The priorities of rural development in the EU countries in years 2007–2013

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Abstract: The diversified level of agricultural development and directions of evolution of rural areas in the individual EU countries results in complex and diversified problems for the agricultural policy. That was a basic reason of giving a relatively great freedom to the individual member states to choose measures within the individual axes of the Rural Development Programmes. The allocation of expenses to the individual measures Member States should ensure that synergies among the economic, environmental and social aspects and, by assumption, it is supposed to reflect the priorities of rural development. The analysis of the allocation of expenses within the national rural development programmes will indicate similarities and differences of the use of the CAP support in the regional aspect. The main goal of the paper was to determine the priorities of rural development in the individual EU member states. As results from the analysis the specific character of the individual programmes corresponded to the level of development of the individual countries and the needs of the agribusiness and rural areas resulting from that level. The diversification concerning the directions of use of the assets from the European Agricultural Fund for Rural Development resulted from the different wealth of the societies and rural communities in the individual countries.

Key words: agricultural policy, CAP, European Union, farm subsidy, subsidy programs for agriculture

Abbreviation
CAP – Common Agricultural Policy, EU – European Union, LFA – Less–Favoured Areas, EFARD – European Fund for Agriculture and Rural Development, UAA – Utilized Agricultural Area, AWU – Annual Work Unit, GVA – Gross Value Added, DP – Gross Domestic Product, GNP – Gross National Product, LSU – Livestock Unit

Since the moment of its establishment in 1957, the Common Agricultural Policy (CAP) of the European Union has been evolving and adjusting to the altering internal situation and external conditions (Majewski et al. 2009). The market support, which was widely used in the initial period, enabled the member states to achieve the food self-sufficiency, but it required a considerable financial outlay (Cini 2003) and soon it contributed to the development of the adverse effect of food overproduction and 'spoilt' the world market with the subsidised European food. Therefore, since the MacSharry's reform in the 1990s, the market interventionism has been gradually abandoned in favour of the direct support of agricultural income. Apart from the improvement in the nourishment situation in the recent years, there have been numerous structural changes, both in agriculture itself and its surroundings. The mechanisation and chemisation of agriculture contributed to the increased workforce productivity, which resulted in the reduced demand for labour in this sector of economy and contributed to an increase in the area of farms. Furthermore, the landscape simplification (Bałazy and Jankowiak 2008) and the application of chemical substances led to an increased influence of agriculture on the environment. Changes in the lifestyles of European societies in combination with the described changes in agriculture itself transformed the functions of rural areas, which are increasingly inhabited by the non-farming population, including people running non-agricultural businesses. The aforementioned objective factors contributed to a change in the paradigms of the CAP, i.e. the abandonment of support provided only for agriculture in favour of a more widely understood rural development policy (Bednaříková and Doucha 2009; Biernat-Jarka 2009; Hadyński

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2009; Oleszko-Kurzyna 2009; Zawalińska 2009). In spite of the fact that at present most expenses in the Common Agricultural Policy still concern the first pillar (direct payments and market intervention), in the following years of the financial perspective 2007–2013 the share of payments made to the second pillar (rural development) continues to increase (Kawecka-Wyrzykowska 2009). Another factor of extreme significance influencing the modification of assumptions of the CAP was the consecutive extensions of the Community, where the latest of 2004 and 2007 were the most important. That resulted in almost doubling the number of the member states from 15 in 2004 to 27 at present. From the point of view of agricultural and rural policy, another aspect of equal significance was the fact that in comparison with the 'old' member states, most of the countries that joined the EU at the time had a different political and economic history in the past fifty years (Sadowski and Poczta 2007; Poczta et al. 2008, 2010). After the World War II., they implemented the command-and-quota system, which resulted in differences in the economic development and living standard (Gotkowska 2009) between the 'old' and 'new' member states and backwardness in the rural infrastructure development in most of the EU 12 countries, which can still be observed at present. A separate problem regarding agricultural and rural development could be seen in Poland, where besides the above mentioned disadvantages which are characteristic of the post-communist countries; there is an unfavourable agrarian structure and overpopulation in agriculture (Kowalski 2010). There was no economic transformation in Poland motivated either by economic (characteristic of West European countries) or political factors (which was the case in most of the new member states). As a result, in Poland there is a relatively high number of under invested farms with low productivity, which significantly affects the condition of rural areas in that country. The diversified level of agricultural development and directions of evolution of rural areas in the individual countries and regions of the enlarged European Union poses a serious challenge how to develop the form of the Common Agricultural Policy which should retain its community character on the one hand and be a useful instrument helping to satisfy more and more the complex and diversified problems, on the other. The idea of sustainable development, which assumes an equal treatment of economic, environmental and social problems, may be in a way a response to those challenges (Ryszkowski and Kędziora 2005; Czubak and Pawlak 2008; Miškolci 2008). The operationalisation of that idea on the basis of the CAP was carried out in the form of the general structure of the Rural Development Programmes 2007–2013 (Hrabánková and Boháčková 2009), which consist of the 'economic', 'environmental' and 'social' axes. In general, they correspond to the individual areas of interest of balanced development. It is also necessary to mention the fact that the individual member states have a relatively great freedom to form their own policies of rural development based on the Community Strategic Guidelines (Dybowski 2008). This is manifested by the possibility to choose measures within the individual axes of Rural Development Programmes so that the form of one's own Rural Development Programme can be best adjusted to one's needs. However, it must be done in a way that 'Member States should ensure that synergies between and within the axes are maximised' (Council Decision 20 February 2006). This certain freedom of choice of priorities (with regard to the guidelines included in the Article 17 of the Council Regulation of 20 September 2005) is externalised by the allocation of expenses to the individual axes and measures and it shows the main direction of emphasis of agricultural policies in the individual countries. If we assume that the level of financing of actions in 2007–2013 is not accidental but it results from the real needs in the EU Member States, an analysis of this allocation of expenses will indicate similarities and differences in support offered to agriculture and rural areas in the EU in the regional aspect.

MATERIAL AND METHODS

The analysis (Figure 1), which was made in several stages, was based on the allocation of assets to the individual measures within the national rural development programmes. Its aim was to determine the priorities of rural development in the individual member states. However, in the study the division of measures according to the individual axes of the Rural Development Programmes was abandoned in favour of formation of the authors' own categories, which specified:

(a) the target group of fund recipients/beneficiaries, i.e. rural inhabitants, farms, enterprises of the agri-food industry,
(b) the aim of offering support, i.e. the improvement of real capital, the improvement of human capital, the improvement of the condition of natural environment.

