

Possibilities for Free-riding in the Contemporary Bulgarian Agricultural Co-operative

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Summary: The paper focuses on analyzing the free-riding problems in the contemporary agricultural cooperatives on the basis of the Neo-institutional economics. The results of analysis of the functioning mechanisms of 21 agricultural cooperatives in Plovdiv region, allow reaching the conclusion that these organization forms do not use the advantages of clearly defined and differentiated property rights. It has been found that that free-rider problem appears sharply in relation with the policy of cooperatives in definition of the property rights.

Key words: free riding; agricultural cooperatives; economic realization of land, labor and capital.

JEL: D23, Q13.

Introduction

The operation of contemporary Bulgarian agricultural cooperatives is attended with a number of problems, which

cast doubt on the expectations for these structures' survival and further development. The possibilities for overcoming some of the main problems of the cooperatives can be explored and analyzed through applying the principles of "methodological individualism" accepted in the neo-institutional economic theory.

This paper focuses on investigating the functioning mechanism of the contemporary Bulgarian agricultural cooperatives, particularly in reference to the free-riding problem.

Theoretical fundamentals of the free-riding problem

Cook (1995, p. 1156) suggests that the main cooperative problems can be reduced to: a free-rider problem, horizon problem, portfolio problem, control problem and the influence costs problem.

According to Borgen (2002, 2004), Fertő and Szabó (2002), Szabó (2002), etc., the operation problems of agricultural cooperatives can be summarized into two major groups: problems connected with the investments and ones concerning the decision-making process. The authors regard the free rider, horizon and portfolio problems as belonging to the group of the investment problems, and the monitoring, follow-up and influence cost

problems as ones referring to the process of decision-making.

Even though the differentiation of cooperative problems varies considerably among the different authors, it might be said that the covered matter is almost identical. The key problems in the cooperatives include the free rider, horizon, portfolio, control problem (covering monitoring, follow-up and decision-making), and the problem of influence cost. The effects of the existence of these problems, however, find expression in two main directions: the inclination of members to invest in the cooperative and their participation in the decision-making process. That is why, the above-cited authors are justified to classify the problems into: problems having effect on the investments and ones influencing the process of decision-making.

Free riding appears as one of the main problems in all classifications and its effect is expressed in lack of will among the members to invest in the cooperatives. The problem arises when the property rights are non-tradable, insecure and undefined. It appears as a result of the possibility of some individuals who have not taken equal part in the creation of the cooperative's profit to benefit from it, in spite of whether or not they are cooperative members.

Cook (1995, p. 1156) points out, that a typical free rider problem is observed in the case when present members or non-members incur expenses for providing of certain good or service. However, the unclearly defined and exercised property rights do not allow making the best use of the created good or limiting the access of those who have not participated in its creation.

A free rider problem of more complex type (or within membership free rider problem)

appears, when considering the problem of common property. Gaining of consumption and dividend rights from new members, equal with those of the old members, as well as the right of equal payments per a unit of consumption raises an integration conflict among the groups within the cooperative. This network of equally shared rights, along with an absent market where to set a price of the dividend rights, reflecting the accumulated and current equivalents of future profits, makes lower the level of return for the existing members and causes their lack of incentive to invest in the cooperative.

The empirical study of the functioning mechanisms of 21 agricultural production cooperatives in the Plovdiv region performed as a part of a large-scale research (Popova, 2006), has demonstrated the extreme acuteness of the problem of undifferentiated rights. The study has also shown that "free riding" is wide spread and exerts its negative effect on the investment activity of the present and probable members and thus restricting the possibilities for development of the organizational form.

Analysis of the possibilities for free riding in the agricultural cooperatives

The major goods, the cooperatives in Bulgaria create for their members and that could be object of free riding, can be reduced to dividends for the labor, capital and land inputs and the price of the offered by the cooperatives services.

There exist two payment systems for labor applied in the contemporary agricultural cooperatives, i.e. fixed (per time), and piece-work payment. As can be seen from the study, nowhere in the investigated cooperatives

there are any existing and applied mechanisms for differentiated payment among members and nonmembers. The annual remuneration of full-time labor varies between 2160-4200 levs depending on the occupied position and financial state of the cooperative. The average per a year remuneration for all investigated objects amounts to nearly 2700 levs, which is slightly above the sector's average (about 2431 levs for 2003 according to data of the National Institute of Statistics). The absence of differentiated approaches in determining payment of members and nonmembers can be explained to some extent with the insignificant share of nonmembers, which is less than 10 % of that of full-time members, according to data provided by the cooperatives. Yet, this policy has destructive effect on the members, what is more it does not confine only to the labor factor, as can be seen from the next parts of the paper.

