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YOUNG FARMERS IN PORTUGAL: ASSESSMENT OF POLICY EFFECTS

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ABSTRACT

This work aimed to evaluate the effects of agricultural policies, between 2005 and 2016, on the settlement of the young farmers and the changes in the Portuguese agricultural structure by age group of the farmers. The results show the ageing of agricultural holdings managers and the impossibility of generational renewal. Despite the provision of support for young farmers aiming at generational renewal, in Portugal it does not seem to have had the same effect as it has had in other countries of the European Union (EU). It is worth noting the significant decline in young farmers between 2010 and 2016, despite the new entrants supported by the rural development programme. The arising question is the relationship between young people supported by policies and young people who remained in the sector as managers of agricultural holdings. Farms run by young farmers are more profitable and market oriented. These factors increase the sector competitiveness, but they do not seem to be sufficient to keep youth in the sector. It is important to identify young people supported by agricultural policy aimed at this age group that were able to demonstrate clear business competitiveness and modernization capacity, and the public policies that promote the success of their settlement.

Keywords: *Young farmer, Agriculture, Policies, Rural Development Programme.*

INTRODUCTION

This work aims to evaluate the effects of agricultural policies on the development of agricultural employment and on the changes in the Portuguese agricultural structure, namely, on the development of the entry of young farmers. The question to be answered is whether agricultural policies help the entry of new farmers or whether other factors will boost their entry into the agricultural sector. A considerable volume of work and studies has been carried out in the last two decades in relation to the migration of labor and payments made by governments to stimulate agricultural activity, both in the United States of America (USA) as the work of D'Antoni and Mishra (2010) and in the European Union (EU). In their bibliographic review, Berlinschi et al. (2011) highlight the different results of the

policies. With the increase in farmers' incomes, through subsidies and other incentives, they can invest in the education of their children and they may have access to other non-agricultural activities that may be financially more attractive, thus making agriculture less attractive for these young people. Petrick and Zier (2012) found that direct payments, measures for the development of rural areas, transfers to disadvantaged areas and agri-environmental measures had no effect on agricultural employment. The effect of education on agricultural employment was already referred to by Huffman (1980), who pointed out that more educated farmers reallocate their labor services from autonomous agricultural work to work outside the farm more quickly than less educated farmers. Other authors demonstrate mixed effects of policies (Mattas et al. 2010; Olper et al. 2012). Several works underline the effect of policies on youth and agriculture (OECD, 2010; Susilowati, 2014). The demographic challenge in the case of small-scale agriculture, social isolation and the lack of incentives to innovate are issues mentioned in several works (Matthews, 2013; Davidova and Thomson, 2014). However, Zagata and Sutherland (2015) state that this is an emotional discussion and is directly related to the sustainability of European agriculture. The EU focused its attention on the needs of young farmers, seeing that the need for land and land issues, such as income, land fragmentation, followed by issues related to subsidies, credits and quality of hand labor, seem to be the most important needs in the countries analyzed (Zondag et al. 2015). These concerns had already been highlighted by Matthews (2013) and Olper et al (2012).

MATERIALS AND METHODS

This article presents the results of surveys of EU28 agricultural households throughout the Common Agricultural Policy (CAP) program and explores the impacts of CAP measures to stimulate and support the entry of young farmers. The issue is to identify what are the results of agricultural policies in the entry of new farmers in the short and medium term. Knowing the effect will help reshape these policies if they haven't had the medium-term result. Descriptive statistical analysis instrument was applied and indicators were produced to assess the effects. The sources of information are the National Statistics Institute (INE), the European Rural Development Network, the National Reports of the Portuguese Rural Program and EUROSTAT. The issue is wehte

RESULTS AND DISCUSSION

For the past ten years, the agricultural, forestry and fisheries sector has remained a major employer in the EU; about 9.9 million people work in agriculture, forestry and fisheries, accounting for 4.2% of total employment in the EU in 2019. Agriculture is a particularly important employer having represented, in 2019, in Romania, about 22% of the employed population, in Bulgaria 17% of the total employment, in Greece 11% and in Poland 9% (Eurostat DataBase; 24/04/2021).

