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A COMPARATIVE STUDY REGARDING THE EUROPEAN AGRICULTURAL ALLOCATION OF FUNDS FOR RURAL DEVELOPMENT DURING 2007-2013 AND 2014-2020

Case
Study

Keywords

*Common agricultural policy,
Rural development,
EAFRD,
Market concentration,
Gini Struck Index,*

JEL Classification

Q18, M38, L11

Abstract

Sustainable rural development represents one of the European Union policy priorities, which focuses on the development of the agricultural sector by means of an increased attention given to rural communities, to the rural environment and to natural resources. The Common Agricultural Policy Reform led to the development of a number of EU mechanisms for funding the national and regional rural development programs. The present paper performs a study on the concentration degree of national and regional funds, obtained through the European Agricultural Fund for Rural Development, by relying on the Gini Struck Index. The results of the analysis highlighted a moderate fund distribution concentration degree by means of the EAFRD in the EU, as compared to a high rural development program concentration degree at the level of the Member States. The application of the Pearson Test showed that there wasn't any significant correlation, from a statistical point of view, between the number of LAGs in the EU and the amount of EAFRD funds absorbed by the Member States.

INTRODUCTION

The Common Agricultural Policy (CAP) represents one of the most important European policies, with a major impact not only on the rural area but also on its direct influence on the European Union (EU) budget. Over the years, CAP became a major instrument in promoting the green development of agricultural areas, and for more than fifty years it has represented the future of the EU rural communities, it has shaped the agricultural future of communities and it has also had a direct influence on the EU budget (Andrei and Darvasi, 2012).

The EU agricultural policy has greatly evolved in recent years, promoting a number of measures, adapted to the changes in public attitude, which were meant to help the EU farmers face the complex challenges that came from the European and the international economic environment and to lead to an increase in the level of food security in the EU. The priorities of the EU's common agricultural policy are defined by its slogan: "for our food, for our countryside, for our environment" (European Commission EC, 2014). According to the concept promoted in the EU, agricultural policy is not just about food production, it is also about paying more attention to rural communities, to the rural environment and to natural resources, by also taking into consideration the fact that almost half of the population from the EU lives in rural areas. The EU interest in developing rural areas became a priority beginning with year 2000, thus continuing the agricultural reform policy began in 1990 (EC, 2012). The 2003 CAP Reform has brought radical change to the CAP, especially concerning its income support policy. The strategic approach, based on Community Strategic Guidelines (national strategy plans – programs), allowed for the establishment of a number of clear priorities for the agricultural policy (Commission of the European Communities, 2005). The new CAP Reform cancelled the connection between subsidies and production. From its implementation, farmers have received a subsidy on condition that they exploit the infield and meet the environment safety, animal welfare and food safety standards.

The (CE) Regulation no. 1698/2005 represented the foundation of the EU policy for rural development support. The European Agricultural Fund for Rural Development (EAFRD) was especially created to promote the sustainable rural development in the EU. The mentioned Regulation stipulated the basic aspects of rural policy development for the period 2007 – 2013, as well as the financing measures available to Member States and to regions. Due to the 2003 Reform, the period 2007 – 2013 was characterized by a considerable simplification of the CAP in the agricultural and rural domains. Thus, the five previous financing programs were cumulated in

only one program (EAFRD) and a single financial management body was set up (EC, 2011).

The year 2013 led to a new reform of the CAP, which focused on the consolidation and competitiveness of the agricultural sector, on promoting a sustainable and innovative agriculture, on supporting employment in the domain and on the economic growth of rural areas (EC, 2014). The CAP priorities, during the period 2014-2020, from the rural development domain, are classified into six priority areas of interest at the EU level: Knowledge Transfer and Innovation, Farm viability competitiveness, sustainable forest management, Food chain organization, Animal welfare, Risk management, Ecosystems in agriculture and forestry, Resource efficiency, Low carbon and climate resilience, Social inclusion, Poverty reduction, Economic development (EC, 2017). In the national rural development programs, the Member States/EU regions must set quantitative objectives for each area and deal with at least four priority areas at the EU level; afterwards, a number of measures are established, which should be implemented in order to achieve the goals and justify the funds allocated for each and every measure. A minimum value of 30% of the funds allocated for each rural development program must be put aside for relevant measures aimed at protecting the environment and fighting climate changes and 5% for the LEADER axis (EC, 2017).

