

Evaluation of members' satisfaction in modern Bulgarian agricultural cooperatives¹

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Abstract: *Decades after the establishment of the first modern agricultural cooperative in Bulgaria, we observe a continuous increase in its number, then we see a decline until nowadays. We have identified three historical periods for this development: pre-socialism, socialism and post-socialism. In periods, when the members' satisfaction is higher, we notice an increase of the cooperatives' number and vice versa. In each period the relation between members' satisfaction, cooperative values and principles, on the one hand, and existing and operating governance structures, on the other hand, differs seriously.*

This paper is concentrated on reasons for this development and tries to evaluate the influence and application of the governance structure and cooperative values and principles on members' satisfaction. In our research we argue that the members' satisfaction is higher when the governance structure of the cooperative fits with the cooperative values and principles.

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The methodology of the research comprises qualitative and quantitative methods. The qualitative method includes in depth interviews, observations and narrative analysis. We use Analytic Hierarchy Process (AHP) as an instrument for quantitative valuation of governance structures, according to the cooperative values and principles as a criterion, and will use it to measure the members' satisfaction in each historical period.

Key words: *agricultural cooperatives, cooperative values and principles, governance structure, members' satisfaction.*

JEL codes: *Q13*

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1. Introduction:

Despite the deep historical roots of the Bulgarian modern agricultural cooperatives and some decades of a continuous increase in their number, we observe a decline until nowadays. We identify three historical periods for this development: pre socialism, socialism and post socialism. In periods, when the members' satisfaction is higher, we notice an increasing number of cooperatives and vice versa. In each period the relation between members' satisfaction, cooperative values and principles and existing and operating governance structures differs seriously.

The aim of this paper is to evaluate the impact and the application of cooperative values and principles on members' satisfaction as a main reason for the observed decrease of the number of cooperatives (Figure 3).

The research proceeds from the assumption that the satisfaction of cooperative members is closely related to the practical application of the cooperative values and principles. If the cooperative values and principles are accurately followed, then the members' satisfaction increases and the cooperative enterprise is more sustainable. When some cooperative values and principles are not applied, the members are not satisfied and that can explain the decrease in the number of members and cooperatives over time.

Historically, the cooperative development in Bulgaria can be divided into three periods:

- First period (pre-socialism) - from the establishment of the first cooperative in 1890 to 1944;
- Second period (socialist) - from 1945 to 1989;
- Third period (post- socialism) - since 1990.

In our previous studies we have found (Boevsky, I., 2007; Sarov, A., Boevsky, I., 2016a, b; Sarov, A., Boevsky, I., 2017) some strong relations between members' satisfaction and cooperative values and principles and their reflection in the cooperative governance structure. On this basis, we claim that members' satisfaction is higher when the cooperative governance structure corresponds to cooperative values and principles.

For each of the periods we will construct a hypothesis that we will try to measure and prove in the empirical part of the study.

H1: The pre- socialist period applies the cooperative values and principles to the greatest extent. Because of that, the members' satisfaction is high and the cooperatives are developing positively and the member is in the focus of the cooperative governance structure.

H2: The socialist period is characterized by values and principles that lead to compulsory membership and centralized cooperative governance structure, which focuses on the needs of communist party and communist government. Thus, the member got only the role of endorsing the decisions of the communist party and its government which is why the members' satisfaction went to the lowest level. This is one of the reasons, why members abominate this type of organization, which also reflects on the negative image of the cooperative in the post-socialist period.

H3: The post- socialist period practically applies in low degree the values and principles (even though they exist on paper and are presented in the cooperative governance structure and try to change the focus formally on the member, but informally, the focus is on the chairman and his management team), which is why the members are not satisfied and their number decreases as the number of cooperatives.

We use Analytic Hierarchy Process (AHP) as an instrument for quantitative valuation of the cooperative values and principles and will use it to measure member's satisfaction in each historical period.

Our paper is structured as follows. First, we begin with description of the periods and values and principles that are followed. Second, we describe the methodology and apply the AHP method to measure the members' satisfaction. Finally, we discuss the results and make conclusions.

Barton (1989) distinguishes the cooperative values and principles between four classes of principles: Rochdale, Traditional, Proportional, and Contemporary. Based on Barton's classification we assume that the Bulgarian cooperatives use the following values and principles:

- Pre-socialism period – combination of Rochdale principles with the values and principles from Friedrich Raiffeisen and Wilhelm Haas;
- Socialism - "socialist" principles;
- Post-socialism - Traditional principles.