The replacement rate of the legal and economic responsibility for the agricultural holding, called the "holder replacement rate", according to the methodology of

Regidor (2012) is the relationship between the number of holdings managed by farmers under the age of 35 and the number of holdings managed by farmers over 65 (number of farmers <35 years old / number of farmers 65 years old). This replacement rate was 16% for the EU28 in 2016. If we consider, as a denominator, the total number of farmers aged between 55 and 64, the rate increases to 20% (Table 1).

Table1: Replacement rates (by countries)

Age Group	Farmer <35 / Farmer between 55 -64 years old					Farmer <35 / Farmer 65 years old				
	2005	2007	2010	2013	2016	2005	2007	2010	2013	2016
Portugal	0.10	0.09	0.10	0.10	0.08	0.05	0.05	0.06	0.05	0.04
EU-28	0.31	0.27	0.32	0.24	0.20	0.22	0.19	0.25	0.19	0.16

Source: Eurostat Database, accessed: 20/04/2021

Portugal is the second country with the lowest replacement rate after Cyprus, with a replacement rate for the ages between 55 and 64 years of 8% and, considering the most real substitution for those over 65 years old that rate drops to 4%. In Austria, Germany and Poland, substitution appears to be ensured. Despite the low rate of substitution, in Portugal there was a considerable number of young farmers entering in the period 2007/10, as a result of the start of the Rural Development Program (2007-2013). It supported 8,199 young farmers to settle as individual producers or as agricultural company's members, between 2008 and 2014. However, the data analyzed indicate that this growth didn't stay, we don't have the number of young farmers who left the activity.

Between 2013 and 2016, in the EU, the number of young farmers responsible for agricultural holdings, under the age of 35 years old, decreased by 17% and, in Portugal, the decline was 24%. In the previous period 2010/13, the decrease was 17%, lower than that observed in the EU28, which was -29%. In the EU28, the decline continued in 2016, but with a lower rate of decrease (17%) (Table 2). The results show that young farmers suffered a higher mortality rate on their farms than other age groups. One can always ask the question of passing between age groups. The number of holdings managed by farmers aged 35 years (<35 years) and the number of holdings operated by farmers in the 35-40 age group can be seen. In the year 2016, the 40-44-year-old rate had to be applied due to a lack of data in the previous age group.

It appears that between 2010 and 2013 and between 2013 and 2016 the rate of change of the age group between 40-44 years decreased more than in the previous age group. There does not seem to have been a transfer between these two age groups (Table 3). We can also explain this reduction by transferring the latter to the next age group. The analysis of the data does not seem to indicate this movement, except for the last age group in which there seems to have been an increase of the number of farmers due to natural ageing.

Table 2: Number of holdings by age group of the Farmer (holding manager) in the EU28 and Portugal

Age Group	European Union (EU-28)										Rate of change				Change Rate
	2005		2007		2010		2013		2016		2005/ 2007	2007/ 2010	2010/ 2013	2013/ 2016	2005 2016
	N°	%	N°	%	N°	%	N°	%	N°	%					
<25	81,380	1%	72,300	1%	96,980	1%	57,560	1%	48,770	0%	-11%	34%	-41%	-15%	-40%
25 e 34	916,580	6%	788,300	6%	815,860	7%	586,800	5%	487,000	5%	-14%	3%	-28%	-17%	-47%
35 e 44	964,390	7%	2,087,670	15%	2,031,220	17%	1,654,510	15%	891,090	9%	116%	-3%	-19%	-46%	-8%
45 e 54	3,318,440	23%	3,154,630	23%	2,788,500	23%	2,489,490	23%	2,398,920	23%	-5%	-12%	-11%	-4%	-28%
55 64	3,218,020	22%	3,131,950	23%	2,882,260	24%	2,683,630	25%	2,621,470	25%	-3%	-8%	-7%	-2%	-19%
65	4,616,810	32%	4,527,440	33%	3,631,020	30%	3,366,290	31%	3,436,000	33%	-2%	-20%	-7%	2%	-26%
TOTAL	14,482,010	91%	13,808,470	100%	12,245,700	100%	10,838,290	100%	10,467,850	94%	-5%	-11%	-11%	-3%	-28%
Age Group	Portugal										Rate of change				Change Rate
	2005		2007		2010		2013		2016		2005/ 2007	2007/ 2010	2010/ 2013	2013/ 2016	2005 2016
	N°	%	N°	%	N°	%	N°	%	N°	%					
<25	380	0%	350	0%	580	0%	450	0%	450	0%	-8%	66%	-22%	0%	18%
25 e 34	7,250	2%	5,630	2%	7,280	2%	6,060	2%	4,540	2%	-22%	29%	-17%	-25%	-37%
35 e 44	0	0%	22,470	8%	25,080	8%	19,130	7%	10,520	4%		12%	-24%	-45%	-53% (**)
45 e 54	58,730	18%	48,350	18%	54,440	18%	44,020	17%	40,220	16%	-18%	13%	-19%	-9%	-32%
55 64	79,010	24%	69,920	25%	75,960	25%	62,410	24%	62,370	24%	-12%	9%	-18%	0%	-21%
65	149,420	46%	128,360	47%	141,940	46%	132,350	50%	134,370	52%	-14%	11%	-7%	2%	-10%
TOTAL (*)	323,920	91%	275,080	100%	305,270	100%	264,420	100%	258,980	97%	-15%	11%	-15%	-2%	-20%