This approach results (in the authors' opinion) from substantial differences in the administrative division

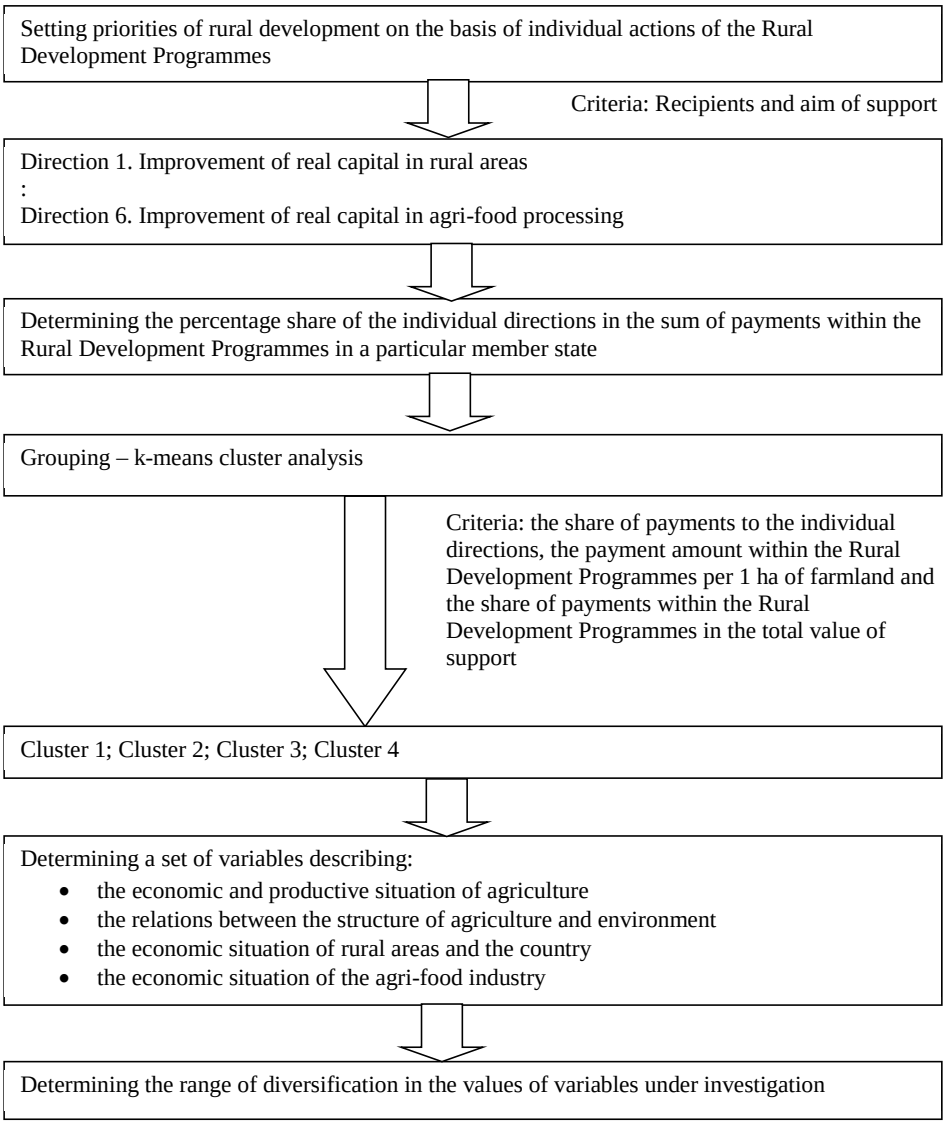

Figure 1. Stages of the analysis

of funds assets of the second pillar of the CAP with regard to the real influence and effects of various actions in the programmes for 2007–2013 (Czubak and Pawlak 2008). On that basis, six directions were formed with the following measures assigned to them within the Rural Development Programmes (Rural Development ... 2009)[1]:

Direction 1. Improvement of real capital in rural areas. Measure: 311 Diversification towards non-agricultural activities; 312 Support for business creation and development; 313 Encouragement of tourism activities; 321 Basic services for the economy and rural population.

Direction 2. Improvement of human and social capital in rural areas. Measure: 322 Village renewal and development; 323 Conservation and upgrading of the rural heritage; 331 Training and information; 341 Skills acquisition, animation and implementation of local and development strategies; 411 Implementing local development strategies. Competitiveness; 412 Implementing local development strategies. Environment/land; 413 Implementing local development strategies. Quality of life; 421 Implementation of cooperation projects; 431 Running the Local Action Group, acquisition of skills and activation.

Direction 3. Improvement of real capital only or mostly in rural areas. Measure: 112 Setting up of young farmers; 121 Modernisation of agricultural holdings; 125 Improvement and development of infrastructure related to the development and adjustment of agriculture and forestry; 126 Restoring agricultural production potential; 141 Semi-subsistence farming; 133 Information and promotion activities; 211 Natural handicap payments to farmers in mountain areas;

[1]Action coding according to the Commission regulation (EC) No 1974/2006 of 15 December 2006.

212 Payments to farmers in less-favoured areas (LFA) other than mountain.

Direction 4. Improvement of human and social capital only or mostly in farms. Measure: 113 Early retirement; 114 Use of advisory services; 115 Setting up of management, relief and advisory services; 124 Cooperation for development of new products; 133 Information and promotion activities; 143 Provision of farm advisory and extension services.

Direction 5. Increased forestation and improved condition of the environment. Measure: 122 Improvement of the economic value of forests; 131 Meeting standards based on Community legislation; 213 Natura 2000 payments and payments linked to Directive 2000/60/EC; 214 Agri-environment payments; 215 Animal welfare payments; 216 Non-productive investments; 221 First afforestation of agricultural land; 223 First afforestation of non-agricultural land; 222 First establishment of agro-forestry systems on agricultural land; 224 Natura 2000 payments; 225 Forest-environment payments; 226 Restoring forestry potential and introducing prevention actions; 227 Non-productive investments.

Direction 6. Improvement of real capital in agri-food processing. Measure: 123 Adding value to agricultural and forestry products.

On the basis of the authors' earlier studies (Czubak and Pawlak 2008), we made an assumption that the aim of a specific measure does not always converge with the achieved effect. Therefore, the allocation of certain measure of the Rural Development Programmes in the individual priorities, which was applied in this article, in some cases does not correspond to their location in the given axis. For example, two measures supporting activities in the areas with unfavourable economic conditions (measures: 211 and 212) are assumed to contribute to retaining the rural character of the areas (including the landscape) and to guaranteeing the continuation of land use (Stolbova 2008). Due to this fact, they were categorised as the Axis 2 ('environmental'). However, obtaining funds within those actions does not involve contracting specific actions and bearing costs. Therefore, in this article, the payments are treated as factors which above all contribute to improved real capital of farms. Some of the measures do not have one specific recipient, but they are addressed e.g., both to farmers and forest holders. Therefore, we decided that for the Priorities 3 and 4, individual measures concern either only (e.g. Setting up of young farmers) or mainly (e.g. Use of advisory services by farmers and forest holders) farms.

