

FARMERS' COOPERATIVE IN THE CONTEXT OF ECONOMIC TRANSFORMATIONS IN LITHUANIA

Jadvyga Ciburiene, PhD/ professor +
Kaunas University of Technology, Lithuania

Abstract. Lithuania farmers' farms are amongst the most important producers of agricultural products in Lithuania. During the analyzed period of 2005-2014 small farms are dominating in the structure of agricultural products. Because of the rising standard of living and increasing need of quantity and quality of agricultural products, including food, both at global and regional level, attention should be given to the growth of the agricultural production productivity.

The aim of the study: to analyze the role of farmers' cooperatives in the context of economic transformation in Lithuania. Objectives of the study: to characterize the economic transformations in Lithuania; to discuss the changes of farmers' cooperative importance in country economy development, as a smart, sustainable and inclusive growth; to characterize the farmers' cooperative as one of ways for the modernization of agriculture sector. The analysis shows that economic transformation in Lithuania is related to the restitution of the private property rights in 1990, when the farmers' farms began to settle. Planned economy system and its structure collapsed. Collective farms in the agricultural sector were gradually completely eliminated. The number of small farmers' farms increased in the period of 2005-2014 by 12.1% and their agricultural land increased by 29%. The level of education of young farmers is very poor and can cause problems by implementing innovations, new organizational forms of different activities and services. The investigation reveals that in Lithuania the level of farmers' farms cooperation is small and the market share is low, unlike in Europe and the world's developed countries such as Japan, the United States of America (USA).

Key words: agriculture, farmers' farms, economic development, sustainable development, farmers' cooperative.

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+ Corresponding author. Tel.: + (370613 43624); fax: + (370 208757).
E-mail address: (jadvyga.ciburiene@ktu.lt).

Introduction

In the conditions of European integration and globalization in Lithuania, as in all the 28 European Union Member States (EU-28), the role of agriculture is important but the share of this sector decreases in the structure of economy of each country and in generally in all the EU-28. The scientific research shows the significance of agriculture and its relevant role in the export in objective to increase the competitiveness of the country and to help ensure sustainable territorial development. Rural Lithuanian territories consist of 33.4% of total population of the country, which is continuing to decrease. All of the Lithuanian population, including the rural population, is ageing. Other, 25% of rural population, is above 60 years of age. The employment rate in rural areas is smaller in comparison with urban areas and the average disposable income of rural population is considerably lower – by 24.7% than urban population (Rural Development Programme ..., 2010). The small farmers (farm size 0-5 ha of agricultural land) in the year 2015 accounted for 57.6% of the total number of farmers and produced about 72.7% of the total agricultural production (Rural Holdings Register Information System, 2015).

One way to increase employment and to improve productivity and enlarge disposable income is to use different organizational forms in agriculture, including the farmers' cooperatives. The farmers' cooperatives in Lithuania in the year 2010 produced about 8.5% of all of the agricultural production (Bijman, J. C. et al., 2012). The share of the agricultural products market of the farmers' cooperatives in the EU countries is considerably higher than in Lithuania, for example, in Finland 74%, in the Netherlands – 68%, in Denmark – 66%, in Sweden and Ireland – 59%, in Germany and Spain - 47% and so on. The average share of agricultural product market of the farmers' cooperatives of the EU-27 in the year 2010 was 40% (Bijman, J. C. at al., 2012).

Agricultural cooperatives are widely applied both in Japan and in the United States (US). For example in year 2007 Japan created yields in farmers' cooperatives which were about USD 90 bill. and united 91% of all the country farmers, at the same period in the US, 30 thous. farmers' cooperatives provided more than 2 mill. jobs (Co-operative Identity ..., 2015).