MATERIALS AND METHODS

The bibliographic documentation was based on the scientific articles, available in the ISI Web of Knowledge, a search by keywords from the domain of interest being performed. The information about CAP, about the national and regional programs funded by EAFRD and about the amount of funding for the financial years 2007 - 2013 and 2014 – 2020 was obtained from the EU official site (<https://europa.eu>), from The General Directorate for Agriculture and Rural Development and from The European Network for Rural Development database. The selected data was structured, statistically processed and interpreted. For the EAFRD-funded program concentration degree, the method recommended by Săvoiu, Crăciuneanu and Țaicu (2010) was applied based on the calculation of the Gini Struck Index. The results obtained were graphically represented and interpreted.

SHORT LITERATURE REVIEW

The assessment of the EAFRD sustainability during 2007-2014 was also performed by Monsalve, Zafrilla and Cadarso (2016). The authors measured the complex economic, social and environmental effects

on the European regions and on a number of non-EU states from the perspective of a multiregional input-output model. According to the authors, the Common Agricultural Policy (CAP) Reform (2013) led to the implementation of certain regulations in six areas: Funds, the European Agricultural Fund for Rural Development (EAFRD), oversight controls, direct payments, common market organization, and multiannual financial framework, the EAFRD financing effects being assessed from the point of view of the global economic financial results.

The research carried out by Maier (2016) led to an overview of the EU and global regulations in the agricultural domain. The paper, published in *Zuckerindustrie* (Sugar industry), a predominantly technical journal, also presents the legal arguments for the setup of the Common Market Organization for Sugar.

An analysis of the EAFRD fund usage for funding projects in the renewable energy, pollution control, water resource management and agricultural product quality improvement domains, from the perspective of the European Economic Recovery Plan (EERP), in Romania, (2007-2013) was carried out by Brinaru and Dona (2016). As a result of the research, the authors reached the conclusion that a national good working practice guide is required, with clear and transparent rules, in order to facilitate the access to the management of EU funds, which may lead to important investments in the analyzed sector.

Rusali (2007) analyses Romania's rural area development perspective in the period 2007-2013, by means of the EAFRD funding. The paper investigated the initial situation of human resources and of economic activities, by relying on the pre-accession processes and phenomena. The result of the research consisted of an assessment of the national socio-economic situation, of its strong and weak points, in view of a sustainable rural development.

THE COMPARATIVE EVOLUTION OF THE EAFRD FUNDING DURING 2007-2013 AND 2014-2020, RESPECTIVELY

The assessment of the financial allocation concentration degree for each Member State during the analyzed periods can be carried out by using the methodology recommended by Săvoiu, Crăciuneanu and Țaicu (2010), i.e. by calculating the Gini Struck Concentration Index (IGS). The calculation modality applied is presented in formula 1.

$$IGS = \sqrt{\frac{n \sum gi^2 - 1}{n-1}} \quad (1),$$

where n represents the number of terms of the series under study

gi represents the weight factor of EAFRD allocated in i Member State, related to the total value of the program.

The organization of data referring to the rural program financing in the Member States, by means of the EAFRRD program, is presented in table 1.

The data was taken from the EU official information, for the financing periods 2014-2020 and 2007-2013, respectively. Only the funds from the EU budget were taken into account.

The EAFRD funding evolution in the Member States during 2007-2020 is presented in figure 1. France (with an increase of almost 3.8 billion euros) and Italy (with an increase of over 1.5 billion euro) had the greatest increase in the funds allocated to rural development. On the other hand, Poland registered a decrease of 4.8 billion euros. Romania hasn't registered a spectacular evolution in point of financial allocation on RD in the analyzed periods, the value of the financing being relatively constant in the two analyzed financial periods. Croatia is not included in the 2007-2013 period because it joined the EU in 2013.

In the 2014-2020 programming period, there are 118 national and regional RDPs whose implementation is co-financed by the European Agricultural Fund for Rural Development (EAFRD) and national contributions. France, Italy, Spain and Germany cumulate 77 financed RD programs.