2. First period. Pre- Socialism - from the establishment of the first cooperative in 1890 to 1944

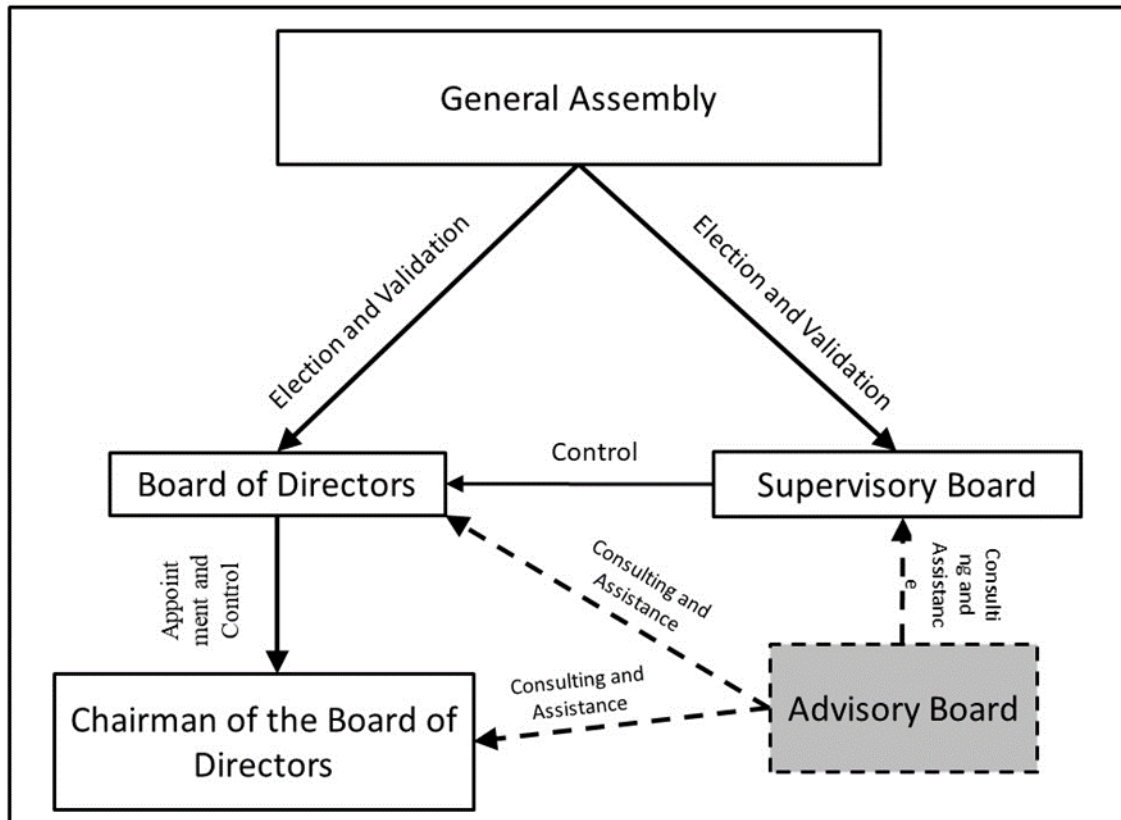
The first modern agriculture cooperative in Bulgaria was established in 1890 in the village of Mirkovo. In Bulgaria, unlike Western European countries, cooperatives are established in the villages. Since its beginning, the cooperatives have emerged to meet the needs of their members and operate as full-purpose cooperative (incorporating both financial and non-financial products and services into their business operations). The

initiators for the cooperative establishment are not the common people, these are the educated people. Leading role is played by the village mayor, the teacher, the priest. Remarkable was the influence of the German cooperative system on the Bulgarian cooperative law and Bulgarian cooperative development. In fact, Bulgarian cooperatives follow a combination of Rochdale principles with the values and principles from Friedrich Raiffeisen and Wilhelm Haas, which are summarized below:

1. Self-help,
2. Self-responsibility,
3. Self-management,
4. Volunteer management (without payment),
5. Democracy,
6. Equality,
7. Equity,
8. Solidarity,
9. Decentralization,
10. Independence from the state,
11. Political and religious neutrality,
12. Economization,
13. Voting is by members on democratic basis (one-member-one-vote);
14. Membership is open;
15. Equity is provided by patrons;
16. Equity ownership is share of individual patrons is limited;
17. Net income is distributed to patrons as patronage refunds on a cost basis;
18. Dividend on equity capital is limited;
19. Exchange of good and services at market prices.

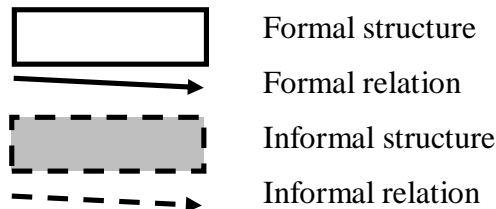
These values and principles underpin the first Bulgarian cooperative law as well as the internal and external cooperative governance structure. The member is in the focus of the internal and external governance structure (see the left side of figure 2) and it is build down-up. The decisions comes and are made from the owner-members in the general assembly or from their representatives in the other governing bodies in their favor, usually without agency problems (Figure 1). For consulting and assistance of one, more or all operative cooperative governing bodies, the owner-members establish an advisory board as an informal element of the internal governance structure. Usually, members of the advisory board are educated people from the village that do this job voluntary.

Figure 1. Extended innovative cooperative internal governance structure



Source: own figure

Legend:



With their successful implementation of the values and principles and their operations, the cooperatives gained the trust and the satisfaction of their owner-members. In 1944 the number of the agricultural cooperative is 2,160 with around 2,000,000 members. These numbers show that every rural Bulgarian household is a member of minimum one cooperative.