In the second stage of research, the percentage of each group in the total volume of support was specified for all EU Member States on the basis of payments from the EFARD for the individual measures. By assumption it is supposed to reflect the priorities of rural development. In the third stage, the STATISTICA 9.0 package was used to make *k* means cluster analysis. The following grouping criteria were assumed (Table 1):

– the percentage of payments to individual directions,
– the share of payments within the Rural Development Programmes in the total support fund for a particular country (without market interventionism),
– the payment amount within the Rural Development Programmes per 1 ha of UAA.

The applied method of *k*-means cluster analysis consists in grouping objects according to a known and predefined number of clusters so that the objects in a particular cluster will be characterised by the biggest possible similarity but will be as much different as possible between the clusters (Electronic Statistics Textbook ... 2011). The computing procedure consists in random creation of groups (clusters) of objects. Then the algorithm moves the consecutive objects to the groups to minimise the variability within the cluster and simultaneously to maximise the variability between the groups. The procedure is stopped when the error function (which measures the diversification of means) does not indicate significant changes in the consecutive iterations. An important element of the method is the need to indicate the number of groups a priori. In order to do so, cluster analysis was applied to distinguish homogeneous subsets of objects (countries) under investigation. The subsets constitute similar elements – they are situated close to each other but simultaneously they are located at a distance from each other. The most frequently selected metric, i.e. the Euclidean distance, was assumed as a measure of similarity between the objects. The objects were grouped by the means of the Ward's method with agglomerative techniques (gradual linking of individual objects into new clusters until one cluster is made). In this approach, the analysis of variance is applied to estimate the distance between clusters. It leads to such linking of objects that they are characterised by the minimum diversification from mean values, measured by the sum of squared deviations of the variable which is the segmentation criterion. The number of clusters was determined on the basis of the analysis of a line graph of agglomerations in the consecutive stages of the object linkage process. The flattening line pointed to the creation of 4 clusters. Upon analysis, from 4 up to 11 member states were categorised into each cluster, within which they represented a similar share of payments of the individual priorities.

Table 1. The allocation of the EU funds within the rural development programmes in the individual Member States[1], share

Country	Cluster	Allocation of funds within the Rural Development Programme 2007–2013 (%)							Share of payment within rural development plan in total support from CAP[2] (%)	Support within rural development plan per 1 ha UAA[1] (€)
		Improvement of real capital in rural areas	Improvement of human and social capital in rural areas	Improvement of real capital only or mainly of farms	Improvement of human and social capital only or mainly of farms	Improvement of real capital in agri-food processing	Increased forestation and improved condition of environment	Total		
Denmark	1	4.1	11.0	8.9	7.3	5.1	63.5	100.0	5.7	163.7
Ireland	1	0.0	10.0	23.4	8.0	0.0	58.6	100.0	19.9	564.6
Sweden	1	5.8	8.3	23.6	5.0	1.5	55.8	100.0	25.1	574.3
United Kingdom	1	5.9	9.3	14.2	4.2	3.4	63.0	100.0	14.2	287.8
Median	1	**5.0**	**9.7**	**18.8**	**6.2**	**2.5**	**60.8**	–	**17.1**	**426.2**
Positional variation coefficient	1	**27.5**	**6.2**	**28.2**	**21.9**	**54.6**	**4.3**	–	**26.9**	**36.4**
Greece	2	10.0	10.2	37.8	7.3	6.8	27.7	100.0	18.9	911.2
Cyprus	2	2.9	8.8	43.3	7.4	7.5	30.1	100.0	38.6	1053.5
Latvia	2	18.5	3.6	45.0	5.3	6.0	21.7	100.0	57.7	563.5
Lithuania	2	10.6	8.3	38.7	9.6	6.2	26.6	100.0	47.1	631.8
Portugal	2	0.1	10.7	48.4	4.2	9.7	26.8	100.0	47.9	1037.1
Slovenia	2	7.3	6.8	40.5	4.9	7.8	32.7	100.0	55.5	1832.7
Slovak Republic	2	8.1	8.7	48.9	1.4	7.8	25.1	100.0	49.8	1026.9
Bulgaria	2	24.0	8.2	37.6	3.7	8.2	18.3	100.0	48.0	866.5
Poland	2	16.4	8.2	35.1	15.0	6.3	19.0	100.0	46.1	841.9
Romania	2	10.3	19.7	39.3	3.1	11.9	15.7	100.0	56.4	519.3
Spain	2	2.1	13.1	32.2	6.7	12.0	33.7	100.0	16.9	283.7
Median	2	**10.0**	**8.7**	**39.3**	**5.3**	**7.8**	**26.6**	–	**47.9**	**866.5**
Positional variation coefficient	2	**41.7**	**12.9**	**8.2**	**32.1**	**15.1**	**16.1**	–	**10.8**	**25.1**
Belgium	3	5.3	8.7	44.2	4.4	5.1	32.3	100.0	8.8	297.7
France	3	3.4	8.7	56.5	3.2	4.8	23.4	100.0	9.8	231.2
Luxemburg	3	3.4	9.3	52.2	0.5	3.5	31.0	100.0	25.6	687.9
Finland	3	8.6	6.2	46.7	2.7	2.4	33.5	100.0	34.3	914.0
Czech Republic	3	13.9	8.2	36.0	2.8	3.1	36.0	100.0	38.2	796.5
Germany	3	9.0	21.9	34.2	0.9	3.3	30.7	100.0	16.5	469.1
Estonia	3	7.8	15.2	34.0	3.2	4.2	35.6	100.0	58.0	756.6
Italy	3	6.1	11.0	30.7	5.2	7.3	39.7	100.0	21.7	632.3
Hungary	3	10.1	9.2	38.5	4.2	4.1	34.0	100.0	35.8	856.3
Netherlands	3	19.7	20.3	28.5	5.1	0.1	26.3	100.0	7.4	252.6
Austria	3	3.2	9.0	34.7	1.5	1.9	49.8	100.0	42.4	1174.8
Median	3	**7.8**	**9.2**	**36.0**	**3.2**	**3.5**	**33.5**	–	**25.6**	**687.9**
Positional variation coefficient	3	**33.0**	**23.9**	**15.8**	**34.5**	**24.6**	**7.3**	–	**46.5**	**32.2**
Malta	4	11.8	26.1	37.0	6.6	7.1	11.4	100.0	73.4	7 122.0
Median	EU 27	**7.8**	**9.2**	**37.6**	**4.4**	**5.1**	**31.0**	**–**	**35.8**	**687.9**
Positional variation coefficient	EU 27	**42.5**	**14.7**	14.1	39.7	39.6	16.3	–	42.1	30.4

