

COOPERATION OF PRIVATE FOREST OWNERS: CASE STUDY IN LITHUANIA

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Summary

Pivoriūnas, A. Cooperation of private forest owners: case study in Lithuania. – *Miškininkystė*, 2004, Nr. 2 (56), 69–77.

According to the cooperation theory, to be successful, co-operative should involve and produce at least two main types of socio-economic aspects in its performance – social satisfaction and economic benefit, compared to the competitor enterprises. Theory also says members should have the best possible economic benefit; that external ownership is permissible as long as this leads to member being increased. It explains the link between family farm and farmer-owned co-operative by combining motivation problems and economies of scale.

The paper is built on cooperation theory literature survey, and analysis of empirical studies that examines basic economical and social arguments for forming forest owners' co-operatives in Lithuania.

Key words: forest owners' co-operatives, cooperation theory, empirical study, need assessment.

Santrauka

Pivoriūnas, A. Privačių miško savininkų kooperavimasis: tyrimas Lietuvoje. – *Miškininkystė*, 2004, Nr. 2 (56), 69–77.

Kooperavimosi teorija sako, kad tam, kad kooperatinė bendrovė vykdytų pelningą veiklą, palyginti su konkuruojančiomis įmonėmis ir skirtingomis jų formomis, jos efektyviam darbui užtikrinti reikalingos bent dvi prielaidos, paremtos socialiniais ir ekonominiais aspektais – bendrovės narių socialinis pasitenkinimas bei kooperatyvo nariams generuojamas pelnas iš įmonės veiklos. Ši teorija taip pat sako, kad įmonės nariams būtina užtikrinti ne šiaip paprastą pelningumą, priklausomą nuo nario pajaus įnošo, bet jį siekti užtikrinti maksimaliai didesnį. Tai, anot teorijos, gali užtikrinti tik didėjantis kooperatinės bendrovės narių skaičius, taikant kaštų ekonomijos principus. Kooperavimosi teorija paaiškina ir tamprų bei tiesioginių ryšių tarp ūkininko/miško savininko ir narystės kooperatinėje bendrovėje remiantis motyvacija.

Šis straipsnis yra paremtas kooperavimosi literatūros apžvalga, o taip pat atlikto empirinio tyrimo, kurio tikslas buvo išsiaiškinti privačių miško savininkų kooperatyvų formavimosi priežastis (socio-ekonominis aspektas) ir veiklos ypatumus, bei jų atitikimą teorijai, analizei.

Raktažodžiai: miško savininkų kooperatyvai, kooperavimosi teorija, empirinis tyrimas, reikmių analizė.

Introduction

Forest cover in Lithuania comprises 30.8% of national area. The total area covered by forest stands is around 2 M ha. Scots pine (*Pinus sylvestris*) stands occupy 36.5% of national forest cover, Norway spruce (*Picea abies*) – 22.8%, birch (*Betula pendula*) – 20.1% (Ministry of Environment and State Forest Survey Service 2003).

State forests in Lithuania occupy half of the national forest cover (Table 1). One third of forests are already under private ownership and 21% still remain reserved for restitution process. It is unlikely though that all of those 21% will be turned over to the private sector. Some of these forests will probably return under state management. Private forests in Lithuania are managed by about 200,000 private forest owners (NTKD 2003).

Forest policy implementation in Lithuania falls under the responsibility of the Ministry of Environment. The ministry houses the position of vice-minister, dedicated especially for forestry issues. State Forest Enterprises (SFE) – state-owned forestry companies – are 42 enterprises trusted with the management of state forests.

Volume of annual felling in Lithuania was increasing for the last five years. In 2003, volumes felled in the state and private forests altogether comprised 5.9 M m³, which makes up only 50% of gross annual increment. Timber harvesting in state forests during the last year decreased by 4%. The volume of timber harvested from private forests during the last year increased by 9% and in 2003 comprised 2.18 M m³ (Vižlenskas 2004).

