

**CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE**

**Faculty of Tropical AgriSciences**



Czech University of Life Sciences Prague

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AgriSciences**

**RECENT TRANSFORMATION OF  
AGRICULTURAL COOPERATIVES IN  
EASTERN EUROPE: COMPARISON OF THE  
CZECH REPUBLIC, GEORGIA, MOLDOVA  
AND UKRAINE**

**BACHELOR THESIS**

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## **Declaration**

I hereby declare that I have done this thesis entitled Recent Transformation of Agricultural Cooperatives in Eastern Europe: Comparison of the Czech Republic, Georgia, Moldova and Ukraine independently, all texts in this thesis are original, and all the sources have been quoted and acknowledged by means of complete references and according to Citation rules of the FTA.

In Prague, 19 April 2019

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Ludmila Böhmová

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## **Abstract**

Cooperatives are popular all across the world. As community-owned and run enterprises they are empowering its members and contributing to sustainable economic growth. The role and perception of agricultural cooperatives in CEE countries and CIS has been tarnished by the communist rule and the forced collectivisation.

This Bachelor Thesis presents general overview of cooperatives in CEE countries and CIS and their typology. This work is further focused on the analysis of recent development of agricultural cooperatives in Eastern Europe and in countries of former Soviet Union. The research was done in two ways. Firstly, through the analysis of secondary data obtained from scientific articles and reports. Secondly, through the evaluation of primary data collected through questionnaires in Georgia, Moldova, and Ukraine. Data showed that after the dissolvment of USSR all the countries took various routes of transforming collectivistic state farms, even though they share similar historical cooperative backgrounds. In Ukraine there is a high share of agri-holdings. In Georgia and Moldova land was restructured into high-fragmentation farmland, which affected the size and structure of agricultural cooperatives. The Czech Republic cooperatives did not really dissolve, but more or less morphed into a new version and changed their legislative status.

**Key words:** CEE, CIS, cooperative development, cooperative typology, agricultural policies, external support

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## **List of the Abbreviations Used in the Thesis**

AA – Association Agreement

ACSA – National Extension Service

AGROinform – National Federation of Agricultural Producers

AYEG – Association of Young Economists Georgia

CAP – Common Agricultural Policy

CEE - Countries of Central and Eastern Europe

CIDA – Canadian International Development Agency

CIS - Commonwealth of Independent States

CZK – Czech Crowns

DAČR – Družstevní asociace České Republiky (Cooperative Association of the Czech Republic)

ENPARD – European Neighbourhood Programme for Agriculture and Rural Development

EU – European Union

EUR – Euro

FAO – Food and Agricultural Organization

FAOSTAT – Food and Agricultural Organization Corporate Statistical Database

FNFM – National Federation of Farmers

GDP – Gross Domestic Product

Ha – Hectares

ICA – International Cooperative Association

IFAD – International Fund for Agricultural Development

ILO – International Labour Organization

NGO – Non-governmental organisation

SČMVD – Svaz českých a moravských výrobních družstev (Union of Czech Production Cooperatives)

SSS of Ukraine – State Statistics Service of Ukraine

UHDP – Ukraine Horticultural Development Project

UK – United Kingdom

UNDP – United Nations Development Programme

USA – United States of America

USAID – United States Agency for International Development

USSR – Union of Soviet Socialist Republics

WB – World Bank

WTO – World Trade Organisation

ZSČR – Zemědělský svaz České republiky (Agricultural Association of the Czech Republic)

## **Introduction**

Cooperatives are a worldwide spread practice. They are used mainly by small-scale farmers to cope with large agricultural corporations, big market demands, high input costs and other types of market challenges. This practice is therefore not unknown even in Eastern European countries that are the focus of this Bachelor thesis. Due to the interest of international donors, cooperatives in CEECs and CIS are often created by the international donors. However, the current state of cooperatives in this region was massively influenced by the communist rule and its imposed forced collectivization, which tarnished the view of farmers on cooperatives.

The main goal of this Bachelor thesis is the analysis of transformation from centrally planned to market economy and its impact on small farmer's cooperatives in the Czech Republic, Ukraine, Republic of Moldova and Georgia. The comparison of the three Eastern European countries was chosen because of its relation to the Czech Republic, which is a member of the EU. The Czech Republic became an EU member country in 2004, and the other countries' trade is closely interlinked with the EU as well. Georgia, Moldova and Ukraine signed the Association Agreement in 2014, which allows the free-trade in line with WTO's principles. It has been important especially for the trade of agricultural products, which are very important in terms of export in all three countries (European Commission 2018a).

Thesis is divided into 6 main chapters. The first chapter is the literature review, which describes historical background, cooperatives' introduction and typology and current agricultural structures of all four chosen countries. Second chapter presents the aims of the Bachelor Thesis. Third part discusses applied methodology. Fourth chapter presents the results conducted through review of secondary data as well as primary data collected by interviews with cooperative members in Georgia, Moldova and Ukraine. Fifth chapter is the discussion. The sixth and last chapter is the conclusion.

# 1. Literature Review

## 1.1. Historical Background

The communist rule lasted over 70 years in the CIS and 40 years in CEE countries. The differentiation in time and in the development of the thesis' chosen countries is substantial. Even though each country varies they share similar characteristics in the post-transition development, therefore it is possible to draw comparisons. These countries have been separated from the West by the Iron Curtain since the end of World War II. Such significant period of time clearly had immense impact on the different political, economic, social, and cultural development.

The concept of cooperatives therefore had a long history in CEE and CIS countries, even before forced collectivization was introduced. The cooperative as we know it was established in Europe and spread to the rest of the world in late 1800s as a help to tackle extreme poverty conditions. One of the most important advances was the creation of the first saving and credit cooperative by Friedrich Wilhelm Raiffeisen in 1864 in Germany. The aim of the Raiffeisen Bank was to offer credit and savings services to urban and rural population with the thought of self-help (Ortmann & King 2007).

The experience of state control over collectivized cooperatives has destroyed their image and people's perception of them. Gardner and Lerman (2006) state: *'Member registration was compulsory and the directors and staff were not appointed by the members (...). Cooperatives were not particularly concerned about profitability since they were subsidized by the government and received preferential treatment. (...) Their business affairs were often restricted to a small range of products and services.'* The authors also claim that among rural population even the word "cooperative" itself induces the wrong impression. The socialist "legacy" caused scepticism and distaste among farmers to any form of organized cooperation (Hagedorn 2014). This term suffered during the years of socialist regime and lacks the positive overtone that appears in North America and the rest of Europe.

Agricultural sector in the socialist era was divided into three farm types: state farms (sovkhoz) created by nationalization of property, collective farms (kolkhoz) formed by enforced

collectivization of family farms, and small household plots used for self-sufficiency (Hagedorn 2014). However, agriculture was performed mainly through production cooperatives which according to Deininger (2002) was prone to inefficiency due to moral hazard, avoiding responsibilities and increasing free-riding. The cost-inefficiency of agriculture in centrally planned economies is also mentioned by Bezemer (2004).

After the Velvet revolution in Czechoslovakia in 1989 and the dissolution of the Soviet Union in 1991, the period of transformation began. CEE and CIS countries are all affected by the communist rule. The transformation in all of the countries was influenced by the way they were entangled with the USSR (Lerman 2001). The immediate transition shock resulted in sharp decline of (not only agricultural) GDP. However, Gross agricultural product in CEE became stable in 1994. CIS had to wait for four more years, until in 1998 Gross agricultural output stopped declining (Gardner & Lerman 2006).

## 1.2. Introduction of Cooperatives

Modern cooperatives are popular all across the world. As community-owned and run enterprises they are empowering its members and contributing to sustainable economic growth.

The biggest non-governmental organisations focused on cooperatives is the International Co-operative Alliance, which serves more than 1 billion people from any of the 3 million worldwide cooperatives it represents (ICA 2019a). ICA's (2019b) definition of a cooperative 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'*. Essentially, cooperatives are independently owned and controlled by members. Members elect the board of directors, who vote on notable decisions on a basis of one-member one-vote. In case of excess profit, it is returned to the members.