The lack of interrelation between the final economic results from the cooperatives' activity on one hand, and the differentiation in remuneration of members and nonmembers on the other hand, deprives the working cooperative members of incentives to put in more intensive and qualitative labor in their professional obligations, as compared with nonmembers. Therefore, the undifferentiated rights in labor remuneration lead to restricting the investment of additional time and efforts on behalf of the working members. Thus, the cooperative loses one of its main advantages, the theorists attribute it: the capacity of organization to stimulate a highly intensive and high-quality input of labor on part of its members, which logically affects the final economic results of its activity.

It may be noticed that since the employed workers are predominantly members, the payment of labor is assigned to support their best possible standard of living.

However, as owners of the organization, the members would have to be concerned about its successful operation and respectively to exhibit consciousness and self-control in doing their working duties, which by economic logics should lead to their better remuneration. Consideration of both effects in the formation of labor remuneration in the agricultural cooperatives explains the higher average rate of wages there, as compared to the sector's average, within the financial capacity of the different cooperative structures. Applying of identical approach in determining the nonmembers' remuneration however, indicates that the organization takes due care of them as it does for its members, which is to say that the nonmembers derive direct benefits from the lack of differentiated approach in assigning of remuneration without having any objective reasons for that. In this respect, free riding can be ascribed also to the members, because the above analysis showed that they lack incentive and hence do not put in more intensive or more qualitative labor, notwithstanding this is how they are expected to behave and which behavior is in the root of the economic grounds for the payment rate.

The dividend for the land used by the cooperative has a form of rent payment to its owners. Since by virtue of the law, the land relations between landowners, members or nonmembers on one part and the cooperative on the other part are negotiated through special contracts for leasehold, rent, common cultivation or using of production services, there is no economic reason for differentiating the rent rate on the basis of whether or not the individual landowner is cooperative member. There are however, many other characteristics of the landed property, which directly concern the economic results of the cooperative's activity and should therefore have effect on the mechanisms of determination of the rent

payment rate. Both key characteristics in this case are the quality of different land parcels and their spatial fragmentation.

The investigation carried out among the agricultural cooperatives in Plovdiv region demonstrated that the approaches used in determination of rent payments are slightly more flexible than those applied in the labor remuneration. The inquired cooperatives settle the problem with the spatial land fragmentation in a similar way and the applied approach is characterized with significant subjectivism in making the decisions. No one of the inquired cooperatives applies a differentiated approach in determination of the rent payment, when the leasehold land is remote from the major tracts of land for cultivation. The economic efficiency of cooperative activity in this respect is maintained through refusal of cultivating small size and rather remote lands, without existing of any differentiated formal criteria for maximal admissible remoteness or minimal admissible size. Decisions are taken subjectively in judgment of the cooperative's administrative body and individually for each particular case. There exist at least two problems in the applied approach, which have a negative impact on the overall conditions for the cooperative functioning and hence on the final economic results of its activity.

First, the lack of economically grounded limits as basis of the decisions for accepting or rejecting of given land property, and for the size of acceptable rent for these lands, raises a risk for making wrong management decisions. These may be acceptance for cultivation of lands, which do not worth the required expenses or rejection of lands, the cultivation of which would bring in additional incomes in the organization. The first kind wrong management decision creates direct possibility for free riding on behalf of the landowner, whereas the second one deprives

both the landowner and the cooperative from reaching positive effects of the land use.

The unclear criteria applied in accepting or rejecting of a certain land parcel for cultivation by the cooperative may also cause sense of injustice and injury for some members at the expense of others. This may lead to appearance of heterogeneity and opportunistic behavior, which to impede the operation of cooperative mainly through complicating the processes of decision making at all management levels.

