



## RESEARCH ON THE EFFECTIVENESS OF COOPERATIVES AND LIMITED LIABILITY COMPANIES IN THE AGRICULTURAL SECTOR

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### ABSTRACT

This article aims to study companies with the form of management "cooperative" and "limited liability company" (Ltd.). Cooperatives are created as associations of consumers and small producers to achieve certain economic and social goals that could not be individually accomplished. While Ltd. arises in a specific way. It is created in an artificial way (by legislation), as it arises first as a legal entity and then as an economic entity. This article examines cooperatives and limited liability companies, representatives of the agricultural sector. In order to study the activity of which company is more effective, a comparative analysis of financial indicators of profitability and productivity is made. Some control variables are also studied, such as investments in fixed assets, size and age of companies, since they also influence the economic results of the activities of agricultural companies. The period of the study covers the first and second programming periods of the EU CAP (2007 - 2020). The expected results are that representatives of agricultural cooperatives realize higher financial results than the representatives of the Ltd.

**Keywords:** cooperative, limited liability company (Ltd.), Agricultural sector.

### INTRODUCTION

A cooperative is an association of individuals with variable capital and a variable number of members who, through mutual assistance and cooperation, carry out commercial activities to satisfy their economic, social and cultural interests. It develops and passes from one phase to another, operating in different legal and economic conditions and adapting to them accordingly.

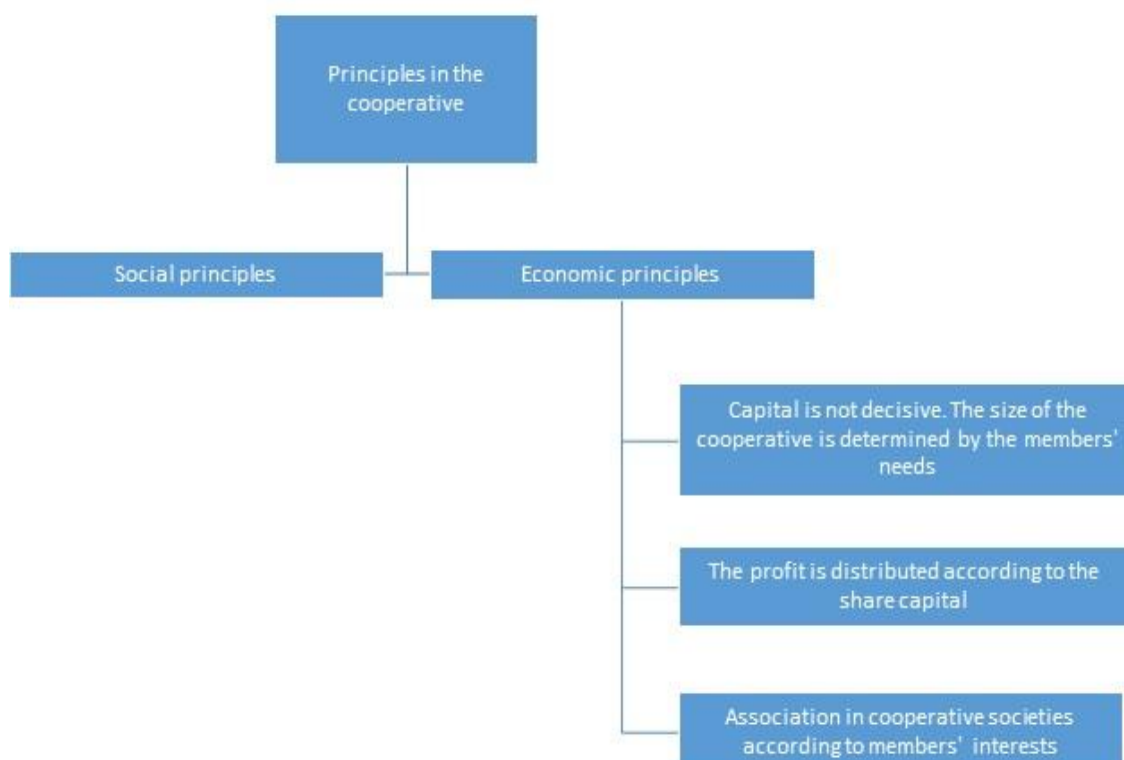
In the scientific literature, there have been many studies of this organizational structure, which carries out its activities in agriculture and not only. The most common difficulties encountered in the implementation of activities in cooperatives are in the sphere of application of cooperative principles. When one of these rules of conduct in cooperatives is not observed, difficulties inevitably arise. The private problems and difficulties in the activities of

cooperatives include: lack of sufficient capital, insufficient support of members in the activities of cooperatives, shortcomings in management, lack of sufficient moral and financial support from the state, etc.