ICA (2019b) presents the basic seven principles of cooperation as:

Firstly, **voluntary and open membership** which means their services are open to everybody, without any gender, social, racial, political or religious discrimination, who is prepared to agree to the importance of membership. Secondly, **democratic member control** – cooperatives are run as a democratic organisation by members whom can actively take part in

decision making. All members have equal voting rights. Thirdly, **member economic participation**: members provide, and equally control the capital of the cooperative. Part of this investment is the accepted common property. Surpluses generated by the cooperative can be used for any of these purposes: “*developing the cooperative, benefiting members in proportion to their transactions with the cooperative, supporting other activities approved by the membership*” (ICA 2019b). Fourth principle is the **autonomy and independence**. Cooperatives are independent, self-help institutions. Therefore, if they decide to enter into arrangements with other organisations or governments, they do it on terms guaranteeing to maintain their autonomy and democratic control by members. Fifth is the **education, training, and information** principle. Cooperatives offer education and training to their members, employees, and others to ensure they are able to strengthen the development of their cooperative effectively. Sixth principle: **cooperation among cooperatives**. It increases the strength of the cooperative movement by collaborating through local, national, regional and worldwide system. Last, but not least is the seventh principle - **concern for community**. Cooperatives strive for sustainable development of their communities through practices recognized by their members.

These seven principles are internationally accepted and referred to when it comes to cooperative legislation or their creation. However, there are other guiding values we can refer to, such as Scholl and Sherwood's (2014) four governance pillars: **teaming** – productively and effectively banding together to achieve a shared objective(s), **democracy** – endorsing, applying, and preserving democratic environment of cooperative, **strategic leadership** – coherently setting up cooperative’s direction, and developing the organizational structure to move towards desired direction, **and accountable empowerment** – positively empowering members, but holding them responsible for newly accessed power. The pillars outlined by Scholl & Sherwood (2014) above are supposed to be highlighting present gaps in cooperative governance. Cooperatives are motivated to exist mainly for selling and marketing their produce and supplying a service to members for fair and quality goods or services (Ortmann & King 2007). Their aim is first and foremost to serve their members, profit maximization or increase of shares in the market comes second (Mata-Greenwood 2013).

The principles of cooperatives described above can be also seen as their main advantages. Among other benefits and reasons for creation we can refer to USA’s National

Council of Farmer Cooperatives (2019). They present following points as the main reasons cooperatives are formed in the first place: strengthen bargaining power; maintain access to competitive markets; capitalize on new market opportunities; obtain needed products and services on a competitive basis; improve income opportunities; reduce costs, manage risks. Cooperatives are especially important in time of crisis, because of their “unifying nature” making the members more resilient and sustainable, especially if the cooperatives provide credit to their members (Mata-Greenwood 2013). Zeuli & Cropp (2004) in their work outline benefits of cooperatives’ formation: reaching out to new and bigger markets with higher bargaining power; in case of processing cooperatives, adding value and profit to members’ raw products; worker-owned cooperatives create improved working conditions for employees.

All the reasons why cooperatives are created are all ruling in their favour and are inherently positive. To be able to paint the whole picture, it is crucial to discuss also the negative side of cooperatives and why they do not function in certain environments. Anderson and Henehan (2003) offer an overview of instances when cooperatives are prone to fail, and reasons for their poor performance:

- 1) **Conflicting goals:** the board of elected members serving as management has the accountability to make decision in the best interest of the cooperative. These decisions might have unfavourable effect on members, especially in the short run.
- 2) **Poor management/poor board performance:** insufficient funds offered to the management can be an obstacle in finding the most suitable manager/board that fully understand all their roles and responsibilities.
- 3) **Inappropriate strategies or poor implementation:** cooperatives are sometimes accused of not willing (or capable) to invest into a fitting strategy which might be a reason for marketing goods and not value-added products and services.
- 4) **Inadequate capitalization:** can be caused by either insufficient investment requested from members, or because of poorly working investment programs
- 5) **Lack of member oversight:** cooperatives can be negligent in supplying adequate, up-to-date information, more so in times of financial crisis when members need it the most to apply their democratic rights. Therefore, the high trust on which most cooperatives operate can be easily damaged and hard to reclaim.



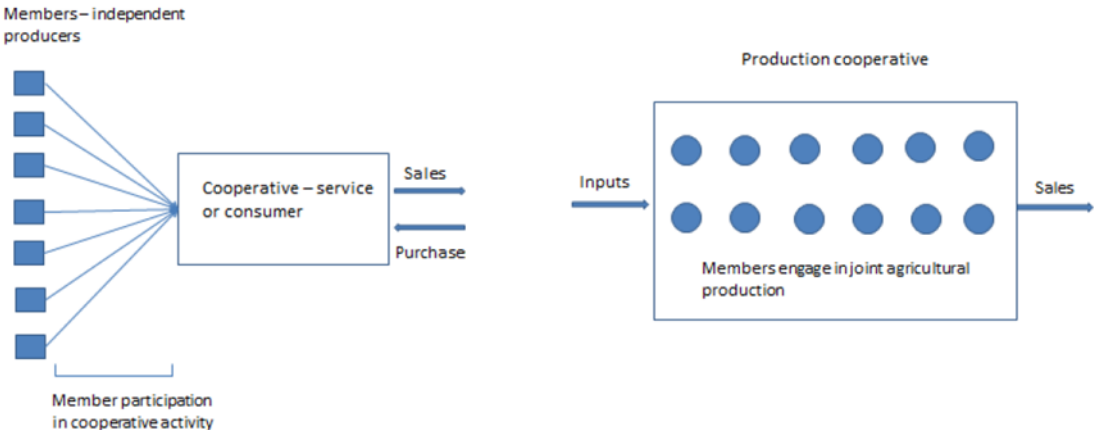
- 6) **Overly sensitive to member concerns:** and not taking into consideration what is the best for the cooperative policies in the long run. Sensitive approach can include: taking in bad quality products, not demanding adequate capital, catering to surplus of subsidized services etc.

Jones (2004) in his research proposes the wealth inequality theory as a characteristic of some unsuccessful cooperatives. Great wealth difference between persons can discourage collective action if poorer members lose motivation if the benefits for them are too little. Lissowska's (2013) research is focused on trust in cooperatives in post-transition countries. Her analysis' results show that general trust in post-transition countries is lower as well as the civil involvement and participation in association, which is linked to the lower compliance to cooperate with broader public. This distrust of general society in post-communist countries is also discussed by Hagedorn (2014). Furthermore, Ostrom (2014) identifies seven types of threats to sustained collective action. *“(1) efforts by national governments to impose a single set of rules on all governance units in a region; (2) rapid changes in technology, in factor availability, and in reliance on monetary transactions; (3) transmission failures from one generation to the next of the operational principles on which self-organized governance is based; (4) turning to external sources of help too frequently; (5) international aid that does not take account of indigenous knowledge and institutions; (6) growth of corruption and other forms of opportunistic behaviour; and (7) a lack of large-scale institutional arrangements that provide fair and low-cost resolution mechanisms for conflicts that arise among local regimes, educational and extension facilities, and insurance mechanisms to help when natural disasters strike at a local level.”* Zeuli & Cropp (2004) further mention limitations of collective action. The limitations include - difficulty to compete with large corporations; inappropriate assistance and advice; uncertain patronage making performance and strategic planning demanding.

Even though navigating the cooperative organizational systems is tricky, adopting cooperative principles and strategies is still very popular worldwide as it can be seen in the reports by Dave Grace and Associates (2014; World Cooperative Monitor & ICA (2018).

### 1.3. Cooperatives' Typology

When talking about cooperatives there are, of course, different types and specializations, which will be discussed in the following chapter. However, in the context of CEE, CIS and the historical circumstances we must distinguish between two main types of cooperation and that is production cooperatives (the form that was seen in practice in the former USSR) and service cooperatives. Production cooperatives' members together manage their joined agricultural resources. Production collectives still sell their output to third parties only and are legally commercial. Another major difference is the status of a member in a relation to a cooperative. Service cooperatives' sales are carried out mostly to members who keep their legal and working independence and, unlike members of production cooperatives, are not automatically part of the labour force (Lerman & Sedik 2014). Service cooperatives are the largest and most common type of cooperative all over the world. According to FAO (2014) in European countries like Netherlands, Denmark, Ireland and Sweden 70-80 % of all agricultural products are marketed through cooperatives. It provides help to the members, who unlike the production cooperative, do all the production tasks independently. When it comes to current status of production cooperatives they are more or less an anomaly nowadays, which is backed up by the fact that they account for less than 5% of all cooperatives worldwide (FAO 2014). However, in Czech Republic production cooperatives are of big importance, representing mainly medium-sized businesses focused on primarily handicraft production and services (DAČR 2019; SČMVD 2019).



