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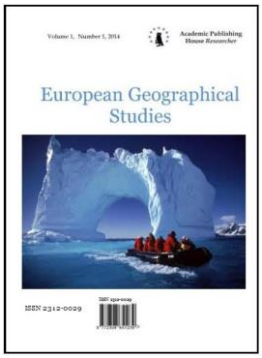

UDC 33

Agricultural Holdings in Montenegro – Structure, Labor Force, Use of Agricultural Land: a Review

Goran Rajović [a, *], Jelisavka Bulatović [b]

[a] International Network Center for Fundamental and Applied Research, Russian Federation
[b] College of Textile Design, Technology and Management, Belgrade, Serbia

Abstract

In this paper authors analyze the structure of agricultural holdings in Montenegro; persons engaged in work on family agricultural holdings and used agricultural land family agricultural holdings. The total number of agricultural households in Montenegro in 2010 is 48.870. Out of that 48.824 are family agricultural holdings. According to is size class of utilized agricultural land 15.418 of family agricultural holdings in the interval of 0.1- 0.5 ha or 31.6 %. Working on agricultural households engaged an average of 2.03 people. Of the total of 48.824 bearers of family agricultural holdings 6.286 women, i.e. 12.87 %, while 42.538 men, i.e. 87.13 %. How would family agricultural holdings in Montenegro improved its physical and economic performance and become more competitive, it is necessary to obtain the support of political leaders, through the implementation of a number of support measures: ensuring predictable and stimulating agricultural and overall economic policy; market development (agricultural products, capital, land); creating a stimulating business environment for higher investment, employment, overall economic development and diversification of income and activities of the rural population.

Keywords: Montenegro, family agricultural holdings, structure, labor force, agricultural land.

1. Introduction

What is an agricultural holding? Is the term “agricultural holding” used for something that is precisely defined or a label inherited from the past that implies more loosely an “agricultural enterprise, firm or business”? These questions remind us that the agricultural holding is a multi-dimensional social construct with, inter alia, spatial, agronomic, economic, statistical, institutional, and symbolic dimensions (Laurent, Rémy, 1998).

Geographers and economists need to focus on this issue because weakening the meaning of the term agricultural holding causes confusion in debates on the development of agriculture. As policy measures are, in the main, directed at agricultural holdings, an examination of what is meant by this concept means questioning how beneficiaries of certain policy measures are selected and calls into question what a farmer actually is. The agricultural holding is also at the heart of a statistical frame that gives us our picture of European Agriculture. Redefining the basis of the

* Corresponding author
E-mail address: dkgoran.rajovic@gmail.com (G. Rajović), jelisavka.bulatovic@gmail.com (J. Bulatović)

statistical construct by recommending, for instance, that it only includes holdings that receive direct subsidies means changing outlooks on agriculture (Laurent, Rémy, 1998).

Thus, there is no universally agreed definition of family agricultural holding, although various stakeholders have established definitions either for purely analytical purposes or for the implementation of government programmers. Despite such variation among definitions of family farms, there are some commonalities. A survey of 36 definitions of family agricultural holding found that nearly all definitions of family agricultural holding specify that a member of the household owns, operates and/or manages the farm either in part or fully. Often the definition specifies a minimum share of labour that must come from the owner and his or her relatives. Many definitions limit the size of the agricultural holding explicitly by establishing a maximum land area for the farm, beyond which the farm is no longer considered a family agricultural holding. Some definitions require that the share of household income from non-farm activities not exceed a certain level (Garner, de la O Campos, 2012).

For the International Year of the Family agricultural holding being celebrated throughout 2014, FAO has defined family agricultural holding as follows: Family Agricultural Holding (which includes all family-based agricultural activities) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labor, including both women's and men's. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions. (FAO, 2013).

