

An Evaluation of the Romanian Fruits and Vegetables Producers Access to Different Types of Common Agricultural Policy Instruments. Is there Any Real Consistency with the Policy Objectives?

Nicu MARCU¹, Georgeta-Mădălina MEGHIȘAN^{2*}, Ionel Mugurel JITEA³

¹Romanian Academy, 125 Victoriei Street, 010071, Bucharest, Romania; marcu.nicu@yahoo.com

²University of Craiova, Faculty of Economics and Business Administration, 13 Al. I. Cuza Street, Craiova, Romania; madalina_meghisan@yahoo.com (*corresponding author)

³University of Agricultural Sciences and Veterinary Medicine, 3-5 Manastur St., 400372, Cluj-Napoca, Romania; mjitea@usamvcluj.ro

Abstract

Fruits and vegetables sectors are considered to be strategic in the European Union due to their contribution to a better human health. Among others positive effects, their intake increase reduce mortality and obesity, assuring in the same time harmonised development for young children. The present study thus focused to reveal the consistency of the measure implemented in the Common Agricultural Policy to support fruits and vegetables production in Romania in liaison with the policy objectives. The country is one of the main ten important European producers of horticultural products in terms of production volumes and acreage. Results showed that over the last seven years (2007-2014), the sectorial production drawbacks have not been ameliorated very much. Both sectors are dominated by small-size farms that can produce only seasonally and mainly for short-market chains. In the same time, the greenhouses area shrink to levels that made the country extremely dependent to imports especially for tomatoes. The analysis of the pillar one payments schemes revealed that the fruits and vegetables producers could have access to only one payment that was half from European averages. Moreover, almost half of the producers had low sizes that left them outside the eligible criteria. The measures designed for the second pillar also penalized producers through the selection criteria. These results showed that for Romania there was not a real consistency between the actual policy measures and the objectives assumed by policy makers. The future measures (2014-2020) seem to correct these negative findings being better tailored to the situation of the local fruits and vegetables producers.

Keywords: access to payments, fruit, human health, small-size farms, vegetables

Introduction

The Common Agricultural Policy has been shaping the European agricultural sector for more than 60 years now. Its history is closely linked to the evolution of the European Union (EU). The first years (1955-1992), presumed important financial transfers from consumers to producers through minimum guaranteed prices targeted to bust the agricultural productivity (Ackrill, 2000). This early strategic options produced between others also some well-recognised negative side effects like ground – water pollution due to increased use of pesticides and fertilisers (Rabbinge and Van Latesteijn, 1992), biodiversity losses (Benton *et al.*, 2003), high budgetary pressures, marginal land abandonment and rural depopulation (MacDonald *et al.*, 2000). Since then, the policy has being several times reformed (1992 McSherry reform; Agenda 2000; 2003 Luxembourg Agreement and 2013 Ciolos reform) in order to better orientate the producers towards market, to reduce its high budgetary costs, to recognise the multifunctional role of

agriculture, to respond to external pressures (World Trade Organisation) or to allow the EU extension to the East (Bureau *et al.*, 2012; Donald *et al.*, 2002; Renting *et al.*, 2009).

Therefore, in the present context, agriculture and rural areas do not produce only food but also important societal advantages like environmental goods, farmland as cultural heritage, biodiversity and environmental quality (Pretty *et al.*, 2001). They were recognised to be important incentives also by the buyers (Hall *et al.*, 2004). Over the last years, much emphasis has been also devoted to develop a policy targeted to support human health (Lock, 2004). Previous studies demonstrated that the cardiovascular disease burden attributable to CAP to be substantial due to the incentives for a dietary saturated with fats (Lloyd-Williams *et al.*, 2008). Moreover, as a result of fruits and vegetables market withdrawal supports, the prices are usually high having as a consequence the limitation of their consumption (Veerman *et al.*, 2005). A special programme was designed to increase fruit and vegetable consumptions by giving

them for free to the children school population. Results showed that school schemes can be effective in increasing both intake and knowledge about fruit and vegetable consumption (De Sa and Lock, 2008).