**Figure 1 - Scheme of service and production cooperative** (Lerman & Sedik 2014)

Cooperatives are formed for all kinds of goals and purposes. Even though this Thesis deals with agricultural cooperatives, it is important to set up a clear classification of types of cooperatives, because they can overlap all across the board.

Best known cooperatives (Mata-Greenwood 2013):

1. Financial cooperatives – offer credit and other financial services (savings accounts etc.) at reasonable rates; only members can deposit or borrow money from a credit union
2. Food (consumer) cooperatives – grocery shops for members (sometimes for non-members as well) of a cooperative, at reduced prices; most common consumer cooperative.

Agricultural cooperatives are created to help their members in different types of specialization. According to Lerman and Sedik (2014) main areas of agricultural service cooperatives' activities are:

1. Marketing cooperatives – focus on providing marketing information and services;
2. Processing cooperatives – processing food commodities; sale of products
3. Technical farm services – machinery merges, mechanized field performance, transport, machine maintenance; veterinary assistance; accounting help; agricultural extension and consulting services
3. Consumer and public services – improvement and upkeep of telephone, gas, electricity networks; health care services; education; legal consultation

ILO (2017) presents their classification by cooperatives' characteristics. According to ILO (2017) cooperatives are mainly organized by the combination of following parameters:

1. Member relation to the cooperative: consumer, user, worker
2. Nature of member's activity: e.g. producer, retailer
3. Nature of cooperative's function in relation to the member's production: e.g. purchasing, marketing
4. Number and atypical categories of members: multi-stakeholder, volunteer-members, community-members, investor-members

Another possible cooperative classification is the **open** and **closed** cooperatives. Williamson (1998) describes **open membership** as “*allowing anyone who wants to join the cooperative and can use its services to do so*”, **closed membership** is the direct opposite “*cooperatives with limited or closed membership either limit the number of members they feel they can serve or the total volume of business they can receive*”. Poray and Ginder (1997) elaborate further on this concept. Open cooperatives have proven to be sufficiently adaptive in marketing of farm outputs and purchasing of farm inputs. Their existence has not been that extensively used in production or processing cooperatives. One of the important factors differentiating these two types of cooperatives is the way they use their capital and distribute financial benefits. In the majority of open cooperatives, no fixed level of capitalization is needed. People generally join them for all kinds of reasons other than returning strict financial benefits. Closed (or in other words defined) membership is convenient for people who want direct and instant return of profit, but they have to be prepared to entrust capital and business capacity to the cooperative when they join it. Because of the capital-handling distinction these cooperatives are organized and governed very differently. Membership in closed cooperative is strictly determined, everyone is obliged to “*make a defined volume commitment for each share owned*”. Unlike open cooperatives, they are not confronted with unpredictability of obtaining farm outputs from their members (Poray & Ginder 1997).

Another variation in differentiating types of cooperatives is their level of involvement in value chains. Value chains in agri-food supply chains can influence income distribution in rural areas and mixed value chains systems can have extensive poverty reduction outcomes (Swinnen & Maertens 2007).

Apart from these four value chain models, Bijman and others (2011) introduce also four categories of cooperatives. Their research divides co-ops according their type of governance mechanisms. Even though they present clear-category division of governance, they still put an emphasis on the fact that cooperatives use combination of the governance mechanisms depending on current economic conditions. The key assumption in designing this structure is that organizations use governance mechanisms to avert or lower transaction costs.

**Table 1 - Type of governance mechanisms (Bijman et al. 2011)**

	Market	Hierarchy	Community	Democracy
Main coordination instruments	Reciprocity, strong incentives	Command and control	Goal agreement, shared norms	Joint decision making
Way of operation	Price	Rules	Routines, traditions, informal information exchange	Participation, voice, commitment
Cost of operation	Low	High	Low	Intermediate
Flexibility	High	Intermediate	Low	Low
Capacity to solve vertical coordination problems	Low	Intermediate	High	Intermediate
Capacity to solve horizontal coordination problems	Low	High	Low	Intermediate

Democratic and community governance are intrinsically characteristic for cooperatives. However, when cooperative grows, becoming more heterogenous or vertical coordination increases, keeping these types of governance and its features is more difficult to obtain. Therefore, initiating hierarchy type of governance and introducing professional management, might be better way to go. But at the same time hierarchy is an alien aspect in cooperation and contradicts with the participatory decision making.

Another distinction of cooperative types can be those that are spontaneously or externally created. The externally established cooperatives are for example in Moldova, where USAID was involved in the development of the biggest agricultural cooperative (Millns 2013).

## **1.4. Current Situation in Agriculture and the Role of Cooperatives in Research Countries**

### **1.4.1. Czech Republic**

Agricultural land makes up around 54% of the country's area (Czech Ministry of Agriculture 2019a) and employs 2.78% of population (ILO 2018). One of the most distinguishable entities for Czech agriculture is the high percentage of leased land – 90% (Czech Ministry of Agriculture 2019a). With 90%, the Czech Republic takes second place for rented farmland in the EU (where the average is 44.61 %) (Sklenicka et al. 2014).

The plant production is slightly more profitable than animal production. The plant production's share on total agricultural production is about 780.248 million EUR<sup>1</sup> more than animal production (Czech Ministry of Agriculture 2018). The most prominent species in plant production are cereals (namely wheat and barley), maize, rapeseed, sugar beet. The Czech Republic belongs to one of the biggest producers of hops. Around 80% of produced hops are exported making it a vital plant species (Czech Ministry of Agriculture 2019b). The production of milk and pig breeding is the most prevailing in the animal sector (Czech Ministry of Agriculture 2018).

In 2004 the Czech Republic entered into the EU and since then Czechia's agricultural development, structure, level of subsidies, and legislation have been adapted to the EU's Common Agricultural Policy. This ascend to the EU has resulted into opportunities to access substantial financial aids which make Czech agriculture more profitable than ever (EU subsidies in 2010 consisted of 6.2 billion CZK). Nevertheless, employment in agriculture continues to decrease as well as agricultural share on total GDP (Věžník et al. 2013). Czech agriculture in 2017 contributed by 2.25% to the country's GDP (ČSÚ 2017).

### **1.4.2. Georgia**

As in most Eastern European countries agriculture in Georgia is an important, but slowly declining sector. Georgia has good rainfall and a variety of micro-climates throughout the country, creating the perfect conditions for all kinds of cash crops. However, one of Georgia

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<sup>1</sup> 1 EUR = 25 Czech crowns

agriculture's characteristics is the high level of subsistence, low productivity, and weak competitiveness. One of the reasons for low productivity of agriculture is the under-utilisation of fertile land as well as decreasing soil fertility caused by the lack of crop rotation and appropriate agricultural practices (Millns 2013). The most important products for export are: hazelnuts and wine (Ortmann & King 2007).

Another important feature in Georgian agriculture is the large percentage of small-scale farming: the average plot size for family farms is 1.2 hectares (Ortmann & King 2007). Employment in agriculture is 39.79% (ILO 2018). Agricultural share in GDP is 9.2% and has slightly increased since 2010 from 8.4%. Arable land is 344,000 ha; Land under permanent crops is 110,000 ha and land under permanent pastures and meadows constitutes of 1,940,000 ha (FAO 2016).

Georgia signed the Association Agreement with the EU in 2014, which is partly supposed to create better regulations for the EU trade. Georgia is also a partner country in the European Neighbourhood Policy (European Commission 2018b).

### **1.4.3. Republic of Moldova**

Moldova's rich soils and mild climate made it one of the most productive areas in Europe. Chernozem makes up 75% of the country (Millns 2013), making it the perfect soil for the production of cereals, grains, and fresh fruits and vegetables. Among the most important crops are wheat, barley, sunflower, maize, apples, grapes, potatoes, plums, watermelons (FAO 2019a). The animal production is highly fragmented. 97% of milk production is produced by smallholders with less than 5 cows (Millns 2013). Data from 2017 shows pig and poultry breeding is producing the biggest amount of meat (FAO 2019b). When it comes to food processing industry, wine making is the most important sector producing 300-350 million bottles per year (Millns 2013). Wine industry is also the most important in terms of export, having the most amount of export value – 107,538,000 \$ in 2016 (FAO 2018). Other crops important for export value are: sunflower seed, walnuts, wheat, maize, and refined sugar (FAO 2018).

