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YOUNG FARMERS - A FUNDAMENTAL FACTOR IN THE DEVELOPMENT OF THE AGRICULTURAL SECTOR

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Abstract

Generational renewal plays an important role in strengthening resilient agriculture at EU level. The low number of young people working in agriculture is, on the one hand, a major concern both in Romania and at EU level, but also the subject of political stimulus measures.The purpose of this study is to analyze the changes that occur at the level of agricultural structure according to the age group of farm managers in Romania between 2005 and 2016. Thus, the analysis carried out assesses the effects of agricultural policies aimed at generational renewal. Although a number of measures to stimulate the young people's entry into agriculture have been introduced in recent years, there is a significant decrease in this category between 2010 and 2016. The ratio between young farmers and farmers aged 65+ indicates that the agricultural community is aging. In order to highlight the significant potential that young farmers have in supporting the sustainable economy, economic growth and competitiveness, a number of key variables were analyzed in relation to the age group, such as: number of holdings, agricultural area, number of livestock farms, standard production (SO), but also the number of farms with self-consumption. The analysis shows that farms run by young farmers are much more profitable compared to older farmers, but the factors that encourage young people to remain in the agricultural sector as farms leaders it does not seem sufficient to enough maintain it in this sector.

Key words**:** *young farmers, generational renewal, potential, agricultural policies*

INTRODUCTION

The age structure of farm managers is unfavorable in Romania, following the general trend of an aging population. The lack of young people in the agricultural sector is a cause for concern in the context of the renewal of generations of farmers and the competitiveness of this sector as well as for territorial development. In less-favored areas, agriculture can play an important role, but skills is need to be attracted, especially trained and dynamic young people.

Young farmers have a number of qualities that can help revitalize agriculture, and they are open to innovation and new approaches to business.

Davis et al, (2009) [4] analysing the economic data of agricultural holdings found that there are no significant age differences in farmers' performance, but young farmers were oriented towards longer-term planning with investments focused on the development of farms compared to their older counterparts. [6]noted that young farmers have a better chance of expanding production (in the case of livestock farms).

[7] points out that there is a positive relationship between the number of young farm managers and a number of variables such as gross agricultural product, labor productivity and the amount of subsidies.

[15] also discuss the need for young farmers in European agriculture, which would lead to economic development if productivity increases. Many studies agree that there is a link between young farmers and higher productivity.

Although a number of works and researches have been carried out in the field to support the integration of young farmers into the agricultural sector, the renewal of generations of farmers seems to be a difficult one [2, 10]. The transfer of farms from older to younger generations can face a number of barriers that can be both administrative and legal and moral, facing the refusal of senior farmers, although the farm remains low in productivity [3, 13, 12].

The initial motivation for young people and

newcomers to the sector is the knowledge gained from family members but also from the education system. [14] stated that young farmers face certain impediments to effectively enter the industry, thus being discouraged. Socio-economic factors such as difficult access to land and credit, lack of rural infrastructure, drive young people away from this sector [11].

The need for young people in agriculture is not only a problem for the sector, but also for regional development. Reducing the decline of the rural population, rejuvenating the active population are factors that play an important role in promoting geographical cohesion. Public policies can help break this cycle. This generational update has also been supported by the EU's Common Agricultural Policy (CAP) since the 1992 Mac-Sharry reforms aimed at early retirement measures.

The purpose of this study was to analyze the changes in the agricultural structure in the age group of Romanian agricultural operators in the period 2005-2016.

MATERIALS AND METHODS

In an attempt to assess the effects of agricultural policies on stimulating and supporting young farmers, statistics provided by Eurostat from EU-28 Farm Surveys, the National Institute of Statistics (INSSE) and the Agency for the Financing of Rural Investments (AFIR) were processed.

