While structural development in agriculture is typically described as a change in the number and size of farms, this may not be sufficient to illustrate the transformation in EU agriculture over the last decades in terms of farming practices, production, level of integration in the food supply chain, etc. Nonetheless, dynamics in terms of farm numbers and sizes can serve as a starting point to analyse the direction of European agriculture since the 1970s along this process of structural change.

Available statistics show that changes occur at a different pace across the EU-27, with some Member States experiencing a substantial reduction in the number of farms and farm-related jobs but still maintaining a strong presence of small-sized farms, while other countries move faster towards less and larger farms.

Yet, despite the persistence of many small-sized farms, the prevailing trend towards fewer, larger and more capital-intensive farms, and a declining farming population with an increasing average age, is a broad and generally applicable outline of the path followed by EU farms as the agricultural sector moves towards a different position in relation to the whole economy.

1. STRUCTURAL CHANGE IN EU AGRICULTURE:

Structural change in agriculture is a complex phenomenon involving multiple and interlinked driving factors. Theories and explanatory models have been developed to investigate the numerous dynamics affecting the evolution of the agricultural sector. Thus, structural development can be analysed in terms of farm size, of farming operations, in the use of technology, in the financial and institutional arrangements, etc. Moreover, there is a mutual interaction between structural change in agriculture and a number of other important aspects, such as the socio-economic characteristics of the rural farm household, the role of agriculture in the food supply chain, the political and institutional environment and the growth of the economy as a whole.

The data shown in the following paragraphs have been taken from the Farm Structure Survey (FSS) database, which is the only harmonised source for a wide range of structural data of EU farms. FSS is carried out in all EU Member States in the form of a sample survey every 2 or 3 years, and as a census every 10 years. The most recent data available stem from the FSS 2007 while the final results for the Agricultural Census 2010 are foreseen to be available in 2013.

2. A LONG-TERM TREND TOWARDS FEWER FARMS,…

A long-term trend of constant decrease in the number of farms and farm-related jobs has characterised European agriculture since the 1970s. In 1975 there were 5.8 million farms in the EU-9 (i.e. the then 9 members of the European Community: BE, DK, DE, IE, FR, IT, LU, NL, UK). Due to the accession of new Member States, this number increased to 13.7 million farms in the EU-27 in 2007. At the same time, the number of EU farms declined at an average annual rate of around -2%. From 1975 to 2007, the number of farms in the EU-9 fell by more than 2.6 million (of which almost 1.8 million in Italy and France alone), which means a reduction by 83 000 farms per year, on average.

The rate of decrease in the number of farms seems to have accelerated in the last decade, even if the situation differs across Europe (Graph 1): some Member States experienced the highest decrease during the 1980s (-7% in Denmark between 1980 and 1983, -7.7% in Ireland between 1987 and 1990), while others have experienced a more constant rate of decrease (for example, in Belgium, Greece, Germany and Italy). Among the EU-12, the highest rate of decrease was observed in Estonia (-10.8% between 2003 and 2007) and Bulgaria (-7.2% between 2003 and 2007). Finally Malta, Poland and the United Kingdom have experienced a stable or even a slightly increased number of farms, mainly due to statistical reasons (as in the United Kingdom) or because of a specific economic or political situation (as in Poland, where new holdings were created on previously unutilised agricultural area or by splitting large legal entities into individual farms).

3. …A NEW MIX OF PRODUCTION FACTORS…

The composition of production factors is another important dimension in the structural development of agriculture. As capital and technology replace labour, more machinery and fewer workers are used on an almost stable agricultural area.

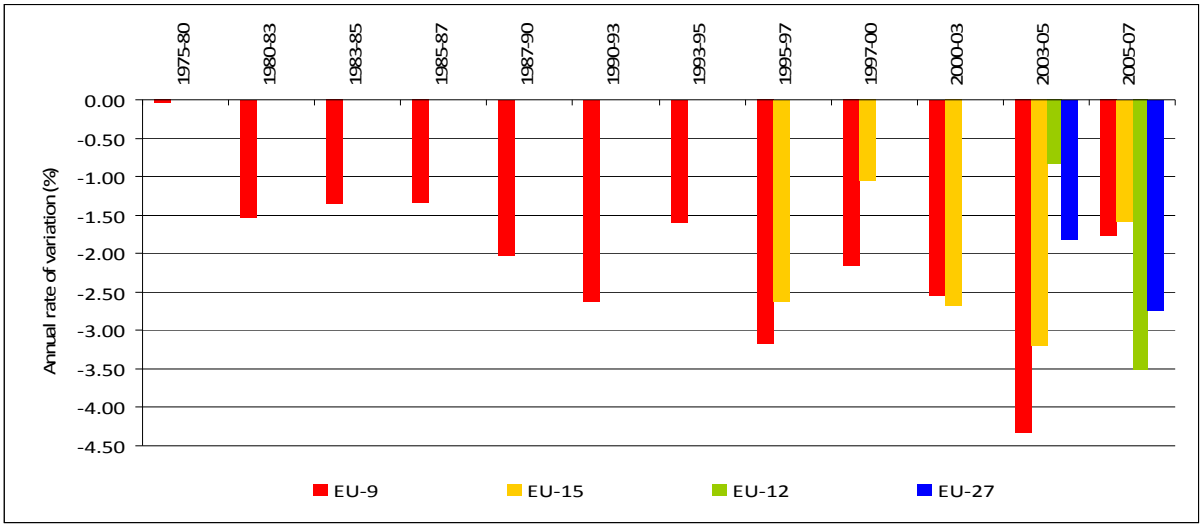
In 1975, agriculture in the EU-9 employed the equivalent of 7.5 million full time workers, which came to 11.7 million in the EU-27 in 2007. The annual rate of change for agricultural labour follows roughly the same pattern as for the number of farms: while the decrease stood at -2% in the oldest Member States between 1995 and 2007, it even reached -3.8% for the EU-12 between 2003 and 2007 (Table 1).