3. Second Period. Socialism - from 1945 to 1989

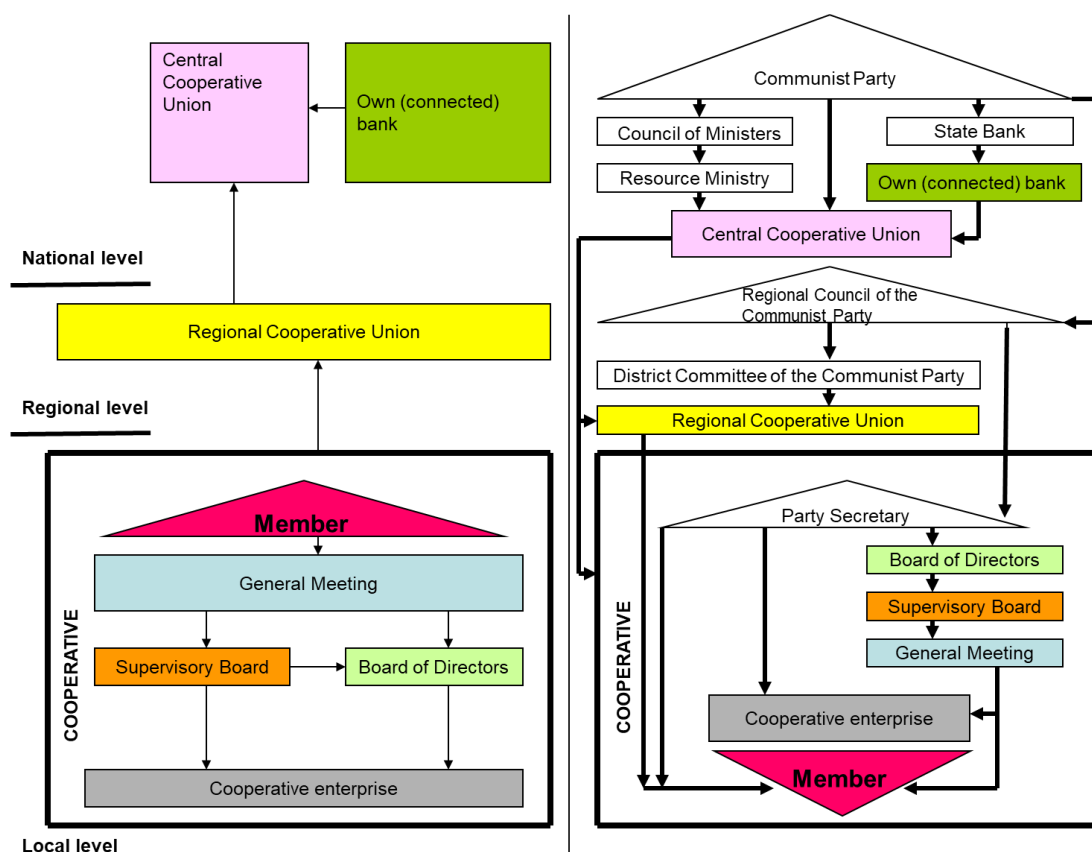
During this period the cooperatives are restructured in TKZS. Based on the cooperative theory of Marks and Lenin, the restructuring is applied compulsory and violently. Compulsion, pressure, violence and centralism become the main values underpinning the communist cooperative law and corresponding government structure (see the right side of figure 2).

While in the pre-socialist period, the member-owner (in red) is in the focus of the activity of the cooperative and its governance structures, in the socialist cooperative and its governance structure, the focus is changed and is no longer on the individual member. It is on the communist party and on the communist state. The governance structure is reordered from down-up to top-down. We identify the following values and principles:

1. Compulsory membership
2. State-sponsored and state-controlled
3. Authoritarian management
4. Party Dependence
5. Party Control
6. Equity ownership is share of state
7. Concern for Party
8. Net income is distributed to state
9. The benefits are for the state
10. Nationalized private property

The autonomy of the cooperative is lost, whereby the governing bodies of the communist party-and the communist state only dispose of the land and the distribution of income. Another important feature is the members' placement at the bottom of the governance structure, i.e. their voice is no longer needed, they are practically not included in the cooperative governance. They are instrumentalised and only used as the labour resource of the production unit as well as entity for affirmation of the communist party's decisions. The function of the General Assembly has been completely seized by the party secretary as an executive of the communist party and communist state. Thus, the cooperative governance structure is practically merged with the communist party and communist state.

Figure 2. A comparison between pre socialism and socialist cooperative governance structure.

