EXECUTIVE SUMMARY

WRITTEN BY EEIG AGROSYNERGIE

Agrosynergie
Groupement Européen d’Intérêt Economique
THE AGROSYNERGIE EEIG IS FORMED BY THE FOLLOWING COMPANIES

OREADE–BRECHE Sarl
64 chemin del prat - 31320 Auzeville FRANCE
Tel. : + 33 5 61 73 62 62
Mail : t.clement@oreade-breche.fr
Represented by: Thierry Clément

COGEA S.r.l.
Via Po 102 - 00198 Roma ITALY
Tel. : + 39 6 853 73 51
Mail : fantilici@cogea.it
Represented by: Francesca Antilici

This evaluation study, financed by the European Commission, has been carried out by the EEIG AGROSYNERGIE. The conclusions, recommendations and opinions presented in this report reflect the opinion of the consultant and do not necessarily reflect the opinion of the Commission.

Scientific Responsible: Ezio Scotti
Project Coordinator : Maria João Queiroz

EEIG AGROSYNERGIE
Rue Joseph II, 36/38 – 1000 Brussels
tel. +39/06.85.37.35.21
email: fantilici@cogea.it
1. Evaluation scope

The scope of this evaluation is to examine the effects of the direct support schemes laid down in Council Regulation (EC) No 1782/2003 of 29 September 2003 (later Council Regulation (EC) No 73/09) on farm structural changes.

None of the key objectives expressly assigned to the CAP by the article 39 of the EU Treaty is related to farm structures. However, the changes in the support tools, introduced with Regulation (EC) No 1782/2003, may have affected farmers’ behaviour, particularly in the use of production factors: land, labour, capital, with likely subsequent effects on key structural features of European farms.

The evaluation examines the evolution of farm structures and the maintenance of farming in marginal areas as well as the effects of direct payments on labour force, capital and on farm business strategies.

The geographical scope of the analysis is EU27. The coverage is regional (NUTS 2) and the examination period starts on 1 January 2005. In order to clearly identify the effects of policy changes on the evolution of farm structures, data from 1995 onwards are analysed.

2. Policy Framework

Council Regulation (EC) 1782/2003 of 29 September 2003 introduces a radical change to the logic of the CAP. According to the 2003 reform, it is the free market that should determine production levels and quality of agricultural production. Specific measures are established for aspects that the market is unable to deal with in an optimal manner, taking into account non-market effects of agricultural activities in order to protect the environment, public health, etc.

In this context, Regulation (EC) No 1782/2003 introduced the Single Payment Scheme (SPS) which represents a fundamental change in the support instruments. The tools used until 2003 (price support, area payment, animal payment) have gradually been dropped in favour of a single payment. This aid is decoupled, since it is no longer bound to production levels (unlike price support), nor to production (unlike the area payment), nor to market conditions. Thus the production decisions of farmers (both in terms of output levels and quality) respond to market signals.

The decoupled "Single Payment" is paid in the form of a single annual payment based on the value of the so-called payment entitlements, which are held by the farmer. The farmer has to declare payment entitlements together with an equivalent number of eligible hectares in a yearly application in order to claim the single payment. The Member States (MS) could choose from three basic SPS models to calculate the reference amount (i.e. payment entitlements) for an individual farm: based on historical farm data (historical model), based on regional historical data (regional model) and hybrid systems.

New Member States have the possibility, during a transitional period, to apply a Single Area Payment Scheme (SAPS), i.e. a decoupled support system based on two fixed elements at the national level: a national financial envelope and the national utilised agricultural area.

The table below gives an overview of the implementation choices made by Member States:

<table>
<thead>
<tr>
<th>Calculation of the value of payment entitlements</th>
<th>Member States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPS Historical</strong></td>
<td>Austria – Belgium – France – Greece – Ireland – Italy – Netherlands – Portugal – Spain - UK Scotland - UK Wales</td>
</tr>
<tr>
<td><strong>SPS Regional</strong></td>
<td>Malta - Slovenia</td>
</tr>
<tr>
<td><strong>SPS Hybrid</strong></td>
<td>Denmark – Finland – Germany – Luxembourg – Sweden - UK England - UK Northern Ireland</td>
</tr>
<tr>
<td><strong>SAPS</strong></td>
<td>Bulgaria – Cyprus - Czech Republic – Estonia – Hungary – Lithuania – Latvia – Poland – Romania - Slovakia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SINGLE FARM PAYMENT (SFP)</th>
<th>Calculation of the value of payment entitlements</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPS Historical</td>
<td>Payment entitlements are calculated on the basis of the payments received by the individual farmer during a reference period resulting in different aid levels per hectare.</td>
</tr>
<tr>
<td>SPS Regional</td>
<td>Payment entitlements are calculated taking all payments received in a region and dividing them by the number of eligible hectares resulting in a flat rate.</td>
</tr>
<tr>
<td>SPS Hybrid</td>
<td>Payment entitlements calculation combines the above two approaches; it can be “static” or “dynamic” (with the latter approximating both historical and regional elements towards a flatter rate).</td>
</tr>
<tr>
<td>SAPS</td>
<td>In each Member State, the aid consists of an annual amount per hectare of eligible land.</td>
</tr>
</tbody>
</table>
Regulation (EC) No 1782/2003 also introduces the possibility of partial decoupling that may or may not be used by Member States (articles 66 to 68b). Furthermore, Article 69 also allows Member States to retain up to 10% of the funds available (under national ceilings) for each sector, and to assign it in the form of an additional coupled payment to farmers using special farming methods.

