Changes in the Romanian farm structures during transition – evolution and main determinants

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„What was expected, what we observed,

the lessons learned."

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ABSTRACT

In Romania, farm restructuring is an ongoing process, largely conditioned by the legal framework that accompanied the land reform during the transition period. After 1990, Romanian agriculture experienced critical shifts in farming structures, reflected also in the production ones. While arable land represents 63% of the UAA, a restrictive production factor in developing a competitive agriculture resides in the fact that 61.7% of total arable land is utilized in excessively fragmented family farms – 14303 thousands plots. This is seriously hampering family farms' productivity, if we take into account that they are producing an estimated 74% of the total crop output of the sector level (2004). Under the present conditions, the agricultural producers act under two major objective restrictions: (i) integration of the Romanian agriculture into European structures, under the implementation of the 2007-2013 CAP reform; (ii) the relative low possibilities for backing up the financial support received through different EU-funded programs. The present study tries to assess the evolution of the Romanian farm structures during transition, together with the policies aiming to land ownership and consolidation, by analysing the main determinants of the changes, the expectations, the successes and failures, as well as to appraise the problems encumbering the further restructuring process, given the need for successfully competing in the EU Single Market.

Keywords: agricultural structures, land consolidation, Romania

1. INTRODUCTION

In Romania, privatization and land restitution process were accompanied by important changes in the structure and utilization of arable land. As 86% of area cultivated with cereals is concentrated in the private sector, with a major amount farmed in small and very small farms, the low productivity, reflected also in the yields/ha, determined a decrease in the marketable production. Agricultural policy was mainly oriented towards providing support to legal agricultural holdings, excluding almost entirely the family farms from the development and financial support programs. This lack of confidence in the potential development of the family farms, led to the maintenance of low competitivity levels of the Romanian family farms compared with the European Union standards, where a family farm represents not only a way of life in rural space, but mainly a viable production entity, whose production results are aimed mostly to marketing.

2. FARMS STRUCTURES

The changes crossed by the Romanian agriculture after 1990 were significantly reflected in the restructuring of the utilization of the agricultural land. Compared to the common agricultural policy that was mainly envisaging agricultural land concentration in larger holdings, more viable from the economic point of view, the Romanian land reform was accompanied by an excessive agricultural land fragmentation. According to the results of the 2002 General Census of Agriculture, at country level there were registered 4,485 thousands agricultural holdings, with an average size of the Utilized Agricultural Area (UAA) of 3.11 ha/holding. Out of these, 94.9% were family holdings.

Table 1: Agricultural holdings from Romania and UAA, at 2002 census

Type of holding by legal status	Number of holdings	UAA (hectares)	Average UAA/holding (hectares)
Family holdings (physical persons)	4462221	7708757.6	1.73
Legal entities	22672	6221952.5	274.43
Total	**4484893**	**13930710.1**	**3.11**

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

The distribution of the agricultural holdings after UAA, by size classes (Table 2), indicates a lesser share of the large holdings. The greatest percentage belongs to the holdings sized 2-5 hectares and 1-2 hectares, while larger holdings, more than 20 hectares, represents less than 1% of the total number of holdings.

Table 2: Agricultural holdings and the UAA, by size classes, at 2002 census

UAA size classes	Holdings with UAA		UAA	
	Number	%	Number	%
Under 1 ha	2,169,257	50.46	758,815.08	5.45
1-2 ha	897,891	20.88	1,272,610.64	9.14
2-5 ha	952,395	22.15	2,907,957.69	20.87
5-10 ha	218,880	5.09	1,440,944.55	10.34
10-20 ha	37,408	0.87	471,097.55	3.38
20-30 ha	5,527	0.13	131,583.66	0.94
30-50 ha	3,950	0.09	149,588.43	1.07
50-100 ha	3,850	0.09	258,042.66	1.85
Over 100 ha	10,203	0.24	6,540,069.84	46.95
Total	**4,229,361**	**100.00**	**13,930,710.10**	**100.00**

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

The severe land fragmentation, accompanied by a depleted living standard, determined a high share of self consumption. More than 76% of the total holdings (utilizing 38.2% of the agricultural area) are using the agricultural products for self consumption and only 2.3% of the total holdings (utilizing 31.2% of the agricultural area) are marketing oriented (Table 3.).