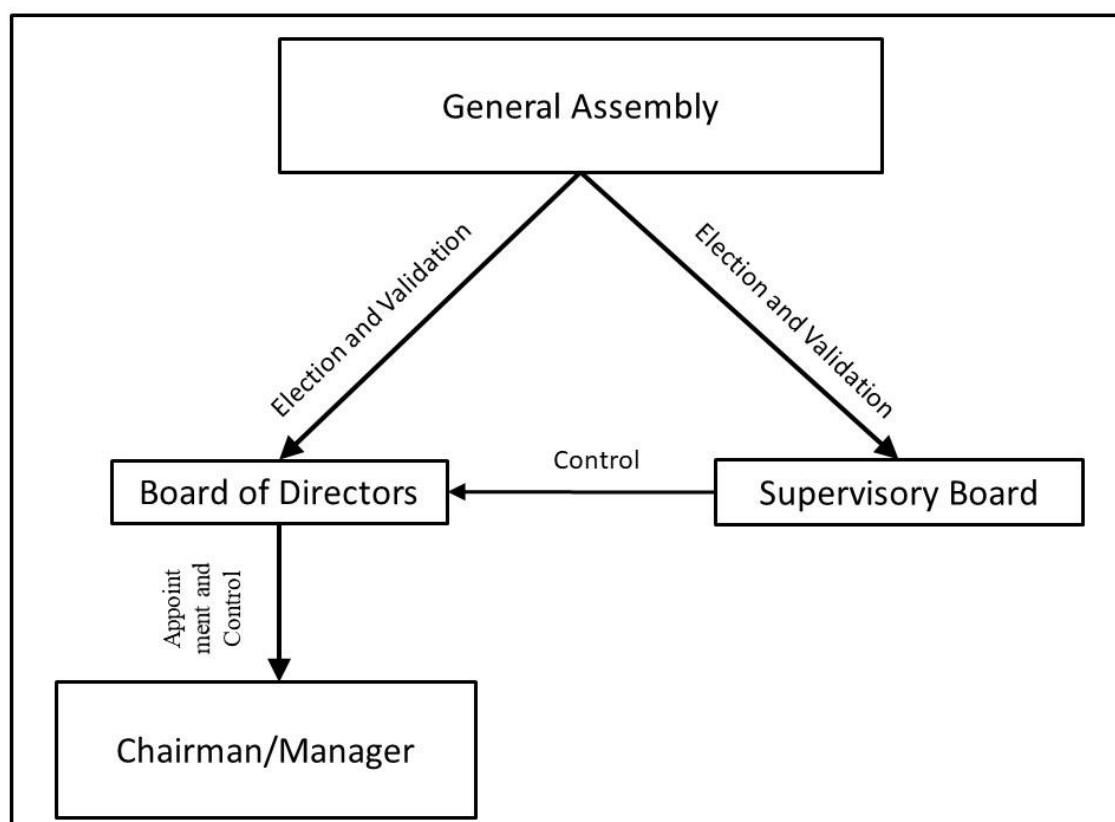


Source: Boevsky, Laurinkari. (2017).

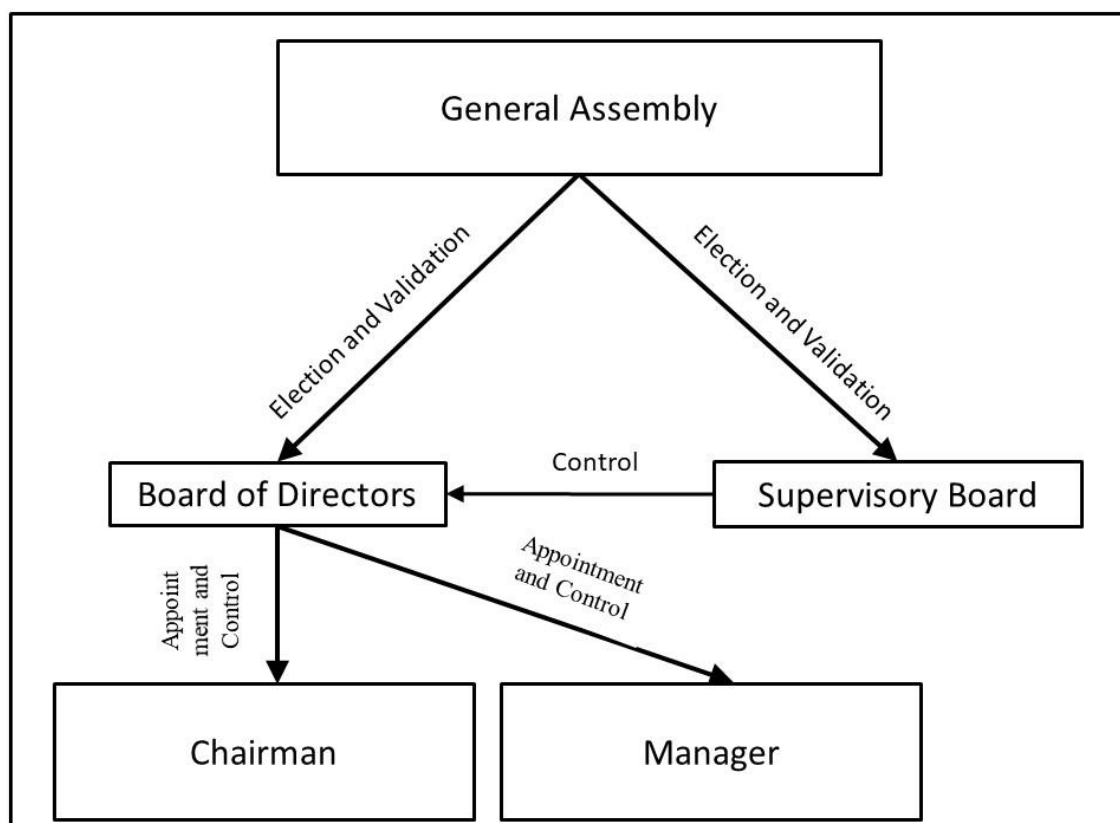
4. Third Period. Post -socialism - a period of democratic change since 1990

Since 1989 political changes have taken place in Bulgaria in all spheres of the socio-political life. The changes also affected on the Bulgarian cooperatives, giving a political and economic opportunity for the development of a new type of cooperative governance structures. Figure 3, 4 and 5 represent the traditional model of cooperative governance structure from the post socialist period. The common between these three structures is that all of them have General Assembly, Supervisory Board and Board of Directors. The last chooses the Chairman, the Manager or both. That structure has become a problem through the years because the Board of directors enters into an unregulated relationship with the Chairman or the Manager or (as shown on figure 5) a group of members creates informal structures and coalitions. In an effort to prevent the negative impact of these informal relationships, has been introduced changes in the legislation. The new and innovative governance structure is shown in Figure 6. According to the new governance structure the Board of Directors, the Supervisory Board and the Chairman are directly elected by the General meeting? Assembly.

