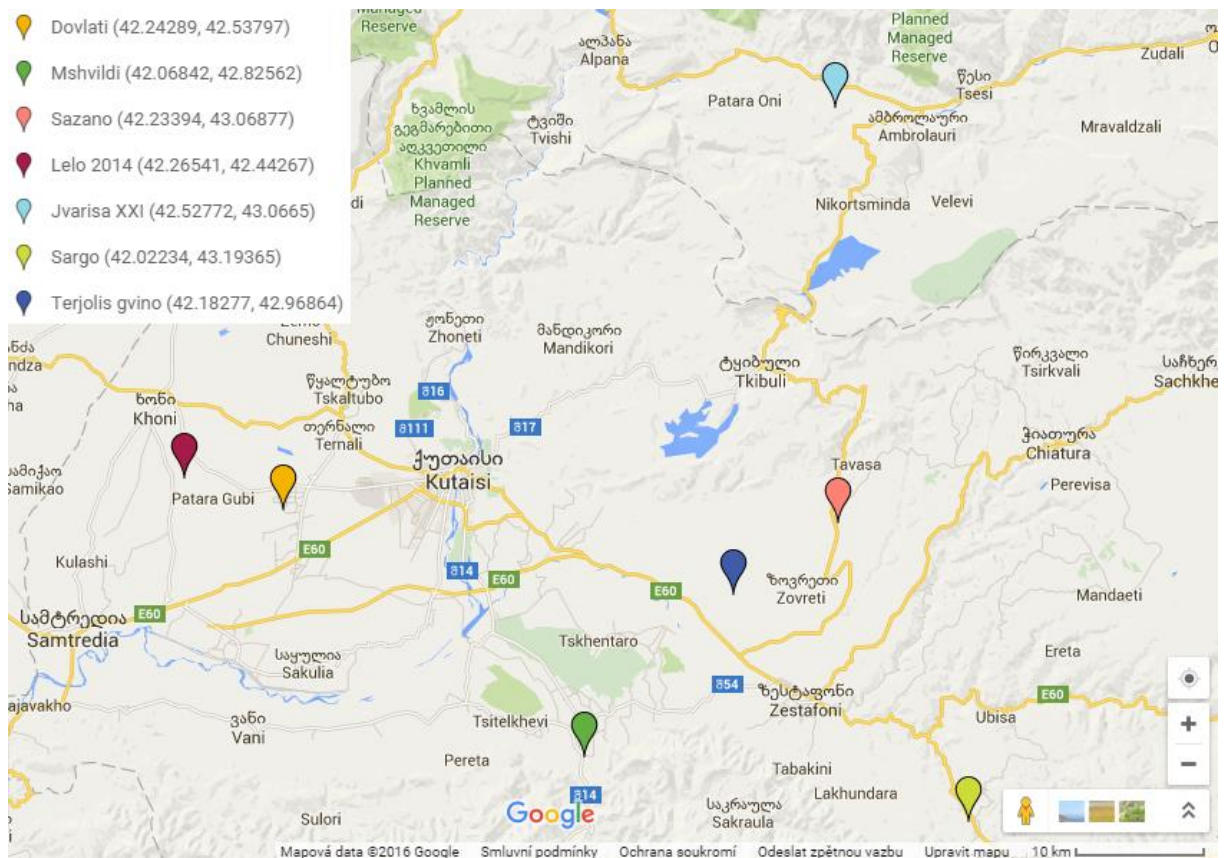


Figure 2: Map of locations of data collection in Imereti and Racha region

4.4 Methods of Data Collection

The research used training needs assessment, abbreviated as TNA, which identifies who needs training and what they need training in (Alkinani, 2013). There are a lot of TNA methods as Delphi method, Questionnaires, On-Site Observations, Advisory Committee, Document Reviews, Focus Groups, Performance Appraisal Forms and Assessment Centres (Alkinani, 2013). The method of needs assessment was used in this study, because of most suitable method for given conditions. As the tool was used the interviewing, which is most prevalent and which pursue information related to all purposes). Needs assessment is about opinions, it involves contact with sources to seek new information and perspectives (Rossett, 1987). The figure 3 shows the process of TNA.

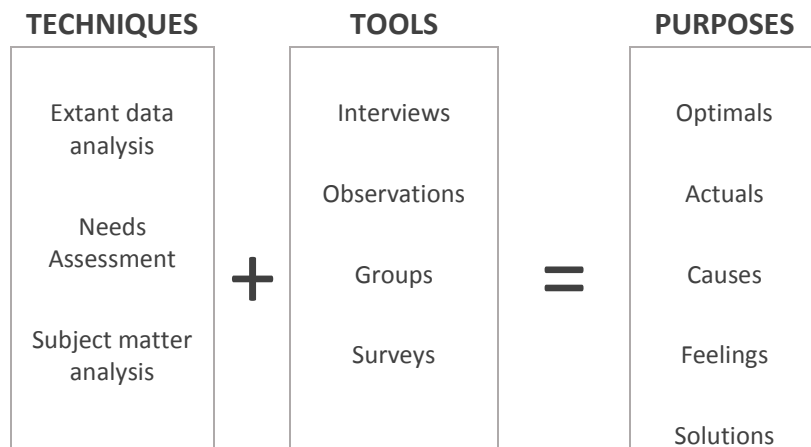


Figure 3: Training needs assessment analysis techniques and tools (Rossett, 1987)

This research used questionnaire survey as the most widely used method of data gathering for needs assessment. There were used semi-structured questionnaires, personal interviews and observation people at work. The questions in questionnaire used point continuum Likert scale (Peake et al., 2007; Sajeev & Singha, 2010; Akila & Chander, 2011), open-ended and close-ended questions. For questionnaire, there were examined the factors influencing training needs of farmers, as age, gender, highest level of education, average monthly disposable income, years of working in agriculture, number of trainings attended and membership in other organizations (Omotesho, 2014).

There were used three types of questionnaire for particular cooperatives – first type for wine cooperatives, second for herbs cooperatives and third for dairy cooperatives. The topics of all questionnaires and its variables are listed in the following table.