The activities of cooperatives, regardless of their field, are based on certain principles. They can be conditionally divided into two groups (**Figure 1**):

- Social principles: voluntary membership and selection of members: democratic control (one person – one vote), training of cooperative members (education);
- Economic principles:
  - ✓ Capital in a cooperative is not of decisive importance. The size of the cooperative, as in companies, is determined not by the amount of available capital, but by the needs of the combined companies;
  - ✓ The distribution of profits among the members of the cooperative is carried out according to the share capital;
  - ✓ A merger between cooperative associations is possible in accordance with the interests of the members.

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**Figure 1.** Principles in the cooperative.

The limited liability company (Ltd.) is the newest commercial company. It was created at the end of the 19th and beginning of the 20th century, as a result of the objective practical necessity of its application. Ltd. arises in a specific way. It was created artificially by the legislation, since it arose first as a legal entity, and then as a business entity. It was established for the first time in Germany in 1892 and relatively quickly spread to other countries, and in Bulgaria it was introduced by a special law in 1924.

Ltd. borrows the positive aspects of both personal and capital companies. Partners have the opportunity to transfer and inherit shares. In Ltd., there is capital contributed by the partners, but the liability they bear for its obligations is limited to this amount, i.e. their economic risk is limited. In Ltd., rights and obligations are better balanced compared to cooperatives. This is what Stoychev (1) describes in his study - the more financial resources the partners invest, the more profit they realize, they have more rights in making decisions in the company, but they also bear a higher risk compared to partners who have less investment.

In limited liability companies, the ownership of the partners is clearly demarcated in their

partnership agreement. It specifies the exact amounts of the share contributions of each partner, as well as the method of distributing the financial result at the end of the reporting period. When making management decisions in an Ltd., the partners are entitled to as many votes as the shares they own. Based on this statement, their personal motivation for the development and progress of the company is also explained. While in cooperatives, as already mentioned, regardless of the amount of contributed equity, each member-cooperative has the right to 1 vote when making management decisions.

In the Bulgarian agricultural sector, both forms of management are widespread – cooperatives and limited liability companies. Each has its advantages and disadvantages. However, despite the more difficult path to obtaining capital, cooperatives are a form that is privileged because of their social functions, which are not characteristic of capital companies such as Ltd. (2)

**Figure 2** shows a tabular comparison of the main characteristics between a cooperative and an Ltd.

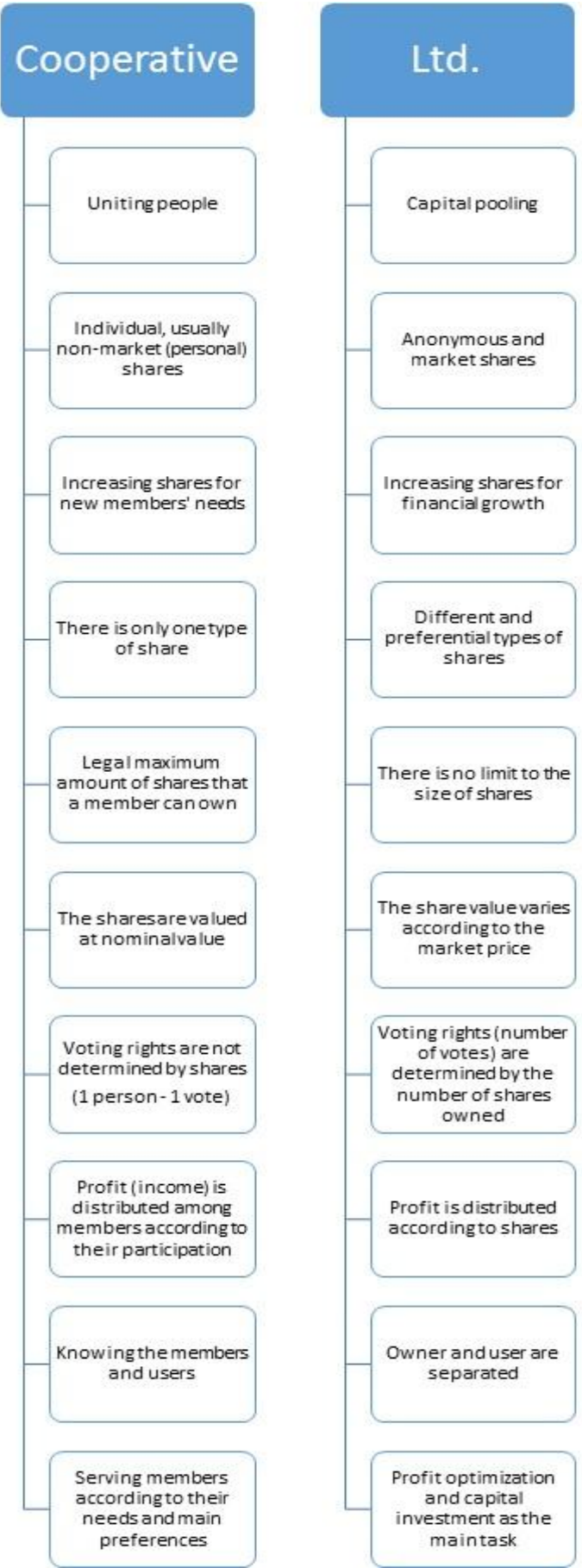


Figure 2. Comparison of main characteristics between a cooperative and an Ltd.