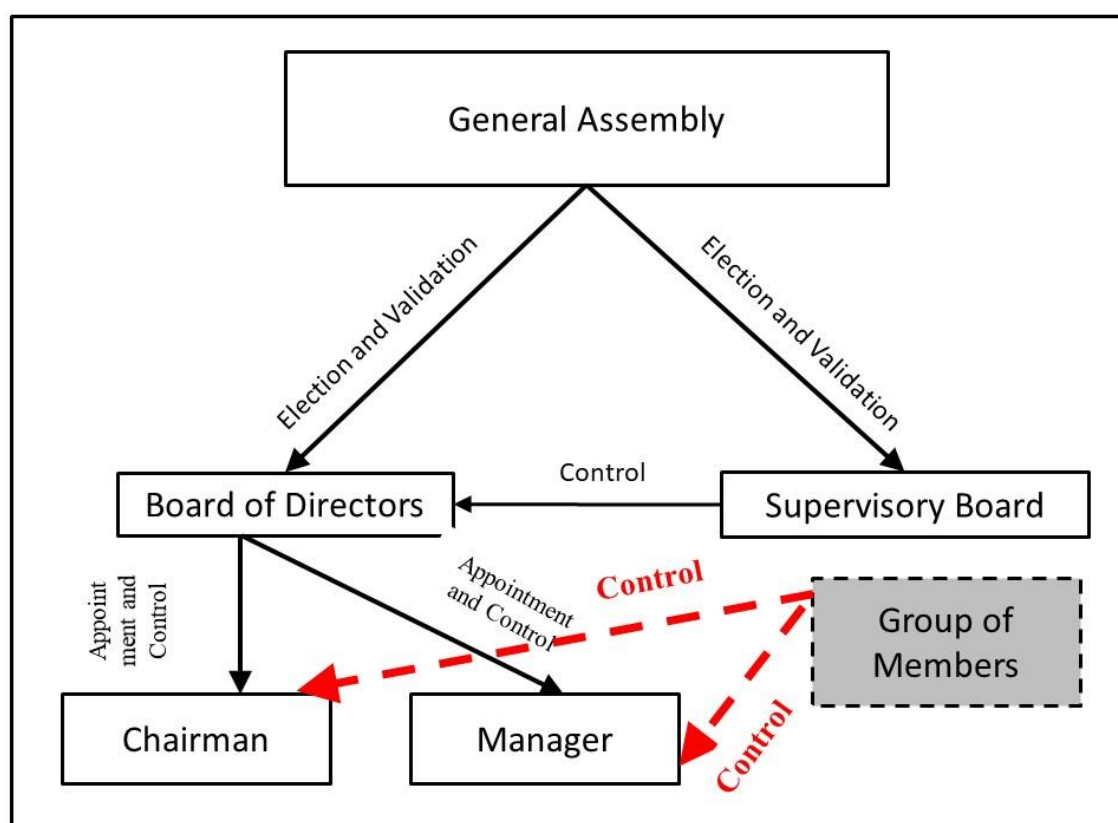
**Figure 3. A cooperative governance structure during post socialist period:
Traditional extended model I**