Without getting further in theoretical considerations the definition of agricultural households by Radojević et al (***) in Montenegro agricultural holding represents a unique technical and economic unit with a unified administration, carried out by agricultural activity and which can be familial agricultural holding or a business entity. Family agricultural holdings is households used at least 1000 m² of agricultural land or less than 1000 m² of agricultural land, has a 1 cow and 1 calf; or 1 cow and 1 offspring; or 1 cow and 2 adult throat small cattle; or 5 adult sheep or goats, or 3 adults pigs; or 4 adults throat sheep, goats and pigs together, or 50 pieces of adults poultry, or 20 beehives). Included are those households that have agricultural production, but do not meet the above requirements for the agricultural holding, where agricultural production is the only source of income for the household. Census to include and households that do not meet the above requirements, or dealing with cultivation of mushrooms in specialized facilities. Starting rank holding the person in whose name and for whose account is kept farm and who is legally and economically responsible for the holding, i.e. who bears the economic risks holdings. Business entity - shall mean all natural and legal persons engaged in an activity based in Montenegro, established and registered by the competent authority in accordance with the law, as well as the organizational units of foreign companies and foreign merchants doing business in the territory of Montenegro. On this point we intend to point the structure of agricultural holdings in Montenegro in 2010, i.e. on the workforce on family agricultural holdings according to gender and age structure, and the structure of agricultural land of family agricultural holdings.

2. Results and their generalizations

Doichinova, 2008 referring to the study Kanchev et al., 2008 and Reed et al., 2012 is implement the definition of family agricultural holding. The family agricultural holding (Figure 1) is defined as an organization in which:

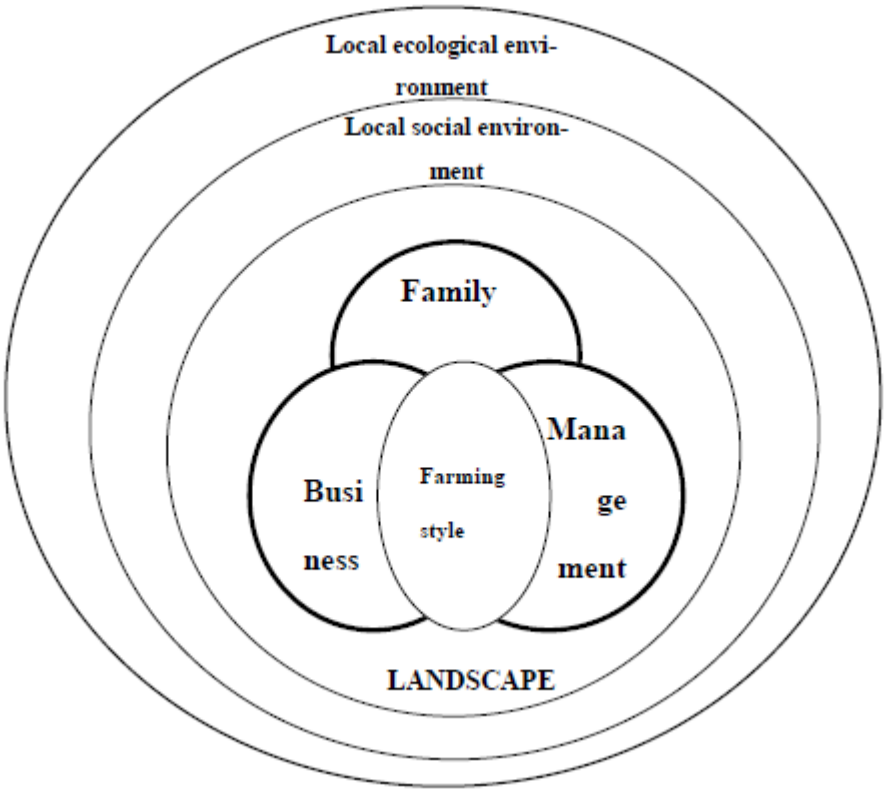

Fig. 1. Family agricultural business (Doitchinova, 2008).

a) The ownership on business is combined with management (or control) from the linked by kinship or marital ties of the principals. The families members secure economic, cultural and social capital and participate in it via intellectual, emotional or directly via labor form,

b) Farming style of each consecutive managing owner expresses the family philosophy for farming. Agricultural holding is given to chosen heirs,

c) The whole or part of the family lives on the territory of the agricultural holding (or closed to it) and it's surrounded by local networks or relatives, friends and other groups which form the social and cultural environment. The landscape and environment of the agricultural holding are formed with family labor and directly influence the family quality of life. On this basis multifunctional holding is each agricultural holding in which the production resources and its territory are used for linked or non-linked with agriculture activities. Besides this the family members own and manage other businesses regardless their location (Doitchinova, 2008).