In the year 2014 agriculture accounted for 13% of GDP (IFAD 2016). Employment in agricultural sector is 32.55% (ILO 2018). Even when considering the relatively high percentage

of agriculture's influence on the economy its status has changed drastically over the last 20 years. The acreage for high value crops has been reduced, the shift has also been visible in land productivity. The farm structure in 2014 is dominated slightly more by household plots (42.9%) and corporate companies and enterprises are estimated at 39.6%. The remaining 17.5% are peasant farms (IFAD 2016). These changes are tied to the scarcity of investment, credit and capital availability, which were followed by the application of low yielding technologies by farmers (IFAD 2016). The structure of agriculture is comprised of 64% of plant production, 35% of livestock and 2% of services. This structure is based on the revenue in local currency. Out of the 64% of plant production around 90% cover cereals and industrial crops (mainly maize and sunflower). According to the article by IFAD (2016) animal production suffered the most during the economic crisis and transformation period.

Just like Georgia, Moldova signed the Association Agreement in 2014, which allows the free-trade in line with WTO's principles. It has been important especially for the trade of agricultural products (one of the key Moldovan exports) (European Commission 2018a).

#### **1.4.4. Ukraine**

According to the State Statistics Service of Ukraine, agricultural share on GDP in 2017 is 11%<sup>2</sup> (SSS of Ukraine 2018) and employs 17.7% of population (SSC of Ukraine 2018). The divide in production by farm types is more or less half and half where corporations make up 47.3% and privately own farms 52.7% (FAO 2012). Even though the agricultural growth climbs at a good pace the underperformance is still significant as well as the lack of financing (FAO 2012). Ukraine is often times described as the "bread-basket of Europe" which is apparent when we look at the export value of wheat 2,033,167,000 US\$ (FAO 2018). Maize, barley, potatoes, sunflower, sugar beet, rapeseed and soybeans can be classified among other important crops. (FAO 2019a).

As of 2012, agricultural enterprises form 63% of agricultural land use, the other 27% are in the holding of individuals. The brisk formation of massive agri-holding is on the rise as

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<sup>2</sup> Data exclude the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and 2014 – a part of temporarily occupied territories in the Donetsk and Luhansk regions (SSS of Ukraine 2018).



well, some of them as large as 100,000 ha which are unified with processors and exporters (Meyers & Goychuk 2015). Between the years 2005-2011 farms with the size over 3000ha increased by 35% and their sown area grew by 59%. However, this growth was in conjunction with the decrease of numbers and area in agricultural land plots between 500 to 2,000 ha. There is no definite number of Ukrainian agri-holdings however, the estimation in 2011 was 79 agri-holdings with 5 million hectares in use (Meyers & Goychuk 2015).

There are many reasons for this rapid increase: *'relatively cheap fertile land, a sufficient level of infrastructure development, world market access, productive and relatively cheap labour, increasing commodity prices'* (Meyers & Goychuk 2015). Meyers and Goychuk (2015) also mention why this mega farm phenomena is mainly in post-USSR countries: weak governmental conditions and political-economic potential connected to transitional economies.

Just as in the case of Georgia and Moldova, Ukraine signed the Association Agreement (AA) in 2014. This agreement is supposed to cut tariffs and equalize Ukraine's rules with the EU. This inclusion allows Georgia, Moldova, and Ukraine to receive EU funds for small and medium sized enterprises (European Commission 2018c). The EU's ban on import of goods coming from Crimea and Sevastopol is part of not recognizing the Russian Federation's illegal annexation of these regions (European Commission 2018c).

## **2. Aims of the Thesis**

### **2.1. Main Research Question**

The main goal of this Bachelor thesis is the analysis of transformation from centrally planned to market economy and its impact on small farmer's cooperatives in Czech Republic, Ukraine, Republic of Moldova and Georgia. The communist party was in power for more than 70 years in the CIS and 40 years in CEE countries, therefore it had an immense influence on the evolution of cooperatives (especially because the forced collectivization). However, in 90-ies every country took different steps in privatization of the land, which resulted in different outcomes for agriculture and rural development. Especially in Georgia, Moldova and Ukraine the privatization completely destroyed the former collectivistic structures and resulted in atomization of the land. Nowadays, all countries are trying to introduce and support producers' groups and cooperatives again. Besides, farmers that still remember old types of Soviet kolkhozes react to different national and international incentives differently in every country.

The comparison of these four countries was chosen, because of its relation to the EU and its trade. Czech Republic became part of the EU in 2004. The EU regulations and incentives have had an irretrievable influence on the Czech agricultural development and legislation. As for Georgia, Moldova, and Ukraine, these countries are part of the European Neighbourhood Policy (European Commission 2016a). However, in 2014 all three countries signed the Association Agreement with the EU, that is supposed to strengthen trade between parties, offer technical and financial incentives and allow for deeper integration into EU structures (European Commission 2018c).

### **2.2. Specific Aims**

I. Compare the enabling conditions and background of countries based on pre-selected criteria.

II. Provide typology of current producer groups in Georgia, Moldova and Ukraine which resulted from specific national conditions.

### 3. Methodology

#### 3.1. Criteria-Based Comparison of Enabling Factors

Methodology of this Bachelor Thesis for the first objective was based mostly on the review of available resources, which deal with aspects of transformation and development of cooperatives in the countries of Eastern Europe and former Soviet Union, namely Georgia, the Republic of Moldova and Ukraine. The Czech Republic, with similar historical background but with membership in the EU, serves as a reference country.

The agricultural cooperative development in each country was analysed and compared with the use of specific set of criteria based on literature review that determined popular and most prominent research topics in these areas. The criteria chosen are as follows:

Qualitative information:

- a) **Privatization strategy** to explain and offer more context to the agricultural sector and how the privatization influenced farmland divisions and in the 1990s.
- b) **Legislation adopted to govern cooperatives** questions how different variations in legislation affect farmer groups registration process, activity, inner governance, and creation.
- c) **Type of governmental and donor support** examines governmental assistance, policies, and national and international funds supporting co-ops.
- d) **Main agricultural sectors covered by cooperatives** and if they intersect with the countries' main agricultural sectors and exports

Quantitative data:

- e) **Cultivated land of cooperatives in hectares and share of cooperative managed land in total arable land** - these criteria help draw comparisons to cooperative development and establishment in each country
- f) **Number of agricultural cooperatives and other legal forms of agricultural businesses**

Mainly science journal articles were used for the literature review. They were acquired by using appropriate key words with the use of Boolean operator. Among the applied key words

were: “cooperatives; agricultural cooperatives; agriculture AND Czech Republic, Ukraine, Georgia, Moldova; de-collectivisation; agricultural cooperatives in East Europe; producer’s groups; economic transformation; cooperative legislation; gender AND cooperatives”. All sources used are referenced according to the norm of the Faculty of Tropical AgriSciences (Conservational Biology journal style). Scientific databases such as Web of Science, Scopus, ScienceDirect and Google Scholar were used. Around 30 articles were retrieved on the topic. They are listed in References.

After the extraction of initial articles, it was clear that Zvi Lerman’s name was reoccurring. Zvi Lerman is Professor Emeritus of Agricultural Economics at the Hebrew University of Jerusalem and is a regular consultant to FAO, the World Bank, USAID, and UNDP. His research since the 1990s has been focused on the land reforms and farm restructuring in countries with transition economies. The thesis often references John Millns and his study ‘Agriculture and Rural Cooperation Examples from Armenia, Georgia and Moldova’ published in the Policy Studies on Rural Transition.

Research papers, conference proceedings and reports of AYEG, FAO, IFAD, ILO, World Bank, ZSČR were also used. Most prominent research was by the FAO. Conference paper on ‘Agricultural Cooperatives in Eurasia’ organized by the FAO with European Commission on Agriculture (2014) analyses the differences in development of cooperatives. The European Union’s ‘Assessment of the Agriculture and Rural Development Sectors in the Eastern Partnership countries – Ukraine (2012), this study was funded by the EU, but implemented by the FAO. Research paper by IFAD (2016) describing Moldovan agricultural sector in recent years was used to outline current structure of agriculture in Moldova.