Of all Member States, only eight have more than two financed programs, the others having only one national rural development program financed from the EU budget (figure 2).

The EU rural development program concentration degree assessment was carried out by using the Săvoiu, Crăciuneanu and Țaicu methodology (2010). The structured data and the value of the Gini Struck Index, calculated with the help of formula 1, are presented in table 2.

The analysis conducted highlighted a high value of the Gini Struck Index (39.25), which denotes a high concentration degree for national and regional programs dedicated to rural development in the EU.

The assessment of the correlation degree between the funds absorbed by means of the EAFRD and the number of Local Action Groups (LAG)

There are 2,451 unevenly distributed Local Action Groups (LAG) in the EU (figure 3). The countries with the largest number of LAGs are: Poland (336), Spain (264) and Germany (244). The countries with the lowest number of LAGs are Cyprus (4) and Malta (3). According to figure 3, there isn't any graphical correlation between the absorbed EAFDR funds and the number of LAGs from the Member States.

The assessment of the correlation between the funds absorbed and the number of LAGs was also tested by means of the Pearson Test. The results of the test are presented in table 3.

The results of the analysis highlight the fact that the null hypothesis is not rejected, therefore there isn't

any significant correlation, from a statistical point of view, between the number of LAGs and the absorbed EAFDR funds.

CONCLUSIONS

The concentration degree of the EAFDR fund distribution on Member States is moderate in both analysed periods. There aren't any major differences between the funds allocated to rural development in the period 2014 – 2020 as compared to the period 2007 – 2013. At present, 118 national and regional rural development financing programs have been proposed, worth a total of 100 billion (bln.) euros. The concentration degree of the EU RD program distribution is high, which is justified, taking into account the fact that France, Spain, Italy and Germany cumulated over 65% of the total number of financed programs. The assessment of the correlation degree between the number of LAGs and the absorbed EAFDR funds by applying the Pearson Test proved that there isn't any significant correlation between the analysed variables from a statistical point of view. The research may represent a useful tool for the EU and national authorities as well as for the local communities in identifying the financing domains for the rural development programs.

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ANNEXES

Table No 1.

Rural program financing in the EU Member States by means of the (2007-2013) and (2014-2020) programs

Member State	EAFRD 2014-2020 (bln. euro)	gi (%)	gi ²	EAFRD 2007- 2013 (bln. euro)	gi (%)	gi ²
BE	648	0.652232992	0.425407876	487	0.506513144	0.256555565
BG	2,367	2.38246218	5.676126037	2,642	2.745388162	7.537156161
CZ	2,306	2.321063703	5.387336715	2,857	2.969048457	8.815248741
DK	919	0.925003271	0.855631052	577	0.60047763	0.360573384
DE	9446	9.507705005	90.39645447	9,078	9.433079828	88.98299504
EE	823	0.828376161	0.686207065	723	0.751987757	0.565485586
IE	2,191	2.205312478	4.863403126	2,494	2.591914408	6.718020299
EL	4,718	4.748819841	22.55128988	3,906	4.058707152	16.47310374
ES	8,297	8.351199283	69.74252947	8,053	8.367427829	70.01384847
FR	11,385	11.45937132	131.317191	7,584	7.880556209	62.10316616
HR	2,026	2.039234633	4.158477887	0.00	0.00	0.00
IT	10,444	10.51222434	110.5068605	8,985	9.336539812	87.17097565
CY	132	0.132862276	0.017652384	164	0.170987275	0.029236648
LV	1,078	1.085041922	1.177315973	1,054	1.095530731	1.200187583
LT	1,613	1.623536754	2.63587159	1,765	1.834721459	3.366202833
LU	101	0.101659772	0.010334709	94	0.098664483	0.00973468
HU	3,431	3.453412648	11.92605892	3,860	4.010769171	16.08626935
MT	97	0.097633642	0.009532328	77	0.080684536	0.006509994
NL	765	0.769997282	0.592895815	593	0.616352482	0.379890382
AT	3,938	3.963724572	15.71111249	4,025	4.182713425	17.49509159
PL	8,698	8.754818774	76.64685176	13,398	13.92195223	193.820754
PT	4,058	4.08450846	16.68320936	4,059	4.217466058	17.78701995
RO	8,128	8.181095309	66.93032045	8,124	8.441324974	71.25596732
SI	838	0.843474147	0.711448637	916	0.951748294	0.905824816
SK	1,560	1.570190537	2.465498321	1,996.91	2.074856925	4.305031261
FL	2,380	2.395547101	5.738645912	2,155	2.239139574	5.013746033
SE	1,764	1.775523145	3.152482439	1,953	2.029299278	4.11805556
UK	5,200	5.233968455	27.39442579	4,612	4.79215348	22.96473497
Total	99351		n=28	96243		n=27
Gini Struck Index			26.52			27.11
Concentration			moderate			moderate