Table 1. Administration of forest resources in Lithuania**1 lentelė.** Lietuvos miškų ištekliai

National forest cover <i>Šalies miškai</i>	2.009 M ha (30.8% of national land cover) <i>2,009 M ha (30,8% viso žemės ploto)</i>
State forests <i>Valstybiniai miškai</i>	1017.0 thousand ha (50% of national forest cover) <i>1017,0 tūkst. ha (50% visų miškų)</i>
Reserved for restitution <i>Rezervuoti nuosavybės atkūrimui</i>	442.0 thousand ha (21% of national forest cover) <i>442,0 tūkst. ha (21% visų miškų)</i>
Private forests <i>Privatūs miškai</i>	586.0 thousand ha (29% of national forest cover) <i>586,0 tūkst. ha (29% visų miškų)</i>
Number of private forest owners <i>Privačių miško savininkų skaičius</i>	183 thousand <i>183 tūkst.</i>
Average size of private forest holding <i>Privačios miško valdos vidutinis plotas</i>	4.5 ha <i>4,5 ha</i>

Source: Ministry of Environment and State Forest Survey Service (2003)

Šaltinis: Aplinkos ministerija ir Valstybinė miškotvarkos tarnyba (2003)

In year 2003 there were fifteen Forest Owners' Co-operatives (FOC) in Lithuania. Forest owners' co-operatives are practicing the contracting system to sign between the forest owner and the co-operative, thus is acting as the contracted forest manager.

It should be also added, co-operatives in Lithuania have no tax advantages compared to other forms of organisations. Newly established forest owners' co-operatives are trying to find their niche in roundwood supply market. According to the recent data it is evident that forest owners' co-operatives deliver from 6 to 12 per cent (depending on roundwood type) of the amount delivered by SFE. (InfoTree 2004)¹.

Study area

Methods and Objective of the Study

In this study Lithuania has been chosen as a case study area to explore the present state of private forest sector, which is viewed in the context cooperation among private forest owners and formation of Forest Owners' Co-operatives.

The main objective of this paper is to analyse theoretically the formation of the forest owners' co-operatives in one of the Eastern European countries - Lithuania, which is currently facing the phase of economy in transition. In this paper the special attempt was to explain the different theoretical economically and socially driven as well as by making the analysis of empirical study of practice of cooperation among private forest owners.

The overall objective of this paper can be divided into two individual goals, each of these treated in a separate chapter:

- to review the literature providing explanations why farmers/private forest owners join the forest owner's co-operatives.
- to summarise the findings from the above review and empirical investigations.

For the purpose of this study the sample survey approach was chosen, using direct mail survey instrument. The instrument was designed using both close- and open-ended questions with intention to collect the information on two areas of interest: (1) the state of private forest owners' co-operatives; and (2) the scope of their business performance.

Research methodology

Theoretical Approach

I have started with a literature survey about cooperation theory, explaining the main reasons why farmers/forest owners join the co-operative. Based on this some scientific questions would be formulated for a set of empirical investigations.

Schrader (1989) attributes formation of co-operatives to the correction of market failures, benefiting from the economies of scale, capturing profits from up- or downstream levels in the production and marketing chain, the provision of missing services, securing the supplies in markets, coordinating gains through reduction of transaction costs and risk, and shaping market power.

¹ InfoTree (IT) is the branch of public institution Private Forest Extension Center that analyses economic data of Forest owners' co-operatives in Lithuania.

Barton (1989) argues co-operatives provide access to the markets for farmers who would otherwise have been denied of such access and possibly benefit for a members and market by proving to be a reliable source of supplies during the periods of shortages.

Ollila (1989) argues that the more dominant the co-operative is in a market, the greater possibilities it has to use it's potential effectively. If the market is large, the larger co-operative will become more effective as well. When the number of members increases, the heterogeneity of expectations and objectives increases as well. In addition, the relative position of an individual member decreases.