Additional quantitative information was obtained through international as well as local databases. Czech Statistical Office – share of agriculture on GDP in Czech Republic; State Statistics Service of Ukraine – percentage of agriculture on total GDP in Ukraine, percentage of people employed in agriculture; FAOSTAT database – export value of crops and livestock products in Moldova and Ukraine, production quantity of certain crops in all researched countries to calculate the most important crops in each country; Trading Economics - arable land total (ha).

### **3.2. Primary Data Collection for Typology of New Producers' Groups in Georgia, Moldova and Ukraine**

For the second objective the research used a cross-sectional data set collected in Georgia, Moldova and Ukraine from September 2018 to April 2019. Farm-level data was collected through face-to-face interviews using structured questionnaires on a farmer basis. Prior to the interviews, the questionnaires were translated into Georgian, Romanian and Russian languages. Local interviewers (local students from all three countries with their local supervisors) were trained and pilot testing was conducted in order to reduce measurement and reliability errors. The data was collected as part of the Czech University of Life Sciences Prague Internal Grant Agency project no. 20185001. The author of this thesis personally participated during data collection in Georgia and Ukraine.

In each country, the initial (but limited) list of cooperatives was obtained from local authorities. Since many cooperatives in CEE region exist only on paper and they are registered as cooperative only because of expectation of some governmental support, only functional cooperatives were considered for the list. The list of functional cooperatives was clarified with local authorities and cooperative experts. Unfortunately, even the final list of cooperatives cannot be taken as a representative sample. Especially for Ukraine, where the interviewed cooperatives are located in the North-East due to the sheer size of the country.

Only in Georgia the main source of initial contact was provided by International School of Economics Tbilisi, which was the partner organization during EU ENPARD project and was responsible for monitoring and analysis of all cooperatives created within the project. Therefore, all the Georgian cooperatives were created or at least supported by the EU ENPARD project (total number of created cooperatives was almost two hundred). Based on the initial list and with snowball non-random convenient sampling strategy, the data collection team managed to interview following numbers of cooperatives:

- In Georgia 40 cooperatives were interviewed. The selection was limited only to honey, grapes and hazelnuts sectors, since these three sectors dominate in cooperative movement
- In Moldova 36 cooperatives were interviewed. The sectors covered apples, grapes, plums and nuts

- In Ukraine 24 cooperatives were interviewed. Due to the size of Ukraine, chosen cooperatives are only from the North-East of the country - Sumy, Poltava, Chernihiv, Kharkiv. The cooperative sectors covered dairy production, cereals, honey, fruit and berries cultivation

However, from the initial lists of registered cooperatives usually around 50% of contacted cooperatives in each country refused to meet due to the reluctance and unavailability at the time of data collection. Several reported that they do not operate as cooperative anymore.

The list of criteria for typology of specific arrangements of cooperatives in Georgia, Moldova and Ukraine are following:

**Table 2 - Criteria for typology of new producers' groups**

		<b>Units</b>	<b>Intervals</b>
<b>Market</b>	Agricultural sectors	%	N/A
	Main market	%	Local consumers/middlemen, Regional, Supermarkets, Export
<b>Size and Institutional Design</b>	Total number of members	%	1-5; 6-10; 11-15; 16-20; 21-23; More than 26
	Total farmland	Ha	1-10, 11-20, 21-30, 31-40, 41-50, More than 50
<b>Member, Gender and Youth Composition</b>	Gender representation	%	Female dominated, Equal, Male dominated
	Young farmers (less than 35 years)	%	0-25%; 26-50%; 51-75%; 76-100%
<b>Activity/Dormancy/Commitment and Profit of Cooperatives</b>	Activity of cooperatives	%	Active handling with produce and processing; Active handling with produce; Only brokering
	Increase in members	%	Increasing; Planning to increase; No increase
	Frequency of meetings	Number	Every day; Every week; Twice a month; Every month; Once in 3 months; Once in 6 months; Once a year; No meetings
	Use of the profit	%	Reinvested; Distributed to members; Reinvested and Distributed; No profit

## 4. Results

### 4.1. Evaluation of Countries According to Chosen Criteria

Table 3 - Criteria-based comparison of enabling factors

<b>X</b>	<b>Privatization strategy</b> <i>(Lerman 2001)</i>	<b>Legislation</b>	<b>Government and donor support</b>	<b>Arable land total (ha)</b>	<b>Cultivated land in cooperatives</b>	<b>N. of agricultural cooperatives</b>	<b>Main sectors covered by coops</b>
<b>Czech Republic</b>	Restitution of land rights to former owners	Law 20/2012 on commercial companies and cooperatives (Business Corporations Act)  <i>(Chamber of Deputies of the Parliament of the Czech Republic 2012)</i>	EU subsidies	3,136,000  <i>(Trading Economics 2015a)</i>	668,740 – 19.1%  <i>(ZSČR 2017)</i>	517  <i>(ZSČR 2017)</i>	Dairy, hops, fruits and vegetables  <i>(Ratinger et al. 2012)</i>
<b>Georgia</b>	Distributed equally among farmers without any payment	Law on Entrepreneurs 2008-2012; Law on Agricultural Cooperatives (Jul2013)  <i>(Lerman &amp; Sedik 2014)</i>	ENPARD	448,000  <i>(Trading Economics 2015b)</i>	N/A	1586  <i>(AYEG 2017)</i>	Viticulture, cereals, apiculture, hazelnuts  <i>(Kochlamazashvili et al. 2017)</i>
<b>Moldova</b>	Distributed equally among farmers without any payment	Law on cooperation (Jan1992); Consumer cooperation (Sep2000); Business coops (Apr2001);	World Bank	1,822,900  <i>(Trading Economics 2015c)</i>	N/A	700  <i>(Millns 2013)</i>	Viticulture, fruits, walnuts, sugar beet, apiculture  <i>(Millns 2013)</i>



		Production coop (Apr2002, upd. 2010; <i>(Lerman &amp; Sedik 2014)</i>					
<b>Ukraine</b>	Distributed equally among farmers without any payment	Law on Cooperation (Nov2004, upd. Jun2009); Law on Agricultural Cooperation (Nov2012) <i>(Lerman &amp; Sedik 2014)</i>	UNDP, CIDA	32,541,300  <i>(Trading Economics 2015d)</i>	N/A	801  <i>(FAO 2014)</i>	

#### **4.1.1. Approaches to Land Reform and Privatization Strategy**

The differences in privatization, restitution and transformation laws influenced different development paths in each post-socialist country, which further altered the economic and income distribution (Hagedorn 2014). In the Soviet Union all (agricultural) land was transferred to the state right after the October 1917 revolution (for Ukraine and Moldova after the integration after WWII). In CEE countries (then Czechoslovakia) state land co-existed with private ownership. State parcels were established by seizing the holdings of Nazi collaborators, the church, monasteries, large farmers etc. Persons, who joined cooperatives in the 1950s therefore maintained their ownership which was listed in cooperative's records (Lerman 2001).

As we can see from *Table 3* the restitution of the land of former socialistic state kolkhozes to original owners was different in every country of our interest. Bezemer (2004) also describes various ways of how most CEE farms were restructured. CIS generally took a route of a re-distribution (Deininger 2002). However, even though they shared distribution approach, it differs in terms of main approaches. In Georgia agricultural land was distributed equally among workers without any payment. Moldova distributed in land parcels, but also had a secondary approach of distribution in land shares. Ukraine applied distribution in physical parcels as well as in land shares as their main approaches.(Hartvigsen 2014).

Results of de-collectivization were different in every country. In Moldova in 2001 the share of state agricultural land was only 17%, in Ukraine less than 40%, in Georgia half the arable land was still state's because of state owned mountain pastures (Lerman 2001). Another important characteristic of farmland in Georgia and Moldova is the high level of farmland ownership fragmentation. This outcome results in loss of farmland attractiveness due to complication for farming activities (Sklenicka et al. 2014). Which makes it harder for small-scale farmers to make their living.

In Ukraine the desire to run private agricultural business was low, because it was one of the post-Soviet countries that did not have family farming legacy in the lifetime of people who were living during the transition period (Meyers & Goychuk 2015). Majority of population with access to plots of land continued to produce on small scale for their

households (and markets) but did not see farming as a lucrative business. Currently, Ukrainian government legally recognizes private land ownership, however buying and selling of land is limited in practice, and land transactions are mainly restricted to leasing (Lerman 2001).