Table 3: Variables used in questionnaire

Topic of the questionnaire	Name of variable	Type of question	Dependent/Independent
Personal information	Age	Dichotomous	Independent
	Gender	Dichotomous	Independent
	Highest level of education	Multiple-choice	Independent
	Monthly disposable income	Open	Dependent
Cooperative/ Agriculture experiences	Position in coop	Multiple-choice	Dependent
	Years of membership	Open	Dependent
	Years in agriculture	Open	Independent
	Membership in GFA/PFA	Dichotomous	Independent
Trainings	Participation	Contingency	Dependent
	Provider	Open	Dependent
	Duration	Multiple-choice	Dependent
	Topic	Open	Dependent
	Reasons for attendance	Multiple-choice	Dependent
	Satisfaction	Likert scale	Dependent
	Content relevance	Likert scale	Dependent
	Contribution	Likert scale	Dependent
	Frequency increase	Likert scale	Dependent
	Use of skills	Likert scale	Dependent
	Willingness for attendance	Contingency	Dependent
	Willingness to pay	Contingency	Dependent
	Number of trainings	Open	Dependent
Training method	Likert scale	Dependent	
Farm	Planting	Multiple-choice	Dependent
	Treating	Multiple-choice	Dependent
	Harvesting	Multiple-choice	Dependent
	Processing	Multiple-choice	Dependent
	Diseases	Multiple-choice	Dependent
	Processing/packaging	Dichotomous	Dependent
	Storage	Dichotomous	Dependent
	Machinery	Dichotomous	Dependent
Marketing and management	Market participation	Dichotomous	Dependent
	Accounting		
Women and youth	Women/youth in coop	Dichotomous	Dependent
	Women/youth trainings		
Training needs	Animal husbandry	Likert scale	Dependent
	Herbs production		
	Wine production		
	Production of on farm inputs		
	Plant protection		
	Soil health and fertility management		
	Processing		
	Storage		
	Agricultural engineering		
	Marketing and market practices		

Management and accounting
 Women and youth empowerment
 Operation of coop

Next, there were conducted short personal interviews with key informants, who were members of organization People in Need, Elkana and ACDA. The short interview about 5 minutes were semi-structured, cooperatives members were questioned in Georgian language by interpreter and members of organization People in Need, Elkana and ACDA were questioned in English directly. The interview were conducted in summer 2015 as well.

Finally, there was conducted observation people at work during the research among cooperatives.

4.5 Methods of Data Processing

Data were analysed by statistical analysis, using descriptive statistics and regression analysis; and method of weighted scores used for point continuum Likert scale (Chimi and Russell, 2009; Sajeev and Singha, 2010; Akila and Chander, 2011). For descriptive statistics, there were used frequency counts, percentages, and means. For regression analysis, we need to know, if the data are normally distributed. Some of the variables are normally distributed (as age, total income and farming experience) and the rest of the variables are not. For dataset (df) smaller than 2000 elements, we use the Shapiro-Wilk test. In the study were 30 elements, so we used Shapiro-Wilk test.

Concerning method of weighted scores used for point continuum scale, we assigned weightings to the question choices as following (Chimi and Russell, 2009):

Table 4: Weightings to the question choices

Type of question	1	2	3	4	5
Question type no. 1	Strongly needed	Needed	Least needed	Not needed	-
Question type no. 2	Strongly agree	Agree	Nor agree neither disagree	Disagree	Strongly disagree
Question type no. 3	Strongly satisfied	Satisfied	Nor satisfied neither dissatisfied	Dissatisfied	Strongly dissatisfied
Question type no. 4	Very preferred	Somewhat preferred	Not very preferred	-	-

Then, there was used following formula for computing the weighted average for each question and its answers:

$$\bar{x} = \frac{\sum_{i=1}^n (x_i * w_i)}{\sum_{i=1}^n w_i}$$

where:

Σ = the sum of weightings

w = the weights

x = the value

According to Akila and Chander (2011) we can also compute a Training Need Index:

Training need Index = Total obtained score / Maximum obtainable score x 100

Depending upon the extent of need, the training needs of the respondents were categorised as Low - 0-33%, Medium - 34 – 66% and High - 67 – 100% (Akila and Chander, 2011, Srivastava et al., 2012). Low need of training means, the training is not needed, medium need reflects, the training should be done and high need of training shows, the training is really needed.

For dependency detection among various variables, data were analysed with suitable methods according to Park (2010). There were used Categorical Dependent Variable Models (CDVM), which are more accurate than ordinary least square method (OLS), which was used in study by Omotesho (2014) concerning training needs assessment as well. For CDVM, these independent variables have been set: age, gender, highest level of education, coop, position in coop, years spent in agriculture, number of trainings attended, and following dependent variables: willingness to attend the trainings, satisfaction with trainings, average disposable monthly income, and membership in other organizations.

There were used correlation, chi-square, and regression models: linear regression, ordinary least squares, probit, and mlogit. The models were chosen based on the type of variable (continuous, dichotomous, ordinal, nominal).

5. RESULTS

This chapter describes the training needs of members of cooperatives in Imereti and Racha region in Georgia. The first part of the chapter shows main characteristics of the respondents. Second part identifies particular training needs of the respondents. The third part describes willingness of members of cooperatives to attend the trainings. And, the last part deals with satisfaction of members of cooperatives with attended trainings.

5.1 Characteristics of the respondents

During the survey, there were interviewed 30 respondents from the cooperatives involved in the project of PIN consortium within ENPARD programme. The characteristics of these respondents are listed in table 5. Men are represented from 80% (N=24), women just from 20% (N=6). The average age of all respondents is 42 (\pm 10) years. Only one respondent has only primary education, quite lot respondents achieved university educational level, but they are often not graduated from agriculture, but from other fields of study, as food technology, economy, business and management, heavy industry, sport teacher, engineer, historian or dentist. The respondents have been working in agriculture for 25 (\pm 9) years in average. Average total income was 660 GEL/month (that is approximately USD 293/month¹). There were 6 respondents, who were members of some professional farmers' association or Georgian Farmers' Association.

Table 5: Characteristics of the respondents (N=30)

Variable	Range/options	Frequency	Ratio (%)	Mean	SD
Age					
	<= 30	5	5.0	26.6	2.5
	31-40	10	33.3	36.6	3.5
	41-50	10	33.3	46.4	2.4
	>= 51	5	5.0	58.4	6.7
Gender					
	Male	24	80.0	-	-
	Female	6	20.0	-	-
Educational level					

¹ According to the exchange rate 2.2549889462 GEL/USD, from July 23 2015. Available at <http://www.xe.com/currencytables/?from=GEL&date=2015-07-23>

	Primary	1	3.0	-	-
	Secondary/High school	7	23.0	-	-
	Vocational	5	17.0	-	-
	University	17	57.0	-	-
Total income (GEL)					
	<325	8	27.6	259.4	46.2
	326 - 500	7	24.1	500.0	0.0
	501 – 1 000	11	37.9	827.3	178.0
	>1 001	3	10.3	1,500.0	300.0
Farming experience (years)					
	0-10	2	20.0	9.5	0.7
	11-20	10	50.0	18.0	6.0
	21-30	8	40.0	27.1	3.2
	>30	6	23.8	36.8	4.3

For hypotheses testing, we need to know, whether the data are normally distributed. The test statistics of discrete variables are shown in the table 6. For dataset (df) smaller than 2,000 elements, we used the Shapiro-Wilk test. Based on this test, it is obvious, that data are normally distributed according to p-value, which is higher than 0.05 in all cases of tested variables.

Table 6: Test of normality of characteristics of respondents

Variable	Shapiro-Wilk		
	Statistic	df	Sig.
Age	0.940	17	0.320
Farming experience	0.953	17	0.507
Total income	0.896	17	0.058

It was analysed, whether there is a correlation between gender and achieved education at 5% level of significance. The statistical analysis, showed that there is moderate positive correlation. Data were analysed by Fisher's Exact Test, where the p-value=0.006 and Cramer's V=0.561. It says, that variability of achieved education of the respondents, is from 56% explained by gender. According to p-value=0.006, we refuse H_0 , and accept H_1 .