Note: (*) It is not considered 100% because there are several farms in which age is not considered. (**) The years 2007 and 2016 were considered.

Source: Eurostat Database, accessed in 03/20/2022

Table 3: Evolution of the number of holdings between two age groups

Group Class	2005	2007	2007/05	2010	2010/2007	2013	2013/2010	2016	2016/13
Portugal <35 anos	7630	5980	-22%	7860	31%	6510	-17%	4920	-24%
Portugal 35-40 Years *		22.470		25.080	12%	19.130	-24%	10.520	-45%
UE <35 years	997960	860600	-14%	912840	6%	644360	-29%	535770	-17%
UE 35-40 years *	964390	2087670	116%	2031220	-3%	1654510	-19%	891090	-46%

Note: (*) In 2016 the 40-44-years-old group was excluded. Source: Eurostat Database, accessed in 24/11/2020

Table 4: Variables of agricultural holdings by age group of the manager, per year in EU28 and Portugal

Countries	European Union (28)					Portugal				
	2005	2007	2010	2013	2016	2005	2007	2010	2013	2016
Variables per holding (all age groups) in total holdings										
UAA (Ha/Hold)	12	13	14	16	17	11	13	12	14	14
N° farms with livestock/hold	0.6	0.6	0.6	0.6	0.5	0.7	0.7	0.7	0.6	0.7
self-consumption> 50% Final Prod /Hold	0.4	0.4	0.5	0.4	0.4	0.1	0.1	0.2	0.2	0.4
SO/HOLD: 1000 Euros/Hold	20	21	25	31	35	12	13	15	17	20
Farm variables managed by farmers <35 years of age in total age group holdings										
UAA (Ha/Hold)	16	17	20	25	22	30	35	31	27	31
N° farms with livestock/hold	0.7	0.7	0.6	0.6	0.5	0.7	0.7	0.6	0.6	0.6
Self-consumption> 50% Final Prod /Hold	0.4	0.3	0.4	0.4	0.3	0.0	0.0	0.1	0.1	0.1
SO/HOLD: 1000 Euros/Hold	29	29	30	42	56	40	44	45	42	58
Farm variables managed by farmers aged 55 and 64 years in the total of age group holdings										
UAA (Ha/Hold)	12	13	15	17	17	10	12	11	14	15
N° farms with livestock/hold	0.6	0.6	0.6	0.6	0.5	0.7	0.7	0.7	0.7	0.7
Self-consumption> 50% Final Prod /Hold	0.4	0.4	0.5	0.4	0.4	0.1	0.1	0.2	0.2	0.4
SO/HOLD: 1000 Euros/Hold	19	20	25	31	36	11	13	14	18	21
Farm variables managed by farmers aged 65 years in the total of age group holdings										
UAA (Ha/Hold)	5	5	6	7	8	8	8	7	9	8
N° farms with livestock/hold	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.7
Self-consumption> 50% Final Prod /Hold	0.5	0.5	0.6	0.5	0.5	0.1	0.1	0.2	0.2	0.5
SO/HOLD: 1000 Euros/Hold	7	7	9	11	13	7	7	7	8	9