Privatization of land in the Czech Republic (former Czechoslovakia) took different direction. Instead of following the western-style of individual family farms, agricultural entities reorganized as a whole without disassembling the collective structures. When the land was transferred to original owners who were not used to cultivating it, often times newly gained land was leased to large corporate farms or leased for cooperative use (Lerman 2001). Restitution in the Czech Republic accepted only claims for restitution before the year 1948. Another outcome tied to restitution and cooperative transformation is the high number of passive owners. There are no specific numbers, but in former Czechoslovakia 3.5 million people hold the right to cooperatives transformation, but only 0.7 million people worked in agriculture (Swain 1999).

#### **4.1.2. Legislation**

In general, legislation on cooperatives in CIS countries is systematized in three layers. Firstly, they are discussed in the Civil Code as a legal entity. Secondly, legislation deals with the Tax Code. Last, but not least the third level is focused on cooperative-specific laws. They can differ according to their type (production, service, consumer), legislation can deal with all agricultural cooperatives together or separate them in legislation into agricultural and non-agricultural sector (Lerman & Sedik 2014).

In the Czech Republic, cooperatives' legal form is under the Business corporations Act, No. 90/2012 Sb. The legislation further specifies Housing cooperatives and so called 'Social cooperative' (continuously develops generally beneficial activities in support of social cohesion for the purpose of working and social integration of disadvantaged persons into society). This law came into action on 1<sup>st</sup> of January 2014 (Chamber of Deputies of the Parliament of the Czech Republic 2012).

Georgia has a specific ‘Act on Agricultural Cooperation’ unlike the Czech Republic. The law was established in 2013. Georgia has an unusual two-step registration process. Firstly, co-ops have to register as non-profit legal entities and later also register with the Agency for Cooperative Development (state agency created under the Ministry of Agriculture). The second step is optional, however if cooperatives want to be part of the government support programs, they must be registered with the state agency as well (FAO 2013; Lerman & Sedik 2014).

Just like in Georgia, Ukraine has its own law dealing with agricultural cooperation respectively, drafted in 2013). This act was formulated as close to the European legislation as possible. According to this law, service cooperatives have a non-profit status and can provide services only to its members. Both physical and legal persons can be members of a service cooperative (FAO 2013).

As you can see in *Table 3*, Republic of Moldova has several acts dealing with cooperation. However, the main (and latest) law on agricultural producer groups and associations came in 2013. Cooperatives and agricultural associations in Moldova are qualified for preferential access to subsidies, which may be unavailable for individual farmers (IFAD 2016).

#### **4.1.3. Government Support and the Role of Donors**

Czech Republic, being a member of EU, benefits from EU’s funds based on the Common Agricultural Policy (CAP). According to European Commission (2016b) between the years 2014-2020 Czech agriculture has allocated EUR 2.31 billion. Czech Rural Development Programme has three main objectives for these years: sustainable management of natural resources and climate-friendly farming practices; increasing competitiveness; increasing rural economy (European Commission 2016b).

In Georgia the main player when it comes to support of agricultural cooperatives is ENPARD (European Neighbourhood Programme for Agriculture and Rural Development). The programme was established in 2013 with the goal to decrease rural poverty. Four major NGOs (Oxfam, CARE, Mercy Corps and People in Need) were

involved in implementing ENPARD's goals such as: *'purchasing assets, providing intensive technical support via training session, bringing experts to the field, building market linkages and proving day-to-day support in many other directions'* (Ortmann & King 2007). Apart from international donors, agricultural cooperatives are eligible for government support and subsidies, if they are registered with the Agency for Cooperative Development; as it was already mentioned in the chapter 4.1.2.

Moldova has an increasing number of organizations and institutions that started to implement extension services in rural areas in the last 10 years. The mentioned ones are: National Extension Service (ACSA), the National Federation of Agricultural Producers (AGROinform), the National Federation of Farmers (FNFM) and others (IFAD 2016). The ACSA was established with the help of WB in 2002 and from 2013 government took on the entirety of its financing. Network services are provided for free to farmers, however the organization is reliant on state funding (IFAD 2016). The main international donor establishing agricultural cooperatives was WB – for example WB's Competitiveness project in 2012 (World Bank 2012), but another contributor was also IMF (Daoud et al. 2019).

In Ukraine UNDP implemented and co-founded a project called 'Community-Based Approach to Local Development' alongside the EU. It has been established in 2008, operating in three phases, where third one finished in 2017. Namely Phase III was operating with 819 community organizations, and in all three phases 64 agricultural service cooperatives have been established. Its aims are to 'strengthen participatory governance throughout Ukraine through community-based initiatives. It accomplishes this by providing incentives and a methodology to local communities to promote sustainable socio-economic development at the local level.' (Webster & Fajerskov 2017). Turner and others (2013) also discuss the Ukraine Horticultural Development Project (UHDP) funded by the Canadian International Development Agency (CIDA). The aim was to increase competitiveness and profitability and engage farmers in high value chain horticulture (greenhouse tomatoes and cucumbers, table grapes, berries, medicinal herbs). Targeted farmers own 1 hectare of land on average who sold at the farm gate market.

#### **4.1.4. Arable Land (Total and in Cooperatives); Number of Agricultural Cooperatives**

In *Table 3* it is clearly seen Ukraine has the biggest amount of agricultural land out of the observed countries. However, the biggest number of cooperatives is in Georgia (see *Table 3*). When we look at the data, we have to take into an account the farmland structure. According to FAO (2014) the average size of family farms in Georgia is 0.96 ha compared to 4.6 ha in Ukraine. We can therefore assume the high number of cooperatives in Georgia is connected to small sizes of agricultural plots. In Ukraine, the relatively small number of cooperatives can be linked to a high number of agri-holdings. In 2010, 40 largest agri-holdings were operating on 13.6% of agricultural land (Deininger et al. 2018) and 60% of all farmland in Ukraine is controlled by large farm enterprises (Mamonova 2015).

Moldova has a similar problem with high level of small plots, just like Georgia. Millns (2013) writes *'More than 1 million manage as individual plots of 1.4 ha (...) and affecting the extent of large-scale mechanisation for crop production. (...) Farms of less than 10 ha account for 72% of total agricultural production in volume terms and 80% of all horticultural products.'*

Apart from the Czech Republic, no specific data regarding the amount of agricultural land in cooperatives were found. As you can see in *Table 3* cooperatives in Czechia manage 19.1% of all cultivated land in the country according to the Agricultural Association of the Czech Republic (2017).

#### **4.1.5. Main Agricultural Sectors Covered by Cooperatives**

In the Czech production of dairy, hops, and fruits and vegetables, cooperatives have a pivotal role in the market share. According to Ratering et al. (2012) in 2010 (newer data not available) market share of cooperatives in dairy industry is 66%; in hops industry 90%; and in production of fruits and vegetables 35%. However, dairy sector has the biggest annual turnover, and cooperatives specializing in this sector are the biggest in the country – top 5 largest cooperatives are in the dairy sector. As it was already mentioned, hop production and marketing are covered almost entirely by Chmelarstvi cooperative.

Czech Republic is the fourth main producer of hops, and the biggest producer of aromatic hops with specific qualities (Ratinger et al. 2012).

In Georgia wine industry is one of the most important sectors, and second biggest export commodity (Kvariani & Ghvanidze 2015). However, the most favoured sector for cooperation in the four-year ENPARD programme is apiculture, after that come cereal and hazelnut production. Viticulture and potato cooperatives round up the top five sectors (Kochlamazashvili et al. 2017). As it was already mentioned in the *Chapter 1.4.2* wine and hazelnuts are the most important products for export, but according to Kochlamazashvili et al. (2017) in 2017 out of the 281 cooperatives involved in the ENPARD programme only 10 cooperatives (4%) exported some of their products (wine, hazelnuts, citrus and greens). Majority of cooperatives (64%) still sells their produce on local markets.

Moldova is known for its wine, so it is no surprise that viticulture is also an important sector for cooperatives. The Oenologist Union of Moldova (est. 1998) has nowadays 16.000 grape and wine member-producers, covering 70% of all country's vineyards. The same national entities cover other important commodities. "Moldova Fruct" with 95 companies operating on 20.000 ha of fruit-and-vegetable growing areas; and other organisations connecting beekeepers, sugar beet and nut producers and others (Millns 2013). Millns (2013) further mentions that even though cooperatives are somewhat well represented at administration and produce level, their integration into commercial value chains is still very low.