Only few studies had previously analysed the CAP effects on the EU or a Member State fruits and vegetables sectors. Rickard and Sumner (2011) highlighted that the major policy changes for processed fruits and vegetables from 2001 and 2008 and the EU subsidies reform increased EU tomato production by 3.8% for the regime that began in 2008 and 9.1% for the regime that began in 2001. Moreover, after the Uruguay Round Agreement on Agriculture (URAA) EU has signed trade preference treaties particularly with Southern Mediterranean countries that are important suppliers of fruits and vegetables to the EU. The subsidies devoted to these sectors proved not to be able to boost the EU exports of eligible products (Cioffi and dell'Aquila, 2004). Fewer studies were even reported for the New Member States (NMS) that are located in the Eastern part of Europe. Pomerleau *et al.* (2006) showed that the number of lives potentially saved annually if fruit and vegetable intake increased to 600 g per person per day would reach 423 000 persons in NMS.

Romania is one of the most important horticultural producers from the European Union, with rank 6 for total cultivated surfaces (after France, Spain, Poland, Italy and Germany) and accounting for about 5% in total EU production volume (EVD, 2009). For this NMS only a limited number of studies analysed the CAP effects at producer-side level. There are studies that considered the importance of Agro Environment Measures (AES) for High Nature Value permanent grassland areas (Jitea and Arion, 2015). In our knowledge, there is no study that questions the access to the CAP for fruits and vegetables producers. Thus the paper has several objectives: to address the evolution of the Romanian fruit and vegetables sector in the last 25 years; to investigate the access to CAP pillar's payments for the local fruits and vegetables producers; to evaluate the investment possibilities that exist in the rural development programme (pillar 2); to see if the policy objectives related to human health were further implemented in the practice.

Materials and methods

The outcomes of agricultural policies can be evaluated by econometric estimations, computable general equilibrium models (CGE), through micro simulation models (MSM) or case-study assessments (Janssen and van Ittersum, 2007). The methodology largely depends on the research aims and data disposal. The models usually presume to simulate the environment of the offer-side operators and then to introduce information about the new policy incentives such as to reveal their potential outcomes at macro (CGE) or farm level (MSM). The methodology used in this research is mainly based on the bibliographical and case-study assessment (Yin, 2012). This approach was less time and resource consuming allowing in the same time good assessment of the access to different types of CAP measures for fruits and vegetables producers.

These two sectors were analysed based on the secondary official statistic data (Romanian National Institute of Statistics – Tempo Online data base; EUROSTAT; FAOSTAT etc.) on a 20-25 year time frame. The structural characteristics investigated over time were acreage and production in volume units, farm

number and acreage distribution in different size classes but also fruit and vegetables food balance. Descriptive analyses such as frequencies, percentages, means and indexes were performed to understand the changes produced over time at the farm structure level (Healey, 2012). The food balance was analysed based on FAOSTAT data and methodology (FAO, 2001). Two indicators were calculated in order to judge country's dependency to imports (1) and the self-sufficiency in fruits and vegetables products (2).

$$IDR = \frac{\text{Imports}}{\text{Production} + \text{Imports} - \text{Exports}} * 100 \tag{1}$$

and

$$SSR = \frac{\text{Production}}{\text{Production} + \text{Imports} - \text{Exports}} * 100 \tag{2}$$

Where: IDR – import dependency ratio; imports, production and exports expressed in volume; SSR – self-sufficiency ratio;

The access to different types of subsidies (first pillar) and rural development funds (second pillar) was evaluated by analysing the eligible criteria from the CAP legal framework (Regulation (EU) 1782/2003; 73/2009; 1305/2013; 1307/2013). Also different versions of fund guides were further investigated for Measure 112 'The Installation of the young farmers' (six different calls between 2007 and 2013; one after 2014) and 121 'Modernisation of agricultural holdings' (ten different calls between 2007 and 2013; one after 2014) to qualitatively appreciate the link between policy measures and stated policy objectives.