Table 1. Annual rate of change (%) in the number of farms, labour and agricultural area in the EU, 1975-2007

	Number of farms	Labour inputs	Agricultural area
EU-9 [1975-2007]	-1.88	-2.36	-0.11
EU-15 [1995-2007]	-2.17	-2.03	-0.26
EU-12 [2003-2007]	-2.18	-3.76	0.60
EU-27 [2003-2007]	-2.27	-3.26	-0.04

Source: EUROSTAT, Farm Structure Survey, 1975-2007

Graph 1. Annual rate of change in the number of farms in the EU, 1975-2007



Source: EUROSTAT, Farm Structure Survey, 1975-2007

The equivalent of more than 4 million full time jobs disappeared in the EU-9 between 1975 and 2007 (of which almost 2.7 million were lost in Italy and France alone). The last decade has seen the highest rates of decrease, especially in the EU-12 (e.g., -11% in Bulgaria and -6.4% in Hungary between 2003 and 2007).

The utilised agricultural area has remained rather stable (reaching 172.5 million hectares in 2007), with average rates of change of less than 1% almost everywhere in the EU (with the exception of Estonia and Latvia, which have increased their agricultural area by more than 3% between 2003 and 2007).

On the other hand, there has been a noticeable increase in mechanisation. For instance, in the EU-15 the percentage of farms owning a tractor has increased from 44% to 56% between 1995 and 2005. During the same time, also the average number of machines per farm increased (for example, from 1.7 to 1.9 tractors per farm with machinery) between 1995 and 2005 (Table 2).

Table 2. Number of machines per farm with machinery in the EU-15, 1995-2000-2005

	1995	2000	2005
Tractors and tool carriers	1.7	1.7	1.9
Cultivators	1.2	1.2	1.3
Combine harvesters	1.1	1.1	1.1
Other fully mechanised harvesters	-	1.4	1.7

Source: EUROSTAT, Farm Structure Survey, 1995-2000-2005

4. …INCREASING FARM SIZE…

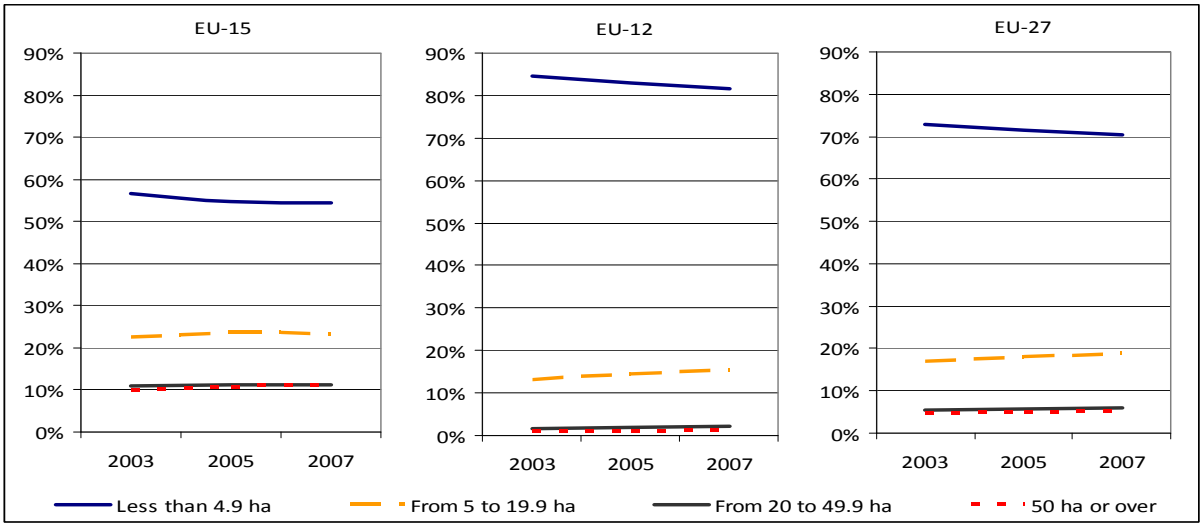
The decrease in the number of farms, together with an almost stable utilised agricultural area since the 1970s, suggests that on average those farms which have remained active must have become bigger.