**Figure 4. A cooperative governance structure during post socialist period:
Traditional extended model II**

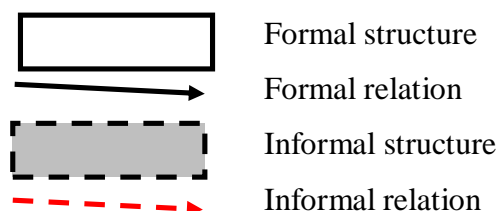


**Figure 5. A cooperative governance structure during post socialist period:
Traditional extended model III**

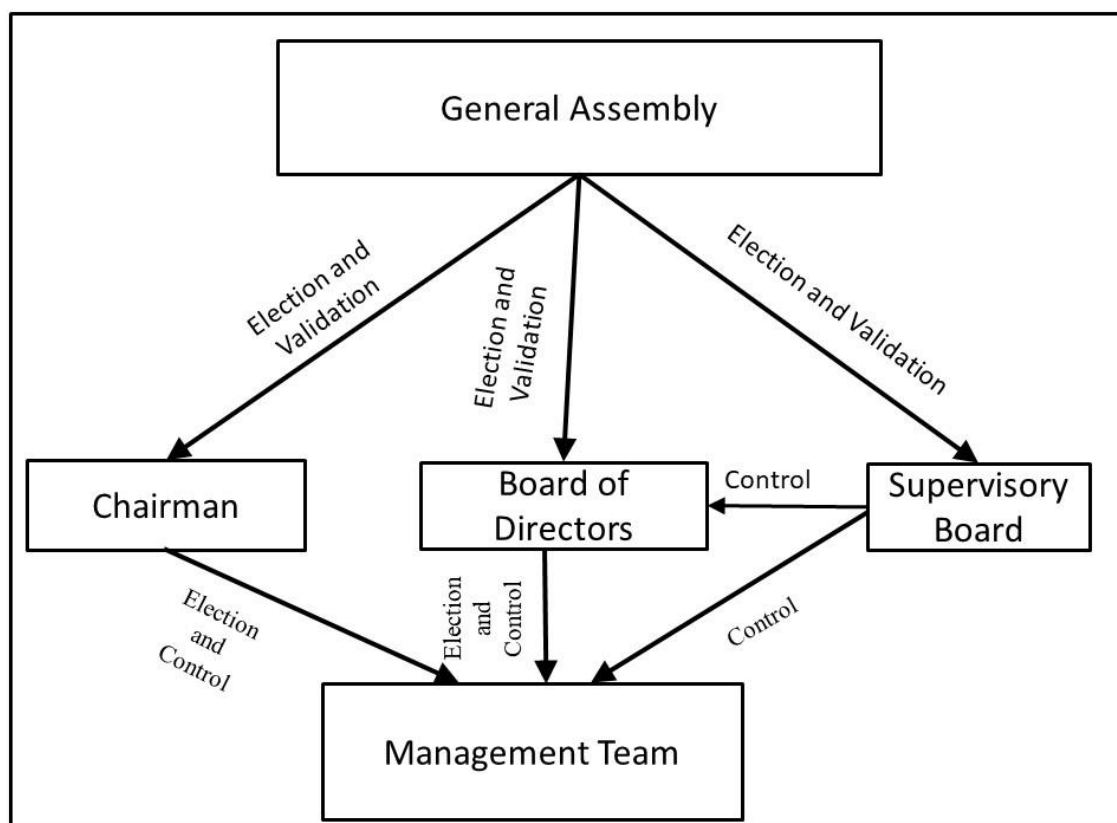


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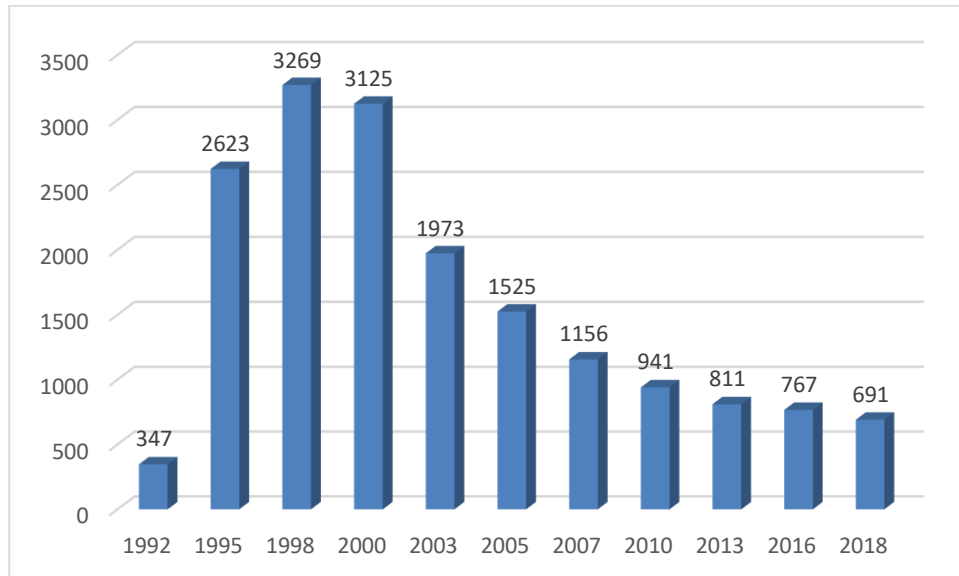
**Figure 6. A cooperative governance structure during post socialist period:
Innovative model**



Cooperative values and principles during this period generally follow the cooperative values and principles of the pre-socialist period. For this reason, we will not list them in detail, as they have already been shown when presenting the pre-socialist period.

In the period 1992-1996 there was an increased in the number of agricultural cooperatives, with the increase being over 140% (Graph 1). In 1997-1999 there was a stabilization. Since 1999, the number of agricultural cooperatives has been decreasing. In 2005, only half (1525) of those operating in 1998 was still functioning. In the period 2005-2016, they gradually lost their attractiveness and continued to reduce the number of agricultural cooperatives. During these years, over 50% reduction was recorded, with only 767 cooperatives remaining in operation in 2016. This is the result of the membership drop caused the dissatisfaction of members due to the failure to respect the cooperative values and principles.

Graph 1. Dynamics in the number of agricultural cooperatives in Bulgaria



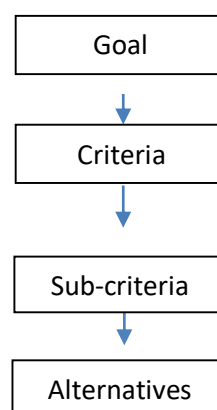
Source: Agrostistics, MAF (2019), 2018 is an estimation

5. Methodology

The Analytic Hierarchy Process (AHP) is part of multi-criteria approach as a decision-making model constructed for synthesis of information. Its main benefits are when one has to solve problems that does not have clear quantitative measure, especially when the problem is related to social elements, subjective opinions, etc. The application of the model can be complicated and often requires a complex methodology.