[1]The analysis does not include technical assistance measures and the Complements to direct payments for Bulgaria and Romania, [2] without market support

Source: Rural Development ... (2009), own estimation

In the next stage of the analysis, a set of variables characterising the following areas was specified for each of the EU member states:

– the indexes of financing the priorities of rural development in the EU countries (Table 2)
– the economic and productive situation of agriculture (Table 3)
– the relations between the structure of agriculture and environment (Table 4)
– the economic situation of the country and rural areas (Table 5).

Due to the relatively low number of study objects (Member States of the European Union) and their possible high diversification in terms of the studied qualities, a median was used to determine the average values and a positional variation coefficient was applied as a variation measure. This approach resulted from the higher 'resistance' of those measures to atypical – outstanding situations (Wysocki and Lira 2005).

The value and diversification of the variables inside the clusters and between them enabled an answer to the question how similar the countries under investigation are to each other in a particular aspect and why they decided to adopt this rather than another direction of rural development within the general framework outlined in the programme assumptions of the European Union.

RESULTS AND DISCUSSION

When analysing the variability of priorities of national rural development policies implemented in the EU countries between 2007 and 2013, it is necessary to take into consideration the aforementioned guidelines of the Community written in the Article 17 of the Council Regulation of 20 September 2005. They assumed the duty to allocate at least 10% of the total contribution from the European Agricultural Fund for Rural Development to the aims of axes 1 and 3 and at least 25% to the aims of axis 2. Besides, the allocation of funds depended on the decision of the authorities of the individual member states.

Cluster 1 ('ecological') is characterised by the least unequivocal direction of the rural development policy to pro-environmental issues. The share of expenses on higher forestation and improvement of the state of environment is in average the highest and not very diversified internally (Table 1). On the other hand, the share of expenses on the improvement of the real capital in rural areas, farms and agri-food processing is the smallest of all the clusters. The share of payments made to improve the human capital only or mainly in farms is the highest, which may also be related with the pro-environmental direction of national policies of the countries in the cluster, because a considerable part of educational, training and above all advisory actions addressed to farm owners and forest holders is related with teaching about the environmental standards of the European Union[2]. Such unequivocally environmental definition of the priorities may have several substantial causes. First of all, the cluster encompasses only the old member countries, which have been benefiting from the CAP for a long time. That resulted in the improved technical infrastructure both in rural areas and farms located there. The high level of agricultural environment can be proved by the lowest average number of hectares per tractor[3], the number of annual work unit (AWU) per 100 ha of UAA, the highest livestock density (Table 4) or workforce productivity (calculated as the gross value added (GVA) produced by one annual work unit) (Table 3). The saturation of farms with capital can also be proved indirectly by the lowest unit profitability of farms, which is defined by the GVA per farm. This status quo proves the fact that at the current stage of agricultural development in those countries, the problem of modernisation is of a lesser importance and in certain situations it may even cause negative effects for the environment (if the production intensity or livestock density rises) and economy (if farms are overinvested). The very character of agriculture, which is intensive on the one hand but has qualities that make it start pro-ecological measures on the other, may play a certain role in the direction of the rural development policy. Above all, it is necessary to pay attention to the highest average share of permanent grassland, which is particularly supported by the means of agri-environment schemes. The countries of Cluster 1 are also characterised by the highest biodiversity in agricultural areas, which is defined by the share of cereals in the structure of arable land (Table 4). When analysing the directions of using funds, it is necessary to pay attention

[2]According to Article 24 of the Council Regulation (European Community) No. 1698/2005 "the advisory services cover at least the statutory management requirements and the good agricultural and environmental conditions provided for in Articles 4 and 5 of and in Annexes III and IV to Regulation (EC) No 1782/2003.

[3]In the comparison of the individual clusters Cluster 4, which encompasses only Malta, it was omitted due to the different and marginal role of agriculture and rural areas in that country.

Table 2. The coefficients of financing priorities of rural development in the EU countries

Country	Cluster	Improvement of real capital in rural areas per rural inhabitant (€)	Improvement of human and social capital in rural areas per rural inhabitant (€)	Improvement of real capital only or mainly of farms per farm (€)	Improvement of human and social capital only or mainly of farms per farm (€)	Improvement of real capital only or mainly of farms per person employed in first sector (€)	Improvement of human and social capital only or mainly of farms per person employed in first sector (€)	Afforestation increase and improved condition of environment per 1 ha of UAA (€)
Denmark	1	25.0	44.3	864.6	716.9	494.6	410.1	104.0
Ireland		0.0	108.4	4 259.6	1 458.2	4 791.7	1 640.4	330.9
Sweden		72.7	62.6	5 825.3	1 231.8	4 452.3	941.5	320.3
United Kingdom		44.2	31.4	2 170.4	646.1	1 542.0	459.1	181.2
Median		**34.6**	**53.5**	**3 215.0**	**974.4**	**2 997.2**	**700.3**	**250.8**
Positional variation coefficient		**47.2**	**30.8**	**43.7**	**30.2**	**54.3**	**47.8**	**32.1**
Greece	2	83.0	60.7	1 597.1	309.0	2 567.7	496.8	252.8
Cyprus		17.9	45.1	1 720.7	292.9	4 602.2	783.3	317.2
Latvia		257.5	73.5	4 171.7	489.9	3 875.0	455.0	122.3
Lithuania		160.7	146.7	2 811.5	700.8	3 557.2	886.6	168.1
Portugal		0.9	38.0	6 718.5	587.1	3 137.7	274.2	277.9
Slovenia		61.8	41.4	4 817.2	580.2	4 077.8	491.2	599.9
Slovak Republic		66.9	11.5	13 675.8	389.5	11 099.9	316.1	257.4
Bulgaria		262.0	40.0	1 801.1	175.9	1 205.2	117.7	158.9
Poland		144.2	132.4	1 910.9	818.0	2 003.9	857.8	160.1
Romania		75.8	22.7	722.1	56.5	996.0	78.0	81.7
Spain		14.4	44.9	2 176.8	451.9	2 407.1	499.7	95.8
Median		**75.8**	**44.9**	**2 176.8**	**451.9**	**3 137.7**	**491.2**	**168.1**
Positional variation coefficient		**74.3**	**31.3**	**62.8**	**31.3**	**28.2**	**35.3**	**37.8**
Belgium	3	77.4	63.6	3 764.2	374.4	2 203.9	219.2	96.1
France		15.6	14.5	6 838.9	385.2	4 238.0	238.7	54.1
Luxemburg		35.2	4.9	20 449.0	189.1	9 406.5	87.0	213.2
Finland		91.2	28.3	14 168.3	804.5	8 055.8	457.4	306.1
Czech Republic		139.4	28.6	25 602.5	2 021.5	5 365.6	423.7	286.6
Germany		33.4	3.3	7 374.4	192.7	3 279.8	85.7	144.2
Estonia		130.9	53.9	10 001.3	943.5	8 049.3	759.4	269.0
Italy		25.6	21.7	1 467.9	247.6	2 515.5	424.3	251.2
Hungary		114.4	47.3	2 245.6	243.1	7 481.1	809.9	291.0
Netherlands		32.7	8.5	1 796.8	323.3	532.4	95.8	66.4
Austria		45.3	21.2	8 047.7	350.2	5 838.8	254.1	584.5
Median		**45.3**	**21.7**	**7 374.4**	**350.2**	**5 365.6**	**254.1**	**251.2**
Positional variation coefficient		**77.0**	**60.9**	**61.6**	**49.9**	**45.4**	**55.8**	**33.6**
Malta	4	377.8	210.6	2 471.6	437.6	6 809.4	1 205.6	815.1
Median	EU 27	**66.9**	**41.4**	**3 764.2**	**437.6**	**3 875.0**	455.0	251.2
Positional variation coefficient		69.9	47.6	69.7	46.6	42.5	57.7	32.9