The total number of agricultural holdings in Montenegro in 2010, according to data from the Statistical Office of Montenegro, 2012 is 48.870. Out of that are 48.824 family agricultural holdings. According to the size class of utilized agricultural land 15.418 of family agricultural holdings is in the range of 0.1 - 0.5 ha or 31.6%. Montenegro has 23.242 agricultural holdings classified as a specialized type of production for livestock, which represents 47.56% of total holdings. Of the is total number of family agricultural holdings 43.125, i.e. 88.3% of family agricultural holdings have a perennial meadows and pastures, while only 122 farms, i.e. 0.2% have nursery garden. The largest number agricultural holdings using perennial meadows and pastures is based holdings in the municipalities Nikšić, Podgorica, Bijelo Polje, Pljevlja and Berane.

According to Šarović, 2013 perennial meadows and pastures make up by far the largest part of the utilized agricultural land, which is certainly a very negative impact on the production of agricultural crops, especially in the central part of Montenegro. However, what is even worse is the fact that we get when we find the share as a percentage of meadows and pastures. The largest share of used land then do not make no meadow pastures even more katuns with 58.66% as long meadows occupy 37.39% and 3.95% of all pastures. This finding indicates that the majority of utilized agricultural land makes the katuns of the northern part of Montenegro, which is in principle very unfavorable agrarian structure of parcel of that part of the Republic. However, it's the ultimate effects must always be considered as part of other natural and economic environment

(geographical region, technical equipment of farms, and other types of production), and will be so in the official statements easier to find a justification for this kind of agrarian - cadastral attitude.

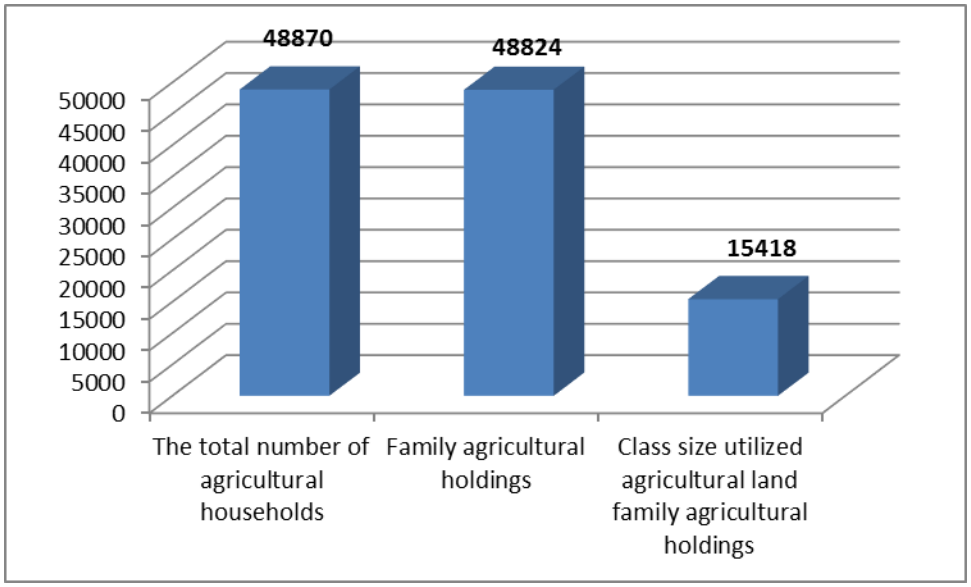

Fig. 2. Agricultural households in Montenegro and size class utilized agricultural land

Working on agricultural households engaged an average of 2.03 people. Of the total of 48.824 bearers of family agricultural holdings 6.286 women, i.e. 12.87%, while 42.538 men, i.e. 87.13%. Our research records look like based on research Janeska, Bojnec, 2011 indicates yes as for the characteristics of the labour force and their influence on development, the reduction in the participation of women in the agricultural labour force can be seen as a new feature. Yet, this change remains in the shadow of an unfavorable age and educational structure, as well as the adverse spatial distribution of the total labour force. For market-oriented agricultural production, a significant factor is the education level of farmers. "The age structure of agricultural holdings in Montenegro is characterized by a high proportion of older working-age population at the holding and a small number of younger members. The process senilisation village is deeply affecting all spheres of Montenegrin rural communities because today almost 44% of the total number of persons employed on the farm is people over 55 years of age. At least is of those which would in future progressive, entrepreneurial-oriented holdings should be the highest, only 7% of the workforce in Montenegrin households is under the age of 24 years" (Šarović, 2013).