Not all rural residents are equally characterized by entrepreneurship, and have a capacity for initiative, thus, the promotion of entrepreneurship can be encouraged focusing on the development of cooperation in the Lithuanian countryside. This form of agriculture could become an effective instrument for maintaining employment, generally by farmers; addressing topical issues with cooperative forces of economic activity, such as: purchase of new equipment, better organization of sales of manufactured products or services. The article analyzes one of the ways to increase the effectiveness of agricultural activities – though cooperative development processes in different activities of the agricultural sectors. Analysis of scientific literature and statistical data of the European Union (EU) Member States and economically developed countries in the world show that cooperation can be developed in any

of the food supply chain's structural element: in the manufacture, supply or intermediation of agricultural products; in the reprocessing of agricultural products and in their consumption. The farmers' cooperative enhances the operational performance of agriculture and facilitates a balanced agricultural sector and the whole economy of the country as well as the economy in the global level.

The object of this study: farmers' cooperative in the economy.

The aim of the study: to analyze the role of farmers' cooperatives in the context of economic transformation in Lithuania.

Objectives of the study: to characterize the economic transformations in Lithuania; to discuss the changes of farmers' cooperative importance in the country economy development, as a smart, sustainable and inclusive growth; to characterize the ways for the modernization of agriculture using farmers' cooperation. The methods of research: analysis of scientific literature, statistical classification and comparison, logical comparative analysis and synthesis.

Research results and discussion

In the conditions of growing global and regional economy, the consumption of food has an increasing tendency. According to the OECD data, food consumption will grow by 60% by the year 2050. Consequently it is really important to increase agricultural productivity of farmers' farms, as they are the most important producers of agricultural products in Lithuania. The analysis of scientific literature (Von Braun, J., 2008) shows that the development of family farms cooperatives is a significant instrument to increase its viability and further development. The importance of the role of cooperatives is based on the principles of self-help, self-responsibility, democracy, equality, equity, and solidarity. This form of labour organization is used worldwide and it is set out that over one billion people are members of cooperatives. Moreover, cooperatives of all economic sectors create over 100 mill. jobs around the world, which creates 20% more new workplaces than the multinational enterprises (Agricultural Cooperatives ..., 2012). The International Cooperative Alliance characterizes cooperative as "autonomous association of persons united voluntary to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically controlled enterprise" (Co-operative Identity ..., 2015).

The satisfaction of farmers' economic, social, and cultural needs requires developing their abilities and initiatives. These factors – abilities and initiatives – are one of the main, which affect the level of entrepreneurship of rural population (Vaznonis, V., Ciutaite, D., 2010). Other authors characterize the entrepreneurship of farmers due to the food supply chain, ranging from agricultural production to final products to consumers (Vavilov, O., 2008 recited from Ramanauskiene J., Gargasas A., 2012). They substantiate that the level of entrepreneurial professionalism of farmers is based on the four elements (related with the traditional food supply chain elements) which are: sales, financial, industrial, and innovative activity. Some

researchers (Jurkenaite N., 2012) show that the viability of farmers' farms in Lithuania in the year 2010 has decreased, because of the increase of the number of farmers who are unable to cover production costs and decreased long-term economic attractiveness of agricultural activity.

After the restoration of Lithuania's independence in the year 1990 and the reconstruction of remaining real estate property rights, farmers' farms began to settle. The process of economy transformation is based, firstly, on the changes of economic system (transition from a command economy to a market economy system, based on the restitution of personal property, privatisation of state property and establishment of new private firms in all economic sectors), and secondly, on the structural changes of a country' economy, related to the changes of different economic activities roles, because Lithuanian economy became an open small economy, cooperating with other countries, oriented not only to the East, but firstly to the Western Europe countries. The previous agricultural sector, based on command economy and the activity of the collective farms, was gradually completely eliminated. A new organizational form of activity was reintroduced in agricultural sector – farmer's farms. The greatest part of them, as shown in Table 1, consists of small farms. The small farms in the structure of all farms in the year 2014 accounted for about 57.6 %, while the average size of the farmers' farm was – 8.03 ha. The value of agricultural production produced in the year 2014 in Lithuania by farmers; farms accounted for 72.7% of the country's agricultural output volume (Rural Holdings Register Information System, 2015), including organic agricultural products (Ciburienne J., 2014).