The Health Check (Council Regulation (EC) No 73/09) decided on the further integration of coupled measures into the decoupled direct support. Among other things, the regulation provides assistance to sectors or regions with particular difficulties (the so-called 'Article 68' measures), abolishes arable set-aside, increases milk quotas gradually leading up to their abolition in 2015, and converts market intervention into a genuine safety net. It was also agreed to increase modulation, whereby direct payments to farmers are reduced and the corresponding amounts are transferred to the Rural Development Fund.

With regard to the new Member States, direct payments are phased in from 2004 to 2013 for the ten members entering the EU in 2004 and from 2007 to 2016 for Bulgaria and Romania. By the date of accession, the new Member States had to make a decision whether they wanted to apply the SPS or the SAPS. Only Slovenia and Malta chose the SPS.

The new Member States may grant complementary national direct payments (CNDP) subject to the authorisation of the Commission and within specific limits. These CNDPs may be decoupled or coupled (to production, or to land use). Moreover, certain new Member States may decide to grant a separate sugar payment to historical producers of sugar beet as well as a separate fruit and vegetable payment, a separate soft fruit payment and a transitional fruit and vegetable payment to SAPS eligible farmers.

3. THEORETICAL ANALYSIS

The theoretical analysis focuses on the economics of structural change in agriculture. The analysis provides the definitions of structural change in the farm sector followed by a brief review of the main theories that can be used to explain such phenomenon. Furthermore, two approaches are used in the theoretical analysis to represent and discuss the role of agricultural policies and other factors:

- on labour allocation decisions and farm exit;
- on the substitution of capital for labour.

Considering the complexity of the topic, only a synthesis of the findings concerning these two broad subjects is presented.

3.1 The role of agricultural policies and other factors on labour allocation decisions and farm exit

A large number of farms in the EU are family farms. For this type of farms it is very useful to analyse structural change from a household economics perspective. This is particularly useful in developing the analysis concerning labour allocation decisions. Indeed, one of the main problems in family farms regards how to allocate the available labour between on and off-farm activities. The literature suggests that: higher off-farm wage levels decrease the amount of days worked on-farm; lower unemployment rates decrease the amount of days worked on-farm; higher off-farm work transaction costs increase the amount of days worked on-farm; and, finally, that higher farm product prices increase the amount of days worked on the farm. Moreover, higher direct payments generate a less variable and higher income. Thus, it is plausible that these payments increase the share of days worked on-farm and reduce the rate of exit from agriculture.

However, the theoretical analysis developed within the present evaluation suggests that there is a difference between the effects of coupled and decoupled payments. A non-negligible number of studies account for the role of agricultural policies, but none of these analyse coupled and decoupled payments separately. Therefore, the considered theories of structural change have been further developed in order to account for this aspect that seems relevant for the current evaluation. Because decoupled payments provide a very limited incentive to increase production level and/or the use of resources on-farm, decoupled payments should have a more limited impact on labour allocation and farm exit compared to coupled payments.
3.2 The role of agricultural policies and other factors on substitution of capital for labour and expansion of continuing farms

The substitution of capital for labour has been widely studied in the literature on structural change, as such substitution requires farms to grow in size in order to justify a given level of management and labour costs.

The literature suggests that the support provided by agricultural policies increases the capacity to consume and to invest as well as the likelihood to access credit. Given the labour-saving bias of innovations introduced through investments, it seems logical to expect an increase of capital over labour. While both coupled and decoupled payments increase the possibility to invest on-farm, based on the results of the theoretical analysis developed within this evaluation, decoupled payments may be expected to provide a more limited incentive compared to coupled payments.

According to the literature on structural change, the introduction of innovations has implications for the overall farming sector including increase of supply and a resulting decline in output prices. This adds additional pressure on small farms, that generally perform less well than larger farms, and lessens their possibility to invest on-farm. According to the “cannibalization” mechanism\(^1\), the support provided by agricultural policy could accelerate this process, provided that the residual profits generated by this support be larger for larger farms. In this case, larger farms can bid resources away from smaller farms. This could increase land prices (sale price or rental rate) and the demand for land, even if this process is again expected to be more pronounced for coupled than for decoupled forms of support.

Most of the factors considered so far are likely to accelerate the process of structural change. However, in the short-run agricultural policies can preserve the inefficient farms by reducing the number of farms exiting the sector. Furthermore, according to the literature based on household models, small farms can survive provided that they use off-farm income and/or that farmers have a more complex set of objectives than profit maximisation.

Finally, if decoupled payments are granted under the condition that farmers should hold a given amount of land, this could result in a decrease of capital intensity per unit of land. The impact of decoupling in terms of capital intensity per unit of work cannot be assessed theoretically because decoupling also changes the use of labour.

3.3 Theoretical basis for the evaluation

The theoretical analysis highlighted that structural change is a complex phenomenon that can affect simultaneously several structural attributes. Moreover, the analysis provides some hypotheses on the likely effects of direct payments on labour use and on the substitution of capital for labour. The support provided by direct payments generates higher and less variable income. This is expected to increase the use of labour on-farm and to reduce the farm exit rate. Furthermore, this could also imply an increase of on-farm investments and, because of the labour saving bias of innovation, the substitution of capital for labour. However, while these hypotheses could hold when coupled direct payments are considered, decoupled payments would be expected to have only a very limited effect. These hypotheses are tested in the empirical analysis by means of different approaches.

4. METHODOLOGY AND LIMITS OF THE EVALUATION

4.1 Evaluation methodology

Considering the complexity of the topic under evaluation, the methodology combines quantitative analysis, via econometric modelling and other methods, with a review of national legal and institutional frameworks and a CATI survey².

Quantitative analysis is carried out at two levels, at macro level based on regional data (NUTS II) and at farm level. The analysis distinguishes across the alternative Single Farm Payment (SFP) implementation models (Historical, Regional, Hybrid and SAPS). The analysis also distinguishes by farm type³ and economic size⁴.