## MATERIALS AND METHODS

This study used company data from over 350 cooperatives and over 160 limited liability companies. The number of companies surveyed cannot be accurately determined because the research period covers the first and second programming periods of the EU CAP (2007-2020). Over the past 14 years, some of the companies have undergone transformations such as mergers or spin-offs. There are representatives who have ceased their commercial activities and those who have been deleted. The sample includes small, medium and large companies, respectively with a number of employees 10-49 for small, 50-249 for medium and over 250 for large, according to the Law on Small and Medium-Sized Enterprises. (3) Micro- companies are excluded

from the scope of this study due to the capital restrictions characteristic of this group. The stratified random sampling method was used to provide the data.

## RESULTS AND DISCUSSION

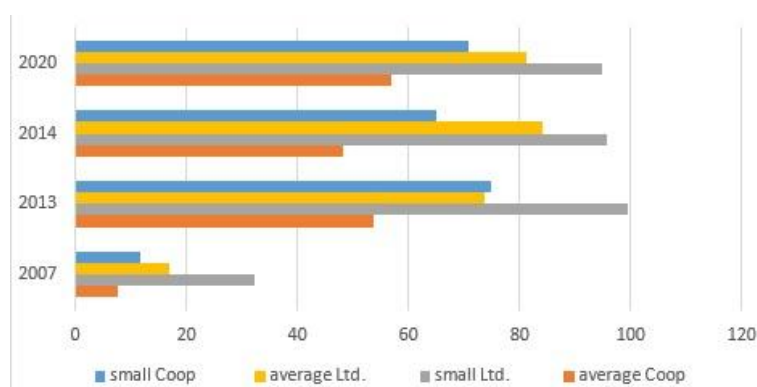
In the sample used for this study, the most numerous are cooperatives with up to 50 employees, followed by small limited liability companies. Over the longer period of the study, medium-sized cooperatives were the least active. In the First Programming Period of the EU CAP, medium-sized cooperatives were in third place in terms of number. While in the Second Programming Period, it was observed that their number decreased and at the end of the period, 2020, small ones even exceeded them (**Figure 3**).



**Figure 3.** Distribution of operating cooperatives and Ltd.s by size.

In this scientific report, the aim is to study the activity of which agricultural company is more effective. First of all, their productivity is examined. And in the 4 years of research, the first and last for the First and Second programming periods of the CAP, the same dependence is observed. The highest results are achieved by Ltd.s with staff up to 50 people. They are followed by medium-sized Ltd.s, with

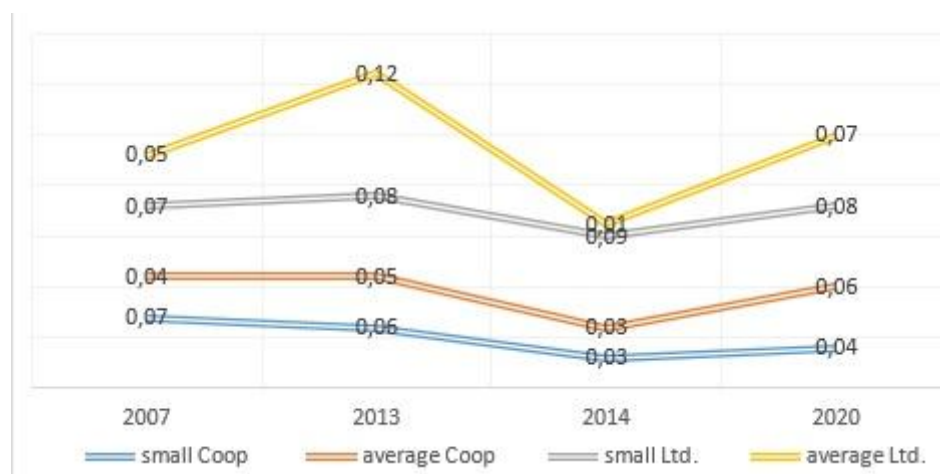
the only exception being in 2013, where cooperatives with staff up to 50 people achieve about one unit more productivity than them (**Figure 4**). The figure shows that in the remaining years they are in 3rd place in terms of achieved productivity, followed by the lowest results achieved by medium-sized cooperatives.