In *Chapter 121.4.4* it is stated that for Ukrainian agriculture and economy the most valuable commodities are: wheat, maize, barley, potatoes, sunflower, sugar beet, rapeseed, soybeans (FAO 2019a). As for cooperatives and the agricultural sectors they mostly cover, no data was found. However, Mamonova (2018) mentions that for small-scale farmers in general, the major commodities are potatoes, fruits and vegetables. Even though small farmers in Ukraine are regarded as "inefficient" and "backward" (Mamonova 2018), they produce almost half of the country's gross agricultural output (Borodina 2013).

## 4.2. Typology of Newly Created Cooperatives

### 4.2.1. Market

According to the analysis, majority of target cooperatives in Georgia are focused on apiculture. Which might be explained by the sector to be traditional, profitable and having potential for export. In Moldova production of grapes represents important sector for cooperatives. This is in line with Moldova's main export sector – wine. In Ukraine vast majority of interviewed cooperatives are cereal production. This correlates with the fact that chernozems make up big portion of local agricultural land. Cultivation of cereals was in 3 cases accompanied by milk production and pig husbandry as well. Apiculture in Ukraine appeared only in one case in our conducted interviews.

**Table 4 - Agricultural sectors in cooperatives**

	<i>Sector</i>			
<i>No. of Cooperatives in Georgia</i>	15 (37,5%) Apiculture	14 (35%) Hazelnuts	11 (27,5%) Grapes	X
<i>No. of Cooperatives in Moldova</i>	12 (33,5%) Apples	11 (30,5%) Grapes	11 (30,5%) Plums	2 (5,5%) Nuts
<i>No. of Cooperatives in Ukraine</i>	12 (50%) Cereals	7 (29%) Milk	4 (17%) Fruits and Berries	1 (4%) Apiculture

It is interesting to see only very few cooperatives reach foreign market even though big number of them in both countries are focused on viticulture and wine industry, which make up large share of both countries' export.

It is worth mentioning that in Georgia there are 4 apiculture cooperatives from a total of 6 with no market access and none of the apiculture cooperatives have access to a foreign market. The only cooperative in Ukraine that has reached a foreign market is focused on berries production. It is worth mentioning this cooperative was only established in 2018 and has 5 Ha in total.



**Table 5 - Main market**

<i>Dominant buyers</i>	<i>Local consumers/middlemen</i>	<i>Regional</i>	<i>Supermarkets</i>	<i>Export</i>
<i>No. of Cooperatives in Georgia</i>	24 (60%)	6 (15%)	8 (20%)	2 (5%)
<i>No. of Cooperatives in Moldova</i>	14 (38.8%)	12 (33.4%)	4 (11.2%)	6 (16.6%)
<i>No. of Cooperatives in Ukraine</i>	18 (75%)	5 (21%)	0	1 (4%)

#### 4.2.2. Size and Institutional Design

In Georgia there is a clear prevalence of small cooperatives (with maximum of 15 people). However, the biggest cooperative in our sample has 539 members (hazelnuts). In Moldova there are 6 cooperatives with only 2 members. The majority of cooperatives in Moldova are of the smallest size (from 1 to 5 members). On the other hand, Ukraine is the complete opposite where small cooperative co-exists with relatively big cooperatives, while there are no middle-size cooperatives. The majority of cooperatives have more than 26 members. The biggest cooperative in our sample has 110 members (cereals production). However, in the interval ‘more than 26 members’ cooperatives have on average 70+ members.

**Table 6 - Total number of members**

<i>No. of members</i>	<i>1–5</i>	<i>6–10</i>	<i>11–15</i>	<i>16–20</i>	<i>21–26</i>	<i>More than 26</i>
<i>Cooperatives in Georgia</i>	4 (10%)	12 (30%)	17 (42.5%)	1 (2.5%)	2 (5%)	4 (10%)
<i>Cooperatives in Moldova</i>	20 (55.6%)	12 (33.3%)	4 (11.1%)	0	0	0
<i>Cooperatives in Ukraine</i>	5 (21%)	3 (12.5%)	0	1 (4%)	4 (16.7%)	11 (45.8%)

Georgian co-ops have the biggest share of land between 1-10 Ha. In Moldova the maximum size of cooperative land is 120 Ha, which is interesting when we take into an account big portion of cooperatives in Moldova has less than 5 members. In Ukraine the maximum size of cooperative has 3,500 Ha. The smallest ones (5 and 8 Ha respectively)

are focused on cultivation of berries which obviously don't require as much land as cooperatives focused on cereal cultivation.

It is important to note that the share of farmland in Ukraine was calculated out of 17 cooperatives. The cooperatives who did not report the size of land are focused on dairy production and therefore reported total number of cows instead (on average around 100 cows). The apiculture cooperative reported 300 beehives instead of farmland as well. It is also noteworthy to point out that out of 82% of cooperative with more than 50 Ha of land, almost 43% of them operate on more than 2,000 Ha. However, it is important to remind that the size of cooperatives differs so significantly in Ukraine from others just from the sheer size of the country.

**Table 7 - Total farmland**

<i>Size of the land (Ha)</i>	<i>1—10</i>	<i>11—20</i>	<i>21—30</i>	<i>31—40</i>	<i>41—50</i>	<i>More than 50</i>
<i>Cooperatives in Georgia</i>	37 (92.5%)	2 (5%)	1 (2.5%)	0	0	0
<i>Cooperatives in Moldova</i>	6 (16.6%)	5 (13.9%)	7 (19.5%)	6 (16.6%)	3 (8.4%)	9 (25%)
<i>Cooperatives in Ukraine</i>	2 (12%)	0	0	1 (6%)	0	14 (82%)

#### **4.2.3. Member, Gender and Youth Composition**

As we can see in *Table 8*, majority of cooperatives are male dominated. It is probably of no surprise, because of the engrained patriarchal mindset in societies that usually “dictates” males to be the heads of households who are involved in agriculture and earning an income for the family while females are seen mainly as housewives (or support workers) dealing with family matters.

**Table 8 - Gender representation**

	<i>Female dominated</i>	<i>Equal</i>	<i>Male dominated</i>
<i>No. of Cooperatives in Georgia</i>	4 (10%)	6 (15%)	30 (75%)
<i>No. of Cooperatives in Moldova</i>	0	12 (33.3%)	24 (66.7%)
<i>No. of Cooperatives in Ukraine</i>	2 (8%)	6 (25%)	16 (67%)

In *Table 9* we can see the share of young farmers. The reason that most cooperatives (more than 50) have dominant old members could be the migration of young people from rural to urban areas, the loss of interest of work in agriculture or no adequate profitability for small farmers. The young cooperators are probably the family members who are involved in cooperative movement because of their parents and see a potential in farming. What is staggering to see is the total lack of young farmers in cooperatives in Ukraine where 100% of our sample size have less than 25% of young farmer members.

**Table 9 - Share of young farmers (less than 35 years)**

	<i>0-25%</i>	<i>26-50%</i>	<i>51-75%</i>	<i>76-100%</i>
<i>No. of Cooperatives in Georgia</i>	25	10	4	1
<i>No. of Cooperatives in Moldova</i>	24	10	1	1
<i>No. of Cooperatives in Ukraine</i>	24	0	0	0

#### **4.2.4. Activity/Dormancy/Commitment and Profit of Cooperatives**

As we can see in the following *Table 10* majority of cooperatives in Georgia and Moldova are focused only on brokering. Very small portion of questioned cooperatives is active in handling produce as well as processing.

**Table 10 - Activity of cooperatives**

<i>Sector</i>	<i>Actively handling with the produce and processing</i>	<i>Actively handling the produce</i>	<i>Only brokering</i>
<i>No. of Cooperatives in Georgia</i>	6 (15%)	12 (30%)	22 (55%)
<i>No. of Cooperatives in Moldova</i>	3 (8.3%)	9 (25%)	24 (66.7%)
<i>No. of Cooperatives in Ukraine</i>	4 (17%)	14 (58%)	6 (25%)

As we can see in *Table 11* some discrepancy in numbers can be seen. It is due to the fact that cooperatives who replied have no increase in number of members, could also reply they are planning to increase those numbers. From what we can see it is apparent Moldova is at the forefront of growing in numbers of members. However, from what we already discussed Moldova is still way behind Ukraine in total number of members.