Source Author, own calculations using EC Data (2017)

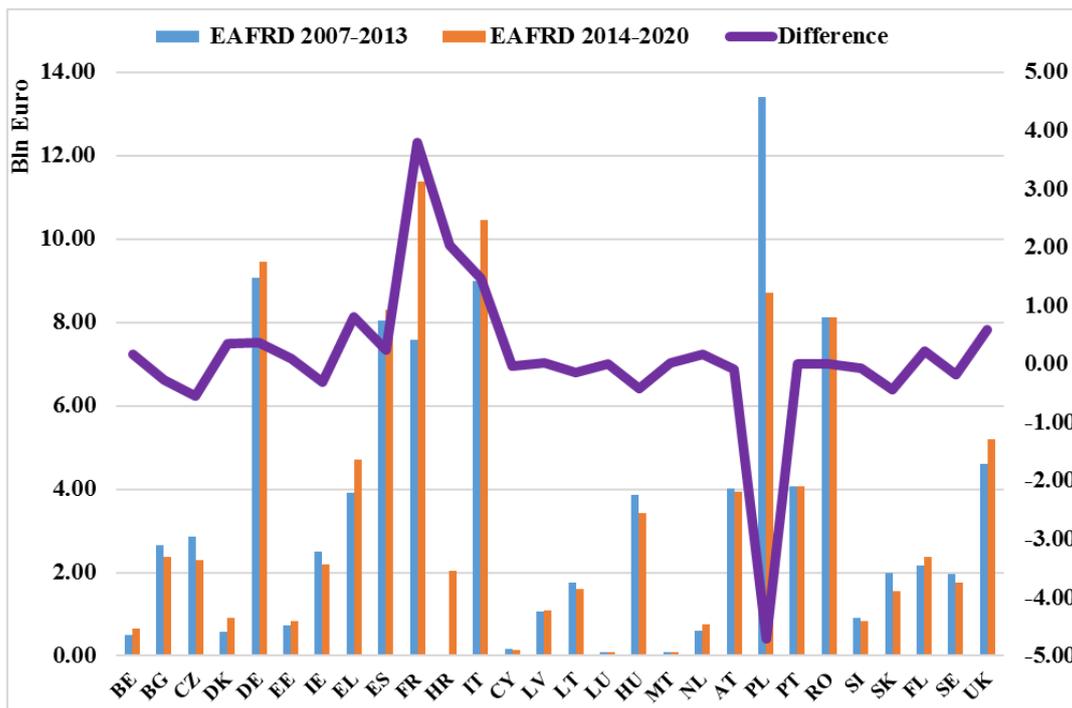


Figure No 1. EAFRD in Member State (2007- 2013, and 2014-2020)
 Source Author, by using EC Data (2014, 2017)