Source:http://data.worldbank.org/indicator/SP.RUR.TOTL; http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/; Council Regulation (EC) No 1782/2003; Council Regulation (EC) No 2011/2006; Rural development ... (2009); World Bank, own estimation

to the specific form of payment from the European Agricultural Fund for Rural Development, especially in relation to other forms of support within the CAP (Mickiewicz and Mickiewicz 2010) and in the context of the agricultural and rural structure (Table 1). It is necessary to take into consideration the fact that the countries in the cluster are characterised by absolutely the lowest share of support from the Rural Development Programme in the total EU aid within direct support and from the second pillar, as well as the lowest value of payment from that source per 1 ha of UAA. Therefore, taking into consideration the relatively small importance of that instrument of support, it would be rational to direct it to one specific purpose, all the more so because the role of the fund supporting modernising actions can also be played by the funds from the first pillar (direct payments) (Czubak 2008; Kisiel and Gutowska 2010). Apart from that, in spite of the relatively small share of funds allocated to farms, the sum related with improvement of real capital per farm is in average the highest in all of the clusters, which is mainly due to a small number of large farms (Table 3). However, the average amount allocated to the improvement of real capital in rural areas per resident is the smallest. The cause of that situation cannot be attributed to their small importance, because Cluster 1 is characterised by the highest share of the predominantly rural areas and residents of those areas (Table 5). Similarly to the general pro-environmental focus of policies of the countries in the 'ecological' cluster, it can be only partly attributed to agriculture itself or the structure of rural areas. The main cause is the fact that among the EU countries, those societies and communities inhabiting rural areas are characterised by the highest wealth. The GDP per capita is the highest and not very diversified there. It is also important to notice that except the United Kingdom, in all of the countries the GDP per capita in the predominantly rural areas is higher than the average in the whole European Union (Table 5). It is also necessary to mention the fact that except Denmark, Ireland and Sweden, the level of GDP per capita in rural areas is lower than the average in the EU. Having taken into consideration the aforementioned high capital of the farms (including the possibility of financing modernisation from the funds of the first pillar of the CAP) and a relatively high living standard in rural areas it is possible to notice the fact that in those countries, the needs of modernisation (understood in classic terms) have a lower rank in comparison with other problems. Therefore, the high priority given to environmental issues should be considered chiefly in the context of high development of the Cluster 1 countries, where the basic economic and social problems in agribusiness and in rural areas have already been solved to a large extent. Therefore, it was possible and recommended to direct the policy to achieve new goals. Above all, the issue of the food self-sufficiency should be taken into consideration. Many pro-environmental measures referring to agriculture (e.g. some agri-environmental packages, afforestation of farmlands) in consequence lead to a reduced general volume of production. Therefore, their social acceptance is possible only in the conditions of a high food security, when it is possible to switch from the quantitative to the qualitative paradigm of thinking. Therefore, the actions aimed at the improvement of the state of the environment should be explained in the aspect of another – a higher stage of solving problems of societies with an appropriate material status. The quality of environment itself has absolutely social connotations and the care given to it is supposed to serve the people's welfare, understood as a broad term. Indirectly, this fact can also be proved by the highest average share of organic farming areas (Table 4). The market of usually more expensive organic food products can exist only in wealthy societies, who can afford to buy them, and who have a high health and ecology awareness.

The situation in Cluster 2 ('poorer countries') is completely different. It mainly consists of the new member states. Only three Mediterranean countries: Greece, Portugal and Spain, which belonged to the EU before 2004, can be found in the cluster. Baer-Nawrocka and Makarewicz (2010) also note the similarities between the development of agriculture in most of the new member states and the abovementioned Mediterranean countries. The short period of functioning within the EU structures means that in most cases, there is a wide range of problems related with the development of agribusiness and rural areas. They encompass such issues as: adjusting the economy to the EU environmental protection and food security standards and simultaneously increasing its competitiveness in the European market, improvement of the condition of technical infrastructure in agriculture and rural areas as well as the improvement of the social capital of the resident population (including changes and improvement in occupational competence). On the one hand, the EU funds are a precious source that facilitates the achievement of those goals. On the other hand, a wide range of needs makes it impossible to direct the priorities to one specific goal. However, it is necessary to note that the actions aimed at the achievement, above all, of economic goals in a short time have a relatively high rank, because the cluster is characterised by the

highest average share of expenses allocated to the improvement of real capital in rural areas as well as farms and in food processing industry (Table 1). The last category of expenses deserves a special attention, because agri-food processing is the component of agribusiness that produces ready-made food products. Therefore, its modernisation contributes to the aforementioned improved competitiveness, both in the marketing and formal sense, which refers to the need to meet the EU standards. The improvement of real capital in the agri-food industry was also given a relatively high rank in the old member states in Cluster 2 (especially Spain), which is related with the fact that among the EU-15 countries, they are