Table 1

The structure of farmers' farms and agricultural land by farm size in Lithuania in the period 2005-2011, %

Farmers farm by size, ha	0-5	5-10	10-50	50-100	>100	Total
1. Structure of farmers' farms, %						
2005	51.4	26.0	20.3	1.4	1.0	100.0
2007	60.5	20.1	16.4	1.7	1.3	100.0
2010	58.8	20.0	17.0	2.4	1.9	100.0
2014	57.6	21.2	19.9	1.0	0.3	100.0
Change during the period 2005-2014	12.1	-18.5	-2.0	-28.6	-70.0	-
2. Agricultural land, %						
2005	13.1	16.6	33.5	8.4	28.4	100.0
2007	14.4	12.1	27.5	10.2	35.8	100.0
2010	11.4	10.1	25.0	12.0	41.6	100.0
2014	16.9	18.9	45.8	7.8	10.6	100.0
Change during the period 2005-2014	29.0	13.9	36.7	-7.1	-62.7	-

Source: author's calculations based on Rural Holdings Register Information System, 2005-2015

The transition of the Lithuanian economy from planned economy system to market economy system created and developed private property form. Substantial structural transformations of

different industries shares occurred in Lithuanian economy over the period 1990-2014. The transition process created the conditions for the emergence of farmers' farms.

Farmers' education structure is classified according to three age groups, which are presented in Table 2. The data show that the share of the undergraduates university degree both of young farmers (under 40 years of age) and both of farmers over the age of 65, in the year 2010 slightly increased compared to the year 2007, accordingly, by 11.8% and 5.5%. However, the share of young farmers with minimum vocational education increased up to 49.1%, while the middle-age group of farmers rose to 19.5%. These changes indicate that young farmers' education level is very poor and can cause problems by implementing innovations, new organizational forms of different activities and services. The share of young farmers' in the total farm structure in the year 2014 accounted for 17%; the farmers of the middle age group accounted for 47%, while the group over 60 years – 36% in the total farm structure (Rural Holdings Register Information System, 2015).

Table 2

Lithuanian farmers' structure by education level in the period 2007-2010, %

Education level	Young farmers (< 40 years old)			Farmers 40-65 years old			Farmers >65 years old		
	2007	2010	chan-ge	2007	2010	chan-ge	2007	2010	chan-ge
University education	6.8	7.6	11.8	14.5	13.7	-5.5	11.7	12.6	7.7
College	2.1	1.7	-19.0	5.3	4.8	-9.4	4.7	5.0	6.4
Post- secondary tertiary	24.3	15.8	-35.0	42.4	39.8	-6.1	29.1	30.4	4.5
Vocational	31.6	25.8	-18.4	20.6	22.3	7.8	12.5	12.7	1.6
Minimum professional	35.2	49.1	39.5	17.1	19.5	13.4	42.0	39.3	-6.4
Total	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-

Source: author's calculations based on Rural Holdings Register Information System, 2005-2015

Moreover, both in the short food supply chain and in the traditional food supply chain, the farmers play a meaningful role. Many individual farmers often fail to reduce transaction costs purchasing agricultural machinery, grain drying equipment or other, selling for wholesale or retail trade agricultural products. It is necessary to develop farmers' cooperation in order to increase the competitiveness of the small farmers' farms, which are poorly prepared for the farming and have weak bargaining power.

Scientific literature studies show that the main goals in foreign countries of the organization and development of cooperatives are: satisfying of its member's economic, social, cultural needs; and obtainment profit from agricultural activity and securing sustainability. The practice shows, than farmers' cooperatives play fewer roles in the new EU countries, including Lithuania, compared to the old EU Member States, as shown in Table 3 (Peters, R., 2013). The market share of agricultural cooperatives in separate countries' relevant agricultural sector considerably differs. Statistical data shows, that the weakest agricultural cooperatives are in Lithuania, because statistical data is submitted only for one sector – dairy, which covers 25% of all sector market. The farmers' cooperation level per all agricultural sectors in Lithuania is only 8.5%.