Results

Romanian fruits and vegetables sector – evolution, current situation

The offer-side of the Romanian vegetables sector knew several important structural changes between 1990 and 2013. The total acreage decreased at the beginning of the period due to huge structural reforms achieved in the early 90s that destructured the former state owned farms (1990 to 1995). After that, the area allocated to vegetables increased with almost 20% due to the open field production. Unfortunately, the greenhouse acreage diminished to less than 25% in 2013 as compared with 1990 (Fig. 1). In the same time, the area covered by orchards also decreased with more than 35% (Fig. 2).

More than 80% of fruit and vegetables producers are concentrated in size classes less than 5 hectares. Only around 40% of acreage is exploited in farms bigger than 5 hectares for fruit production (Fig. 3). The structural situation is better for the vegetables growers where 50% of land is located in farm classes bigger than 5 hectares (Fig. 4).

Over the last 20 years (1989-2011), the domestic consumption of fruits and vegetables has been increasing in Romania, especially due to imports. The reduction of greenhouse acreage made the country dependent to foreign products during the cold months. Thus, the import dependency ratio reached 34% for tomatoes and around 12% for fruits (Fig. 5). Also, the self-sufficiency ratio is very low for tomatoes and fruits (Fig. 6); these are the products that should receive special attention from the policy makers in the near future having in mind the stated CAP objectives.

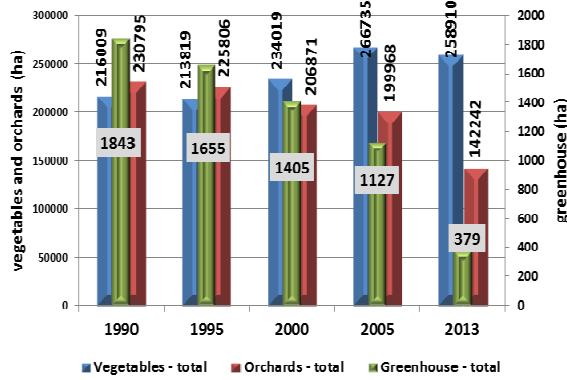


Fig. 1. The evolution of total vegetables and fruit areas
Source: INSSE – Tempo on line (last accessed March 2015)

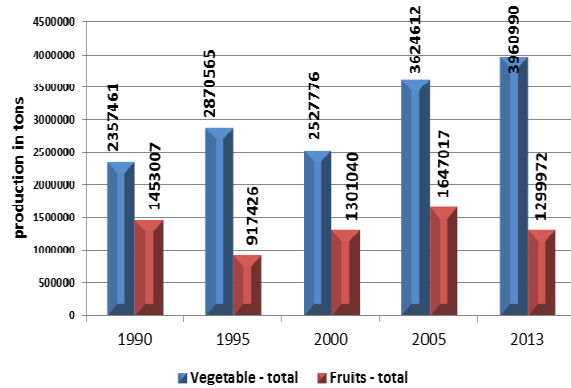


Fig. 2. The evolution of total vegetables and fruit production
Source: INSSE – Tempo on line (last accessed March 2015)

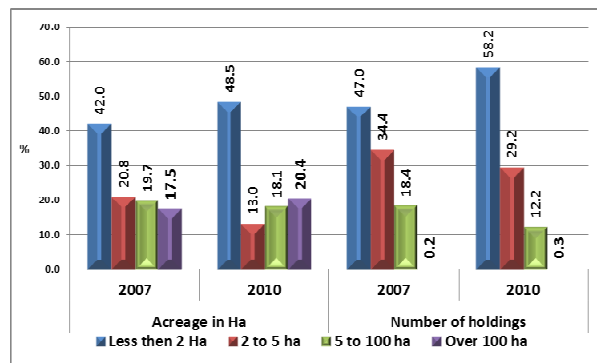


Fig. 3. The distribution of fruit acreage and number of holdings in different farm sizes
Source: EUROSTAT (last accessed March 2015)