In order to highlight the importance of young farmers in the agricultural sector, the variable "replacement rate" was calculated. According to the Regidor methodology (2012), this represents the ratio between the number of farms managed by farmers under 35 years and the number of farms managed by farmers over 65 years (number of farmers <35 years/ number of farmers ≥ 65 years).

In order to identify the results of the agricultural policy on the installation of young farmers in the short and medium term, a number of key variables were analyzed in relation to age group: number of farms, agricultural area, number of livestock farms, standard output and number of self-consumption farms.

RESULTS AND DISCUSSIONS

The agricultural sector has been among the main sectors providing jobs for the EU's working population, with around 9.9 million people in employment in agriculture, accounting for 4.1% of total employment in the EU [5].

The agricultural sector has a significant labor force in Romania, approximately 22.3% of the total employed population works in this field.

The total number of farmers at EU-28 level decreased by 24.3% in the period 2007-2016, from 13.8 million farmers to 10.5 million, the process of consolidating EU farms. leading, on the one hand, to an increase in the average size of the holding and to a reduction in the number of holdings. At the same time, the number of young farmers up to the age of 44 years in the U.E. decreases both in absolute numbers, from about 3 million in 2007 to 2 million in 2016, but also as a share in the structure of farm managers in 2016, by 2.3%, the largest decrease being recorded by the category of farmers with age under 35 years. The process of consolidating farms in the EU is achieved not only by the exit of the elderly population from agriculture but also by reducing the number of young managers, which leads to a more careful analysis of the incentive measures used. The result is an aging age structure of farm managers, more than half of EU farm managers. belong to the category of farmers aged 55 and over.

The number of farm managers in Romania decreased by 19.5% between 2005 and 2016. However, following this process of consolidation of farms, we have at the end of the analyzed period an age structure in which the share of managers aged 65 years and over is higher. high compared to 2005 (44.3% vs 42.6%), contrary to the trend registered at EU level, in the same period. Moreover, the share of farmers under 35 years in the age group structure of farm managers in 2016 is reduced by about 42%. The age structure of farm managers in Romania in 2016 seems even older than in 2005, the number of farmers under 35 years reaching half by 2016 (Figure 1).

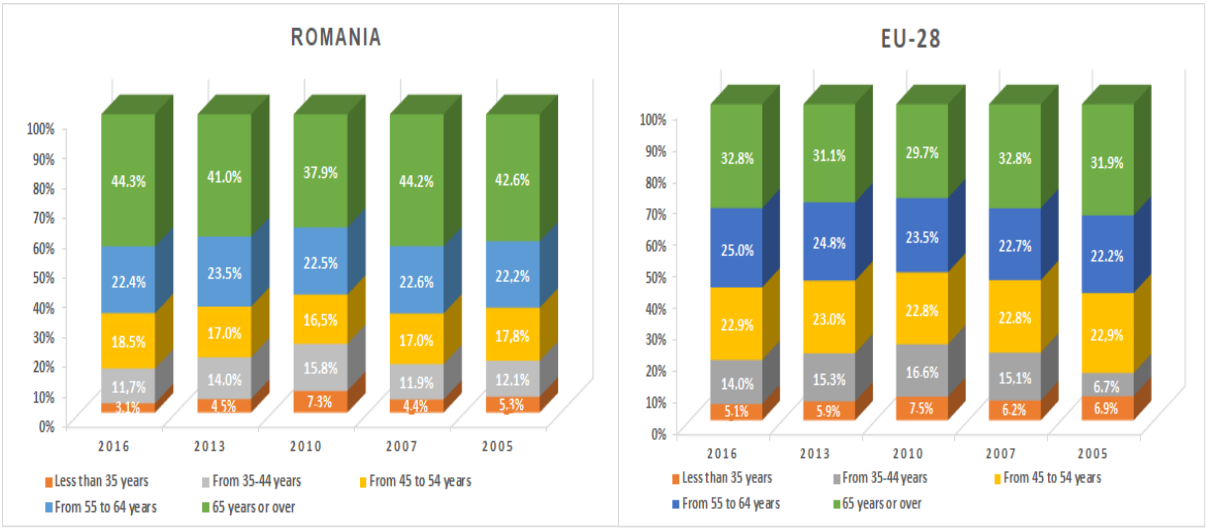

Fig. 1. Farm managers by age in Romania and on average in 28 EU Member States, %.
Source: Eurostat Database, accessed in 13/01/2022 [5].