Condon and Vitaliano (1983) showed that primary incentive force for the formation of co-operatives is the management of the risk entailed in operating a business with organization specific assets that have limited value outside of their current use.

Bijman (2002) argues that the main objective of co-operative is to provide low-cost services to its member and not to generate maximum profit.

Van Dijk (1997) summarized five historic reasons of establishment of co-operative where achievement of efficiency through economies of scale, is among most important objectives.

Condon and Vitaliano (1983) explained that organizations with larger number of members, by virtue of their size, can command volume discounts for inputs and transportation costs. Members who are regular and reliable suppliers receive a compensation for lowering the enterprise's transaction costs.

Fahlbeck (1994) says a co-operative which can control the volume of production from its members will drive any competitor out of the market, assuming that there is no difference in processing efficiency. Since farmers/forest owners usually operate rather small businesses, it may also be efficient for them to jointly generate resources for gathering information concerning prices, demand and other changes in fundamental markets. They can save on transaction costs related to the uncertainty and environmental complexity.

Hansmann (1996) explains the link between family farm and farmer-owned co-operative by combining motivation problems and economies of scale. The author argues the objective of the individual member of co-operative is to maximize the satisfaction derived from the income benefit.

Kuhn (1974) states that "quality-conscious" members of a co-operative have a much more powerful possibility to threaten with exit than small members who do not have as many alternatives for exit as the large ones.

LeVay (1983) maintained that an open-membership co-operative would overproduce by accepting whatever quantity of raw materials members would choose to supply. By offering members the highest price possible, an open-membership co-operative processed at a level beyond the social optimum, because the value of the supplied input exceeded its derived demand.

Empirical Approach

The current state of FOC in this study is explored within the framework of the Needs Assessment approach. The state and process of formation of co-operatives and the scope of their business performance were viewed in the context of demand for cooperation among private forest owners in Lithuania. According to the definition of Witkin and Altschuld (1995), need is considered as a discrepancy or gap between the present state of affairs in regard to the situation of interest and desired state of affairs. A needs assessment is "a systematic and ongoing process of providing usable and useful information about the needs of the target population – to those who can and will utilize it to make judgments about policy and programs" (Reviera et al. 1996, p. 6).

As a rule, needs assessments have been applied by organizations and governmental agencies providing education and social services, business corporations, city municipalities, hospitals and universities (Witkin and Altschuld 1995; Reviera et al. 1996). However, here this approach is employed in learning about process of demand for cooperation among private forest owners.

Since no secondary data on the state of development of private forest owners' co-operatives existed on sufficient level, the primary data collection was necessary. For this purpose the sample survey approach was chosen, using the direct mailing survey instrument (Reviera et al. 1996). The instrument was designed using both closed- and open-ended questions (Patton 1987; Reviera et al. 1996).

Questions were formulated with intention to collect the information on two areas of interest: (1) the state of private forest owners' co-operatives; and (2) the scope of their business performance.

Selection of Respondents

This study was carried out during the period of October-December 2003. When surveying private forest owners' co-operatives, general entirety was chosen. It is 15 forest co-operatives from most representative Lithuanian regions. The regions, for the purposes of convenience where those that had forest owners' co-operatives and local branches of Forest Owners Association of Lithuania operating within the region. Contact information about co-operatives were obtained from official website of Forest Owners Association of Lithuania www.forest.lt.

Findings of empirical study

State of Forest Owners' Co-operatives

The total of 13 leaders of forest owners' co-operatives participated in the survey.

2 co-operative leaders refused to participate in the survey with resulting response rate of 86.7%.

First seven questions were asked in order to learn about the current state of forest owners' co-operatives in Lithuania in general. Most of the co-operatives are located in small towns with an exception of few ones located in the biggest cities. The first FOC was established in 1997. From the feedback delivered by the leaders of forest owners' co-operatives it is vital to note that majority of the existing co-operatives were established with the help of strong ideology delivered by Forest Owners Association of Lithuania.