Table 7 shows counts for gender and achieved education

Table 7: Achieved education by gender

Gender	N	Primary	Secondary	Vocational	University
Male	24	1	6	1	16
Female	6	0	1	4	1

The other correlation relationships mentioned in methodology are presented in table 8. The table shows, that there are few significant correlation, farming experience is from 47% explained by age, what is anticipated, as already mentioned education is from 56% explained by gender, and membership in some professional farmers association is explained from 54% by education of respondents.

Table 8: Correlation relationships of characteristics of respondents

Variable	Statistical test	Age	Income	Farming experience	Gender	Achieved education	Membership in GFA*	Membership in PFA**
Age	Pearson coefficient	1	0.12	0.475	X	0.052	-0.092	0.059
	p-value	30	0.949	0.014		0.784	0.628	0.759
	N	30	29	26		30	30	30
Total Income	Pearson coefficient	0.12	1	-0.133	-0.255	0.339	-0.080	-0.271
	p-value	0.949	29	0.519	0.182	0.072	0.682	0.155
	N	29	29	26	29	29	30	29
Farming experience	Pearson coefficient	0.475	-0.133	1	0.205	0.053	-0.324	0.065
	p-value	0.014	0.519		0.315	0.799	0.106	0.753
	N	26	26	26	26	26	26	26
Gender	Cramer's V	X	X	X	1	0.561	0.134	0.196
	p-value					0.006	0.464	0.283
	N					30	30	30
Achieved Education	Cramer's V	X	X	X	0.561	1	0.234	0.536
	p-value				0.006		0.651	0.035
	N				30	30	30	30
Membership in GFA	Cramer's V	X	X	X	0.134	0.234	1	0.105
	p-value				0.464	0.651		0.566
	N				30	30	30	30
Membership in PFA	Cramer's V	X	X	X	0.196	0.536	0.105	1
	p-value				0.283	0.035	0.566	
	N				30	30	30	

*GFA – Georgian farmers' association

**PFA – Any other professional farmers' association

The comparison of monthly disposable income from coop of men and women showed, that there is considerable difference as is showed in table 9. Mean of total income of men is 712 GEL and women only 467 GEL, whereas 95% confidence interval for mean is 535–889 by men and 158–776 by women, women had higher minimum income, however men had much more higher maximum income.

Table 9: Monthly disposable income of the respondents by gender (in GEL) (N=30)

Gender	N	Mean	95% Confidence Interval for Mean	5% Trimmed Mean	SD	Median	Minimum	Maximum
Male	24	712	535 - 889	682	409	600	200	1800
Female	6	467	158 - 776	449	294	375	250	1000

5.2 Assessment of Training Needs

The primary data analysis showed, that majority of the respondents (23) had some experience with training. These training were provided by organizations People in Need, Elkana, ACDA or other organization. Seven respondents had no experience with any training. In case they had any experience with training, they were trained by organization People in Need, Elkana, members of their own coop, ACDA, Georgian wine association and one respondent with organization NCA. Imereti is divided in 11 districts, 7 of them are handled by PIN and 4 by Mercy Corps (G. Misheladze, personal communication, July 2015). Agency for development of agriculture cooperatives is organization working in whole Georgia. The aim of ACDA is to support cooperatives and give them name and status. They evaluate the trainings via tests, which they are distributing directly after trainings (G. Misheladze, personal communication, July 2015). Elkana is the organization focused on organic farming, especially for wine production.

In general, the topics of the trainings of all organizations attended by respondents were focused in most of cases on the crop cultivation (13), marketing and management (12), processing (10), and other topics (14) as organic agriculture, rural life, cooperative development, food and laboratory safety, food quality, accounting, and administration and business.

The duration of trainings of ACDA were 6.0 hours, People in Need 5.0 hours, Elkana 4.7 hours, and the trainings of the other organizations approximately 3.2 hours long in average. Average duration of all trainings was 4.0 hours. All of the trainings were free of charges. As we can see in the figure 4, the reasons of attendance for members in past were: Self-education, improvement of skills and knowledge (19), strong need for training (8), improvement of quantity and quality of production (12), improvement of marketing skills (10), get better position in coop (3), convenient location (2), convenient time (2), and the fact that trainings were obligatory within ENPARD programme (1), Price (0). Nobody choose the option price because the trainings were not payed.

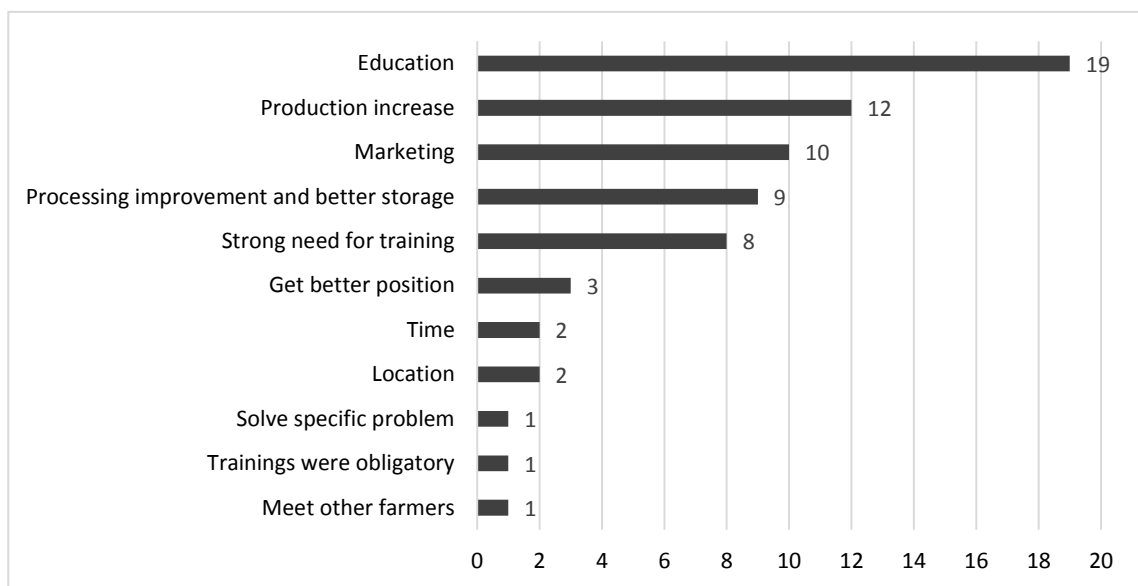


Figure 4: Reasons for participation in trainings in past (N=30)

5.2.1 Cooperatives concerning wine production

There were researched four cooperatives concerning wine production. Three of them were from Imereti region and one was from Racha region located near to the municipality Ambrolauri.