Latvia and Estonia have achieved a higher level of farmers' farms cooperation in the dairy sector than Lithuania, and it accordingly consists of 33% and 35% of the market share. In these countries, the cooperatives also operate in different agriculture sectors and take their place in the shared market, for example, in Latvia sheep meat (6%), fruit and vegetables (F&V, 12%) and cereals (38%); in Estonia – pig meat (1%), F&V (4%) and cereals (10%) sectors. The level of farmers' farm cooperation in the various sectors of agricultural production is bigger in the older EU Member States, for example, in the dairy sector the largest market share of cooperated farms is in Ireland (99%), Finland (97%), Denmark (96%), etc.

The total agricultural product value of Latvia and Estonia farmers' cooperatives is, 28.5% and 19% of their market shares respectively. The data show that the farms cooperation level of the previous planned economies countries is significantly lower than in West European countries.

Table 3

Market share of cooperatives per agricultural sectors and market share of cooperatives per country in the EU-27 in 2010, %

Country	Share of cooperatives per agricultural sectors								Agricultural cooperatives market share	
	dai-ry	pig meat	sheep meat	wine	oli-ves	F&V*	sugar	cere-als	per country	compa-ri-son, in times
Estonia	35	1				4		10	19	2.2
Denmark	96	86				>50			66	7.8
Finland	97	81				40		49	74	8.7
France	55	94		38		35	62	74	55	6.5
Germany	65	20		33		40		50	47	5.5
Hungary	31	25	20	9		18	30	12	18	2.1
Ireland	99								59.5	7
Italy	42			52	5	50	20	27	38.5	4.5
Latvia	33		6			12		38	28.5	3.4
Lithuania	25								8.5	1
Netherlands	90					95	100	55	68	8
Slovakia	25	11				10		16	16	1.9
Spain	40	25	25	70	70	50	28	35	47	5.5
EU-27	57	27	4	42	37	42	27	34	40	4.7

*F&V – fruit and vegetables

Source: author's calculations based on Bijman, J. C. at all, 2012; Peters, R., 2012

In Latvia and Estonia the farmers' cooperative created value is 3.4 and 2.2 times bigger than in Lithuania. Finland achieved the highest overall level of cooperative farms (74%), the Netherlands (68%), Denmark (66%). This means that the market share in these countries is bigger, accordingly by 8.7; 8 and 7.8 times in comparison with Lithuania's farmers' farms cooperative market share.

Conclusions

1. Over the period of 1990-2014 substantial structural transformations of different economic activities occurred, including agriculture in Lithuanian economy. The transition process in the agricultural sector from command economy to market economy created the conditions for the emergence of farmers' farms. Since this is a relatively new form of agriculture development, mainly small farmers operate in Lithuania (farm size 0-5 ha of agricultural land) and in year 2014 they accounted about 57.6 % of the total number of all farmers.

2. The farmers' farms in Lithuania have produced about 72.7% of the country's agricultural output in the year 2014. The big problem is that the share of young farmers with minimum vocational education increased up to 49.1%, while the middle-age group of farmers rose to 19.5%. These changes indicate that young farmers' education level is very poor and can cause problems by implementing innovations, new organizational forms of different activities and services and at last to affect the competitiveness of this sector. The fall of the competitiveness level of small farmers' farms can reduce the already small market share of farmers' cooperatives per agricultural sector and per country.

Young farmers' higher level of education can promote the modernization of manufacture processes, create more work places and increase cooperation in different agricultural sectors. Such changes can cause smart, sustainable and inclusive growth in agriculture.

3. The investigation revealed that in Lithuania, unlike in the Western Europe countries, or the old EU Member States, and in the other developed countries, for example, in Japan, in the USA, the level of farmers' farms cooperation is small. These countries are more developed economically, and their agricultural sector has a higher productivity than the Lithuanian agricultural sector. One of the main ways for the modernization of Lithuanian agriculture sector, creating more possibilities for farmers to invest, avoiding the risks, and increasing the yield of the agricultural products, is the enlargement of farmers' cooperatives.

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