Table 3: Agricultural holdings and UAA, by the destination of the agricultural products, at 2002 census

Type of holdings, by legal status	Destination of agricultural products		
	Only for self consumption	Surplus is aimed to	Mainly for marketing

		marketing	
	Agricultural holdings (number)		
Family holdings (physical persons)	3422089	947484	92648
Legal entities	7377	4461	10834
Total	**3429466**	**951945**	**103482**
	UAA (hectares)		
Family holdings (physical persons)	4009397.36	3127020.99	572339.26
Legal entities	1316761.63	1131257.19	3773933.67
Total	**5326158.63**	**4258278.18**	**4346272.93**

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

While arable land represents 63% of the UAA, a restrictive production factor in developing a competitive agriculture resides in the fact that 61.7% of total arable land is utilized in excessively fragmented family farms – 14303 thousands plots. This is seriously hampering family farms' productivity, if we take into account that they are producing an estimated 74% of the total crop output of the sector level (Table 4).

Table 4: Agricultural holdings, by level of fragmentation, as registered at 2002 census

Level of fragmentation	UM	Number of holdings	UAA ha
		units	*hectares*
Family farms (FF)	**thou**	**4277**	**7708.8**
Total plots	**thou**	**14303**	
1 plot	% in total FF	30	6.5
2-3 plots	% in total FF	36	26.3
4-5 plots	% in total FF	18	26.4
6 plots and over	% in total FF	16	40.8
Average size of a FF	ha	**1,73**	
Average number of plots / FF	number	3	
Legal entities (LE)	**thou**	**22**	**6221.9**
Total plots	**thou**	**218**	
1 plot	% in total LE	25	3.9
2-3 plots	% in total LE	26	6.9
4-5 plots	% in total LE	14	8.2
6 plots and over	% in total LE	35	81.0

Average size of an LE	ha	**274,43**
Average number of plots / LE	number	10

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

The shrinkage occurred in the marketing orientation was also caused by the reduced financial potential of the small family holdings indicated by *the* inadequacy of production factors, as irrigation and fertilizers. The results of the 2002 General Census of Agriculture revealed that only 5.6% of the holdings had an irrigation system, out of which only 31.8% utilized it. Only 10.8% of the UAA had an irrigation system, out of which only 26.5% was effectively irrigated.

Table 5: Agricultural holdings, with an irrigation system available and the ones that effectively irrigated, and the corresponding UAA, as registered at 2002 census

Type of holdings, by legal status	Number of holdings with an irrigation system available		of which, holdings that effectively irrigated		UAA with an irrigation system available		of which, UAA effectively irrigated	
	Number	**% in total holdings**	**Number**	**% in total holdings with an irrigation system**	**ha**	**% in total UAA**	**ha**	**% in total UAA with an irrigation system available**
Family holdings	248489	5.6	78584	31.6	531758	6.9	87700	16.5
Legal entities	2562	11.3	1238	48.3	979062	15.7	312818	32
Total	**251051**	**5.6**	**79822**	**31.8**	**1510819**	**10.8**	**400518**	**26.5**

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

With regard to the use of fertilizers, out of the census results it may be observed the decline of the fertilizers consumption according to historical trend. Only about half of the total holdings applied fertilizers, out of which the greatest share belongs to chemical fertilizers (Table 6).

Table 6: Agricultural holdings that applied fertilizers in 2002

Type of holdings, by legal status	Number of holdings that applied fertilizers		of which:		
	Number	**% in total holdings**	**Chemical fertilizers**	**Organic fertilizers**	**Organic and inorganic fertilizers**
Family holdings	1989731	44.6	838041	625209	526481
Legal entities	10201	45.0	7436	859	1906

Total	1999932	44.6	845477	626068	528387

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

The management of the holding was high influenced by the educational level of the head of the holding. Out of the head of the holdings with legal status, less than half had specialized high studies in the field of agriculture.

The 2005 Farm Structure Survey confirmed the same land fragmentation in very small holdings, while the total number of holdings slightly decreased by 4.1%, compared to 2002 agricultural census results (Table nr. 7).