Type of production

Farmers used very old and traditional technology for wine production. In every cooperative, there were vessels called qvevri, in which is wine fermented and stored for more months to few years. Qvevri winemaking is declared as UNESCO cultural heritage in Georgia (Gard, 2016). The farmers are satisfied with this traditional technology and they want to continue to produce wine in this way with some additional automated instruments, which help them in wine processing. Most of the farmers used this traditional

technology combined with automated processing, some of them used only traditional technology, because the automated technology is quite expensive for them. Hand harvesting was used almost in all cases (10), for treating they used mini motto-blocks, tractor and hand as well. All of the respondents (13) processed and packed their production, except one who sells the wine directly. Lots of them (11) stored their production. And, 12 respondents had some agricultural machinery for wine production.

Disease and pest management

Some of the respondents used chemical fertilizers, but few of them, who were members of Elkana, they used only organic fertilizers, because this organization is specialized on organic farming and they do not want to use any chemicals. Farmers, who did not use organic fertilizers, were often interested in use of organic fertilizers and pesticides in future. Regarding the diseases and pests, the farmers had frequently problems with powdery mildew and other fungal diseases (16), then with worms (3), sparrow attacks (2) and other diseases (2).

Lot of farmers were very interested in wine tourism. The farmers are interested in wine tourism for example because of increase of income from sale of wine for higher prices, as mentioned one farmer.

Training needs concerning wine production

As shows the table 9, training on Wine tourism, Disease management, Bio-control of pest and diseases, Sanitary and hygiene, and Certification were sought after by members concerning wine production as the most needed areas for training, followed by Installation of farm machinery and implements, Soil fertility management and Wine cultivation and the others. The areas with high training needs are all of them except Packaging, which reach medium extent of training needs.

The training needs of the farmers in wine cooperatives are presented in the form of weighted scores in the table 10 contains votes frequencies.

Table 10: Weighted scores (1 – 4 Scale) and rank of the training needs of members of wine cooperatives (N=13)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Wine production</i>								
Wine tourism	7	3			10	1.30	1	100
Disease management	9	4			13	1.31	2	100
Bio-control of pest and diseases	8	5			13	1.38	3	100
Sanitary and hygiene	7	2	1		10	1.40	4	90
Certification	6	4			10	1.40	4	100
Installation of farm machinery and	7	3	1		11	1.45	5	91
Soil fertility management	8	4	1		13	1.46	6	92
Wine cultivation	5	8			13	1.62	7	100
Harvesting	5	8			13	1.62	7	100
Nutrient management	5	6	1		12	1.67	8	92
Production of organic fertilizers	6	5	2		13	1.69	9	85
Nursery management	6	5	2		13	1.69	9	85
Processing techniques and value	6	5	2		13	1.69	9	85
Technologies used for cultivation	3	9			12	1.75	10	100
Storage loss minimization	6	1	2	1	10	1.80	11	70
Postharvest technologies	4	6		1	11	1.82	12	91
Pest management	5	6	1	1	13	1.85	13	85
Production of organic pesticides	4	4		2	10	2.00	14	80
Repair and maintenance	3	6	1	1	11	2.00	14	82
Vermi-compost production	4	6	1	2	13	2.08	15	77
Packaging	2	5	1	3	11	2.45	16	64

MN=Most needed, N=Needed, LN=Least needed, NN=Not needed, WS=Weighted score, TNI=Training Need Index

5.2.2 Cooperatives concerning dairy production

There were researched two cooperatives concerning dairy production in Imereti region. One of the cooperative (Sargo) dealt only with milk production and the other one (Lelo 2014) dealt with dairy production including milk production and consequently processing of milk products. Coop Lelo 2014 had modern technologies for production of the traditional cheese. The modern technologies were supported from ENPARD programme. This production is depicted in the annex 4 – photo documentation. There were employed few women for the cheese production.

Almost all of the respondents (9) processed and packed their production, same number is producing their own feed for animals. The vast majority (10) had some agricultural machinery. And only 6 respondents stored their production.

Training needs concerning dairy production

Regarding dairy production, there were more areas connected to high needs of training compared to wine farmers. As shows the table 11, training on Dairy management, Disease management and veterinary health, Production of quality animal products, Sanitary and hygiene, Processing techniques and value addition, Packaging, Production of livestock feed and fodder, and Repair and maintenance were sought after by almost all responded members concerning dairy production as the most needed areas for training. All areas are in high training need, except one area (Production of organic manures) is on medium level.

The training needs of the farmers in dairy cooperatives are presented in the form of weighted scores in the table 11 contains votes frequencies.

Table 11: Weighted scores (1 – 4 Scale) and rank of the training needs of members of dairy cooperatives (N=11)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Dairy production</i>								
Dairy management	11				11	1.00	1	100
Disease management and veterinary	11				11	1.00	1	100
Production of quality animal products	11				11	1.00	1	100
Sanitary and hygiene	11				11	1.00	1	100
Processing techniques and value	10				10	1.00	1	100
Packaging	10				10	1.00	1	100
Production of livestock feed and	9	1			10	1.10	2	100
Repair and maintenance	7	2			9	1.22	3	100
Feed management	9	1	1		11	1.27	4	91
Installation of farm machinery and	7	2	1		10	1.40	5	90
Storage loss minimization techniques	6			1	7	1.43	6	86
Animal breeding	7	3	1		11	1.45	7	91
Production of organic manures	3	3	2	3	11	2.45	8	55

MN=Most Needed, N=Needed, LN=Least Needed, NN=Not Needed, WS=Weighted Score, TNI=Training Need Index

5.2.3 Cooperatives concerning herbs production

There was only one cooperative (Dovlati) concerning herbs production researched. There was another cooperative (Kvitiri) concerning study, but the members were not available for questioning during the conducting of research.

Cooperative Dovlati was composed of farmers producing herbs. Only one of the respondents had some agricultural machinery, the others used only hand cultivation. All

of the farmers stored their production of herbs in the storage of cooperative for herbs conservation and processing.

Training needs concerning herbs production

Members of this cooperative found that they had not such high training needs as the other cooperatives. As shows the table 11, there are only two areas in high training need – Installation of farm machinery and implements and Soil fertility management. Rest of the areas are in medium, low, or even in any level of training need. In general, most of the members did not want to participate in future trainings. It was probably caused by members’ opinion which was spread among them, that they do not want any trainings in general. However, the respondents did not mention any reason for such opinion.

The training needs of the farmers in herbs cooperatives are presented in the form of weighted scores in the table 12 contains votes frequencies.