Analyzing according to the age category, it is found that the number of farmers under the age of 25 years, decreased by up to 59% in 2013 compared to 2010, this decrease being felt in the case of the age category 25-35 years, 39%. The only period in which there was an increase in the number of farm managers was 2007-2010, in the categories up to 45 years; the number of young up to the age of 25 years, doubling by 2010, then halving by 2013 (Table 1).

Table 1. Number of holding manager by age group of the Farmer in Romania

	2005		2007		2010		2013		2016		Rate of change				Change rate
	No.	%	No.	%	No.	%	No.	%	No.	%	2005/ 2007	2007/ 2010	2010/ 2013	2013/ 2016	2005 /2016
Total	4,256,150		3,931,350		3,859,040		3,629,660		3,422,030		-8%	-2%	-6%	-6%	-20%
Less than 25 years	11,130	0.3%	10,480	0.3%	33,290	0.9%	13,700	0.4%	7,280	0.2%	-6%	218%	-59%	-47%	-35%
From 25 to 34 years	215,100	5.1%	160,950	4.1%	247,150	6.4%	151,070	4.2%	98,310	2.9%	-25%	54%	-39%	-35%	-54%
From 35 to 44 years	513700	12.1%	467,060	11.9%	609,610	15.8%	506,810	14%	399,850	11.7%	-9%	31%	-17%	-21%	-22%
From 45 to 54 years	756,300	17.8%	666,810	17%	636,370	16.5%	617,070	17%	632,780	18.5%	-12%	-5%	-3%	3%	-16%
From 55 to 64 years	946,830	22.3%	886,550	22.6%	868,910	22.5%	853,300	23.5%	765,450	22.4%	-6%	-2%	-2%	-10%	-19%
65 years or over	1,813,090	42.6%	1,739,490	44.3%	1,463,720	38%	1,487,710	41%	1,518,370	44.4%	-4%	-16%	2%	2%	-16%

Source: Eurostat Database, accessed in 13/01/2022 [5].

Statistical data indicate that the number of young farmers has declined faster than the age group over 44years, although young people have been financially supported through the 2007-2013 and 2014-2020 PNDR programs to set up farm management, it seems that many of them are leaving the agricultural activity.

The need to install young farmers is also highlighted by the calculation of the variable "replacement rate". At European level in 2016, the replacement rate for farmers over the age of 65 years by young farmers was 16%. Using as the denominator of the report no. of farmers aged 55-64 years, this replacement rate is higher by 20% (Table 2).

Table 2. Replacement rates

Year	*2005*	*2007*	*2010*	*2013*	*2016*	*2005*	*2007*	*2010*	*2013*	*2016*
Age Group	*RO*					*EU-28*				
<35/from 55 to 65 years	0.24	0.19	0.32	0.19	0.14	0.31	0.27	0.32	0.24	0.20
<35/65 years or over	0.12	0.1	0.19	0.11	0.07	0.22	0.19	0.25	0.19	0.16

Source: Eurostat Database, accessed in 13/01/2022 [5].

However, the replacement rate of farmers over 65 years in Romania is below 50% of the EU average, reaching 7% in 2016, being among the lowest replacement rates recorded at EU level, compared to the replacement rate of farmers aged over 65 years old by young farmers in countries such as Austria and Germany (167% and 91% respectively).