The differentiation of rent payments according to the quality of land entered in the cooperative, also does not find wide application even though being easier to organize and apply as compared to one based on the spatial fragmentation (Figure 1). It can be seen from the study that just about 9.52 % of the inquired agricultural cooperatives apply differentiated approach in rent determination depending on the land category, as lands being divided into two groups: 1) up to 6th category inclusive, the rent valuation of which figures out at nearly 70 kg/dka of wheat and 2) lower-quality lands valued at about 50 kg/dka of wheat. The rent rate in the rest cooperatives is equal for all lands and varies between 30-70 kg/dka of wheat depending on the possibilities of cooperative. 4.76% of the inquired cooperatives indicate that their common practice is the members to pay the cost price and to receive the average yield for 50 % of the land they enter the cooperative, and for the rest to receive rent. In this case however, leading are also the average quantities, without doing differentiation according to the land quality. In addition to the rent paid in the form of grain or its money equivalence, the practice of 33.33 % of the cooperatives includes the landowners to receive some food products, such as sunflower oil, rice and flour (about 1-2 kg/dka). This policy however, does not change

the ratio between the cooperatives applying differentiated and not differentiated approach in determining the rate of rent payments (1:9 approximately), because the mechanism of allocation of goods and services is the same as that of the grain allocation.

It should be noticed that all of the inquired cooperatives, which have perennial plants indicate, that they apply a differentiated approach for the lands under orchards and vineyards, when they settle the payments to the landowners and these payments are of a higher rate (within 100-150 kg/dka grain commonly). Even if the cooperatives include this policy towards rent differentiation, the economic meaning of these payments is radically different. Here finds application the theoretical difference between the notion "rent" and the notion "lease" considered as forms of payment. The received by the owners of perennial plants grain quantity of 100-150 kg/dka, is in fact a lease form payment, which consists of at least two elements: payment for the ownership of land (i.e. rent payment) and payment for the capital placed at disposal of the cooperative as different long-term assets (perennial crops, irrigation equipments, supporting facilities, etc.) situated upon the land. In this sense, the different payment rate in the case of lands under perennial crops cannot be considered a mechanism for differentiating the property rights related to land and is not reckoned in determining the

shares of cooperatives applying or not applying differentiation of rent.

The effect of the predominating lack of such differentiation regarding the free riding problem, and the cooperatives' functioning can be assessed as negative. The absence of mechanisms for differentiation of rent according to the land quality results in flowing out incomes from owners of highly productive lands to owners of low-productive ones. On one hand, this provides conditions for free riding on behalf of owners of less productive lands, and on the other hand – creates motivation for more profitable economic realization of the high-quality lands. This gives reason to expect that in the long run, and in the case of enough alternatives for realization, mainly lands of lower quality will remain or will be entered in the cooperative, which will exercise its negative effect on the economic results and stability of the organization form. Yet, the undifferentiated land property rights in the Bulgarian agricultural cooperatives bring forth prerequisites for investment insufficiency regarding the high-quality lands in the cooperative.

Theoretically, the problem of free riding referring to the dividends on capital, appears from the equal right of dividend in the case of members with different membership duration. In the conditions of Bulgaria, however, this appearance of the free rider problem

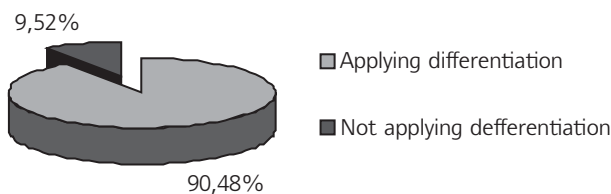


Figure 1. Share of cooperatives applying differentiated approach in determining of rent payments

has comparatively limited effect on the cooperatives' functioning. The reasons for this are rooted in the fact that the members have joined the cooperative comparatively at the same time, as well as in the lacking practice of paying such dividend there (Figure 2). It can be seen from the study, that 4.76 % of the inquired cooperatives have paid dividend on the capital during the first several years after their establishment, and later with worsening the financial and economic results of their activity, this practice has ceased to exist. At this stage, about 81 % of the cooperatives do not pay dividends at all, 9.52 % of them pay regularly such dividend and still 9.52 % pay dividend, only when the organization is in position to do this (once at two-three years on the average). Not paying the dividend automatically rejects the possibility as for grounded deriving of benefit, as well as for free riding. A free rider problem resulting from the policy of setting dividend on capital, is not observed even in the few cooperatives, paying such form, because it is insignificant and hence does not create incentives for opportunistic behavior.

Data obtained from the analysis show, that the dividend paid on capital is about 10 %, and the average annual amounts allotted for this item in the agricultural cooperatives vary within 9000-10000 levs.

Some presidents of cooperatives have shared the view that the capital contribution to providing of initial necessary equipment of the organization has been considerably important in the period of its establishment, however its role now is not so significant as in the very beginning. As confirmation of this view, we can indicate the minimum amount of capital installments in the cooperatives – 33 % of them have no such minimum set, and in the rest 67 %, the existing minimum limitations are: 10 levs in 17 % of the inquired cooperatives, 30 levs also in 17 % of them and 50 levs in the rest 33 %.