The Review of national legal frameworks covering the 27 Member States identifies the most important legislative instruments at national level that, during the period of analysis, may have played a role in structural change in agriculture.

The CATI survey was aimed at collecting information on the effects of direct support on farm business strategies, not otherwise available in the EU or national statistics. The survey was conducted in twelve case study regions⁵ with the objective of involving 1 000 farms beneficiaries of direct payments.

The evaluation judgements formulated for the themes examined in this evaluation are based on the combination of the above mentioned approaches. Hereafter, we provide a synthesis of the main tools used for each evaluation theme.

**Theme 1 “Farm Structure”**

The analysis is carried out at macro-territorial level (regional level NUTS 2) based on Eurostat Farm Structure Survey (FSS) data, completed, in the case of the econometric analysis, with the CATS database⁶ on CAP expenditure at regional level. The analysis uses two methodological approaches:

- **Statistical analysis** of structural indicators computed at regional level covering the years 1995-2010. The years before and after the reform are compared through calculation of average annual growth rates (%).

- **Econometric modelling** provides a quantitative estimation of the impact of the direct support scheme on changes in the agricultural structure of EU regions. The adopted econometric approach used a combination of structural characteristics (size, specialisation, holder’s characteristics, type of tenure, labour used, other gainful activities) as the dependent variable. The analysis covers the years 2005-2010 and is conducted at subsequent stages applying two sets of tools:
  - Multivariate analysis with the scope of identifying a finite number of farm structure profiles through Factor analysis, followed by clustering to identify homogenous groups of regions characterised by the same typology of farm structure;
  - Regression models (Probit model, Ordinary Least Squares - OLS - and Multinomial Logit models) in order to assess whether and to what extent a relationship between direct payments and structural change does exist (statistical significance, sign and magnitude of estimated direct payment parameters).

---

² CATI = Computer Assisted Telephone Interviewing
³ Eight groups representing the main production orientations: Specialist field crops; Specialist horticulture; Specialist permanent crops; Specialist grazing livestock; Specialist granivores; Mixed cropping; Mixed livestock; Mixed crops-livestock.
⁴ Small size farms: Less than 24,999 euro of Standard Output (excluding farms with Standard Output equal to zero euro); Medium size farms: 25 000 – 249 999 euro of Standard Output; Large size farms: 250 000 euro and over.
⁵ The case study regions are: France Centre (FR); Niedersachsen (DE); Brandenburg (DE); Makedonia-Thraki (GR); Del-Alfold (HU); Emilia Romagna (IT); Łódzkie, Mazowsze, Lubelskie and Podlasie (PL); Alentejo and Algarve (PT); Slovenia (SI); Extremadura (ES); Slätbygdslän (SE); England East (UK).
⁶ Clearance of Account Trail System
THEME 2 “MAINTENANCE OF FARMING IN MARGINAL AREAS”

The analysis is based on statistical analysis of structural indicators computed at the regional level (EU27, NUTS 2 regions) and use data available from Eurostat FSS. The analysis examines the development of structural indicators in Less Favoured areas (LFAs) in relative terms (i.e. compared to the general evolution of all farms observed under Theme 1). The analysis covers the years 2000-2007 for EU15, only the years 2005-2007 for the 10 Member States that entered the EU in 2004 and for Bulgaria and Romania only 2007 and 2010. Consequently, separate analysis is carried out for EU15 and EU12.

The analysis is complemented by further in-depth examination of farms in the 12 case study regions, developed on the full sample of FADN farms comparing the years 2004 and 2009 (FADN farm weights were used to extrapolate the sample data to the statistical reference population). FADN farms are classified according to whether they are located in LFAs or not and further divided into two groups: farms that have received the compensatory allowance and farms that have not received it.

THEME 3 “LABOUR FORCE AND CAPITAL”

The analysis concerning labour force is carried out at macro level based on Eurostat data (FSS) and farm level based on FADN farm data across the EU27 Member States. The following methodological approaches are used:

- **Statistical analysis** (macro level) examines the development of the main labour indicators for the observation period corresponding to the years 1995 onwards, and it is instrumental for interpreting the observed phenomena, in particular in the post-reform years.

- **Statistical correlation analysis** conducted on constant FADN samples (2004-2009) within 12 case study regions allows to examine at farm level whether the observed evolution of labour intensity can be associated to direct payments. The analysis is based on the computation of correlation coefficients between couple of variables. The correlation is calculated by means of Pearson’s correlation coefficients and statistical tests for their significance.

- **Single Equation econometric approach** at farm level allows to estimate the effects of direct payments on labour intensity in the period 2005-2009. This approach is used to identify the statistical relationships between labour intensity and a number of explanatory variables (i.e. CAP aids, farm organisation, farm specialisation, economic factors) expected to influence it. The regression parameters estimate the impact of direct payments on labour per hectare. If parameters are statistically different from zero and positive in sign, it can be assumed that direct payments contribute to increasing labour intensity. The magnitude of the parameters provides an estimated measure of this contribution.

Concerning capital intensity the analysis is carried out at farm level based on FADN farm data across the EU27 Member States, and uses the following methodological approaches:

- **Statistical analysis** covering the years 2004 to 2009 of the indicators regarding capital intensity: available Capital/hectare and available Capital/Annual Work Unit (AWU). Because the evolution of capital intensity could be also influenced by the use of contract work on-farm, the evolution of the use of contract work over time has been analysed per unit of land. The intensity of the evolution over time of the above indicators is measured by average annual change rates (%), computed for the years 2004-2009 (for Bulgaria and Romania, 2007-2009).