Table 7: The trend of the number of holdings, by UAA size classes, in 2002 and 2005

Number of holdings, by UAA size classes	2002	% in 2002	2005	% in 2005	2005-2002 (+/-)	2005/2002 %
Total holdings with UAA	**4299361**	**100**	**4121247**	**100**	**-178114**	**-4,1%**
0-5 ha	4019543	93.5%	3735818	90.6%	-283725	-7.1%
5-10 ha	218880	5.1%	289575	7.0%	70695	32.3%
10-50 ha	46885	1.1%	82024	2.0%	35139	74.9%
50-100 ha	3850	0.1%	4939	0.1%	1089	28.3%
over 100 ha	10203	0.2%	8891	0.2%	-1312	-12.9%

Source: *General Census of Agriculture, 2002*. vol.1, NIS, 2004 and *FSS 2005*, vol.1, NIS, 2006

According to the results of the Farm Structure Survey 2005, there was registered a concentration in the total number of legal entities. Compared to 2002 their total number decreased by 19.1 %. By system of land operation, the holdings with legal status operating *land under property* increased by 7% in 2005, as compared to 2002, while the ones operating *land taken on lease* increased by 9% in 2005, as compared with 2002. (Table 8).

Table 8: The trend of the number of holdings with legal status, by UAA size classes, in 2002 and 2005

Number of legal entities with UAA	Total			Operating land held property		Operating land taken on lease	
	2002	2005	Δ+/-	% of total 2002 and in size class	% of total 2005 and in size class	% of total 2002 and in size class	% of total 2005 and in size class
Total holdings	**22046**	**17843**	**-4203**	**70%**	**77%**	**10%**	**19%**
0-5 ha	7414	5317	-2097	98%	95%	0%	1%
5-10 ha	3166	2588	-578	93%	96%	1%	3%
10-50 ha	2401	2242	-159	67%	81%	12%	17%

50-100 ha	1091	1020	-71	31%	57%	31%	45%
over 100 ha	7974	6676	-1298	41%	58%	18%	37%

Source: *General Census of Agriculture, 2002*. vol.1, NIS, 2004 and *FSS 2005*, vol.1, NIS, 2006

The concentration registered at the above mentioned holdings may be explained also by the decrease with 1,417,200 hectares of the total UAA, if compared with 2002 (Table 9).

Table 9: The trend of the Utilized Agricultural Area operated by legal entities, by UAA size classes, in 2002 and 2005

UAA of legal entities	Total			Operating land held property		Operating land taken on lease	
	2002	2005	Δ+/-	% of total 2002 and in size class	% of total 2005 and in size class	% of total 2002 and in size class	% of total 2005 and in size class
Total thou ha	**6221.9**	**4804.7**	**-1417.2**	**46%**	**52%**	**11%**	**29%**
0-5 ha	12.2	9.5	-2.7	91%	95%	1%	1%
5-10 ha	19.7	16.6	-3.1	92%	95%	2%	2%
10-50 ha	48.0	44.7	-3.3	57%	68%	16%	22%
50-100 ha	77	74.3	-2.7	31%	46%	30%	41%
over 100 ha	6065	4659.6	-1405.4	46%	52%	11%	30%

Source: *General Census of Agriculture, 2002*. vol.1, NIS, 2004 and *FSS 2005*, vol.1, NIS, 2006

Analyzing the structure of the UAA, the share of the area "held in property" together with "taken on lease" operated by legal entities increased in 2005, for the size class 10-50 ha, from 73% to 90%, for the size class 50-100 ha from 61% to 87%, and for the size class "over 100 ha" from 57% to 82%.

3. LAND CONSOLIDATION

Even if significant progresses were achieved in the process of privatizing the agricultural sector, there is still much to be done on the road of land consolidation. For dealing with land size constraints, a farm consolidation project is in progress in Romania, starting with 2006.

The main objective of the project is to provide technical assistance for strengthening the institutional capacity to deal with formulating and implementing sound agricultural and rural development policies.

The specific objectives are the following:

- to assist the Romanian Government to define a land consolidation policy;
- to establish an effective land consolidation policy capacity in the MAFRD.

There were envisaged two main target groups:

- rural population who should benefit from increasingly efficient and effective mechanisms

- representatives of the MAFRD who will have improved land consolidation management systems, procedures and skills.