Indeed, the average size of farms has increased from 17.4 to 22 hectares for the EU-15 between 1995 and 2007; from 11.5 to 12.6 hectares for the EU-27 and from 5.3 to 6 hectares for the EU-12 between 2003 and 2007.

Due to the accession of new Member States with a large number of small farms, the group of farms with less than 5 ha has increased more strongly in absolute terms since the 1990s. On the other hand, the share of these small-sized farms in the total number of farms has decreased.

At the beginning of the 1990s there were 4.6 million farms with less than 5 hectares of agricultural area (corresponding to 62% of all farms) in the then members of the European Community (without figures for Germany) and 1 million farms with more than 20 hectares (16% of all farms); in the same Member States in 2007 the figures were, respectively, 3 millions farms with less than 5 hectares (56% of all farms) and 1 million farms with more than 20 hectares (21% of all farms). Thus, although the number of large farms has

Graph 2. Distribution of farms by agricultural area size classes in hectares in the EU, 2003-2007

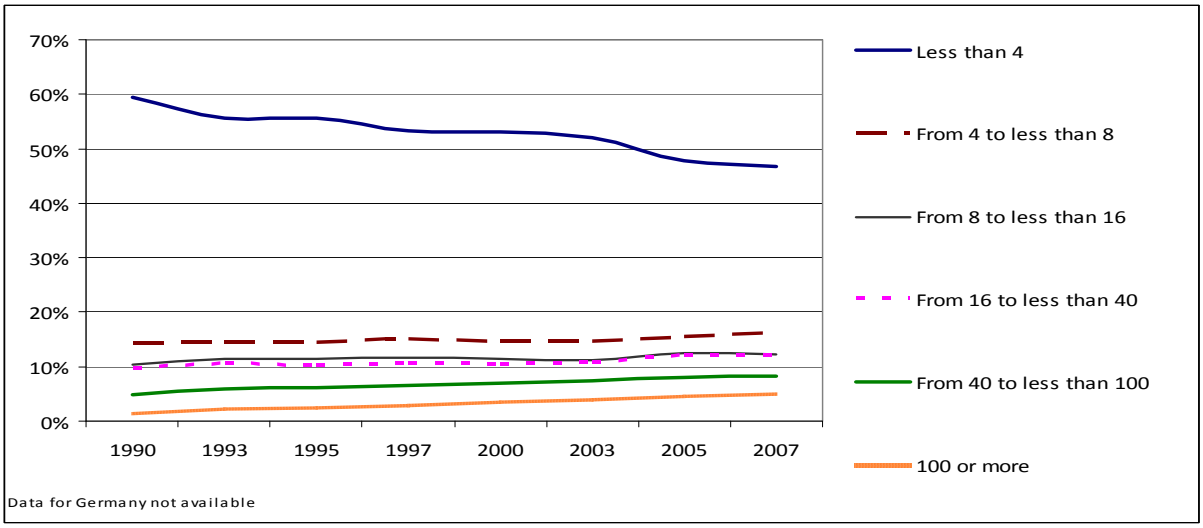


Source: EUROSTAT, Farm Structure Survey, 2003-2007

remained stable, its percentage of total farms has continued to increase.

Even though small-sized farms still represent the great majority of farms in the EU, the distribution of farms by the size of their agricultural area has continued to change also in recent years: the share of farms belonging to the smallest size class (less than 5 hectares), declined significantly, above all in the EU-12 (from 84.6% to 81.6% between 2003 and 2007) while the share of medium/large-sized farms showed a slower but continuous increase in the EU-27, from 16.9% to 18.6% for farms with more than 20 hectares and from 4.6% to 5.1% for farms with more than 50 hectares (Graph 2).

Graph 3. Distribution of farms by economic size classes in those countries which were Member States of the European Community before 1990 (without figures for Germany), 1990-2007



Source: EUROSTAT, Farm Structure Survey, 1990-2007

A similar path towards larger entities can also be observed for the distribution of farms by economic size class[1]. The average economic size of the farms has increased from 15 to 24 ESU for the EU-15 between 1995 and 2007; from 10 to 11 ESU for the EU-27 and from 2.2 to 2.4 ESU for the EU-12 between 2003 and 2007.