- **Statistical correlation analysis** at farm level allows to examine whether the observed evolution of capital intensity can be associated to direct payments and to the decoupling process.

---

7 Concerning the theme “Maintenance of farming in marginal areas” it was not possible to draw a conclusion on the role of direct payments after 2005 in the LFAs. 2010 FSS data on LFAs are available only for a limited number of Member States. The time interval of available data represents a strong limitation for the analysis of structural changes after the reform both for the EU15 and EU12. For this reason, this evaluation theme is not reported in the executive summary.

8 2010 FSS Census data on LFAs are available only for a limited number of Member States: Finland, France, Portugal, Spain, Bulgaria, Cyprus, Malta, Romania.

9 Sample consisting of the same farms in the analysed years. The advantage of this methodology is that it gives the possibility to analyse the structural adjustments in the same farms over time, avoiding the influence of sample change over time.
**Single Equation econometric approach** to examine the contribution of direct payments to farm capital intensity at farm level is developed by using two distinct models (see above for details). The first model adopts the value of capital per hectare as the dependent variable defining capital intensity, whereas in the second model the dependent variable is capital per labour input (working hours).

**THEME 4 “FARM BUSINESS STRATEGIES”**

**A. Farm specialisation**

The analysis, carried out at farm level based on FADN data, combines:

- **Statistical analysis** comparing 2004 and 2009 data for a constant sample of farms in the EU25 regions. Individual farm data are classified according to the type of farming (TF general). The economic and production changes have been examined by measuring the number of farms that have altered their production so as to move from their original sector to another. To this end, for each type of farming we measure flows of farms within the constant sample that between 2004 and 2009: i) remained in the same TF; ii) migrated from a TF to another; iii) moved to a TF from another TF. Moreover, all farms with UAA of the FADN 2004-2009 constant sample have been classified and grouped on the basis of the variations in land, labour and capital (machinery) in absolute terms and per hectare between 2004 and 2009.

- **Econometric analysis** assesses, at farm level, the effect of coupled and decoupled direct payments on the probabilities of changing farm type between 2005 and 2009.

- **CATI survey** complements the statistical data analysis with respect to farm size and production choices.

**B. Farm competitiveness**

The analysis encompasses three topics. Each topic is analysed at different levels based on data from different sources and with a combination of tools and methods.

**Farm investment decisions**

- **Statistical analysis**. Examines the changes occurred in the share of farms investing on fixed assets and in share of farms with positive net investments on fixed assets, operating a distinction between farm types (TF). The analysis compares 2004 and 2009 farms within the FADN constant sample in the EU25 regions.

- **Single Equation econometric approach** is used to test the effects of direct support (coupled and decoupled payments) on farm investments in the years 2005 to 2009.

- **CATI survey** complements the analysis above.

**Marketing strategies**

Because of lack of systematic data on this topic, the analysis of marketing strategies is based on data directly collected through the CATI survey.

**Diversification strategies**

This analysis is carried out at different levels and based on different data sources:

- **Statistical analysis** at macro level of the evolution in the number of holdings with on-farm diversified activities from 2005 to 2010 (Eurostat FSS regional data) and at farm level based on the 2004-2009 FADN constant sample across the EU25. A third piece of analysis focuses on other gainful activities of the farm holder based on Eurostat FSS data for the EU27 (2005 and 2010 for the EU15 and 2005 and 2010 for the EU12).

- **CATI survey** complements the analysis of the 2004-2009 constant sample of FADN farms.

**4.2 Limits of the evaluation**

The analyses are influenced by some limits. Here the most important limits are reported.

Concerning Eurostat FSS data:

---

10 In 2004 Romania and Bulgaria were not yet EU members.
In the 2010 FSS Census, Germany, United Kingdom and Czech Republic have excluded holdings with arable UAA lower than 5 ha. As a result, the indicators for which it was not possible to exclude holdings < 5 ha have been affected by this change.\footnote{In the Hybrid model in particular, 6 regions out of 10 (four of Germany and two of UK) were affected by the change in the UAA threshold.}

For the EU12 Eurostat data on farm structure are available only from 2003.

2010 FSS Census data on LFA are available only for a limited number of Member States: FI, FR, PT, SP, BG, CY, MT, RO. Moreover, data for the 10 Member States that accessed the EU in 2004 are available only for the years 2005-2007 and for Bulgaria and Romania only 2007 and 2010. The short time span represents a strong limitation of the analysis of structural changes in LFA.

Starting from the 2010 FSS Census, farm typology classification is based on the Standard Output (SO) which replaces the previous Standard Gross Margin classification. This change has two important implications on data comparability over time. The first one concerns farm classification according to economic size and the second one concerns farm classification according to type of farming.

EUROSTAT has calculated farm typology classification based on SO for the FSS 2007 and 2005 data. Therefore, the analysis of farm structure data disaggregated according to economic size classes and type of farming could be carried out for 2005, 2007 and 2010, as the data from previous surveys cannot be compared.

In some Member states Common land was not recorded until 2010. Since Common land area is included within the UAA, in the MS where it was recorded for the first time in 2010, data for this year are not comparable to previous FSS years. In order to make the data comparable, we have subtracted Common land area from the UAA in the MS for which such information was recorded for the first time in 2010: Bulgaria, France, Hungary, Ireland and Slovenia.

In each of the SFP implementation models the indicators used at regional level are always subject to a great deal of variability. Average data computed at the level of SFP models are thus affected by this lack of internal homogeneity.