The impact of measures to stimulate the establishment of young farmers does not seem to be visible yet, although the substitution rate is very low, in Romania there was a high number of young people who applied in the National Rural Development Programs 2007-2013 and 2014- 2020. Under the first NRDP, the number of young farmers installed as beneficiaries of Measure 112 "Installation of young farmers" was 12,549, to which are added the young farmers who accessed Sub-Measure 6.1. ,,Support for the installation of young farmers ,, 10,277 young farmers, the NRDP support being continued in the period 2020-2027 [1].

Table 3 shows the number of farms managed by farmers aged 35 years (<35 years) and those managed by farmers in the age group 35-44 years.

Table 3. Evolution of the number of holdings

	2005	*2007*	*2010*	*2013*	*2016*	*2007 /2005*	*2010/ 2007*	*2013/ 2010*	*2016/ 2013*
Less than 35 years	226,230	171,430	280,440	164,770	105,590	-24.3%	63.6%	-41.3%	-35.9%
From 35 to 44 years		467,060	609,610	506,810	399,850		30.5%	-16.86%	-21.1%

Source: Eurostat Database, accessed in 13/01/2022 [5].

If in the period 2007-2010 there was an increase in the number of farms within the two age groups, the rate of change of the age group 35-44 years in the period 2010-2016 was very low, given that the number of holdings in the age group of less than 35 years has decreased by more than 35 %. Thus between the two age groups there seems to have been no transfer whatsoever. Analyzing the statistical data, it is found that the number of holdings managed by young farmers has been steadily decreasing, not indicating a transfer to the next age group, an exception being in the case of the last age groups, where the transfer is carried out naturally, due to the ageing of the farm managers, an increase in the number of farmers being observed.

Table 4 presents some key variables that can help assess the role and importance of young farmers in the agricultural sector in Romania. For this purpose, a comparison was made between the values of some economic indicators for different age categories of farmers, namely the categories of: young farmers (<35 years), farmers aged between 55 and 64 years, who represent steadfast farmers in the agricultural sector and in the market, as well as farmers over the age of 65, they have a length of service in the agricultural field and who will be at the head of the holdings after retirement. How these indicators evolved between 2005 and 2016 shows the impact of these age groups.

Both at European and national level, it has been found that young farmers (under 35 years) are of particular importance in the transformation of agriculture, with farms managed by young farmers being more productive compared to farmers in the other age groups.

Taking into the study the so/hold variable, it is observed that, for the age group 35 years, in relation to no. total managers as well as in relation to the two groups of farmers (the 55-

65 years old and the one over 65 years old), the indicator calculated for the standard production per hold in the case of young farmers is higher than the resulting indicators for the 3 groups. It is worth mentioning that in 2013 and 2016, this indicator is about 3 times higher than that of the group of farmers over the age of 65 years; this indicates that young farmers come to the field with a new knowledge, modernising the agricultural sector, thus there is also an increase in standard production.

Table 4. Variables of agricultural holdings by age group of the manager, Romania

Specification	*2005*	*2007*	*2010*	*2013*	*2016*
Variables per holding (all age groups)					
UAA (Ha/Hold)	3.3	3.5	3.4	3.6	3.7
Nº farms with livestock/hold	0.8	0.8	0.7	0.8	0.8
self-consumption> 50% Final Prod /Hold	0.8	0.8	0.9	0.9	0.9
SO/HOLD: 1,000 Euros/Hold	2.5	2.6	2.6	3.3	3.5
Farm variables managed by farmers <35 years of age in total age group holdings					
UAA (Ha/Hold)	2.6	3.6	3.9	5.6	6.1
Nº farms with livestock/hold	0.8	0.8	0.6	0.6	0.6
self-consumption> 50% Final Prod /Hold	0.8	0.8	0.9	0.9	0.8
SO/HOLD: 1,000 Euros/Hold	2.4	2.7	2.9	6.2	7.4
Farm variables managed by farmers aged ≥55 and ≤64 years in the total of age group holdings					
UAA (Ha/Hold)	3.5	3.9	4.0	3.8	3.4
Nº farms with livestock/hold	0.8	0.9	0.7	0.7	0.7
self-consumption> 50% Final Prod /Hold	0.8	0.8	0.9	0.9	0.9
SO/HOLD: 1,000 Euros/Hold	2.7	2.8	2.8	3.4	3.4
Farm variables managed by farmers aged ≥65 years in the total of age group holdings					
UAA (Ha/Hold)	2.4	2.4	2.0	2.1	2.1
Nº farms with livestock/hold	0.8	0.9	0.8	0.8	0.8
self-consumption> 50% Final Prod /Hold	0.8	0.8	0.9	0.9	0.9
SO/HOLD: 1,000 Euros/Hold	2.0	2.0	1.8	2.2	2.3