The results show that vast majority of FOC (92.3%) in Lithuania are profit oriented enterprises (Table 2, #1). In average co-operatives have nearly seven members (Table 2, #2). It is worth to note that seven FOC out of 13 (53.8%) reported they have the same five members. Survey indicated that in average member of co-operative in Lithuania has 19.7 ha of forest.

Survey showed 38.5% of FOC in Lithuania usually have more than 20 private forest owners as customers that are contracting co-operative for a management of private forest holding, but decided not to become a member (Table 2, #3). This is nearly four times more than the actual number of members within the co-operative.

Respondents argued that their FOC are operating mostly in forest areas that are in size between 50 and 200 ha and more (Table 2, #4).

When analyzing the range of services that co-operatives produce it should be said it is wide; including timber trade, preparation of forest management plans, various measures of consultancies and extension, etc.

Operations within the co-operatives are carried out mainly by sub-contracting other private forest sector enterprises (usually with specialisation on forest harvesting and reforestation).

Co-operatives in Lithuania could be characterised as marketing type, having no timber processing/value added, facilities. It should be also added, forest owners' co-operatives in Lithuania have no tax advantages compared to other forms of organizations (especially those that are registered as agricultural farm enterprises).

If speaking in terms of turnover per share of services provided, FOC leaders responded timber trade accumulates 31.4% of turnover, whereas harvesting correspondingly 27.4% (Table 2, #5). As Table 2 shows the turnover is increasing year by year nearly in all co-operatives.

53.8% of respondents thought that their co-operatives are not competing with other forest owners' co-operatives. 38.5% indicated that they do (Table 2, #6).

Scope of Forest Owners' Co-operative Business Performance

Six questions also were asked in order to assess the scope of forest owners' co-operatives in relation to their business performance and getting the answers on what are the tactics of promotion of FOC towards new members. Three questions of those were opened type, so the leaders of co-operatives might elaborate freely on answers, thus the response rate is presented.

To the question should the members of the co-operative be as much similar as it is possible, 61.5% answered negatively (Table 3, #1). Thus, there were 38.5% of respondents that said forest owners should be as much similar and have explained in opened format the possible options of similarities, where common problems of forest management practices and understanding of forest management practices were said to be the most important ones. The size of forest holding is seen as not an important argument for membership (Table 3).

30.7% of respondents think FOC has to have at least 40 members in order to ensure economically viable forestry and performance of co-operative (Table 3, #2). Correspondingly, non-member status customers are seen as important base for business performance - 53.8% of forest owner's co-operative leaders indicated their enterprise should have more than 40 customers, too.

To the question what are the objectives of FOC, leaders answered that to offer best possible service for members is seen as most important one (Table 4, #1). Another key objectives were consolidation of members and making profit for them (7 out of 13 respondents).

Table 4 shows investment into forest and its management were indicated as not an objective of no one leader of forest owners' co-operative.

To the question on how the co-operative should promote itself to get new members – oral recommendation by existing members/customers was seen by leaders of co-operatives as the most effective and convenient way to obtain new members (11 out of 13 respondents); followed by the articles/advertisements in mass media (10) and Forest Owners Association of Lithuania (Table 4, #2).

Leaders of FOC generally think the main argument to get the membership is through delivered economic benefit (13 out of 13 respondents) (Table 4, #3). Social satisfaction and improved ecologic conditions of forest are seen as slightly less important outcomes of co-operative performance (for both answers 11 out of 13 respondents) (Table 4, #3).