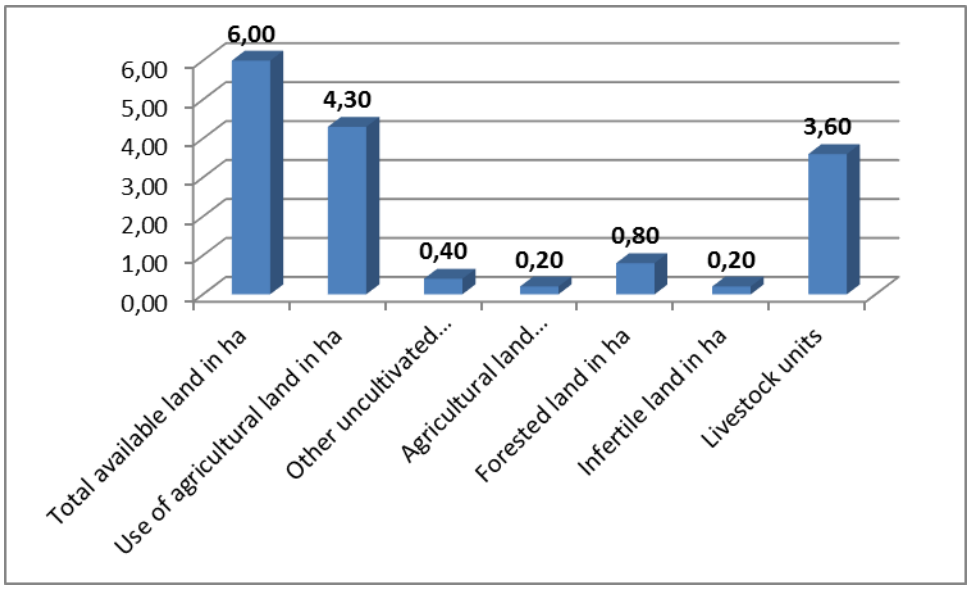

Fig. 3. Availability of the average family agricultural household

Average family agricultural household has 6.0 ha of land available, 4.3 ha of agricultural land use, another 0.4 ha of uncultivated agricultural land, 0.2 ha of uncultivated agricultural land, 0.8 ha of forest land, 0.2 ha of arid land 3.6 livestock unit's cattle. „ If we make a comparison with the EU countries, we see that in Montenegro (whose territorial area of the smallest countries in Europe) are significantly smaller amount of utilized agricultural land in the total territorial area of the country than in most other countries (modest 16%)" (Šarović, 2013). According to the data of the Statistical Office of Montenegro, 2012 municipalities with the lowest number of family agricultural holdings has Tivat 169 what it makes 0.35% of the total number of family farms. The municipality with the largest number of family agricultural holdings is Podgorica 7.276, which makes 14.89% of the total number of family agricultural holdings. While the total value of the economic size of agricultural holdings in Montenegro in Euros is 125.817.765.2, or an average of 2.574.54 EUR per agricultural holdings. "Taking into consideration that the quality of human capital is one of the most important factors for efficient agricultural development, the existing situation in of Montenegro requires a greater focus of attention on the human resources in this sector. For changes in a positive direction, a demographic and economic revitalization of rural areas is necessary. Amid the conditions of social and economic transformation, and the implications of the long-term economic crisis, during the 1990s there was a significant increase in interest among urban citizens in migrating (or returning) to rural areas. Yet this interest was not adequately capitalized upon to accelerate a revitalization of rural areas" (Janevska, Bojnec, 2011).

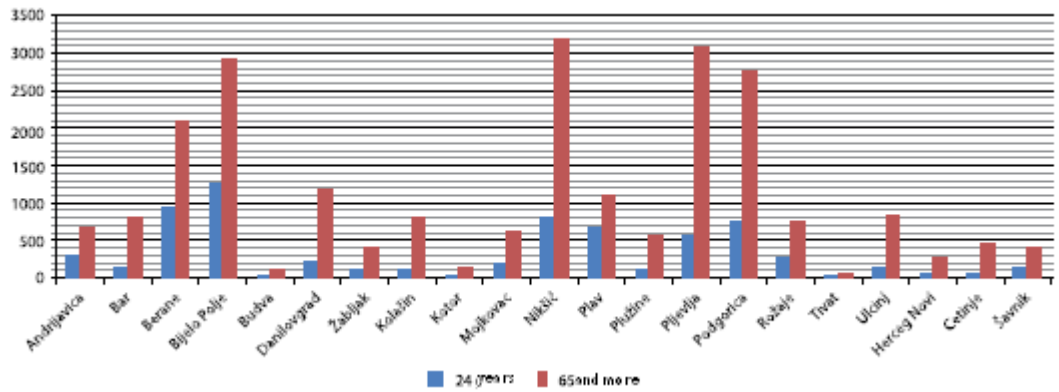

Fig. 4. Working persons engaged on family agricultural holdings by age

Source: Statistical Office of Montenegro, 2012.