The main constraints in accomplishing these objectives resides in developing an effective and reliable land administration system, based on an accurate and updated general cadastre for defining the boundaries of real estate parcels in order to allow a simple, safe and cost and time effective procedure for land transaction to be set up and maintained ongoing.

4. MARKETING OF THE AGRICULTURAL COMMODITIES

For helping the great segment of small agricultural producers, commercial agriculture is to be supported and encouraged, regardless of the size of the farm or type of management. The road crossed by the agricultural product “from farm to fork” is too shattered. The marketing channels, not structured enough for integrating in strategic alliances farmers, processors and retailers, have a negative impact on agri-food markets. As a consequence, out of the results of the General Census of Agriculture it could be observed a decrease level of vertical diversification of the activities within the farms, other than agricultural. From the total number of holdings surveyed, only a minor number are developing processing and/or trading activities for the agricultural products obtained within the farm. Out of these, the greatest part opted for the downstream commodity channel, respectively agri-food trade (2.7% of total farms). A greater percentage of the holdings developing other downstream activities were registered for legal entities (10.5% of the total number of legal entities are integrating agri-food trade activities).

Table 10: Agricultural holdings developing agricultural products processing and/or trading, at 2002 census

Type of activity	Number of family farms	Number of legal entities	Total
Meat processing	27227	572	27799
Milk processing	63139	353	63492
Fruit and vegetables processing	33138	221	33359
Grapes processing	60932	222	61154
Milling	4635	442	5077
Trade	118380	2383	120673

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

With regard to the delivery channels, according to NIS data, 2004, in Romania there are three main channels for agri-food products distribution: (i) agri-food markets/ on street (ii) fairs, (iii) farm gate, (iv) processors, (v) retailers, wholesalers.

Because of the limited holdings able to ensure significant quantities of agricultural products at the requested standards, an important share of the commercialization is done on peasant markets or even at farm gate or on street markets. This type of trade is predominant for fruits, vegetables, potatoes and, in a lesser measure, products of animal origin and cereals.

Table 11: Share of ari-food products marketed, according to distribution channel

Groupe of products	Share of traded products, through	
	Agri-food markets and fairs	Processors, retailers and large holdings
Cereals	10	90
Fruits	80	20
Vegetables	90	10
Potatoes	88	12
Bovine alive	40	60
Pigs alive	6	94
Sheep and goats alive	38	62
Poultry alive	5	95
Milk	8	92
Eggs	39	61

Source: *General Census of Agriculture, 2002*. vol. 1, National Institute of Statistics, Bucharest, 2004

The problems agri-food market is confronting with, resides both in the excessive degree of land fragmentation, but also in the great number of subsistence farm, with a depleted infrastructure and management, unable to support a competitive sector based on good agricultural practices. Among the main causes that aggravated this situation it may be depicted: capital fragmentation and low capitalization capacity, low development in production infrastructure, low level of agricultural education of farm managers, aging of rural population, external migration of agricultural labor, persistence of a constant disequilibrium in the competitive environment for the agricultural producers, but also lack of adequate policy for development of non-agricultural activities in rural area, as an efficient economic buffer, able to support a reliable capital infusion.

5. STRUCTURAL ADJUSTMENTS FOR ACHIEVING COMPETITIVE STANDARDS OF THE FARMS

The preponderance of the small holdings (50% have less than 1 hectare) is an ongoing issue that is be resolved, both by adequate *social measures* (early retirement, etc), and by an efficient *economic approach*, that resides in:

- *measures envisaging the increase of human potential* (improvement of professional information and education for personnel working in agricultural sector, support for young farmers for settle down in rural area and setting up new farms or maintaining the existing ones, consultancy services for farmers, etc);
- *restructuring measures* (farms modernization, increase value added of the agricultural products, infrastructure development, adequate legislation for land consolidation and land market development, policy support for developing non-agricultural activities in rural area, as

a sustainable alternative for non-farm income, upgrade agricultural potential in areas affected by calamities or poor management, etc)

- *measures for improving agri-food products quality* (support for reaching marketing standards for quality, according to EU legislation, support for producers groups for promoting their products according to quality standards, etc)
- measures for supporting the restructuring of *semi-subsistence farms* for market orientation and setting up *groups of producers.*

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