Table 2. Questions and responses representing the state of private forest owners' co-operatives
2 lentelė. Klausimai ir atsakymai reprezentuojantys privačių miškų savininkų kooperatyvų statusą

Question asked <i>Klausimai</i>	Response option <i>Atsakymai</i>	%
#1. Is your FOC a profit-oriented enterprise? #1. Ar Jūsų miško savininkų kooperatyvas (MSK) yra pelno siekianti įmonė?	Yes <i>Taip</i>	92.3
	No <i>Ne</i>	7.7
	Total/Iš viso	100.0
#2. How many members are in your FOC? #2. Kiek narių yra Jūsų MSK?	Up to 5 <i>Iki 5</i>	30.7
	From 5 to 10 <i>Nuo 5 iki 10</i>	46.2
	From 10 to 20 <i>Nuo 10 iki 20</i>	15.4
	20 and more <i>20 ir daugiau</i>	0
	No response <i>Nėra atsakymo</i>	7.7
	Total/Iš viso	100.0
#3. How many customers (non members) contract your FOC? #3. Kiek klientų (ne narių) turi Jūsų MSK?	Up to 5 <i>Iki 5</i>	15.4
	From 5 to 10 <i>Nuo 5 iki 10</i>	23.0
	From 10 to 20 <i>Nuo 10 iki 20</i>	15.4
	20 and more <i>20 ir daugiau</i>	38.5
	No response <i>Nėra atsakymo</i>	7.7
	Total/Iš viso	100.0
#4. What is the area of forests your FOC is operating, ha? #4. Koks yra miškų plotas (ha), kurį Jūsų MSK tvarko?	From 20 to 50 <i>Nuo 20 iki 50</i>	23.0
	From 50 to 200 <i>Nuo 50 iki 200</i>	46.2
	Other <i>Kita</i>	30.8
	Total/Iš viso	100.0
#5. What is the share of services in your FOC per turnover? #5. Kokį santykį sudaro paslaugos Jūsų MSK apyvartoje?	Roundwood trade <i>Prekyba apvaliąja mediena</i>	31.4
	Harvesting <i>Kirtimai</i>	27.4
	Preparation of felling areas/tree measurement <i>Biržės atrėžimas/medžių ženklėjimas</i>	18.0
	Reforestation/afforestation <i>Atsodinimas/įveisimas</i>	13.0
	Extension <i>Konsultavimas</i>	2.4
	Preparation of forest management plans <i>Miškotvarkos projektų rengimas</i>	7.8
	Total/Iš viso	100.0
#6. What is the development of your FOC turnover? #6. Kaip Jūsų MSK keičiasi apyvarta?	Increases every year <i>Auga kiekvienais metais</i>	76.9
	Decreases every year <i>Mažėja kiekvienais metais</i>	15.4
	No response <i>Nėra atsakymo</i>	7.7
	Total/Iš viso	100.0
#7. Does your FOC compete with other co-operatives for forest owners as customers? #7. Ar Jūsų MSK konkuruoja su kitais kooperatyvais dėl miško savininkų kaip klientų?	Yes <i>Taip</i>	38.5
	No <i>Ne</i>	53.8
	No response <i>Nėra atsakymo</i>	7.7
	Total/Iš viso	100.0

Table 3. Questions and responses representing the scope of private forest owners' co-operatives business performance
3 lentelė. Klausimai ir atsakymai reprezentuojantys privačių miškų savininkų verslo vystymo galimybes

Question asked <i>Klausimai</i>	Response option <i>Atsakymai</i>	%
#1. Should the members of your FOC be similar*? <i>#1. Ar Jūsų MSK nariai turi būti panašūs?</i>	Yes <i>Taip</i>	38.5
	No <i>Ne</i>	61.5
	Total/Iš viso	100.0
#2. How big FOC should be in terms of number of members? <i>#2. Kokio dydžio turi būti MSK pagal narių skaičių?</i>	From 5 to 10 <i>Nuo 5 iki 10</i>	23.1
	From 10 to 20 <i>Nuo 10 iki 20</i>	23.1
	From 20 to 40 <i>Nuo 20 iki 40</i>	23.1
	40 and more <i>40 ir daugiau</i>	30.7
	Total/Iš viso	100.0
#3. How big FOC should be in terms of number of customers? <i>#3. Kokio dydžio turi būti MSK pagal klientų skaičių?</i>	From 5 to 10 <i>Nuo 5 iki 10</i>	15.4
	From 10 to 20 <i>Nuo 10 iki 20</i>	0
	From 20 to 40 <i>Nuo 20 iki 40</i>	23.1
	40 and more <i>40 ir daugiau</i>	53.8
	No response <i>Nėra atsakymo</i>	7.7
	Total/Iš viso	100.0