Labour force on family agricultural holdings makes 33.180 persons from other 4 years of high school, or 33.74%, of which 22.157 are men, i.e. 66.78% and 11.023 women, i.e. 33.22%. The number of persons with higher agricultural education was 1.446 which makes 1.47% of the total workforce of family agricultural holdings. The number of men with higher or university agricultural education was 1.054, i.e. 72.89%, female 392 or 27.11%. The share of persons with other higher or university education in the labor force is 7.62%, of which 74.37% were men and 25.63% women. Considering the educational structure of the labor force on family agricultural holdings by municipalities, the largest number of people with higher or university education is in the Podgorica, Nikšić and Bijelo Polje. The largest number of persons with higher and university agricultural education is in the Beranama, Podgorica and Nikšić (Statistical Office of Montenegro, 2012).

Human resource management is important for the development of agriculture and the rural economy. With a view to determining the optimal use of natural resources and developing the agricultural sector, judging by its qualitative characteristics the labour force can be regarded as insufficient in agriculture Montenegro. This implies a rural and agricultural labour market mismatch. In many rural areas Montenegro, the lack of labour force presents a serious limiting factor in the development of agricultural production. In that sense, there is an evident tendency towards a worsening imbalance between the two basic factors of agricultural production: the land that has the natural potential and the asymmetric concentration of the rural and agricultural population, as well as the available labour force (Janevska, Bojnec, 2011).

Table 1. Family agricultural holdings by size of the class type of utilized agricultural land in the period of 1960-2010

Family holdings by the size of class type of utilized agricultural land	1960	2010
no land	-	581
<0.10 ha	-	2.514
0.10<0.50 ha	5.899	15.418
0.50< 1.00 ha	6.900	8.465
1.00< 2.00 ha	11.939	8.865
2.00 < 3.00	8.643	4.076
3.00< 4.00 ha	6.362	2.256
4.00<5.00 ha	4.586	1.287
5.00< 6.00 ha	8.506	1.056
6.00<8.00 ha		1.066
8.00<10.00 ha	3.285	588
10.00<15.00 ha	8.798	814
15.00<20.00 ha	-	342
20.00<30.00 ha	-	323
30.00 <50.00 ha	-	312
50.00< 100 ha	-	436
100 ha and more	-	425
TOTAL	64.918	48.824

Source: Joksimović et al., 2016, according to Agricultural Census for 1960 and 2010.

In the period between two agricultural censuses (1960-2010) there were significant changes in the structure of agricultural holdings. According to the last Agricultural Census, total number of households decreased by about 25% compared to the Census of 1960. According to the Census of 2010, the highest share goes to the households of size from 0.10 to 0.50 ha (31.6%) and a very small number of households with 100 or more hectares (0.87%). Comparing the results of Census of 1960 and 2010, it could be seen that in 1960, the largest share accounts to the holdings size of 1-2 ha (18.39%), while the share of households larger than 10 ha were at the level of 13.55%. Analysis

of the data indicates a significant change in the number of households by type of using. In the period of fifty years, the share of households increased to 2 ha and it was 55.25%, while according to the Census of 1960, this share was at the level of 38%. The share of households in size from 2.1 to 10 ha, according to the Census of 2010, decreased by approximately 27% compared to 1960. Their share was at a level of 48% (1960), while according to the Census of 2010, it was about 21% (Joksimović et al, 2016).

Out of 48.824 family agricultural holdings, 6.088 holdings or 12.24% raise sheep. An average number of sheep per family agricultural holding is 37.6 in comparison to the number of holdings that breed sheep, while the average number of sheep is 4.7 heads in comparison to the total number of family agricultural holdings. The number of holdings that take sheep to common lands amounts to 3.512, which makes 57.7 of the total number of family agricultural holdings that breed sheep. Taking into consideration the previously stated, it can be noticed that livestock potential of Montenegro relies on sheep breeding, which is particularly emphasized by the fact that an average family agricultural holding possesses 37.62 sheep If the data of the Agricultural Census implemented in 2010 are compared to the data of Population Census 2013, it can be concluded that number of bovines at family agricultural holdings suffered a decline of 2.4%, while the number of sheep increased for 42.3%; goats for 157.8%; pigs for 37.7%; poultry for 74% and number of beehives for 103.6% (Despotović et al, 2015).