The AHP together with Analytic Network Process (ANP) were introduced and their theoretical frame were developed by T. Saaty (Saaty, 2001). Historically and logically the AHP is the first model that appears (Saaty, 1980). AHP can help with weighing of various alternatives according to a set of criteria, when the influences between alternatives and criteria are hierarchical. At the top of the hierarchy is the decision-making goal (Figure 7).

Figure 7: Analytic Hierarchy Process



Sours: T. Saaty (Saaty, 2001)

When evaluating the influence of the criteria, it is necessary to make pairwise comparisons between them. In fact, we create a matrix where the criteria are used as rows and columns. These comparisons are made on a scale from 1/9 to 9, where 1 means that both criteria have equal influence on the alternatives, 9 means that the criteria on the row has very strong influence and the factor on the column has no influence, 1/9 means that the criteria on the column has very strong influence and the criteria on the row has no influence. In table 3 are summarized possible scores and their explanation for the estimation of the elements.

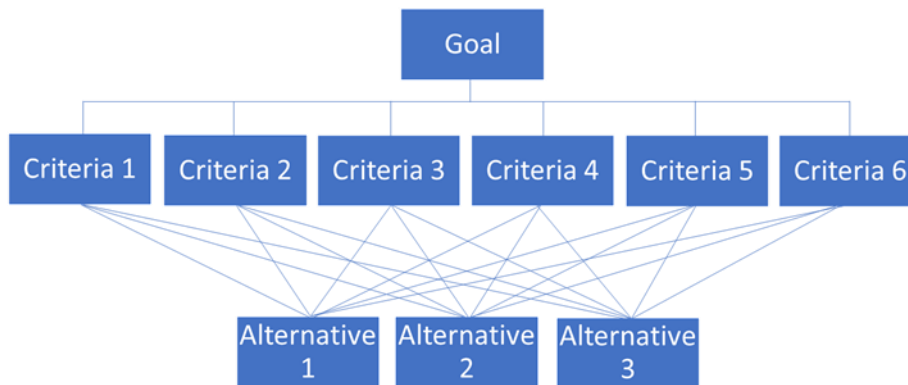
Table 3: The scale for estimation

<i>Numerical</i>	<i>Intensity of Importance</i>	<i>Definition Explanation</i>
1	Equal Importance	Two activities contribute equally to the objective
2	Weak or slight	
3	Moderate importance	Experience and judgement slightly favour one activity over another
4	Moderate plus	
5	Strong importance	Experience and judgement strongly favour one activity over another
6	Strong plus	
7	Very strong or demonstrated importance	An activity is favoured very strongly over another; its dominance demonstrated in practice
8	Very, very strong	
9	Extreme importance	The evidence favouring one activity over another is of the highest possible order of affirmation

Source: (Saaty, Vargas, 2006)

The next step is to make pairwise comparison of the alternatives according every criterion. The process is visualized on figure 8.

Figure 8. The process for pairwise comparison of the alternatives according every criterion.



Source: (Saaty, Vargas, 2006)

During the process of the application of the AHP model, we first define the alternatives. In the recent study our purpose is to evaluate the three historical periods that are described in the text above. This is the reason we use the tree periods as alternatives:

Table 4. Alternatives of the model

Alternative 1	Pre- socialism
Alternative 2	Socialism
Alternative 3	Post- socialism

Source: own table

Second, we have to define the criteria. We would like to evaluate the historical periods (alternatives) according the cooperative values and principles and we are going to use the cooperative values and principles, which we identified and described earlier in the paper. The values and principles that we are going to use as criteria are shown in table 5. The reason we choose these seven values and principles as a criterion is because they are a combination of basic values and principles that the cooperatives are trying to apply. We also limit the number of values and principles up to 7, because if we use more values and principles the amount of the questions in the questionnaire will grow dramatically. So, at the end we choose the most important combination of values and principles according to the authors of the study (table 5) and continue the application of the AHP method.

Table 5. Criteria of the model

Criterion 1	One Member – one vote
Criteria 2	Voluntary and Open Membership

Criteria 3	Non-interference from the state
Criteria 4	Self-help and Solidarity
Criteria 5	Democratic Management and Member Control
Criteria 6	Member Economic Participation
Criteria 7	Proportional remuneration

Source: own table

The next step is to create a questionnaire that the experts have to estimate the pairwise comparison between alternatives according to every criterion. The estimates were done by six experts independently and the results are calculated based on the averages of the estimates. The experts that participate in the research are independent experts. That means that we are not using members or member of the governing bodies of the cooperatives because, from our preliminary conversations, they do not possess the necessary knowledge in historical aspect to make justified estimate. That fact was a surprise for us, so we decided to question only experts with proven knowledge about cooperatives.