At the beginning of the 1990s there were 4.4 million farms with less than 4 ESU (corresponding to 59% of all farms) in the then European Community (without figures for Germany) and 460 060 farms with more than 40 ESU (6% of all farms). In the same Member States in 2007 the figures were, respectively, 2.4 million farms with less than 4 ESU (45% of all farms) and 767 080 farms with more than 40 ESU (14% of all farms). Also the number of largest farms with more than 100 ESU has increased their share from less than 100 000 in 1990 to 283 860 in 2007, corresponding, respectively, to 1.4% and 5.3% of all farms (Graph3).

5. …AND AN AGEING FARMING POPULATION

Another important dimension of structural change in EU agriculture is the general ageing of the farming population. Only 6% of EU farm managers are younger than 35 years, while more than half are 55 years old or older. Moreover, the number of the youngest farmers in the EU decreased between 1990 and 2007, while the elderly age classes

[1] The economic size is expressed in European Size Units, or ESU, defined as the potential gross value added of the holding, calculated as the sum of the standard gross margins of each agricultural activity present in the farm; 1 ESU = 1 200 Euros.

experienced a smaller decrease or even a slight increase.

This ageing trend is caused by the combined effect of the low exit rate from farming by elderly farmers and of the low entrance rate to farming by young farmers.

Certain characteristics which explain this trend are common to most EU regions, such as the lack of a successor for the farm management or the poor attractiveness of some rural remote areas for young people. Nonetheless, considerable differences can be observed in the age structure across the EU-27. For example, in 2007:

- the EU-12 had a higher share (7%) of young farmers (under 35 years) than the EU-15 (5%), but also a higher share of elderly farmers (above 65 years) (31% in the EU-15, 34% in the EU-12);
- Bulgaria, Italy, Portugal and Romania showed shares of less than 5% of young farmers and more than 40% of elderly farmers;
- Poland had the highest share of young farmers (12%), while the highest share of elderly farmers was found in Portugal (47%).

However, in spite of these differences, the ageing trend is a common pattern. In fact, the number of farmers in the youngest age group is declining more strongly than in any other age group across the EU-27, reaching the highest level in Cyprus (-24%), Bulgaria, Estonia and Romania (-18%) between 2003 and 2007. On the other hand, the number of farmers in the oldest age group has decreased at a slower pace or even increased in one out of three EU countries.

Looking at less recent years, the different weights of the youngest and of the oldest age groups between 1990 and 2007 is evident in almost all Member States; the share of young farm managers has generally decreased – from 7% to 2% in Portugal, from 11% to 4% in the Netherlands, etc. – while the share of elderly farm managers has generally increased – from about 30% to more than 40% in Portugal and Italy, from 25% to 36% in Greece and from 20% to about 30% in Spain and the United Kingdom (Table 3).

Table 3. Share of young and elderly farmers in some EU Member States, 1990-2007

	Less than 35		65 years or over	
	1990	2007	1990	2007
DK	10.9%	5.9%	19.8%	19.6%
IE	14.3%	8.1%	21.5%	23.5%
EL	8.7%	6.9%	25.3%	36.3%
ES	8.4%	5.2%	21.2%	31.4%
FR	13.4%	8.1%	13.7%	12.9%
IT	5.4%	3.1%	31.1%	42.9%
LU	13.4%	7.4%	13.9%	13.9%
NL	11.0%	4.0%	14.0%	17.7%
PT	7.0%	2.2%	28.2%	46.7%
UK	10.5%	3.6%	19.0%	28.9%

Source: EUROSTAT, Farm Structure Survey, 1990-2007

6. AND IN THE FUTURE?

Twenty years from now, will European agriculture be dominated by a few very large farms, highly mechanised and run by elderly managers?

Despite the trends described above, this extreme scenario is highly unlikely, for various reasons.

Firstly, there is no such thing as a uniform European agriculture. Diversity of structures, production methods and land use is one of the great assets in a sector covering 27 Member States of extremely varied size, climatic conditions, topography and socio-economic environment. Thus, even where common trends can be observed, they translate into different realities on the ground – a 10% increase in average farm size in Malta corresponds to 0.1 ha, while in the Czech Republic this would be 9 ha.

Secondly, there are reasons to believe that the described trends will not continue indefinitely. Even in the US, where structural change has arguably progressed further than in the EU (the average farm size in the US is 167 ha, compared to 12.6 ha in the EU), significant numbers of farms remain in the lower size classes.

And thirdly, policy interventions at EU and national level aim to support diversity and sustainability in farming in order to maintain the economic viability of farming and quality of life in rural areas. While structural change will certainly continue in the future, policy measures are available to ensure that objectives of balanced territorial development and thriving rural areas are met.