Source: Eurostat Database, accessed in 24/11/2020

To assess the role and relative importance of the young farmers in the EU28 agricultural sector, a number of key variables were analyzed, such as: the number of holdings, the useful agricultural area; the number of farms with livestock and the Total Agricultural Standard Output (SO) (Regidor, 2012). Farms presenting a self-consumption rate higher than 50% of the final production were also analyzed. This variable is an indicator of the business objectives of the farms and their relationship with the market.

In addition to observing the values for young farmers (<35 years), a comparison was made with farmers aged 55 to 64 years old (inclusive) who represent farmers established in the market and full working capacity. It was also compared with farmers aged 65 or over who are established farmers, but likely to be or will be retired, having reached retirement age (Table 4). The results show the relative importance of the young farmers (under the age of 35 years) in the EU28, for the agricultural transformation. The farms managed by young farmers are in many ways different from those managed by farmers of higher age groups.

The key variables are better for young farmers than for farmers in general. Considering income, in the age group <35 years, its importance in relation to the total universe and in relation to the other two age groups analyzed for farmers aged > 55 years and 64 years, it appears that the relative importance of Standard Output (SO) in young farmers is higher than their relative weight in the universe studied (Table 4). It should be noted that, in 2013 and 2016, this figure was lower than the European average. In the other age groups, between 55 and 64 years old, the importance of SO is similar to the relative weight of these farms, in the EU28 and in Portugal. In the age group of farmers over the age of 65, the importance of the SO is lower than the relative weight of the holdings, but in Portugal it is higher than the weight found in the EU. It should be noted that the relative weight of self-consumption in relation to the universe is much lower in young farmers who thus seem to have a productive orientation directed towards the market.

The Utilized Agricultural Area (UAA) has a relative weight greater than the relative weight of the number of holdings in the case of young farmers. In Portugal, between 2013 and 2016, the increase in almost all variables should be noted, except for the number of farms if we consider all age groups. For young farmers, between 2013 and 2016, it is worth noting the increase in farms aimed at self-consumption and the increase in SO. For the same period, and for the age group between 55 and 64 years old, there was an absolute increase in UAA, in farms with livestock, in farms directed towards self-consumption and a significant increase in SO. In the case of those over 65, there was an absolute increase in all variables apart from the UAA, which suffered a reduction. The increase in SO is higher than the increase in farms for this age group. Young farmers in Portugal have higher incomes than in the EU, in relation to the other age groups and in general. The values of self-consumption in Portugal seem to be lower than in the EU for young people, which is an interesting factor to analyze.

The UAA per farm is much higher in young farmers both in the EU and in Portugal, compared with the total of farms and with the other age groups analyzed. This variable is important because larger areas allow more competitive companies, with the application of economies of scale and modernization. However, the relationship between competitiveness, innovation, and the dimension of farms in terms of physical dimension is the subject of discussion in several studies (Latruffe, 2010; Sauer, 2017). It can be considered that young farmers who remain in the system have variables that allow them to have greater competitiveness in the market in relation to the older age groups and already established in the sector.

CONCLUSION

The lack of young people in agriculture is not only a problem for the sector but also for territorial development. It is imperative to promote territorial cohesion, reducing depopulation in rural areas, and the decline of the active population. Agriculture could play a key role in the development of the less favored areas but needs workers especially young and dynamic farmers.

Public policies are critical to respond to the challenges of the demographic crises, social inequalities, and territorial cohesion. The settlement of young farmers contributes to the solution of these problems, but the incentives are neither attractive nor adequate to take the desirable effect. Also, it is worth discussing the succession in the agricultural family farms, namely the availability of the elderly producers to leave or allow their successors to become the decision-makers of the family holding. Public policies can help breaking this cycle. Employment, to be created in rural areas should be public as well as private. In any case, the population is needed.

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