**Table 11 - Increase of members**

<i>Sector</i>	<i>Increasing number of members</i>	<i>Planning to increase a number of members</i>	<i>No increase in number of members</i>
<i>No. of Cooperatives in Georgia</i>	10 (25%)	11 (27.5%)	30 (75%)
<i>No. of Cooperatives in Moldova</i>	31 (86.1%)	16 (44.4%)	5 (13.8%)
<i>No. of Cooperatives in Ukraine</i>	11 (45.8%)	11 (45.8%)	13 (54.2%)

Comparing data from Georgia and Moldova it is interesting to see such a division in frequency of meetings. In Georgia vast majority of boards of cooperatives have meetings only once a year. Moldova on the other hand, has a variation where most of cooperative boards meet twice a month. In Georgia 5 cooperatives in total replied they have no meetings. The question is if there are actually no meetings or if they are just irregular and meet whenever it is needed.

Data for Ukraine are unfortunately unavailable for these criteria.

**Table 12 - Frequency of meetings**

<i>Frequency of meetings</i>	<i>Every day</i>	<i>Every week</i>	<i>Twice a month</i>	<i>Every month</i>	<i>Once in 3 months</i>	<i>Once in 6 months</i>	<i>Once a year</i>	<i>No meetings</i>
<i>No. of Cooperatives in Georgia</i>	0	0	0	1	2	13	20	5
<i>No. of Cooperatives in Moldova</i>	4	8	12	3	0	5	4	0
<i>No. of Cooperatives in Ukraine</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

In Georgia the respondents who distribute profit share to members all answered the distribution share of profit depends on the amount of produce by members. In the case of re-investment and distribution, the share of dividends being invested back into a

cooperative varies from one co-op to another. Maximum of reinvested profit 75% (the rest is divided among members and the minimum is 5%. In Moldova substantial share of profit is reinvested back into the cooperative. Ukraine's cooperatives in most cases do not earn any exceeding profit.

**Table 13 - Use of the profit**

<i>Profit Use</i>	<i>Reinvested</i>	<i>Distributed to members</i>	<i>Reinvested and distributed</i>	<i>No profit</i>
<i>No. of Cooperatives in Georgia</i>	7 (17.5%)	18 (45%)	15 (37.5%)	0
<i>No. of Cooperatives in Moldova</i>	28 (78%)	8 (22%)	0	0
<i>No. of Cooperatives in Ukraine</i>	7 (29.2%)	1 (4.2%)	2 (8.3%)	14 (58.3%)

## 5. Discussion

From the analyses of secondary data, it is clear that after the dissolution of USSR all countries took various routes of transforming collectivistic state farms. In the Czech Republic the transformation of cooperatives was completely different from the other chosen countries. The farmland was broken into small parcels (just like in the cases of other countries), however this dissolution was not followed by a rapid division of the business units. They more or less morphed into a new version and changed their legislative status.

The farmland division right after 1991 snow balled into more issues in all of the countries. Ukraine, which was the bread basket of USSR, was suddenly hit by an enormous availability of land and possible produce. International investors started buying off land of former farmers who allocated some plots of land from the government. The crisis was big, farmers poor and land fertile and investors rich. Hence the beginning of Ukraine's enormous agri-holdings began. However, in 2017 Ukraine passed a legislation that bans selling agricultural land that possibly prevents land-grabbing (Prentice 2017). It is seen as sort of a double-edged sword. On one hand the leased land results in lowest productivity in Europe and limited private and foreign investment. On the other, nowadays around 60% of Ukrainians live below the poverty line and definitely cannot afford to buy farmland left and right (Prentice 2017; Gomez & Choursina 2018). All this is somewhat similar to the case of Georgia which actually banned the selling of agricultural land, but only to foreigners in 2017 (but temporarily lifted the ban in 2018) (Transparency International 2017). However, it is interesting to see that even though Georgia and Ukraine banned selling agricultural land, agri-holdings in Georgia are pretty much non-existent. It could be because of the high fragmentation of land or less fertile soils (chernozems in Ukraine take up big portion of farmland).

In Georgia the high fragmentation of land is the reason for such high number of cooperatives (*Table 3*). Further, in *Table 7* we have additional evidence, because in 92.5% of cooperatives farmland is from 1 to 10 Ha while having usually from 11 to 15 members per cooperative (*Table 6*). In Ukraine we can see a total contrast, where 82% of cooperatives have more than 50 Ha, additionally almost 43% of them operate on more than 2,000 Ha. Such a massive size of cooperatives goes hand in hand with a high number

of members in Ukrainian cooperatives. When it comes to the activity of surveyed cooperatives, they are in most cases focused only on brokering (55% in Georgia and 66.7% on Moldova respectively). As for the share of the market – only small share of cooperatives is able to reach a foreign market (5% in Georgia, 16.6% in Moldova and 4% in Ukraine). In Georgia it is interesting to see such a small share of export market even though grape production is the focus of 27.5% of cooperatives, therefore having a high possibility for export (wine making is one of the most important export sectors in Georgia).

As for legislation in general, it is interesting how it differs. For example, in Moldova they have overall three acts dealing with cooperation whereas Czech Republic has only one covering cooperatives as well as commercial corporations. In Georgia they passed two-step registration where in order to be able to reach government subsidies for cooperatives, cooperatives have to be registered in both steps.

Of course, the question of farmland and legislation is not the only important determinant on the development of new cooperatives. In previous chapters the author already mentioned the reluctance to join agricultural cooperatives in this region, because of its correlation to the communist rule.

In western countries such as the UK, France, Italy, Canada or USA agricultural cooperatives are often at the fore front of agricultural businesses. In Europe agricultural cooperatives have the biggest annual turnover with 39.34% (Cocolina 2016). Obviously, countries of global south are not behind. Cooperatives in India or Brazil are massive players on a global scale in terms of annual turnovers (ICA 2015). Farmers in other countries are of course seeing the potential to join or form cooperatives as well, because of certain benefits they can receive. Be it higher sale price for Fairtrade certified products, interest of donors in developing cooperatives, or just coping with demand that individual small farmers are not able to meet.

The potential for cooperatives is clearly massive but the mindset of those affected by the negative image of forced collectivization is hard to change. One of the possible pulling factors in countries like Georgia, Moldova, Ukraine could be the increased interest of donors wanting to develop the cooperative structure. Unfortunately, the motivation only because of the promise of possible material or non-material donation is not sustainable.

The main limitation of this Thesis is the small sample size of collected data. It is plausible managers were reluctant to meet with us for personal reasons. Also, cases of non-transparency can be seen. Cooperatives are either ceasing to exist or do not work within the ICA principles. Because of large ENPARD donations in Georgia, several members could take the opportunity, create a cooperative, but after several years stop to function. The second limitation is the lack of primary data from the Czech Republic.

Possible further research could be focused on the involvement of women in cooperatives and the effects on their livelihood. As it is seen in the small representative sample, women are hugely unrepresented in the cooperatives. Even though they are a key work force in agriculture all around the world. Furthermore, it is proven that especially in less developed countries if women are given the same access to land and credit as men, they are able to lift themselves and their families out of poverty in most cases. Not to mention new and different view on things in cooperatives could lead to diversifying of production, more value-added products or perhaps further development of the cooperatives' communities.



## **6. Conclusion**

From all the gathered and analysed data, it is palpable the transformation after the 1990s in CEECs and CIS took various routes.

The Czech Republic is the only one out of the four chosen countries that chose a way of restitution of land right back to its former owners. This act further influenced the development of cooperatives and agriculture overall. The high proportion of leased farmland in the Czech Republic can be tied to the lack of interest of new owners in farming. Ukraine has a high proportion of leased land as well due to the ban of selling agricultural land and great interest of agri-holdings in agricultural land. These factors result in large fields. Moldova and Georgia have a completely different problem. Due to the small size of both countries and distribution of farmland equally among farmers, both countries suffer from high-fragmentation of farmland. As we can see from the results this is tied to the small size of cooperatives (with usual size of 1-10 Ha in Georgia, in Moldova most often from 1-40 Ha). In Ukraine the size of cooperatives is enormous compared to those in Georgia and Moldova. The differences in size is both in number of members (45.8% have more than 26 members) and farmland (43% of cooperative land has more than 2,000 Ha).

Unfortunately, data collected in Georgia, Moldova, and Ukraine cannot be taken as a representative sample due to the small number of respondents. Further research would undeniably require bigger sample size of cooperatives and ideally primary data collection in the Czech Republic as well.

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