* If "Yes", please explain in what / *Jei „Taip“, prašome paaiškinti kuo:*

Common problems of forest management practices <i>Bendromis problemomis miškų tvarkymo praktikoje</i>	2
Opened membership <i>Atvira naryste</i>	2
Location of forest holding <i>Miško valdos adresu</i>	1
Size of forest holding <i>Miško valdos dydžiu</i>	0
Common understanding of forest management practices <i>Bendru miškų tvarkymo supratimu</i>	2
Total/Iš viso	7.0

Discussion

Where the single private forest owner is not able to act efficiently, co-operative might be a tool, as it usually acts as a pool of agreements between members. More effective would be a marketing co-operative, which could control the flow of production from the members to and risks to the members.

Private forest sector in Lithuania consists of a heterogeneous set of firms, mainly private forest owners' co-operatives, share companies and State forest enterprises that are managing private forests. According to the co-operative theory and long international practice of forest owners co-operation, one of the core conditions for a successful performance of forest owners' co-operative is to have a: (1) satisfactory number of members and, (2) the area of forest holdings and location are such that technical and economic efficiency could be achieved.

A co-operative acquiring raw products from members where the product is traded in a thin market, with or without a large share of the market, has a problem in assigning a value to members' products. Contracts between members and marketing co-operative could improve the match between supply and demand of roundwood.

Table 4. Questions and responses representing the private forest owners' co-operatives tactics on getting new members
4 lentelė. Klausymai ir atsakymai reprezentuojantys privačių miškų savininkų kooperatyvų taktikas pritraukiant naujus narius

Question asked <i>Klausimai</i>	Response option <i>Atsakymai</i>	Response rate <i>Atsakymų skalė</i>
#1. Which of these propositions coincident with your FOC objectives? #1. Kurie iš šių teiginių atitinka Jūsų MSK tikslus?	Offer best possible service for members <i>Siūlyti geriausias galimas paslaugas nariams</i>	12
	Make profit for the owners of enterprise <i>Uždirbti pelną įmonės savininkams</i>	0
	Offer best possible service for customers <i>Siūlyti geriausias paslaugas klientams</i>	7
	Consolidation of members <i>Narių konsolidavimas</i>	8
	Pay divvy for the members of enterprise <i>Mokėti dividendus įmonės nariams</i>	8
	Pay best possible price for roundwood delivered <i>Mokėti geriausias galimas kainas už pristatytą apvaliąją medieną</i>	7
	Create new jobs <i>Kurti naujas darbo vietas</i>	7
	Provide services with least costs <i>Teikti paslaugas mažiausiais kaštais</i>	3
	Manage the forest holding <i>Tvarkyti miško valdas</i>	0
	Invest into forest <i>Investuoti į mišką</i>	0
	Total/Iš viso	52.0
#2. How should FOC promote itself to get more members? #2. Kaip MSK turėtų propaguoti save, kad pritrauktų daugiau narių?	Publishing articles/advertisements in mass media <i>Straipsnių/skelbimų skelbimas spaudoje</i>	10
	By oral recommendation of existing members/customers <i>Esamų narių/klientų rekomendacija</i>	11
	Sending promotional leaflets by mail <i>Siunčiant lankstinukus paštu</i>	5
	Via Forest Owners Association of Lithuania <i>Per Lietuvos miško savininkų asociaciją</i>	10
	Via NGOs, like Farmers Union <i>Per NVO, pvz., Ūkininkų Sąjungą</i>	5
	Via State Forest Survey <i>Per Valstybinę miškotvarkos tarnybą</i>	0
	Via State Forest Enterprises <i>Per valstybines miškų urėdijas</i>	0
	Total/Iš viso	41.0
#3. Which of these aspects are most important for FOC to get more members? #3. Kuris iš šių aspektų yra svarbiausias MSK, kad pritrauktų daugiau narių?	Economic benefit <i>Ekonominė nauda</i>	13
	Social satisfaction <i>Socialinis pasitenkinimas</i>	11
	Improved forest ecologic conditions <i>Pagerintos miškų ekologinės sąlygos</i>	11
	Total/Iš viso	35.0