Table 12: Weighted scores (1 – 4 Scale) and rank of the training needs of members of herbs cooperatives (N=5)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Herbs production</i>								
Installation of farm machinery		1			1	2.0	1	100
Harvesting	3			2	5	2.2	2	60
Water management and irrigation	1	2	1	1	5	2.4	3	60
Soil fertility management		4		1	5	2.4	3	80
Processing techniques and value addition	1			1	2	2.5	4	50
Technologies used for cultivation	1	2		2	5	2.6	5	60
Disease management	1	2		2	5	2.6	5	60
Vermi-compost production	1	1		3	5	3.0	6	40
Bio-control of pest and diseases	1		2	2	5	3.0	6	20
Nursery management		2		3	5	3.2	7	40
Pest management	1		1	3	5	3.2	7	20
Production of organic fertilizers		1	1	3	5	3.4	8	20
Nutrient management		1	1	3	5	3.4	8	20
Cropping systems		1		4	5	3.6	9	20
Seeds production			1	4	5	3.8	10	0
Storage loss minimization techniques				1	1	4.0	11	0
Repair and maintenance				1	1	4.0	11	0
Post-harvest technologies				1	1	4.0	11	0

MN=Most Needed, N=Needed, LN=Least Needed, NN=Not Needed, WS=Weighted Score, TNI=Training Need Index

5.2.4 Training needs concerning market practices and accounting in all cooperatives

As shows the table 13, majority of the respondents participate in some market practices (22) and vast majority keep accounting (27). Regarding market practices, there were all of the areas in high level of need, except Suppliers possibilities and middlemen issue.

The training needs of the farmers in all cooperatives are presented in the form of weighted scores in the table 13 contains votes frequencies.

Table 13: Weighted scores (1 – 4 Scale) and rank of the training needs concerning marketing and management of members of cooperatives (N=29)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Marketing and management</i>								
Purchasers	16	3		2	21	1.43	1	90
Access to information about	14	4	3	1	22	1.59	2	82
Sales and access to market	12	5	4	1	22	1.73	3	77
Accounting	14	8	3	4	29	1.90	4	76
Leadership	5	1	2	7	29	2.38	5	69
Suppliers possibilities, middlemen issue	5	7	3	7	22	2.55	6	55

MN=most needed, N=needed, LN=least needed, NN=not needed, WS=Weighted score, TNI=Training Need Index

5.2.5 Training needs concerning women and youth empowerment in all cooperatives

All cooperatives were interview on common topics concerning women and youth empowerment. Based on the questionnaires and observation, there were only few women members, and only few young members under 30 years.

As shows the table 14, almost all of the respondents (17) had women in their cooperatives the rest 13 respondents did not. Respondents, who did not have women in their coop, mentioned, that they want to have women members. 22 respondents had young members² in their cooperatives. Almost half of the respondents (14) had never had any training concerning women issues. Previous trainings concerning youth had only 13 respondents. All of the areas were in high training need for respondents. The most needed were Entrepreneurial development of youth and women, and Women mainstreaming.

² Member, whose age ≤ 30

The training needs of the farmers in all cooperatives are presented in the form of weighted scores in the table 14 contains votes frequencies.

Table 14: Weighted scores (1 – 4 Scale) and rank of the training needs concerning women and youth empowerment of members of cooperatives (N=28)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Women and youth empowerment</i>								
Entrepreneurial development of	14	1		4	28	1.79	1	86
Women mainstreaming	8	1	2	2	28	1.93	2	86
Group dynamics	10	1	1	4	28	1.96	3	82
Leadership development of women and youth	8	1 3	4	3	28	2.07	4	75

MN=most needed, N=needed, LN=least needed, NN=not needed, WS=Weighted score, TNI=Training Need Index

5.2.6 Training needs concerning functioning of cooperative in all cooperatives

Then, all cooperatives were interview on common topics concerning functioning and operation of their coop. Generally, the members were satisfied with the operation their coop and they knew the principles, but they wanted to get the training concerning almost all of the areas mentioned below. As shows the table 15, the high need of training is related to all of the areas related to cooperative. The most needed is training regarding Financial plan, Monitoring and evaluation, Operation of coop, Communication in coop and Organizing trainings.

The training needs of the farmers in all cooperatives are presented in the form of weighted scores in the table 15 contains votes frequencies.

Table 15: Weighted scores (1 – 4 Scale) and rank of the training needs concerning cooperative functioning of members of cooperatives (N=28)

Thematic area	MN	N	LN	NN	Votes	WS	Rank	TNI
<i>Cooperative</i>								
Financial plan	15	11	1	1	28	1.57	1	93
Public relations	13	11	3	1	28	1.71	2	86
Monitoring and evaluation	13	12		3	28	1.75	3	89
Operation of coop	11	14		3	28	1.82	4	89
Communication in coop	10	15	1	2	28	1.82	5	89
Coop principles	10	14	2	2	28	1.86	6	86
Organizing meetings	9	16	1	2	28	1.86	6	89
Organizing trainings	10	14	1	3	28	1.89	7	86
Vision of coop	11	10	2	4	27	1.96	8	78
Organizational structure	8	12	3	5	28	2.18	9	71

MN=most needed, N=needed, LN=least needed, NN=not needed, WS=Weighted score, TNI=Training Need Index

5.3 Evaluation of extent of training needs

There were determined several areas, the members of cooperatives found out as the most needed. The respondents felt needs almost in all of the training areas. The overall training need of the members of cooperatives is presented in the table 16. If we compare the results using Training Needs Index (TNI), the strongest training needs had members of wine cooperatives, where 95% of the areas were in high training need, then members of dairy cooperatives, where 92% of the areas in high training need, then members of herbs cooperatives, where 50 % of the areas had only low extent of training needs, 39% medium and only 11% of the areas in high training need. Regarding the common areas for all cooperatives, the members felt high training needs in all areas concerning women and youth empowerment and operation of coop and 83% of the areas concerning marketing and management were in high training need.

Table 16: Extent of training needs

Number and share of the areas of training needs						
Area	Wine production	Dairy production	Herbs production	Marketing and management	Women and youth empowerment	Operation of coop
TNI (Extent low)						
Low (0-33%)	0 (0%)	0 (0%)	9 (50%)	0 (0%)	0 (0%)	0 (0%)
Medium (34-66%)	1 (5%)	1 (8%)	7 (39%)	1 (17%)	0 (0%)	0 (0%)
High (67-100%)	20 (95%)	12 (92%)	2 (11%)	5 (83%)	4 (100%)	10 (100%)

TNI = Training Needs Index

5.4 Satisfaction of farmers with trainings

The respondents were interviewed on their overall satisfaction with trainings of each organization. The satisfaction was related to the content, organization and relevance. They could assess more options/organizations. From the table 17, it is obvious high satisfaction with trainings of all providers. The greatest satisfaction was with the trainings of other organizations, as Georgian wine association and NCA, then with trainings of People in Need, Elkana and ACDA. The respondents are least satisfied with trainings of their own coop, but it worth to mention that the number 1.4 meaning is still almost strongly satisfied.

Table 17: Level of satisfaction with trainings (1-5 scale) (N=30)

Provider	Modus	Mean	SD	N
Other	1	1.0	± 0.0	3
PIN	1	1.2	± 0.4	21
Elkana	1	1.3	± 0.5	18
ACDA	1	1.4	± 0.5	11
Coop	1	1,4	± 0,5	15

As we can see in the table 18, the respondents are generally satisfied with frequency of the previous trainings and their content.