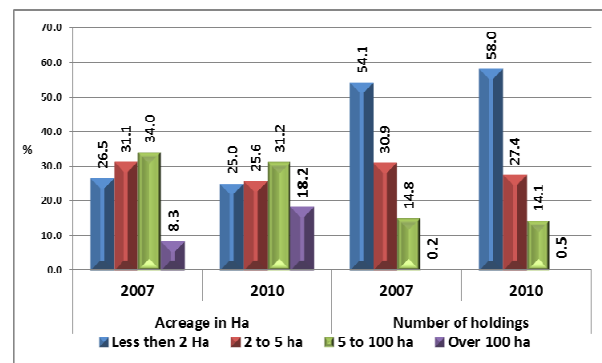


Fig. 4. The distribution of vegetable acreage and number of holdings in different farm sizes
Source: EUROSTAT (last accessed March 2015)

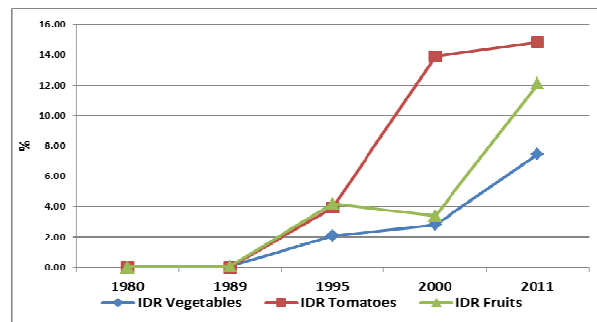


Fig. 5. Romanian import dependency for fruits and vegetables
Source: FAOSTAT (last accessed March 2015)

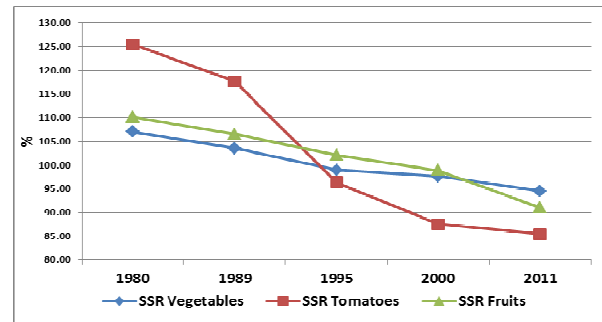


Fig. 6. Romanian sufficiency ratio for fruits and vegetables
Source: FAOSTAT (last accessed March 2015)

CAP pillar 1: access to different type of subsidies for fruits and vegetables producers

Since 2007, farmers have been annually receiving CAP payments (Regulation (EU) 1290/2005). The single area payment is a direct subsidy linked to the utilized agricultural area (120 Euros/hectare in 2014 for farms bigger than 1 hectare and plots bigger than 0.3 hectares; 0.1 for orchards). It can be supplemented with additional complementary payments for the permanent pastures (50 Euros/hectare/year), for the livestock (8 Euros/breeding ewes/year or 100 Euros/breeding cow/year) or for specific crop production (rye, sugar beet etc) (Table 1). Also

five AES were implemented: high value natural grasslands (124 Euros/hectare/year); traditional agriculture practices (58 Euros/hectare/year); meadows, important for bird conservation (209 or 101 Euros/hectare/year); green crop production (rape seed, peas, mustard etc.) and ecological production.

The conventional fruit and vegetables production sector could access mainly one type of payments from the first CAP pillar: the single area payment. The certificated ecological farmers could also access two special designed agro-environmental measures, but their effectiveness was rather limited due to high conversion costs.