Table 3. The indexes of the productive and economic situation of agriculture

Country	Cluster	Average farm area (ha UAA)	AWU per farm (head)	AWU per 100 ha UAA (head)	UAA per 1 tractor (ha)	GVA per farm (thous. €)	GVA per ha UAA (thous. €)	GVA per AWU (thous. €)
Denmark	1	59.7	1.3	2.1	24.3	53.6	0.9	42.8
Ireland		32.3	1.2	3.6	24.3	14.9	0.5	13.0
Sweden		42.9	0.9	2.1	19.2	22.3	0.5	24.7
United Kingdom		53.2	1.1	2.1	35.7	26.1	0.5	22.9
Median		**48.1**	**1.1**	**2.1**	**24.3**	**24.2**	**0.5**	**23.8**
Positional variation coefficient		**15.1**	**4.2**	**9.3**	**8.5**	**25.8**	**13.0**	**18.6**
Greece	2	4.6	0.7	14.3	32.1	7.6	1.6	11.4
Cyprus		3.8	0.6	17.1	13.4	74.1	2.0	11.5
Latvia		16.5	1.0	5.9	32.8	31.8	0.2	3.3
Lithuania		11.5	0.8	6.8	22.9	33.4	0.3	4.3
Portugal		13.4	1.2	9.2	20.3	76.7	0.6	6.2
Slovenia		6.5	1.1	17.1	4.8	57.0	0.9	5.1
Slovak Republic		27.2	1.3	4.9	89.1	73.5	0.3	5.6
Bulgaria		5.5	1.0	18.0	159.0	24.9	0.4	2.5
Poland		6.5	0.9	14.6	11.1	34.0	0.5	3.6
Romania		3.5	0.6	15.9	80.4	15.9	0.4	2.8
Spain		23.8	0.9	3.9	28.6	241.1	1.0	26.0
Median		**6.5**	**0.9**	**14.3**	**28.6**	**57.0**	**0.5**	**5.1**
Positional variation coefficient		**75.8**	**17.5**	**35.5**	**69.5**	**37.0**	**54.8**	**52.7**
Belgium	3	28.6	1.4	4.8	14.5	53.6	1.9	39.3
France		52.3	1.5	2.9	25.6	55.5	1.1	36.4
Luxemburg		56.9	1.6	2.9	18.7	52.3	0.9	32.1
Finland		33.2	1.1	3.2	13.1	19.5	0.6	18.4
Czech Republic		89.3	3.5	3.9	48.9	30.7	0.3	8.8
Germany		46.0	1.6	3.6	18.0	43.3	0.9	26.3
Estonia		38.9	1.4	3.5	22.6	13.1	0.3	9.5
Italy		7.6	0.8	10.2	7.5	15.2	2.0	19.6
Hungary		6.8	0.6	9.5	47.7	3.6	0.5	5.6
Netherlands		24.9	2.2	8.6	12.8	117.8	4.7	54.7
Austria		19.7	1.0	5.0	9.8	17.7	0.9	17.9
Median		**33.2**	**1.4**	**3.9**	**18.0**	**30.7**	**0.9**	**19.6**
Positional variation coefficient		**40.4**	**22.3**	**44.1**	**31.0**	**59.6**	**49.3**	**52.4**
Malta	4	0.9	0.4	40.9	18.4	5.0	5.4	13.1
Median	EU 27	**23.8**	**1.1**	5.0	22.6	14.9	0.6	13.0
Positional variation coefficient		71.9	23.7	87.1	40.9	77.0	49.4	76.2

Source: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/; Statistical Yearbook of Agriculture 2009, own estimation

relatively poor. In consequence, it is necessary to support all branches connected with the development of agribusiness and rural areas. Apart from that, processing is well developed in those countries, so the reproduction of the existing fixed assets (reproductive investments, simple reproduction) requires a higher outlay than in other countries. It is also important for the large number of employees and suppliers of raw materials (agriculture) – hence the care given to that significant branch of industry. This thesis can also be

Table 4. Agri-environmental indexes

Country	Cluster	Permanent grassland[1] (UAA = 100)	Share of area under cereals (Arable area[2] = 100)	Share of area under organic crops (UAA = 100)	Total livestock (LSU/UAA)
Denmark	1	7.6	60.7	5.2	172.0
Ireland		75.6	27.7	0.9	142.0
Sweden		15.6	37.4	7.5	57.0
United Kingdom		61.5	*	3.2	86.0
Median		**38.5**	**37.4**	**4.2**	**114.0**
Positional variation coefficient		**66.7**	**22.1**	**37.6**	**31.0**
Greece	2	20.7	56.9	4.4	64.0
Cyprus		0.3	39.6	0.9	168.0
Latvia		36.1	47.0	3.5	27.0
Lithuania		30.9	55.4	2.1	38.0
Portugal		48.1	25.1	3.0	58.0
Slovenia		59.0	57.4	4.8	113.0
Slovak Republic		28.2	59.5	4.3	38.0
Bulgaria		3.9	67.9	0.3	40.0
Poland		21.1	71.1	0.9	71.0
Romania		32.6	57.6	0.6	43.0
Spain		34.8	52.3	2.6	57.0
Median		**30.9**	**56.9**	**2.6**	**57.0**
Positional variation coefficient		**23.5**	**7.8**	**58.0**	**25.0**
Belgium	3	37.2	41.0	1.7	275.0
France		29.5	49.6	1.8	82.0
Luxemburg		52.2	46.7	2.1	122.0
Finland		1.1	52.3	5.9	50.0
Czech Republic		25.8	61.4	6.4	58.0
Germany		28.9	55.2	*	106.0
Estonia		30.1	46.6	6.1	34.0
Italy		26.3	55.9	7.1	77.0
Hungary		11.0	76.7	2.3	56.0
Netherlands		42.9	21.0	2.4	335.0
Austria		54.8	57.7	*	77.0
Median		**29.5**	**52.3**	**2.4**	**77.0**
Positional variation coefficient		**23.7**	**9.7**	**85.0**	**37.0**
Malta	4	0.0	0.0	0.0	480.0
Median	EU 27	**29.5**	**52.3**	**2.4**	71.0
Positional variation coefficient		37.1	16.6	77.6	45.4

*no data; [1]Permanent grassland and meadow is land used permanently (for several, usually more than five, consecutive years) to grow herbaceous forage through cultivation (sown) or naturally (self-seeded). Not included in the crop rotation scheme on the agricultural holding (Eurostat definition); [2]Arable area, in agricultural statistics, is land worked (ploughed or tilled) regularly, generally under a system of crop rotation (Eurostat definition)