3. Conclusion

In conclusion, agricultural holdings in Montenegro - structure, labor force, use of agricultural land, see the following:

1. The total number of agricultural households in Montenegro in 2010 is 48.870. Out of that 48.824 family agricultural holdings. According to the size class of utilized agricultural land 15.418 of family agricultural holdings in the interval of 0.1 - 0.5 ha or 31.6%,
2. Of the total number of family agricultural holdings 43.125, i.e. 88.3% of family agricultural holdings have a perennial meadows and pastures, while only 122 farms, i.e. 0.2% have nursery garden,
3. Working on agricultural households engaged an average of 2.03 people. Of the total of 48.824 bearer of family agricultural holdings 6,286 women, i.e. 12.87%, while 42.538 men, i.e. 87.13%,
4. The number of persons with higher or university agricultural education was 1.446 which makes 1.47% of the total workforce of family agricultural holdings. The number of men with higher or university agricultural education was 1.054, i.e. 72.89%, female 392, or 27.11%. Participation persons with other higher and university education in the labor force is 7.62%, of which 74.37% were men and 25.63% women,
5. According to the Census of 2010, the highest share goes to the households of size from 0.10 to 0.50 ha (31.6%) and a very small number of households with 100 or more hectares (0.87%). Comparing the results of Census of 1960 and 2010, it could be seen that in 1960, the largest share accounts to the holdings size of 1-2 ha (18.39%), while the share of households larger than 10 ha were at the level of 13.55%,
6. If the data of the Agricultural Census implemented in 2010 are compared to the data of Population Census 2013, it can be concluded that number of bovines at family agricultural holdings suffered a decline of 2.4%, while the number of sheep increased for 42.3%; goats for 157.8%; pigs for 37.7%; poultry for 74% and number of beehives for 103.6%.

Our research evidence based on similar research Paraušić and Cvijanović, 2012, indicates yes development constraints family agricultural holdings in Montenegro, where farmers because of their mentality are usually not aware of, are developed: Human resources (low knowledge and skills of farmers, low rate of entrepreneurship for application innovation, business expansion, lack of desire and interest in the acquisition of knowledge, association ...); Physical resources (small land area, lack of facilities and/or equipment for the storage, preservation and packaging of agricultural products, the absence of the conditions and facilities for refining of agricultural products ...); Social capital (a large proportion of these producers is fragmented bearing in mind: undeveloped /inactive associations of farmers, absence of awareness of farmers about the need and importance of association; lack of trust, both between farmers and between farmers and local / central government authorities, chambers of commerce, cooperatives...); The absence of vertical integration of farmers

(in the production and market the food supply chain, whether long-term contracts, any ownership links with the food industry, cooperatives, trade and so on. Because of this, primary producers do not have the power to influence the purchase price and terms of purchase and value products and additional profit most often generated at the higher levels of the value chain (trade, i.e. intermediary operations) ... (see Rajović, Bulatović, 2015a; Rajović, Bulatović, 2015b; Rajović, Bulatović, 2015c; Rajović, Bulatović, 2015d; Rajović, Bulatović, 2016).

Koloszko-Chomentowska, 2014 citing research Poczta et al., 2012, Bojnec, Latruffe, 2013, Overmars et al., 2013, Smutka, Selby., 2013 and Spicka, 2013 indicates that the results of studies conducted until now prove that utilization of Common Agricultural Policy instruments has improved the production and economic results of the agricultural holdings of new member states. "Funds from the Rural Development Program have proven to be helpful to the development of agricultural holdings. Farmers have obtained the capability to invest in their holdings and adapt them to the requirements of a competitive market, particularly considering that the neglect in this scope is very extensive. However, the fact that the economic conditions in Europe and around the world have worsened, starting from 2008, must be taken into account, and this has had an impact on the situation of agricultural holdings. This justifies the need to conduct systematic studies and assess the functioning of agricultural holdings in a long-term perspective" (Koloszko-Chomentowska, 2014).

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