Table 18: Satisfaction with trainings (1-5 scale) (N=22)

	Strongly satisfied	Satisfied	Nor satisfied neither dissatisfied	Dissatisfied	Strongly dissatisfied	Votes	WS*	Rank
Frequency of the trainings	15	6	1	0	0	22	1.36	1
Content of the trainings	12	8	1	0	0	21	1.48	2

From the table 19, it is obvious that respondents would increase the frequency of trainings.

Table 19: Frequency of the trainings (1-5 scale) (N=22)

	Strongly agree	Agree	Nor agree neither disagree	Disagree	Strongly disagree	Votes	WS	Rank
Higher frequency of the trainings	5	11	5	1	0	22	2.09	3

Most of the respondents are really satisfied with the trainings. A director of participating cooperative in project describes his perception of his own enhancement:

"ENPARD provided me lot of knowledge and experiences within the trainings, so now I know how to cultivate wine."

There was assumption, that there is dependence between gender and satisfaction with previous trainings, but the statistical analysis showed, that there is no significant correlation.

Based on the results of the research, we can say, that the satisfaction with the previous trainings regarding the content and frequency of trainings, is very high and the training is appropriate instrument for education of farmers.

5.5 Willingness to attend trainings in future

All respondents are willing to attend the future trainings, except two men. The reasons they did not want to attend, were that they already had lot of training and they got the opinion, that they have already all information necessary for production and operation in

coop. Reasons, presented in figure 5, for participation in future trainings are: Self-education, skills and knowledge improvement (17), Get more experiences (15), Improvement of production quantity and quality (13), Improvement of storage and processing technologies (12), Improvement of marketing and management skills (10), Get better position in coop (5), Solution of specific problem (2), Meet other farmers (3), and other reasons (1). The respondents could choose more options.

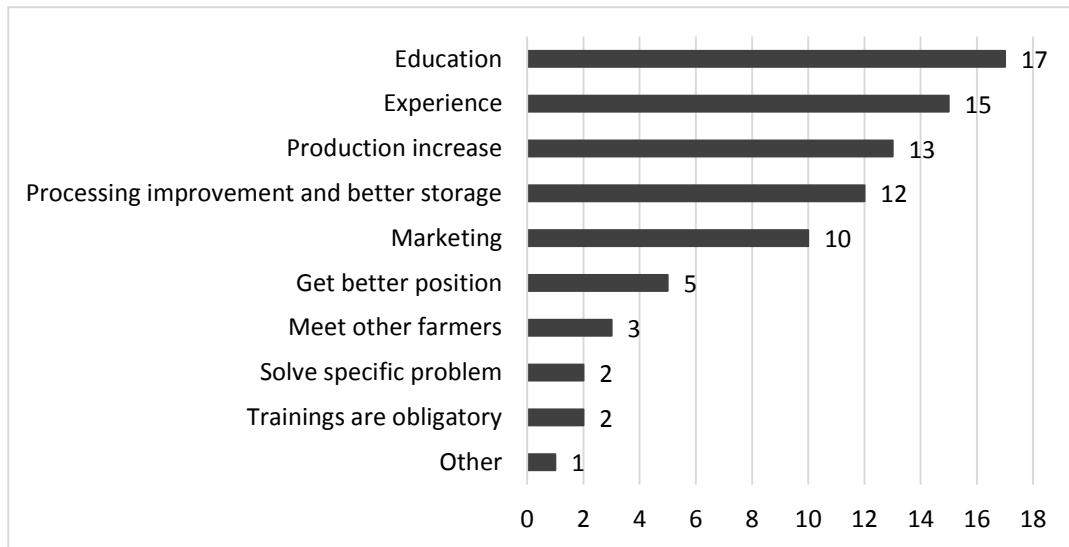


Figure 5: Reasons for participation in future trainings (N=28)

The table 20 describes the contribution of trainings and use of trainings experiences by respondents. 16 respondents strongly agree and 5 respondents agree, that trainings contributed to their development of skills, knowledge and experiences, only one respondent is not sure if it contributed or not. 10 respondents strongly agree and 10 respondents agree, that they sometimes used the skills, knowledge or experiences from the trainings in practice. Only two respondents were not sure if they had ever used the skills, knowledge or experiences in practice.

Table 20: Contribution of trainings and use of trainings experiences (1-5 scale) (N=22)

	Strongly agree	Agree	Nor agree neither disagree	Disagree	Strongly disagree	Votes	WS	Rank
Contribution of the trainings to development of skills, knowledge, experiences	16	5	1	0	0	22	1.32	1
Use of skills, knowledge, experiences	10	10	2	0	0	22	1.64	2

From the respondents, who are willing to attend the trainings in future, 12 of them are willing to attend the trainings once a month, 12 each 2-3 months and one respondents would attend once a year. 11 respondents prefer trainings with duration half of a day, seven respondents 1-2 days, seven 3-4 days and one 5-7 days.

Willingness to participate in trainings is explained by opinion of one member of cooperative describing the situation in agriculture in Georgia:

"Lot of people think that somebody will order them what to do in coop. Agriculture is hard work and there is low income, so it is why people do not want work in agriculture."

Member, who is also explaining why is he not willing to participate in any training:

"I do not want to participate in any training, because I do not have enough time for it, I have other work, and I think, that I already have enough knowledge about agriculture."

Regarding the statistical analysis, it was analysed, whether there is any correlation relationship between the amount the respondents are willing to pay for future trainings, and their income. The statistical analysis showed, that there is a significant correlation ($R=0.453$, $R\text{ square}=0.206$). The graph of analysis says, that variability of amount, the respondents are willing to pay, is from 21% explained by their income:

The relationship is explained by:

$$\text{Amount, willing to pay} = 449.667 + (4.968 * \text{income})$$

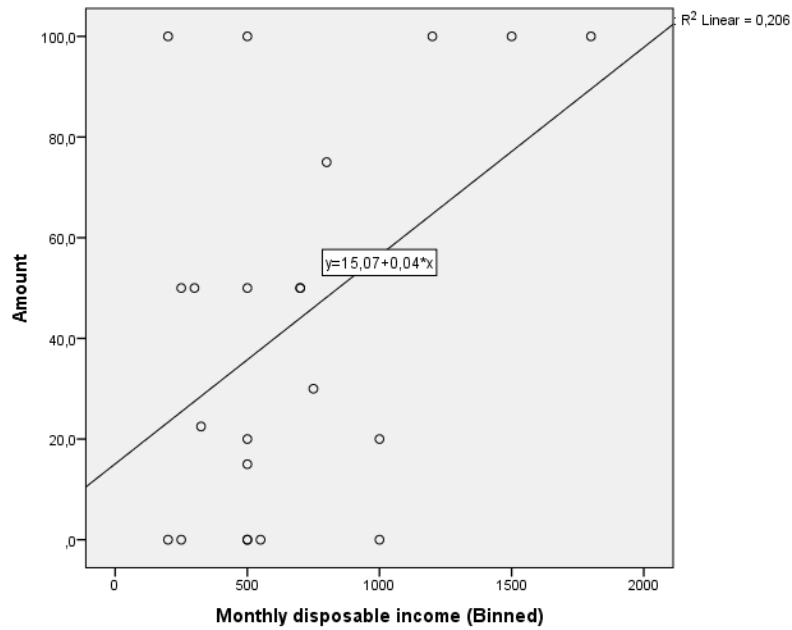


Figure 6: Correlation between monthly disposable income and amount willing to pay

According to p-value $p=0.002$, on 5% level of significance, we refuse H_0 , and accept H_1 .