Source: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/; Rural development ... (2009); Statistical Yearbook of Agriculture (2009), own estimation

confirmed by the high share of expenses allocated to that purpose in the Mediterranean countries (Italy and France) in Cluster 3. The need to solve numerous problems at the same time led to the lowest average unit amount of support per farm in all of the clusters under analysis (Table 2) in spite of a relatively high rank given to the issues of improvement of real capital in farms. The cause of the situation is the generally unfavourable structure of agriculture in the countries under analysis. It can be observed in such aspects as the lowest average utilised agricultural area, the highest area per tractor, the highest labour intensity (AWU per 100 ha UAA) or the lowest labour productivity (GVA per AWU) (Table 3). The status quo makes it difficult to effectively allocate funds for the modernisation of farms, because the effectiveness of agriculture cannot increase without the improvement of structures. Therefore, it is necessary to take into consideration the fact that part of the funds allocated to modernisation will not be used appropriately. This causes even more concern in view of the importance of other problems which should be solved by the means of the funds from the European Agricultural Fund for Rural Development. It is also necessary to add that in contrast to Cluster 1, it is impossible to considerably supplement the funds for the modernisation of agriculture from direct payments, because due to the allocation criteria and negotiation agreements[4], they play a role of much lesser importance in the total payments within the CAP (Table 1). Besides, they are addressed mainly to small and economically weak farms, which use them chiefly to support the non-productive expenses (Czubak 2008). However, the positive aspect is the fact that among all of the clusters, it has the highest amount of payments made to improve the real capital in rural areas per inhabitant. Above all, the funds are used for a wide range of social purposes. It is important for the countries in that cluster at least due to the fact that they are characterised by the highest poverty in the European Union. This refers both to the whole societies (the lowest GDP per capita, but relatively strongly diversified) and rural communities (the level of per capita in the predominately rural areas) (Table 5). In the context of improvement of competitiveness in rural areas, it is also necessary to mention a relatively high priority given to the actions aimed at the improvement of human capital (the highest average amount of payments to improve the human capital in rural areas per head). In this case, the aim is mainly economic as it is assumed to lead the changes and higher qualifications of rural population, which may contribute to a higher investment attractiveness of rural areas in the future. It is also necessary to note that all 'soft' actions are less visible than the 'hard' (infrastructural) ones and positive effects can be seen only in the long run and in general it is more difficult to measure them. Therefore, the relatively high rank given to those actions proves the fact that on the one hand, the creators of rural policies appreciate the role of human capital and on the other hand, they are politically courageous and responsible. The realisation of urgent and important economic and social aims in the countries, most of which joined the EU only a short time ago, took place at the cost of actions aimed at the improvement of the environment. This fact is also confirmed in reference to the poorer, new member states by Hadyński (2010). Cluster 2 is characterised by the lowest and weakly internally diversified share of expenses to increase afforestation and to improve the condition of the environment. It is so in spite of the fact that some agri-environmental indexes are relatively unfavourable. Above all, this refers to the small biodiversity, which is manifested by the highest share of cereals in the structure of arable land (Table 4). However, this direction of policy can be understood, especially in the context of the aforementioned need to realise other aims, but also in reference to the relative poverty of the societies and rural communities, which demand that more urgent and pressing economic and social problems should be solved in the first place (Majewski 2008). This status quo confirms the aforementioned thesis that recognising the issue of improvement of the state of the environment as a priority direction of development is possible only under the conditions of a relative wealth, after the other aims important from the social point of view, have been solved.

Cluster 3 consists of six European Economic Community founding members, two countries which joined the EU in 1995 (Austria and Finland) and three countries which joined the Community in 2004 (the Czech Republic, Estonia and Hungary). In comparison with the clusters discussed above, the structure of allocation of funds for agricultural and rural development is more balanced as regards the share of support allocated to the development of agribusiness (improvement of real capital in farms and enterprises of the agri-food industry) as compared with environmental measures (increasing afforestation and improvement of the condition of the environment).

Relatively the smallest expenses were allocated to the improvement of human and social capital in farms.

[4]Naturally, this refers only to new member states.

In consequence, the value of support per person employed in agriculture and per farm was low (Table 2). The amount of unit expenses (per rural inhabitant) allocated to improve human capital in rural areas was also relatively the smallest. Both of the indexes result from two phenomena: the economic standard

Table 5. The indexes of development of the country and rural areas

Country	Cluster	GDP per capita in PPS in 2009 (thousands €)	Employment in 1st sector (total employment = 100)	Share of predominately rural areas[1] (country area = 100)	Share of population from predominately rural areas [1] (total population = 100)	GDP in predominately rural areas[1] (average GDP per capita in EU = 100)
Denmark	1	40.4	2.8	71.8	42.9	112.0
Ireland		35.7	5.6	98.7	72.0	119.0
Sweden		31.3	2.1	90.1	49.2	107.0
United Kingdom		25.3	1.5	24.2	2.0	85.0
Median		**33.5**	**2.5**	**81.0**	**46.1**	**109.5**
Positional variation coefficient		**10.6**	**31.6**	**20.0**	**24.1**	**5.6**
Greece	2	20.7	11.5	73.9	36.6	71.0
Cyprus		21.2	4.0	*	*	*
Latvia		8.2	10.8	55.9	39.3	31.0
Lithuania		7.9	12.2	32.9	19.7	35.0
Portugal		15.8	11.5	69.7	21.0	60.0
Slovenia		17.3	9.5	70.4	57.5	74.0
Slovak Republic		11.6	4.0	32.2	25.3	49.0
Bulgaria		4.7	20.6	36.6	24.7	31.0
Poland		8.1	15.7	72.2	46.3	39.0
Romania		5.4	30.5	55.3	40.8	27.0
Spain		22.9	4.7	45.4	13.5	83.0
Median		**11.6**	**11.5**	**55.6**	**31.0**	**44.0**
Positional variation coefficient		**47.4**	**29.8**	**28.3**	**29.9**	**41.2**
Belgium	3	31.4	1.9	24.5	4.2	74.0
France		29.6	3.4	48.3	16.8	86.0
Luxemburg		76.5	1.6	*	*	*
Finland		32.1	4.9	88.8	52.9	96.0
Czech Republic		13.1	3.7	8.6	5.0	65.0
Germany		29.3	2.1	36.5	13.2	88.0
Estonia		10.3	4.4	20.7	10.5	39.0
Italy		25.2	3.9	26.7	9.3	85.0
Hungary		9.3	4.8	58.0	41.3	44.0
Netherlands		34.6	3.1	2.8	1.3	98.0
Austria		32.8	5.7	78.4	45.8	95.0
Median		**29.6**	**3.7**	**31.6**	**11.9**	**85.5**
Positional variation coefficient		**22.5**	**27.0**	**53.7**	**122.8**	**15.2**
Malta	4	13.9	2.7	*	*	*
Median	EU 27	**21.2**	**4.4**	**45.4**	**21.0**	**71.0**
Positional variation coefficient		**48.1**	81.8	51.5	83.2	35.2