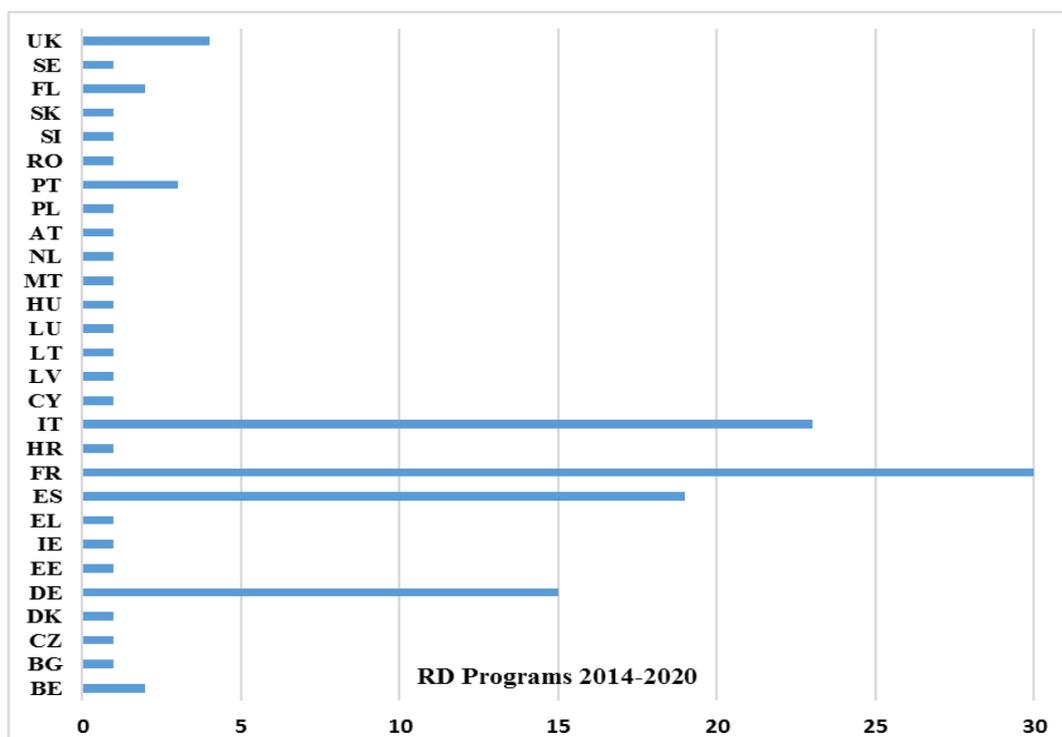


Figure No 2. RD Programs in Member States
 Source Author, by using EC Data (2017)

Table No. 2

Concentration degree for RD Programs distribution in Member States (2014-2017)

Member States	RD Programs	$\sum gi^2$	Gini Struck Index
28	119	1485.2054	39.25

Source Author, own calculations using EC Data (2017)

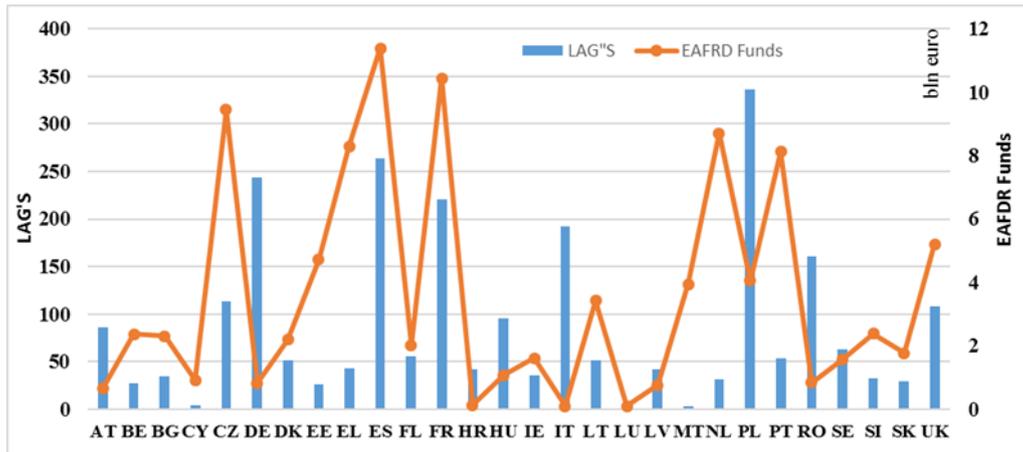


Figure No 3. LAGs and EAFRD Funds in Member States

Source Author, by using EC Data (2017)

Table No. 3.

The assessment of the correlation FLAG- EAFDR Funds by means of the Pearson Test

Country		LAG	EAFRD Funds
LAG	Pearson Correlation	1	0.075
	Sig. (2-tailed)		0.704
	N	28	28
EAFRD Funds	Pearson Correlation	0.075	1
	Sig. (2-tailed)	0.704	
	N	28	28

Source Author, own calculations