Looking again at the theoretical treatments of problem, it may be noticed that the study showed a lack of mechanisms for differentiating of dividend on the capital in all investigated

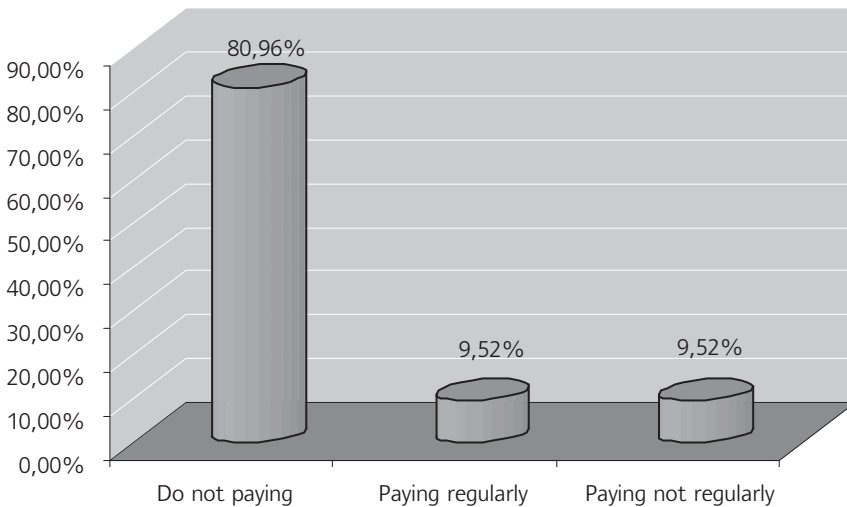


Figure 2. Share of cooperatives paying dividend on the capital

objects. This carries potential risk for future appearance of free riding, even in case the cooperatives stabilize their paying of dividends on the capital.

The implemented policy toward participation with capital in the cooperatives, has negative effect on the organization form's functioning both in theoretical and practical aspect, since there are no any existing motives neither for the present nor for the potential members to strengthen their investment activity regarding the share participation in the cooperative. The result of this is that the agricultural cooperatives in Bulgaria undergo a chronic insufficiency of own capital, which affects their competitive power and capacity to survive.

The appearance of free riding problem is substantially stronger in connection with the cooperatives' pricing policy applied in offering services for members and nonmembers. The investigation showed that 57.14 % of the inquired cooperatives perform mainly mechanized and agro-chemical services. 36.36 % of them indicate that they perform

services only as an exception and these services provide them less than 2 % of their incomes. The rest 63.64 % of the cooperatives performing services generate averagely 10.01 % of their incomes from this activity. It was found, that the conclusion of formal contract for performing of services is rather an exception, and is applied mainly in the case of big clients or corporate bodies though most services are being performed to nonmembers. The payment of services is done by norms, as just 16,67 % of the inquired cooperatives indicate that they have differentiated prices for members and nonmembers. None of the investigated cooperatives applies differentiation concerning the old and new members or remoteness of the cultivated parcels (Figure 3).

The lack of differentiated prices for members and nonmembers in more than 83 % of the agricultural cooperatives causes the incomes to flow out from members toward nonmembers, which is a typical case of free riding on behalf of the nonmembers. On one hand, the diminishing level of return for the cooperative

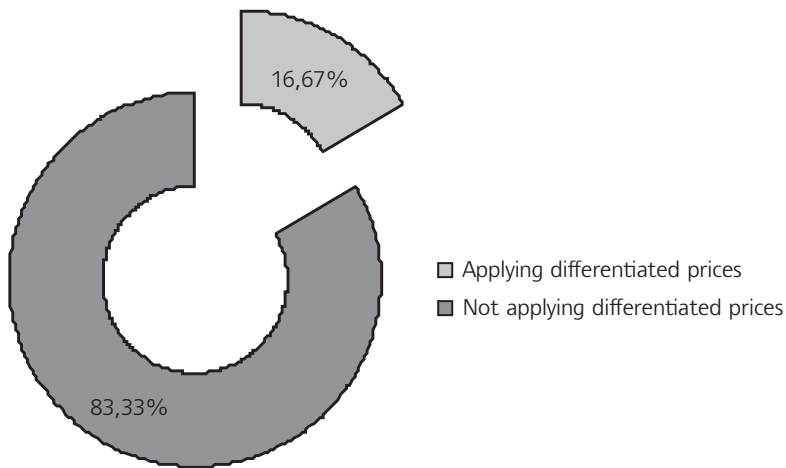


Figure 3. Share of cooperatives applying differentiated prices for the performed services