If an individual private forest owner cannot afford satisfactory amount of roundwood for a timber buyer, it may be feasible for a co-operative to do such job on behalf of its members. The co-operative may miss opportunities to improve coordination by failing to have more explicit contracts with its members. The co-operative's performance may depend on the delivery or purchase of predictable quantities, for example.

According to the co-operative theory, the essential conditions for a successful performance of the co-operative are based on economic factors as well as its' members' social satisfaction, compared to the competitor enterprises. Those co-operatives, which are able to attract new members to produce a large part of the production could facilitate matching supply with the demand through binding contracts with members and forward delivery contracts with timber purchasers.

Such contracting would depend on developing trust among members and purchasers of the co-operative. An influx of new members is necessary for continuous existence over time of any self-managed organization. Active membership ought to be seen as a central element of a co-operative's adaptiveness to the changing environment.

This suggests that co-operative policy promoting continued governance by members, including barriers to exit, would discourage opportunistic behavior and facilitate contingency contracting under uncertainty. It also suggests that such co-operatives might have an advantage over markets in coordination requiring future delivery agreements. Co-operative, which represents remarkable share in market could improve the match of aggregate production and demand, thus contributing to price stability and coordination for the future business performance.

Some aspects of socio-economic environment, such as family structure, might be crucial in forest owners' decision making to join the co-operative. An influx of new members is necessary for any self-managed organization's continuous existence over time. Active membership might be seen as a central element of a co-operative organisation's adaptiveness to the changing environment.

Naturally, the more a member of a co-operative uses the co-operative firm's services, the higher his benefits. Net margins of the co-operative firm are distributed among the members in proportion to their patronage with the firm. By adding more new members to defect, the payoff will be higher for the co-operative, as it has bigger volumes and negotiating power when marketing its' services. Based on above presented surveys, it seems likely that many private forest owners feel that their forests are not sufficiently large enough for economic efficiency. Some look at the estate as a business activity, while for the others the main purpose of the ownership is not economic one.

Conclusions

The objective of this study was to make the theoretical research on cooperation theory and collect the information on two areas of interest: (1) the state of private forest owners' co-operatives in Lithuania; and (2) the scope of their business performance.

For the purpose of empirical investigations the need assessment approach was chosen, using direct mail survey instrument. The total of 13 leaders of forest owners' co-operatives participated in the survey.

The results of the study indicated that in general the theoretical background of cooperation theory has some limitations when it comes to a practical implementation of development of forest owners' co-operatives in Lithuania. Results show that in average forest owners' co-operative could be characterised as marketing type, having no timber processing/ value added, facilities, with membership of seven members. Moreover, they are focusing their activities not on serving the members, but rather non-members (private forest owners as customers for the enterprise).

Leaders of forest owners' co-operatives generally think the main argument to get the membership is through delivered economic benefit rather than social satisfaction derived by membership within the co-operative and improved ecologic conditions of forest.

Despite the fact that Lithuania was selected as a case study area, the findings of this study could be of relevance to the other two Baltic States, and maybe even some other countries of Eastern and Central Europe with similar political conditions.

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