Concerning FADN data, the main limitation regards capital. The analysis of data at individual farm level has highlighted the implementation of very different bookkeeping methods (sometimes also within the same MS, depending on the farms and/or years). We have also noticed the existence of differences (mostly positive, sometimes negative) between the closing value for a year (n) and the opening value for the following year (n+1). This could be (also) due to a revaluation process (positive or negative) of capital in the balance sheet. This too broad variety of cases has prevented us from identifying and applying a unique and sufficiently robust methodology to eliminate the inconsistencies and/or to re-calculate the value of capital in real terms (i.e. through the application of a price deflator). Our attempts at applying methodologies (resting on different hypotheses) to different cases (also at single farm level) have produced overly uneven and thus unreliable results. Therefore the analysis is based on the original data, being aware, however, of the limitations.

5. **Main conclusions**

The evaluation studies the structural effects of direct payments support schemes as introduced by the 2003 CAP reform (and subsequent reforms of the CAP). Given the limitations described above, the following sections draw the main conclusions of the evaluation study.

5.1 **TO WHAT EXTENT HAVE DIRECT PAYMENTS AFFECTED FARM STRUCTURES?**

The results of the analysis lead to the following conclusions regarding the effects of direct payments on farm structural change.

**In terms of concentration process:**

- In a context of long term decrease in the number of holdings (occurring also before the 2003 reform), the CAP reform has contributed either to speeding up the exit of smaller-sized farms from the sector or to the growth in size of part of smaller-sized farms.
- This structural development led to a greater homogeneity in farm distribution among size classes.
The exit from the agricultural sector has concerned almost exclusively farms of small economic size: for all SFP models the average economic size of holdings has increased. This process appears however to be faster for the two models applied in the EU15 than the two models applied in the EU12.

The downward trend in the number of farms with livestock units (LSU) has been more pronounced than in agricultural holdings overall.

Farm concentration slightly increased in the EU15 Member States (applying the SPS Historical and Hybrid models) between 2003 and 2010 and it increased in a more important way in the EU12 Member States. However, in particular in Member States applying the SAPS model, structural changes leading to a greater concentration may also have been the effect of other factors (i.e. end of central planning, land reforms, etc). Moreover, in Member States applying the SAPS model, a structural dualism, which was already existing before the reform, is observed. This dualism is confirmed (and increasing) in farms with livestock.

After the reform, the rate of reduction in the number of farms differs across sectors. In general, it is faster in mixed sectors and slower in specialised sectors. Therefore, the change in policy has driven the agricultural production structure towards increased specialisation.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Statistical analysis 1995-2010 at macro-level of the average annual growth rate (AAGR, %) of the number of holdings with UAA and of number of holdings with UAA > 5 ha\[12\]: EU15, EU12 and EU27 | The overall decline in the number of farms is a long-term phenomenon:
  - In the EU15, between 1995 and 2010:
    - the total number of farms has decreased on average per year by -2.3%;
    - the number of farms > 5ha has decreased on average per year by -1.4%.
  - In the EU12, considering the shorter period of analysis (2003-2010):
    - the total number of farms has decreased on average per year by -3.6%;
    - the number of farms > 5ha has decreased on average per year by -1.0%.

Statistical analysis: comparison at macro-level of the average annual growth rate (AAGR, %) of the years before the reform (1995-2005 for EU15; 2003-2005 for EU12) and after the reform (2005-2010 for EU27) of number of holdings with UAA and of number of holdings with UAA > 5 ha with respect to SFP implementation model | In the EU27, in the post-reform years (2005-2010) the total number of farms has decreased by -17.2% and the number of holdings >5 ha by -10.4%.

The comparison of the average annual growth rate in the years before and after the reform, used to examine whether the change in policy has contributed to the acceleration or slowdown of this trend, shows that in three SFP models, there was an acceleration in the decline or a trend reversal\[13\] (from rise to decline):
  - for the SPS Hybrid model\[14\]: for total number of holdings the average annual rate was -2.5% before the reform and -5% after the reform (0.4% before and -2.2% after for holdings

---

12 The analysis of changes in the number of farms and other related indicators has been carried out for both the total and for farms with UAA > 5 ha in order to take account of the changes in UAA thresholds applied in the 2010 agricultural census in some Member States, namely Germany, the UK and the Czech Republic.

13 With the exception of the Regional model for holdings > 5 ha.

14 The fall in the Hybrid model is partly due to the change in UAA thresholds in some Member States, specifically Germany and the UK.
In terms of concentration process

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>In terms of concentration process</td>
<td>▪ for the SPS Regional model: for total number of holdings the average annual rate was 0.1% before the reform and -0.3% after the reform (-2.2% before and -1.3% after for holdings &gt;5 ha).</td>
</tr>
<tr>
<td></td>
<td>▪ for SAPS: for total number of holdings the average annual rate was -0.4% before the reform and -4.8% after the reform (4.6% before and -3.2% after for holdings &gt;5 ha). For some regions applying the SAPS model the variation is particularly important: the two Polish regions, Slovakia, Czech Republic for total holdings; the four Romanian regions and Lithuania for holdings &gt; 5 ha.</td>
</tr>
<tr>
<td></td>
<td>In the SPS Historical model the decline continues after the reform but at a slower rate: for total number of holdings the average annual rate was -2.4% before the reform and -1.8% after the reform (-1.7% before and -1.5% after for holdings &gt; 5 ha).</td>
</tr>
</tbody>
</table>

Statistical analysis at macro-level of the % distribution of farms according to physical size class and % point differences between 2010 and 2003 for each size class by SFP implementation model: for all holdings and for size classes > 5 ha.

In a general context in which the number of farms is decreasing the shifts between farm size classes show that in all models (with the exception of the Regional model\(^{15}\)), the share of holdings less than 5 ha on total holdings decreased from 70.8% in 2003 to 67% in 2010 (-3.8% points) and the share of holdings larger than 5 ha increased from 27.2% in 2003 to 30.9% in 2010 (+3.7 points). This is explained by the exit of smaller farms from the sector or their shift to a larger size class.