There was also assumption, that there is any correlation relationship between age and willingness to participate in future trainings, but the statistical analysis showed, that there is no significant correlation.

6. DISCUSSION

In this chapter, the results are discussed with other studies on education and training of farmers who are member of agricultural cooperatives or any other farmers' organizations. The results were compared to the studies conducted in Georgia or other countries. The chapter is divided into the subchapters concerning the different topics of the research.

6.1 Characteristics of the respondents

Regarding characteristics of the respondents, there were some similar features described in other studies, but few of them did not.

There were 30 respondents in the study, whereas 80% were represented by men. The employment share does not correspond to the study of World Bank (2014), which says, that women are represented from approximately 50% in agriculture in Georgia. According to this study, there is not considerable a gender gap in the labor market. The female labor force participation has remained relatively stable in agriculture (WB, 2014). In comparison, according to the study of ISET Policy Institute (2014), the percentage share of women is 34% in cooperatives involved within ENPARD programme in whole Georgia. However, more than half of the respondents achieved university educational level, they are not educated and skilled in agriculture sector. That is general problem in Georgia, where both men and women are from almost 65% unskilled in agriculture sector (WB, 2014). In our study, women achieved more often only vocational education, compared to men with university educational level. In comparison with study of WB (2014), the monthly income of the respondents absolutely does not correspond to average monthly wage in Georgia, where men had 111 GEL and women had 72 GEL in 2014 (WB, 2014). However, women in our study had less monthly income than men, they still had more than average wage in Georgia.

There were 6 respondents, who were members of some PFA or GFA. It is interesting, that this membership is from 56% explained by education of the respondents. Based on the results, it is obvious, that higher education of farmers tend to the membership in those

organizations. The membership in GFA brings to its members advisory services and meets the needs of cooperatives in Georgia (ENPARD, 2015d).

The respondents are working in agriculture for 25 years in average. This is related to the average age of all respondents, which is 42, so relatively low in comparison of average age of the farmers in Georgia, which is 56.

6.2 Areas of training needs concerning cooperatives' production

This chapter discusses the results concerning determined areas of trainings needed among members of selected cooperatives in Imereti and Racha region, specifically training needs of cooperatives focused on wine, herbs and dairy production.

Georgia faces to low skill primary sector. There is still missing skills development strategy in Georgia. The skills, including socio-emotional, higher-order skills, problem-solving are still behind global trends in Georgia. Education system is not yet adapted in that is related to relatively high youth unemployment (WB, 2014).

The results showed, that majority of the respondents had some experience with training provided by organizations PIN, Elkana, ACDA, their own coop or other organizations. The topics of the trainings were focused mainly on crop cultivation, marketing and management, processing and other topics as organic agriculture, rural life, cooperative development, food and laboratory safety, food quality, accounting, and administration and business. The main reason for participation in the trainings was for vast majority of the respondents, self-education and improvement of their skills and knowledge. This result correspond to the situation in whole Georgia, where the agricultural sector has very limited skills and knowledge (WB, 2014).

The trainings, the farmers within ENPARD programme participated in past, were analysed in the study of consortium PIN/Elkana/AYEG (2016), which found out the past trainings as very useful for farmers. The study showed, that farmers underline the importance of practical trainings with field visits, exhibitions and demonstration land plots. This is very similar to our study, where the respondents also prefer practical trainings. According to the study of consortium PIN/Elkana/AYEG (2016), the most popular training area is animal farming, namely disease prevention, increase of

productivity and information about different varieties. Compared to our study, the farmers emphasized the almost the same topics.

The results of the study also correspond to the study of Sajeev and Singha (2010) and Gilan et al. (2012) conducted in India and Iran, where similar thematic areas were also classified as most needed: disease and pest management or soil fertility management, production and management technologies, vermi-composting, organic manures production, entrepreneurial development of farmers and youths, or processing and value addition, purchase and sale, principles of storage, accounting of cooperatives, marketing and market management.

Based on results, the members of wine cooperatives found out the trainings in disease and pest management as highly needed. The farmers mentioned they have problems with wide range of grape diseases, the most with powdery mildew and fungal diseases. Incidence of these disease is quite common in the world, for example in California, Hungary (Travis et al., 2012; Holb and Fuzi, 2015). Some of the farmers use chemical fertilizers and some of them, who are a member of Elkana or had training from this organization, use organic fertilizers. More trainings on organic fertilizers provided by Elkana, could be the right solution in the fight against diseases for wine farmers, as the bio-control of pest and diseases is the area the farmers would like to be trained in.

The respondents found out the used traditional wine making technology called Qvevri little bit demanding, but very sophisticated and enriching the wine production in Georgia. They want to continue with qvevri technology in future, but want to combine it with modern processing technologies. Nevertheless, the knowledge on modern technologies, pesticides etc. is not good as traditional method accumulated throughout centuries (PIN/CULS/AYEG, 2015a). Georgians in general are proud of this technology, and want to attract foreign tourists to learn about wine making in Georgia (Burton, 2016). Nevertheless, none of the wine farmers did not practise wine tourism. But lot of farmers mentioned, that they were interested in wine tourism training, because of improved income. Wine tourism has been recently on the rise in Georgia. Even, there was held the Global Conference on Wine Tourism in Georgia in 2016 (Georgian Journal, 2016). Wine tourism helps to enrich the touristic offer and keep cultural, economic and historical values. Wine tourism is offering plenty of features that contribute to the local economy

(Tomescu, 2016). Thus, wine tourism could be one of the solutions for farmers in cooperatives how to get higher earnings and consequently better livelihoods.

The members of cooperatives concerning dairy production realize that the processing of milk products will increase their income and value addition. So, they would like to participate in future trainings focusing on processing techniques and value addition, packaging, but also dairy management, diseases management or production of quality products. Since, there is still poor diversification of the rural economy and the low productivity of the agricultural sector, the increased added value is desirable. Nevertheless, the processing sector of primary agricultural products is not well-developed (Government of Georgia, 2017). Hence, the ENPARD programme can support the farmers in raising the value addition.

There was only one cooperative on herbs production researched. The members of this cooperative were not such interested in future trainings as the members of wine and dairy cooperatives. It can be caused by the fact, that the herbs farmers in Imereti have years of experiences because of inherited family business. The farmers would appreciate the trainings about new farming technologies, which confirms other study of consortium of PIN/CULS/AYEG (2015b).

6.3 Areas of training needs concerning the accounting and management, marketing, women and youth empowerment, and operation of coop

This chapter discusses the results of determined areas of trainings needed among members of selected cooperatives in Imereti and Racha region, concerning the accounting and management, marketing, women and youth empowerment, and operation of coop.