Table 1. The comparative level of different payments from the Romanian CAP pillar 1

Payment type	U.M.	2007	2008	2009	2010	2011	2012	2013	2014
Single Area Payment	Euros/ha	50.55	60.75	71.12	80.36	90	100	110	120
National Complementary Payments (crop sector)	Euros/ha	47.00	46.71	44.64	50.64	50.64	50.64	50.64	50.64
National Complementary Payments (cow)	Euros/Head	100	100	120	97.39	90	90	90	90
National Complementary Payments (sheep and goat)	Euros/Head	9.50	9.50	9.50	9.50	10	10	10	10
HNV permanent grasslands	Euros/ha	124	124	124	124	124	124	124	124
Mountain Area	Euros/ha	50	50	50	50	50	50	50	50
Ecological Vegetables	Euros/ha	--	335	335	335	335	335	335	335
Ecological Orchards	Euros/ha	--	393	393	393	393	393	393	393

Source: Selective Romanian legislative framework.

Table 2. The comparative analysis of the financial allocation in different axes and measures and the access to funds for Romanian fruit and vegetables produces (million Euros)

Measure	Axis 1		Measure	Axis 2		Measure	Axis 3		Measure	Axis 4	
	Public expenses	Access to funds		Public expenses	Access to funds		Public expenses	Access to funds		Public expenses	
111	78.9	No	211	673.5	No	312	456.2	No	4.1	296.1	No
112	302.2	Yes	212	471.9	No	313	304.1	No	4.21	7.6	No
114	0		214	1,270.7	No	322	1,610.9	No	4.31	63.1	No
121	1,028.5	Yes	215	372.9	No						
122	2.3	No									
123	963.2	Yes									
125	523.6	No	221	3.3	No						
141	357.6	Yes									
142	22.4	No									
143	12.3	No									

Source: Data provided by RNRDP (2013)

Table 3. Comparative description of different funds access criteria for measures 112/6.1 from the Romanian Rural Development Programme

Description	112 /6.1
Eligible criteria	2007-2013: Age: 18-40 years; Size: 6-40 ESU; at least 4 ESU increase after 3 years of the project; Juridical: low demands; 2014-2020: Age: 18-40 years; Size: 12.000-50.000 SO*; Juridical: medium.
Conversion criteria	2007-2013: 1 ha Fresh vegetables, melons, strawberries - open field = 3.94 ESU; 1 ha Fresh vegetables, melons, strawberries - market orientated gardens = 5.69 ESU; 1 ha Fresh vegetables, melons and strawberries - in greenhouses and solariums = 35.954 ESU; 1 ha Fruit trees (apple orchards, pear, plum, peach, apricot, cherry) = 1.169 ESU; 1 ha Fruit trees (walnut orchards, hazelnut, almond, chestnut) = 0.946 ESU; 1 ha blueberry, fig, raspberry = 2.94 ESU; 2014-2020: 1 ha Fresh vegetables, melons, strawberries - open field = 7,113.49 SO; 1 ha Fresh vegetables, melons, strawberries - market orientated gardens = 7,914.85 SO; 1 ha Fresh vegetables, melons and strawberries - in greenhouses and solariums = 37,209.23 SO; 1 ha Fruit trees (apple orchards, pear, plum, peach, apricot, cherry) = 2,703.58 SO; 1 ha Fruit trees (walnut orchards, hazelnut, almond, chestnut) 1,556.94 SO; 1 ha blueberry, fig, raspberry = 3,430.92 SO.
Funds limit	2008-2011: min 10000 – max 25000 euro; 2011-2013 : min 12000 – max 40000 Euros; No cofinance 2014-2020: 40000 Euros, the farm is between 12,000 and 29,999 SO; 50000 Euros, the farm is between 30,000 and 50,000 SO; No cofinance.
Funds allocation	2008-2013: Two tranches (60% when signing the contract; 40% after 30 months); at least 30% of funds invested to meet EU standards; 2014-2020: Two tranches (75% when signing the contract; 25% after 36 months).

ESU= Economical Size Unit (1 ESU = 1200 Euros/year);

SO=Standard Output.