**Figure 4.** Productivity of Cooperatives and Ltd.s by size.

Based on the main goal of the scientific work, the profitability indicator is studied in second place. Small Ltd.s again make an impression. However, not because they achieved the highest results, but because they have a good tendency to maintain the level throughout the entire research period (**Figure 5**). This indicates that the partners have adopted a good method for investing their funds in order to obtain the results they desire. The highest level of

profitability was achieved by medium-sized limited liability companies in 2013, namely 0.12. In small and medium-sized cooperatives, the values are close, but it is important to pay attention to the fact that small ones seem to have incorrectly planned economic actions, because their profitability from 2007 to 2020 has fallen by 0.03. While in medium-sized cooperatives, an increase of 0.02 is even observed - from 0.04 to 0.06.



**Figure 5.** Profitability of Cooperatives and Ltd.s by size.

Investments in fixed assets follow the same trend as those in the productivity and profitability of companies. It is found that for the period under review, Ltd.s are more active

in their investment activities, although they are smaller in number compared to cooperatives (**Table 1**).

**Table 1.** Average investments in fixed assets of cooperatives and limited liability companies in the agricultural sector, distributed by age and size (BGN).

|                                    |                | small Coop |         |         |         | average Coop |         |         |         |
|------------------------------------|----------------|------------|---------|---------|---------|--------------|---------|---------|---------|
|                                    |                | 2007       | 2013    | 2014    | 2020    | 2007         | 2013    | 2014    | 2020    |
| number of companies                | up to 10 years | 8          | 1       | -       | -       | -            | -       | -       | -       |
|                                    | 11 - 12 years  | 335        | 300     | 126     | 5       | 53           | 29      | 7       | 1       |
|                                    | over 20 years  | -          | 61      | 233     | 331     | -            | 11      | 28      | 23      |
| average investment in fixed assets | up to 10 years | 617,5      | 2026    | -       | -       | -            | -       | -       | -       |
|                                    | 11 - 12 years  | 351,78     | 1078,85 | 1101,74 | 1320,4  | 741,02       | 2175,14 | 1637,57 | 10380   |
|                                    | over 20 years  | -          | 849,05  | 1093,1  | 1252,69 | -            | 2155,55 | 2819,71 | 3400,04 |
|                                    |                | small Ltd. |         |         |         | average Ltd. |         |         |         |
|                                    |                | 2007       | 2013    | 2014    | 2020    | 2007         | 2013    | 2014    | 2020    |
| number of companies                | up to 10 years | 122        | 58      | 33      | 2       | 16           | 2       | 2       | -       |
|                                    | 11 - 12 years  | 33         | 96      | 117     | 118     | 9            | 18      | 16      | 14      |
|                                    | over 20 years  | -          | 11      | 14      | 29      | -            | 1       | 4       | 13      |
| average investment in fixed assets | up to 10 years | 702,21     | 1486    | 1850,15 | 3324    | 2160,81      | 1971    | 2385,5  | -       |
|                                    | 11 - 12 years  | 977,45     | 2377,15 | 2214,59 | 2652,43 | 2109,56      | 4160,33 | 4934,44 | 5973,07 |
|                                    | over 20 years  | -          | 3052,73 | 3213    | 3469,21 | -            | 4239    | 5463,75 | 3923,92 |

Source: created by the author.

It is important to note that in both forms of governance, the development is in a positive direction. In 2007, small and medium-sized cooperatives invested in fixed assets,

respectively 969.28 BGN and 741.02 BGN. At the end of the Second Period of the EU CAP, their investments amounted to 2573.09 BGN for small and 13780.04 BGN for medium-sized

cooperatives. The data for limited liability companies look the same. Small Ltd.s invested 1679.66 BGN for the purchase of fixed assets in 2007, and medium-sized ones - 4270.37 BGN. In 2020, the expenses incurred for the acquisition of fixed assets by small Ltd.s were 9445.64 BGN, and medium-sized ones - 9896.99 BGN.

During the First programming period of the EU CAP, companies that have been operating for 11 to 20 years are more likely to invest in fixed assets, while during the Second period, a gradual development is observed in cooperatives and Ltd.s with operations over 20 years, which in 2020 are 2.87 times more than them. However, the average value of their invested financial resources for fixed assets is 1.69 times less (companies 11 years - 20 years: 20325.9 BGN; companies over 20 years: 12045.86 BGN).

## CONCLUSIONS

The conclusions that can be drawn based on the conducted research do not meet the previously set expectations. It turns out that companies with unlimited liability realize higher values of the financial indicators of productivity and profitability compared to cooperatives. This report has proven that Ltd.s are more inclined to

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invest financial resources in fixed assets, although they are fewer in number than cooperatives. The best financial results are observed in companies that have been managing their activities for over 10 years.

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