The areas of training common for all cooperatives found out as most needed were: operation of coop (especially trainings about financial plan, monitoring and evaluation, communication, organizing meetings, coop principles, public relations), then market practices and marketing and management (especially trainings about purchasers, access to information about prices and sales and access to market), then women and youth empowerment (especially entrepreneurial development of youth and women, women mainstreaming).

The results of the study are similar to study of women cooperatives in Greece (Lassithiotaki and Roubakou, 2014), where the respondents needed training in marketing, better organization and management of cooperatives.

The results of the research showed, that women participation and women mainstreaming are important areas of training for farmers. The respondents wanted more women in their cooperatives. The research showed the women have lower level of education and hence we assume they have less opportunities for entrepreneurship. Based on the study of Luqman et al. (2013), women have greater problems in access to information. According to GoG (2017), women are more passive in the decision-making process in Georgia and the support to women and youth cooperation is very important in order to facilitate the involvement in cooperative activities. Youth empowerment is important because of youth migration from the mountains where is the lack of employment opportunities (GoG, 2017). Thus, based on these reasons, we consider the women and youth empowerment in cooperatives as very important and introduction of such as trainings as necessary.

In the study of OXFAM (2014) was found out, that farmers who are not in any cooperatives have only little awareness about the principles of agricultural cooperatives, only 13% of the members have ever heard about them. They wanted to join into cooperatives because of many advantages. We assume, that members in cooperatives have already heard about the principles, but it is still worth to raise the awareness.

According to EC (2014), there is lack of leadership and management capacity and skills, so the increase investment in human resource development in cooperatives is recommended.

ILO R193 says (ILO, 2002), that cooperative should support the promotion of women entrepreneurship in cooperative movement, particularly at management and leadership levels. Based on the results, we can see, that both men and women are interested in women entrepreneurship and in increasing number of women in cooperative.

6.4 Extent of training needs

There were determined several areas, the members of cooperatives found out as the most needed. The respondents felt needs almost in all of the training areas. The strongest

training needs had members of wine cooperatives, then members of dairy cooperatives, then members of herbs cooperatives. Regarding the common areas for all cooperatives, the members felt high training needs in all areas concerning women and youth empowerment and operation of coop and concerning marketing and management were in high training need.

In comparison with the study of Akila and Chander (2011), the extent of training needs is high in most of the areas of the trainings. There were no areas classified with high extent of training needs in study of Akila and Chander (2011), most of the farmers had low or medium training needs.

The extent low of the training needs can correspond to the situation defining agricultural sector as very low skilled. Thus, the members of cooperatives feel training needs in such an extent. Except members of herbs cooperative, all of the cooperatives, felt high training needs in almost all of the areas. The low interest in training in herbs cooperative could be caused by general spread disinterest of members in future trainings.

6.5 Evaluation of willingness of members of cooperatives to participate in trainings

This chapter discusses the results regarding the willingness of members of cooperatives to participate in future trainings.

Almost all of the respondents were willing to attend the future trainings, except two men, who said, that they already had lot of trainings and they have all necessary information. The reasons for participation are: self-education, skills and knowledge improvement, get more experiences, improvement of production quantity and quality, improvement of storage and processing technologies etc. The main reason – education, skills and knowledge improvement was already mentioned as the reason of low skilled agricultural sector in Georgia.

The EC composed the recommendations, amongst others were to use practical rather than theoretical advice, trainings and manuals; assist cooperatives in assessing the importance of a problem and how to solve it; and to deliver the training, advisory and research programmes; facilitate and support to meet their needs through extension services, vocational training, education, research and awareness, because the extension

services are decentralized, there is lack of relevant education and lack of research institutions.

The results of the study are similar to the study of Chizari et al. (2006), where the respondents preferred participatory techniques prior to theoretical lectures. It seems, generally, participatory or practical trainings are most preferred and needed.

The training should be provided when it is needed, because sometimes the trainings are provided when it is convenient or economical, and therefore they are less effective (Sorenson, 2002). To make the trainings more effective, the respondents were asked to answer the convenient time and length of training for them. Location of the trainings is not so important for respondents.

6.6 Evaluation of satisfaction of members of cooperatives with the trainings

The overall satisfaction of the respondents with previous trainings was quite high. In comparison with studies of PIN, Elkana, ACDA, AYEG, we can say, that these organizations realize lot of trainings and the trainings are useful for members of cooperatives. Nevertheless, based on the results of our study, there are a still some gaps in training needs of members of cooperatives.

7. CONCLUSIONS

Despite the fact that Georgian agriculture has faced to several problems and went through huge changes in last decades, due to the efforts of EU, international and local organizations, the agricultural sector has been recently successfully developed. Although, the agricultural cooperatives were viewed as distrustful after disintegration process, by reason of agricultural productive cooperatives during Soviet era, the situation is currently much more better and cooperatives are on the rise.

Cooperatives are generally found out as appropriate solutions for small farmers with limited size of household plot. Be a member of cooperative has significant benefits. Besides the others, the members have improved access to additional education and training. The education and training bring the members new skills, knowledge and experiences, which are fundamental for development of cooperatives and farmers. To find out which trainings are needed for members, was used the method of training needs assessment which brought these results:

- Members of cooperatives felt training needs in almost all of the areas of trainings. Members of wine and dairy cooperatives had more training needs than members of herbs cooperative, who considered their skills and knowledge and experiences sufficient. But there were still some members who felt some training needs.
- Members of wine cooperatives felt high training needs in pest and disease management and wine tourism. Members of dairy cooperatives felt high raining needs in processing techniques and value addition, packaging, but also dairy management, diseases management or production of quality products. Members of herbs cooperatives felt high training needs in technologies of production, harvesting and soil fertility management.
- Members of all cooperatives had common training needs in operation of coop (especially trainings about financial plan, monitoring and evaluation, communication, organizing meetings, coop principles, public relations), then market practices and marketing and management (especially trainings about purchasers, access to information about prices and sales and access to market),

then women and youth empowerment (especially entrepreneurial development of youth and women, women mainstreaming).

- Almost all of the respondents are willing to participate in future trainings. Most frequent reason for participation is education, skills and knowledge improvement.
- The members of cooperatives are generally satisfied the trainings organized with PIN, Elkana, ACDA, their own coop or other organizations. But they would increase the frequency of the trainings.

Recommendations:

Based on the results of the study, there are some recommendations for future researches:

- Based on the information, the past trainings contributed to the development of skills, knowledge and experiences of farmers and they used those skills, knowledge and experiences, it is recommended to continue with the trainings amongst members of cooperatives. Furthermore, the respondents were really satisfied with the previous trainings.
- It would be worthwhile to invest in increasing women's participation and their decision-making.
- Trainings should be planned based on the time preferences of the members of cooperatives. The trainings should be more frequent.

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9. ANNEXES

Annex 1: The questionnaire used in research for wine cooperatives

Annex 2: The questionnaire used in research for herbs cooperatives

Annex 3: The questionnaire used in research for dairy cooperatives