CAP pillar 2: the access to different types of investment funds

Between 2007 and 2013 the Romanian National Development Plan was divided in four axis: 1. 'Competitiveness'; 2. 'Environment and land management'; 3. 'Economic diversification and quality of life' and 4. 'Leader' (Table 2). The main important measures that allowed access for investments funds for the vegetables and fruits growers were 112 'Installation of young farmers', 121 'Modernisation of agricultural holdings' and 141 'Financial support for the semi – subsistence agricultural holdings'. The figures showed that even from the beginning the fruits and vegetables sector was eligible for only one third of the entire budget (123 'Marketing of agricultural products' was available for big food processors).

Between 2007 and 2013 the access to funds for the Romanian young persons who wanted to install in fruits and

vegetables sector has started from 1.52 ha of fresh vegetable in open field, 0.17 ha greenhouses or 5.13 ha of fruit trees growing (Table 3). Starting with 2014, the financial allocation increased to a maximum threshold of 50,000 Euros per farm (measure 6.1 from the Romanian National Development Program 2014-2020). To be eligible a farmer should have at least 1.68 ha fresh vegetables in open field or 0.32 ha greenhouses. In the same time the eligible criteria became more difficult, especially due to the concern of being considered an active farmer registered as a legal person.

The selection criteria from the period 2008-2013 did not give any comparative advantages for vegetables and fruits sector, but for the period 2014-2020 these types of farming will be advantaged due to improved selection criteria (Table 4).

Table 4. Comparative selections criteria for the measures 112 and 6.1

112: 2008-2013		6.1: 2014-2020	
Criteria	Points	Criteria	Points
Semi-subsistence farm	20	Production sector	30
		-vegetables	25
		-seeds and seedlings	20
Farm in a disadvantage area	15	-fruit growing	15
		Consolidation of holdings	10
		-three farms	5
The applicant owns the farm	30	-two farms	25
		-one farm	20
		Education level	10
Part of an associative structure	20	-bachelor	25
		- after high school	20
		- qualification course	10
Agro-measure accessed by the farm	15	Agricultural potential	25
		-high agricultural potential	20
		-medium agricultural potential	5
		Local varieties	

Source: Own analysis based on different pillar 2 guides.

Table 5. Comparative description of different funds access criteria for measures 121/6.3 from the Romanian Rural Development Programme

Description	112/6.3
Eligible criteria	2007-2013: high legislative incertitude (ten different guides with different criteria); Size: farms bigger than 2 ESU; 2014-2020: Size: farms between 8.000 and 11.999 SO; Education: at least lower secondary education; Juridical: to be registered as a legal entity; to sell minimum 20% from the production until the second payment tranche.
Funds limit	2007-2009: maximum eligible limit 2,000,000 Euros; the non-refundable funds 50% from the eligible budget; this limit can be increased with 5% for the young farmers (less than 40 years old) or with 10% for the investments from the mountain area; Co finance needed; 2009-2013: maximum eligible limit 2,000,000 EuroS; the non-refundable funds 40% from the eligible budget; this limit can be increase with 10% for the young farmers (less than 40 years old) or with 10% for the investments from the mountain area; Co finance needed; 2014-2020: 15.000 Euros for 3 years (5 years for fruits growing sector); No co finance needed.
Funds allocation	2008-2013: reimbursed after the project is implemented; 2014-2020: Two tranches (75% when signing the contract; 25% after finishing the business plan – no later than 3 or 5 years).

ESU= Economical Size Unit (1 ESU = 1200 EuroS/year);

SO=Standard Output.

Source: Own analysis based on different Romanian Agency for payments guides.