[1]Calculated according to the methodology of the Rural development ... (2009), where at the NUTS 2 or NUTS 3 levels, more than 50% of the population lives in rural areas and the population density is smaller than 150 people per km^2. This study uses values in accordance with the NUTS 3

*Absence of predominately rural areas

Source: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/; Rural development ... (2009); Statistical Yearbook of Agriculture (2009)

of farms and a relatively large number of countries which have been present in the EU structures for a long time. Due to this fact, farmers know how to manage farms; they are aware of the formal requirements of agricultural production and are able to use the funds from the EU or other financial mechanisms. However, in comparison with the other clusters of countries, the value of expenses allocated to improve real capital per farm and per person employed was the highest. One of the causes of that situation was the fact that in those countries, there is no need to finance the development of enterprises of the agri-food industry. Industrial processing is so well developed that it does not require any further adjustment of enterprises to the EU standards.

In spite of the fact that the share of funds allocated to improve the natural environment and increase afforestation was by 50% smaller than in the countries of Cluster 1, the expenses were almost the same when calculated per 1 ha of UAA (Table 2). Above all, this situation results from the differences in the level of support with funds from the Rural Development Programmes provided to a particular country and calculated per 1 ha of UAA. In Cluster 1, it is in average slightly more than 400 Euros per ha, whereas in Cluster 2, it is almost 700 Euros per ha. This means that the countries with a larger amount of funds can successfully finance the development of farms and simultaneously keep a high level of expenses on the support of the natural environment. It is necessary to recall the fact that in the countries of Cluster 1, the funds from the first pillar, including direct payments mainly, may also play an indirect role in the modernisation processes. Nevertheless, on that basis it is impossible to arrive at a conclusion that increasing the second pillar of the CAP will encourage higher expenses on the protection of the environment. For example, this can be proved by the fact that in Cluster 2, the average amount of expenses reaches almost 900 Euros per 1 ha of UAA (Table 2) and in spite of that, as has been mentioned before, from the selection of available actions the aims of improvement of the economic and structural situation were mainly financed.

The second reason why it was possible to keep a similar level of environmental expenses per 1 ha of UAA despite their smaller share in the entire 2007–2013 programme (when comparing Cluster 3 with Cluster 1) could have been the better condition of the natural environment. However, it is not so. Nearly all agri-environmental indexes (except for the livestock density) are worse in Cluster 3 countries (Table 4) and simultaneously, those countries are characterised by a clearly higher production intensity – a higher outlay of labour per 1 ha of UAA and farm, more tractors per 1 ha and in consequence, better results (GVA) per farm and 1 ha of UAA (Table 3). As can be seen, this is not a sufficient stimulus to increase expenses (per 1 ha of UAA) on the improvement of environment in agriculture. It is hardly plausible that the better economic situation (now (Table 5) and in the future – as a result of the expenses on the improvement of real capital in farms) will encourage farms to bear the costs of the improvement of the natural environment above the necessary standards of cross-compliance. The supposition seems even more justified by the fact that in Cluster 3 countries, there is a small share of the predominately rural areas and rural inhabitants (Table 5).

As a result of the calculations, Malta was identified as a separate cluster. That was due to the different allocation of funds for agricultural and rural development than in the other countries. However, it was also justified by the specific character of agriculture in that country. In fact, agriculture is of a marginal importance there (Table 5). There are few farms, very fragmented and occupying a small area (Table 3). Altogether they manage a small area and make region-specific products, which require a high outlay of labour, rather than the mass products. Having taken that into consideration, a considerable part of the funds in the 2007–2013 Programme will be allocated to the support the farms in the process of modernisation of fixed assets and the improvement of human capital in rural areas (which was reflected by the amount of money per farm one employed person – Table 2). Only a small amount was allocated to the improvement of the natural environment, but this is justified by the small area of farmland.

CONCLUSIONS

The EU regulations concerning the possibilities to create the rural development programmes in 2007–2013 left a great freedom of action on the national level. As results from the analysis, the individual countries availed themselves of this possibility. Simultaneously, the specific character of the individual programmes corresponded to the level of development of the individual countries and the needs of agribusiness and rural areas resulting from that level. Another important factor for the determination of priorities was the time of the accession to the European Union and in consequence, the need to allocate funds to the measures aimed at the improvement of competitiveness and meeting the standards of environmental protection and food

safety. However, above all the diversification concerning the directions of the use of the assets from the European Agricultural Fund for Rural Development resulted from the different wealth of the societies and rural communities in the individual countries. In rich countries, where the basic economic and social problems were solved earlier (also by means of the EU funds), the main priority was the environmental care, which was mainly understood as another stage in increasing the wealth of society. This applies both to landscape protection and the improvement of the quality of food. On the other hand, where the living standard, the condition of the public infrastructure in rural areas and the capital equipment of farms are insufficient, one dominant priority of the policy was not determined. Instead, it was above all directed to solving the urgent economic and social problems. This conclusion encourages the redefinition and extension of the definition of sustainable development, which assumes a balanced treatment of the environmental, social and economic problems. However, as results from the analysis, in practice the economic issues are of a primary importance. They are followed by social problems, whereas environmental problems can gain an appropriate rank only when the goals of the other two have been achieved at least at the basic level. This issue is convergent with the authors' earlier research, related with microeconomic conditions (Sadowski and Czubak 2010 a, b). The strong convergence between the level of development of the individual countries (including the state of agribusiness and rural areas) and the directions of use of the assets from the European Agricultural Fund for Rural Development, which has been proved, points to the correctness of the flexible and liberal approach to the possibilities of managing the funds. Knowing the most urgent and important problems, the individual countries allocated the EU funds to solving them. However, this does not mean that increasing the pool of funds in the consecutive programming periods will result in a considerable increase of the allocation to environmental protection purposes. In a way, this justifies setting obligatory requirements to meet the environmental standards in agriculture – cross-compliance – rather than leaving the environmental issues to the facultative actions of farms and the political decisions of each country concerning the amount of the financial support allocated to those actions.

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