Source: Eurostat Database, accessed in 13/01/2022 [5].

Taking into the study the so/hold variable, it is observed that, for the age group 35 years, in relation to no. total managers as well as in relation to the two groups of farmers (the 55-65 years old and the one over 65 years old), the indicator calculated for the standard production per hold in the case of young farmers is higher than the resulting indicators for the 3 groups. It is worth mentioning that in 2013 and 2016, this indicator is about 3 times higher than that of the group of farmers over the age of 65 years; this indicates that young farmers come to the field with a new knowledge, modernising the agricultural sector, thus there is also an increase in standard production.

It should be noted that in the case of young farmers, the self-consumption of farms remains constant during the period under study, while the SO registers increases especially between 2013 and 2016. During the same period, the age group 55-64 years registered a significant increase of SO and self-consumption farms, and the age group over 65 recorded an increase in SO, the rest of the variables being constant.

Comparing the SO incomes of young farmers in Romania to those in the EU (calculated SO/ hold indicator in 2016 is 56) it is observed that they are 8 times lower; while self-consumption values appear to be higher than in the EU (calculated self-consumption indicator in 2016 is 0.3).

Regarding the variable number of farms with livestock/hold, in the case of young farmers the calculated indicator is lower compared to other age groups in the period 2010-2016,

which shows that the interest of young people to invest in livestock farms is one lower.

The indicator calculated for UAA/hold (utilized agricultural area) for young farmers (up to 35 years old) has a higher relative weight than the total at national level. Both at EU level and in Romania, the indicator of the variable UAA per holding is much higher in the case of young farmers compared to the total groups of farmers and the age groups studied. The resulting indicator for UAA per hold in the case of the group of farmers over 65 years is low, in the period 2010-2016 being approximately 2 times lower than of the category of young farmers. UAA is an important variable because the larger the area, the more competitive and productive the farm is considered. The physical size of farms is an intense topic of discussion in various research studies, presenting a relationship between market competitiveness, innovation and farm size.

CONCLUSIONS

The age structure of managers of agricultural holdings in Romania is not a favorable one, following the general trends of population aging, a similar situation is found in most European countries.

Young farmers are a key element in the development of the agricultural sector, their lack being considered an impediment to the general renewal of farmers. Through this generation of young farmers, a number of problems affecting the rural area can be remedied, especially the high degree of aging and the migration of young people from rural to rural areas. Thus, these measures can have an important impact on sociological aspects as well [8].

The resulting indicators show a need for the integration of young farmers as they have great potential for economic growth and competitiveness of the agricultural sector.

The study found that farms run by young farmers are more productive and competitive. Both SO and UAA showed an upward trend under the management of young farmers compared to farmers over 55 years. Perhaps a complementary and effective approach, taking into account the results of this study, would involve the renewal of generations of farmers and the creation of an appropriate context for the development of family-run farms run by young people [9].

U.E. supports the renewal of generations through the instruments of the common agricultural policy including direct payments and financial assistance through the National Rural Development Program. Policies are key to addressing the challenges of the demographic crisis, social inequalities and territorial cohesion. The installation of young farmers can help to solve this problem, but the incentives do not seem to be attractive enough to have the desired effect.

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