Table 6. Comparative selections criteria for the measures 121 and 6.3

112: October 2008		112: March 2012		6.3: 2014-2020	
Criteria	Points	Points	Criteria	Points	Points
Farms that adapt to the new EU cross-compliance rules	10	0	Production sector (crop)	15	
			-vegetables	12	
			-seeds and seedlings	10	
Priority sector, irrigation systems and renewable energy	35	50	-fruit growing	15	
			Production sector (animal breeding)	12	
			-cow	10	
Semi-subsistence farm	5	5	-beekeeping	20	
			-sheep and goats	15	
			Education level:	10	
Part of an associative structure	10	10	-bachelor	15	
			- after high school	5	
No other EU funds accessed	5	10	- qualification course (Level I)	10	
			- initiation course / training / specialization	5	
Certified ecological production	5	7	Agricultural potential	30	
			-high agricultural potential	25	
Investments that have food processing facilities	10	5	-medium agricultural potential		
Farms own by young farmers (less than 40 years)	15	8	Farms that are between (8,000-11,999 SO)	30	
Disadvantage agricultural area	5	5	Local varieties	5	

Source: Own analysis based on different Romanian Agency for payments guides

The measure 121 has been dominated by high legislative uncertainty during the time span. The funds guides were changed ten times during that period. The access to funds was even harder for the two sectors because the co-finance demands were high (Table 5). Practically only big-size farms (bigger than 100 ha) could access this type of funds. For the future financial period the reforms are better targeted for the local small undercapitalised producers. Thus, they will get 75% of the funds in advance without having to finance the entire project and then to be reimbursed.

In addition, the selection criteria for this measure did not give any comparative advantages for vegetables and fruits sector (2008-2013). On the other hand, the 2014-2020 budgetary allocations seems to bring comparative advantages in project selection criteria for fruits and vegetables producers (Table 6). Next to these two measures there is a special design one for fruits sector (4.1.a). It will financially support investments in the modernization of fruit farms, including tree plantations and reconversion.

Discussions

The effects of CAP implementation in Romania were also studied by Hubbard *et al.* (2014) at Romanian agriculture level. These Governmental expenses did not obviously contribute to farm consolidation, but rather to a gradual disappearance of semi-subsistence farms. The present study also shows that CAP framework did not achieve a better way of organising the fruits and vegetables sectors. Swain (2013) also showed that the financial supports went especially to the big farms (12.05 per cent from the first CAP pillar in Romania was devoted to only 0.03 per cent of farms) which proved that the Western policy model was not adapted for the Eastern agricultural structures. Moreover, it was appreciated that the CAP fails to effectively integrate Central and Eastern Europe (CEE) into the European Union (Gorton *et al.*, 2009).

The paper shows that there was an important policy pressure on small-size farms that operates in the Romanian fruits and vegetables sectors induced by subsidy/funds access criteria. They were excluded from payments even from the policy design. In the same time they have to compete with heavily intensive production systems from Western Europe that respond to the on-going important increase demand for food (Tilman *et al.*, 2002). This is in contradiction with all political view-points and researches that showed the benefits of the traditional low intensive farming (high biodiversity; low content of pesticides and fertilisers etc.) (Bignal and McCracken, 1996; Fischer *et al.*, 2012). Moreover, even if Eastern Europe was recognized to be one of the main keepers of traditional European farming practices being reached in valuable local plants varieties (Mikulcak *et al.*, 2013) the average subsidies per hectare (pillar 1) arrive to only half of the European Figures (European Commission, 2011). Therefore, the near future calls for increased attention to properly deal with negative findings. It was found that especially the fruit and vegetables sectors were penalised through policy regulations. These findings are against all policy objectives that demand measures to support human health through increased uses of fruits and vegetables.

Conclusions

The paper demonstrates that Romanian fruits and vegetables sector is still dominated by small-size producers that have difficulties in accessing all types of CAP instruments. Between

2007 and 2013, the policy was orientated to support big-size farms and other agricultural sectors like crop production and animal breeding. Thus, the paper demonstrates that there was an important inconsistency between the policy objectives that called for increase used of fruits and vegetables and the measure implemented in Romania. These findings are in contradiction with all studies that point out the importance of local traditional farming. The future CAP measures (2014-2020) seem to correct these findings being better targeted to the real needs and situation of the local producers.

Acknowledgements

This paper was published under the frame of European Social Fund, Human Resources Development Operational Programme 2007-2013, project no. POSDRU/159/1.5/S/132765.

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