6. Results

After the estimation we take the averages of the pairwise estimates from the experts and create the cluster matrix. The cluster matrix gives the weights of the different criteria (table 6) and is used to calculate the final results. According the experts' estimation, the principle Democratic Management and Member Control has 21.7% weight and is the most important for the cooperative development. The second important principle is Self-help and Solidarity with 16%. All the other values and principles that take part of the research have weight between 10.2% and 14.2%

Table 6. Cluster matrix

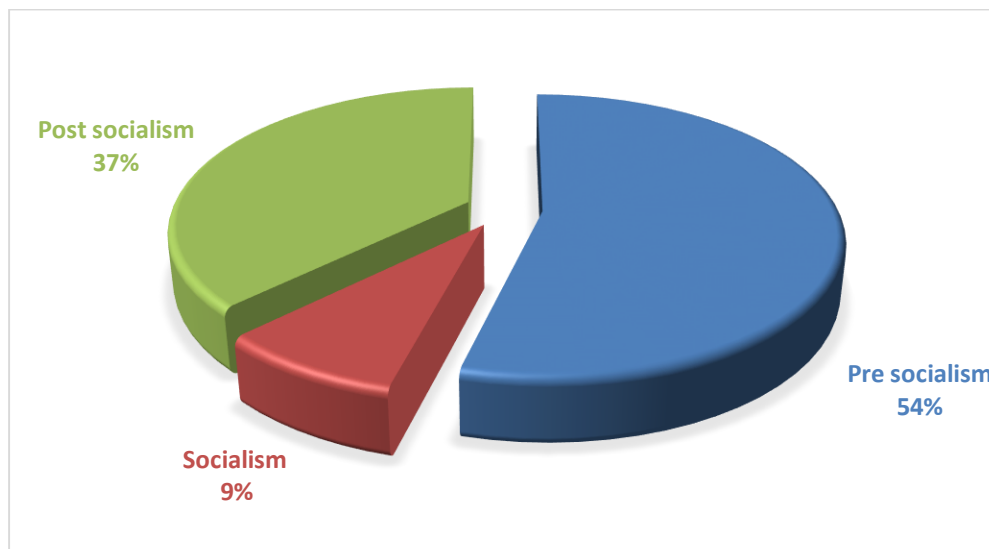
One Member – one vote	13,6%
Voluntary and Open Membership	14,2%
Non-interference from the state	10,2%
Self-help and Solidarity	16,0%
Democratic Management and Member Control	21,7%
Member Economic Participation	10,5%
Proportional remuneration	13,8%

Source: own table

The final results from the calculations of the AHP model are presented on figure 9. The result after applying AHP classifies the alternatives in percentage terms, with the sum of the individual scores being 100. We can observe, which of the alternative best suits the values and principles used as criteria. Subsequently, we will use the results to confirm or reject the hypotheses made at the beginning of the study. According to the

expert estimations, Pre- socialist period corresponds to the greatest extent to the cooperative principles and values – 54%. Post- socialist period with 37% corresponds less. And finally, the Socialism period corresponds only 9%. As noticed in the beginning of the study the research assumption is that the satisfaction of cooperative members is closely related to the practical application of the cooperative values and principles. When we have higher % that corresponds to a higher level of members’ satisfaction, because the values and principles are applied in high degree.

Figure 9. Weights of the alternatives (historical periods)



7. Comments of the results

We can conclude that the hypothesis 1 is confirmed by the results. The pre- socialist period applies the values and principles of cooperatives to the greatest extent (54%), which is why the satisfaction of the members is high and the cooperatives are developing positively. That result is also influenced by the practically applied governance structure that is shown on figure 1.

During the socialist period the values and principles were applied in a very low extend and as a result, the members’ satisfaction was very low. That confirm the second hypothesis H2. These results are logical, because the period is characterized by values and principles that lead to compulsory membership and centralized cooperative governance structure. Thus, the cooperative’s focus is on the needs of communist party and communist government. The member has only the role of endorsing the decisions of the communist party and its government. This explains, why the members’ satisfaction went to the lowest level.

The result for the post- socialist period with 37 % is well below the estimation of pre- socialist period. That means that cooperative values and principles are not strictly

applied. Although they exist in the legislation and are presented in the cooperative governance structure. However, this result shows that only the existence of formal cooperative governance structures is not sufficient for effective implementation of the cooperative values and principles. Furthermore, informal governance structures and coalition in the operative cooperative governing bodies can change the focus of the cooperative enterprise' operations from the member-owners to these informal structures and coalitions. That is the reason, why the cooperatives do not perform well in the last decade. In this way we can consider that hypothesis 3 is confirmed. In fact, the number of cooperatives has a strong growth at the beginning of the post socialist period (graph 1), which continues about 8 years. We can explain that growth with the initial enthusiasm in the farmers and cooperative members. After that, the number of cooperatives slowly decreases for the last about 20 years. The main reason for that is the low practical application of the cooperative value and principles. The initial enthusiasm is expired and the cooperatives cannot make use of it and gain growth. The members start to see the real problems – that the cooperatives serve mainly for the purposes of the management team (informal structures and coalitions), not for the individual cooperative member-owner.

8. Conclusion

Our study shows the importance of the cooperative value and principles for the members' satisfaction in the Bulgarian agricultural cooperatives. Furthermore, we observe it is not sufficient to have them embodied in the relevant cooperative law and in the cooperative governance structures but to implement them into practice for gaining member's satisfaction. In socialist and post- socialist periods, the agricultural cooperatives have the characteristic of pseudo-cooperative. Same economic groups or political actors, as well as mixture of these both set up only pro-forma the cooperative values and principles and the cooperative governance structures to make their own profit or strengthen their powerful positions.

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