In the EU27, the share of holdings with livestock on total holdings decreased by -3.6% on average per year before the reform (2003-2005) and by -2.2% after the reform (2005-2010). The decrease in the number of holdings with livestock in relation to total agricultural farms has been important in the SPS Historical Mediterranean regions\(^{16}\) after the reform: from -2.3% to -6.1%.

The Gini coefficients of concentration of number of holdings and UAA are:

- for the SPS Historical model: 0.65 in 2003 and 0.67 in 2010

---

\(^{15}\) Malta and Slovenia.

\(^{16}\) I.e. GR North, GR Centre-South, IT Centro, IT Sud, ES Este, ES Centro, ES Sur.
In terms of concentration process

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>holdings and LSU by means of Lorenz curve(^{17}) and Gini coefficient(^{18}). Comparison of variations in concentration between 2003 and 2010 with respect to SFP implementation model</td>
<td>(+3.0%);</td>
</tr>
<tr>
<td></td>
<td>- for the SPS Hybrid model: 0.64 in 2003 and 0.65 in 2010 (+1.8%);</td>
</tr>
<tr>
<td></td>
<td>- for the SPS Regional model: 0.19 in 2003 and 0.23 in 2010 (+21.8%);</td>
</tr>
<tr>
<td></td>
<td>- for the SAPS model: 0.57 in 2003 and 0.62 in 2010 (+8.8%).</td>
</tr>
<tr>
<td></td>
<td>The Gini coefficients of concentration of the number of holdings and LSU are:</td>
</tr>
<tr>
<td></td>
<td>- for the SPS Historical model: 0.69 in 2003 and 0.72 in 2010 (+3.3%);</td>
</tr>
<tr>
<td></td>
<td>- for the SPS Hybrid model: 0.65 in 2003 and 0.69 in 2010 (+5.4%);</td>
</tr>
<tr>
<td></td>
<td>- for the SPS Regional model: 0.42 in 2003 and 0.43 in 2010 (+2.5%);</td>
</tr>
<tr>
<td></td>
<td>- for the SAPS model: 0.44 in 2003 and 0.55 in 2010 (+25.2%).</td>
</tr>
<tr>
<td>Statistical analysis of % variation of the number of farms by Type of farming 2005-2010 at macro-level with respect to SFP implementation model</td>
<td>The -17.2% decrease in the total number of farms observed in the EU27 between 2005 and 2010 did not affect all sectors in the same way. In the three “mixed” types of farming there was a larger drop in farm numbers:</td>
</tr>
<tr>
<td></td>
<td>- Mixed cropping: -70.0%;</td>
</tr>
<tr>
<td></td>
<td>- Mixed livestock: -55.2%;</td>
</tr>
<tr>
<td></td>
<td>- Mixed crop-livestock: -20.1%.</td>
</tr>
<tr>
<td></td>
<td>Whereas the reduction in the number of holdings in more “specialised” types of farming is less pronounced:</td>
</tr>
<tr>
<td></td>
<td>- Specialist field crops: -1.0%;</td>
</tr>
<tr>
<td></td>
<td>- Specialist horticulture: -10.1%;</td>
</tr>
<tr>
<td></td>
<td>- Specialist permanent crops: -4.6%;</td>
</tr>
<tr>
<td></td>
<td>- Specialist grazing livestock: -16.2%.</td>
</tr>
<tr>
<td></td>
<td>The number of Specialist granivores farms increased in the same period: +75.3%.</td>
</tr>
</tbody>
</table>

In terms of changes in agricultural land use:

- With the exception of most EU15 southern regions, direct payments did not have an effect on land use changes after 2005.
- In the EU15, the withdrawal of compulsory set-aside in 2009 appears to have played the most important role in land use changes. In these regions, set-aside land has mostly been returned to its original purpose, and only a small share is used as fallow land. In regions implementing SAPS model, where the set-aside requirement has never been applied, there was a rise in the share of fallow land over total UAA.

The following table provides a synthesis of the main results leading to the conclusions.

---

\(^{17}\) Constructed from the combination of cumulative % of the number of holdings by size class and cumulative % of UAA by the same size classes.

\(^{18}\) The Gini coefficient is a measure of statistical dispersion. Based on the Lorenz curve, the Gini coefficient is a number between 0 and 1. Low values indicate a quite even distribution, with 0 corresponding to pure equidistribution; high values of the coefficient indicate a more uneven distribution, with the value 1 corresponding to maximum concentration (in this case, the situation in which a single holding concentrates 100% of available UAA.
### In terms of changes in agricultural land use

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis 2003-2010 of the % composition (total UAA=100) of surfaces in i) Arable land, except for Set-aside areas under incentive schemes and Fallow land; ii) Permanent crops; iii) Kitchen gardens; iv) Permanent grassland and meadow; v) Set-aside areas under incentive schemes and Fallow land. Comparison between % composition in 2003 and 2010 at macro-level with respect to SFP implementation model</td>
<td>Changes between 2003 and 2010 in the distribution of the five crop classes in the four SFP implementation models appear to be rather modest, below 2% points, except for SPS Hybrid where shifts in the relative weight of different crops exceed 4% points. In the EU27, the variations are negligible in Permanent crops and Kitchen gardens (-0.2 points and 0.0 points respectively) and more perceptible in Arable crops (+1.8 points), and Set-aside + Fallow land (-1.7 points). Most southern regions of the SPS Historical model have moved against the general trend. In particular, the relative share of Set-aside + Fallow land and of Permanent grassland and meadows rose (+15.2%), while the share of Arable crops decreased (-12.4%). In these regions, some arable crops lost their appeal between 2003 and 2010, probably also as a result of the introduction of the reform, and a portion of agricultural area previously used for these crops was transformed into Permanent grassland and meadows and/or no longer farmed.</td>
</tr>
</tbody>
</table>