members weakens their motivation to invest in the cooperative. On the other hand, the right of equalized payments per a unit of service for members with different duration of membership raises integration conflicts among the groups in the cooperatives. The reason why the old members may have the sense of injured interests maybe lies in the cooperatives' procedure to pay limited dividend on the capital in order to strengthen the common funds of the organization. This means that the old members are being deprived of the full size of benefits created by their capital, to provide the cooperative with the needed assets, whereas the equal prices of services allow the new members to benefit from goods, to the creation of which they have not contributed at all.

The importance of this problem is partially reduced in the Bulgarian agricultural cooperatives, because the majority of members have entered the cooperative almost together, and the present trends are rather in direction of their decreasing. The more restricted appearance of the internal for the

cooperative free riding problem is confirmed by the members' opinion on this question, presented in the investigation: 67.57 % of them think that the equal prices and equal rights of dividends are fair decision; 10.81 % find that the new members should have got more restricted rights and 21.62 % of the members share the view that such limited rights should be in force only for a strictly regulated time period. The data obtained show that less than 33% of the inquired members see a problem in the undifferentiated prices and dividends on the capital and these are mainly representatives of groups of younger people. The opinion of these young cooperative members can be explained with their better and quick understanding of the active market principles in economy, compared with the older members, rather than with their having of some sense of injury.

Notwithstanding the lower significance of the considered within membership problem, the importance of one with lacking differentiation in prices of services, particularly between members and non-members with resulting

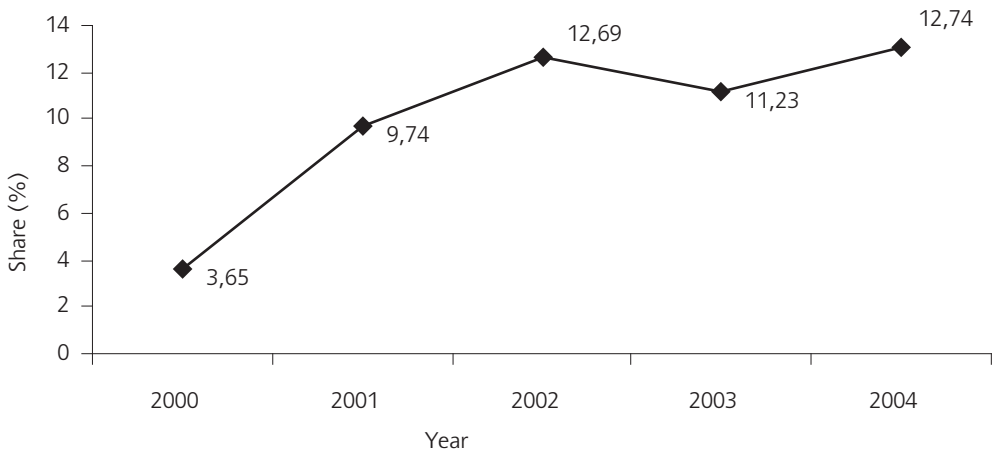


Figure 4. Share of incomes from services in the total income of cooperatives Conclusion

free riding on behalf of nonmembers, should not be underestimated. The studied dynamics of incomes from services shows a tendency of increasing of their share in the cooperative's total incomes (Figure 4). Therefore, it might be expected that continuing to follow the present policy regarding the prices of services, will deepen the considered problems and increase the negative effect on the motivation for participation and investment in the cooperative activity.

The analysis of free rider problem in the Bulgarian agricultural cooperatives indicated existence of lacking differentiation in the economic realization of the labor and capital factors, and differentiation concerning the land and prices of services applied in only a limited number of farms. This sets preconditions for input of lowly intensive and of poor quality labor, for gradually to form a cooperative land fund of low-quality lands, and for lack of incentives for capital participation and flowing out of incomes from members toward nonmembers. Following of this leveling policy exerts a negative effect on the inclination of members to extend their participation in the cooperatives and thus creating preconditions for appearance of capital inadequacy and investment insufficiency in the organizations.

In conclusion, it may be noticed that the free riding problem appears sharply in relation with the cooperative policy in defining the property rights regarding the labor, land and prices of services and is comparatively reduced regarding the capital. The problem and its negative effects may be overcome through clearly defined and differentiated property rights in the cooperatives, which will increase the organization form's sustainability in the agricultural sector of the country.

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