Computation of extensification index (EI) 2003-2010 at macro-level with respect to SFP implementation model:  
\[
EI = \frac{\text{UAA in permanent grassland and meadow} + \text{set aside areas under incentive schemes} + \text{fallow land}}{\text{total UAA}} \times 100.
\]  
| Computation of extensification index (EI) 2003-2010 at macro-level with respect to SFP implementation model | In the regions implementing the Historical and the Hybrid model the extensification index decreases after the reform: from 42.5% in 2005 to 39.9% in 2010 (-2.6 points), with the exception of the above mentioned southern regions of the SPS Historical model where the extensification index rose. In regions implementing the SAPS model the extensification index raised from 27.3% in 2005 to 28.5% in 2010 (+2.2 points). |

### In terms of holdings’ management structure:

- Legal status\(^{19}\) of holdings has not been influenced by policy change.
- Conversely, holdings’ organisational form\(^{20}\) has been indirectly affected by the 2003 CAP reform. Indeed, the observed decrease of land under “farming by owner” seems linked to the farm concentration trends.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis of % ratio Single holder holding / total number holdings and its change between 2003 and 2010 at macro-level with respect to SFP implementation model.</td>
<td>Results show a modest growth of the Legal entity or group holding form, from 2% to 3% between 2003 and 2010 and consequently, a slight decline of the Single holder holding form, from 98% to 97% between 2003 and 2010.</td>
</tr>
</tbody>
</table>
| Statistical analysis of the changes in share of holdings and share of UAA | Results at EU27 level show that:  
  - “Farming by owner” is the most common organisational form. |

---

\(^{19}\) FSS data makes it possible to group together holdings into two legal status categories: (i) single holder holding and (ii) legal entity or group holding.

\(^{20}\) The types of organisational forms are: farming by owner, farming by tenant and shared farming or other modes.
In terms of holdings’ management structure

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| by type of organisational form, 2003-2010 at macro-level and with respect to SFP implementation model. | form among small holdings, whereas the other two forms (in particular Farming by tenant) are adopted more frequently by larger holdings (that have both their own and leased land);  
- There is a growing incidence of land under Shared farming or other modes (from 2.7% to 4.5%, +1.8 points) and Farming by tenant (from 42.2% to 43.0%, +0.8 points), balanced by a decreasing share of land under Farming by owner (from 55.1% to 52.5%, -2.5 points). This holds true in all SFP models except for the SPS Hybrid. |

In terms of changes in structural profiles of EU regions:

- The results of the econometric estimation lead to conclude that decoupled direct payments may have played a role in structural changes occurred between 2005 and 2010, in particular towards a regional agricultural structure characterised by larger sized and more professional farms.

The following table provides a synthesis of the main results leading to the conclusion.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Econometric analysis at macro-level: i) Factor analysis run on two year panel dataset (2005 and 2010); ii) Classification of EU regions into homogenous groups according to their farm structural profile, in 2005 and 2010; iii) Construction of transition matrices and econometric regression model | On the basis of the Factor Analysis results, EU regions (215 regions in the EU25) were classified into homogeneous classes according to their agricultural structural profile. The transition matrix constructed to represent the changes in the structural profiles between 2005 and 2010 shows 73 regions changing class (34% of the observed cases), 26 of which show a transition towards a structure characterised by small and semi-subsistence farms and the remaining 47 a transition towards larger and more professional farms.  
The econometric regression to investigate the role of direct payments in the probabilities of regions changing structural profile between 2005 and 2010, produces the following results:  
- with increasing share of decoupled direct payments on total CAP expenditure, the probability of regions moving towards a structure characterised by larger sized and more professional farms increases. Simultaneously, a larger share of decoupled direct payments on total CAP expenditure reduces the probability of regions moving towards an agricultural structure characterized by smaller and less professional farms;  
- the higher the importance of decoupled direct payments relative to the value of agricultural output (SO) at regional level, the less competitive regional agriculture is because heavily dependent on support (thus leading to higher probability of shift towards a structure characterised by smaller and less professional farms). |

---

21 Drop in the share of land under Farming by tenant and increase for Farming by owner. This trend is almost exclusively caused by changes in the DE East & North-East region (former DDR), where the land restitution/privatisation process started in 1992 and continued even in recent years.
5.2 To what extent have direct payments affected farm labour force

The results of the analysis lead to the following conclusions regarding the effects of direct payments on labour use according to five dimensions: labour use intensity\textsuperscript{22}, family labour\textsuperscript{23}, age structure, part-time/full-time farm organisation.

In terms of labour use intensity:

- The CAP reform and in particular, decoupling of support, may have contributed to accelerate the reduction of labour use intensity in the farm sector occurring already before the 2003 reform. The acceleration of the exit from the agricultural sector of small farms with hidden unemployment has influenced this evolution. However, in the Member States applying SAPS model the decrease in labour use seems related to the reduction of excess labour force in former large cooperatives and state farms, existing in the pre-reform years.
- The econometric analysis shows that in the years 2005-2010 coupled payments may have played a role in increasing labour use and that decoupled payments may have had an effect in terms of decreasing labour use. However, the very low values\textsuperscript{24} of the estimated parameters for coupled and decoupled direct payments indicate that they played a minor role in labour use.
- The analysis conducted in the 12 case study regions shows that in a limited number of regions the observed evolution of labour use could be associated to the decoupling process.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis at macro-level of labour intensity (total labour force/UAA expressed in hours of work per ha) with respect to SFP implementation model: comparison of the average annual growth rate (AAGR, %) of the years before and after the reform.</td>
<td>Labour intensity use has declined steadily over the period 2003-2010 in all EU regions and in all SFP models: on average -4.3% each year. The decline has been greater in the EU12 regions (-5%) than in the EU15 (around -3% per year). The decline in labour use has been more marked in the post-reform years than before the reform in the EU27 (-2.5% on average per year in 2003-2005 and -4.9% in 2005-2010) and in all SFP models: SPS Historical model: -2.0% on average per year in 2003-2005 and -3.6% in 2005-2010; SPS Hybrid model: -2.9% in 2003-2005 and -3.4% in 2005-2010; SPS Regional model: -0.3% in 2003-2005 and -2.8% in 2005-2010; SAPS model: -2.4% in 2003-2005 and -6.5% in 2005-2010. The faster decline in labour intensity observed in the Members States applying SAPS is related to the fact that those Member States used to have a higher level of labour intensity than most of the EU15 Member States (in 2003 around 2.7 times larger than that of the SPS Historical regions and 4.4 times that of SPS Hybrid).</td>
</tr>
</tbody>
</table>

\textsuperscript{22} Expressed in terms of hours per hectare.

\textsuperscript{23} Expressed as relative importance of family labour on total labour force.

\textsuperscript{24} The estimated parameters of coupled and decoupled direct payments are statistically significant and in a logarithmic regression, the parameters represent the constant elasticity of the dependent variable with respect to percentage changes in the explanatory variable (i.e. if Decoupled payments per ha increased by 1%, then the decrease in Labour input per ha would be equal to -0.0092%).

The estimated parameters for other explanatory variables take higher values, e.g. age of holder, net worth (total capital minus total debts), cashflow, GDP per capita.
## Analysis

### Results

In terms of labour intensity (Total Farm Labour/Utilised Agricultural Area) with respect to SFP implementation model and by economic size: comparison of the average annual growth rate (AAGR, %) in the years before and after the reform.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| of labour intensity (Total Farm Labour/Utilised Agricultural Area) with respect to SFP implementation model and by economic size: comparison of the average annual growth rate (AAGR, %) in the years before and after the reform. | EU27 more or less at the same pace in all size-groups: -3.8% in small farms, -2.0% in medium farms and -3.1% in large farms. The results by SFP model show that:  
  - in the regions applying the SPS Historical in small farms labour intensity decreased by -3.3%, in medium farms by -2.4% and in large farms by -3.6%;  
  - in the regions applying the SPS Hybrid in small farms labour intensity decreased by -6.3%, in medium farms by -2.3% and in large farms by -1.4%;  
  - in the regions applying the SPS Regional in small farms labour intensity decreased by -2.3%, in medium farms by -1.2% and in large farms by -3.0%;  
  - in regions applying the SAPS in small farms labour intensity decreased by -3.3%, in medium farms by -1.3% and in large farms by -5.0%.  
  
Compared to the EU27 average labour intensity (around 120 h/ha), labour intensity in small farms is 120% higher (264 h/ha) and in medium and large farms is around 50% of the EU27 average value (58h/ha). Considering that labour intensity is still way higher in small farms than in large farms, the strongest decrease in the number of small farms and the increase in the importance of relatively large farms can be one of the main factors causing the observed reduction of labour intensity. |

Statistical analysis at macro-level of labour intensity (Total Farm Labour/Utilised Agricultural Area) with respect to SFP implementation model and by sector: comparison of the average annual growth rate (AAGR, %) in the years before and after the reform.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Statistical analysis at macro-level of labour intensity (Total Farm Labour/Utilised Agricultural Area) with respect to SFP implementation model and by sector: comparison of the average annual growth rate (AAGR, %) in the years before and after the reform. | Labour intensity use has decreased in all sectors. At EU level in the years 2005-2010, strong reductions concern farms specialised in granivores (-15%). Farms specialised in field crops (-5.4%), in horticulture (-6.7%) and mixed crop-livestock farms (-5.8%) have also experienced a decrease of labour intensity slightly higher than average. In all other groups, the reduction is below the average, whilst labour intensity has increased in mixed cropping farms.  
  
While the strong reduction of labour intensity in farms specialised in granivores and horticulture does not seem related to the CAP reform, the reduction experienced by farms specialised in field crops may have been influenced by decoupling of direct payments as a consequence of the reduction in the relative importance of labour intensive crops. |

Econometric regression analysis at farm level

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econometric regression analysis at farm level</td>
<td>The application of econometric models at micro-economic level, using FADN data, allowed to estimate the effects of direct payments on labour use intensity in the years 2005-2010. Estimated regression parameters for coupled and decoupled direct payments are both statistically significant but positive in the case of coupled payments and negative in the case of decoupled payments. However, estimated parameters for coupled and decoupled direct payments show very low values: +0.0079% for coupled payments and -0.0092% for decoupled payments. The very low values of the regression parameters indicate that direct payments played a minor role in influencing</td>
</tr>
</tbody>
</table>

---

25 See § 5.1.
In terms of labour intensity

**Analysis**  

**Results**

labour intensity:
- if coupled payments per ha increased by 1%, then the increase in labour input per hectare would be equal to +0.0079%;
- if decoupled payments per ha increased by 1%, then the increase in labour input per hectare would be equal to -0.0092%.

Statistical correlation analysis on constant FADN sample (2004-2009) within 12 case study regions. Analysis conducted for the whole regional samples; by economic size class and by type of farming

In 3 case study regions out of 12, Makedonia-Thraki (GR), Del Alfold (HU) and the Polish regions of Łódzkie, Mazowsze, Lubelskie and Podlasie, farms that have experienced the strongest reduction in the relative importance of coupled payments have also experienced a (generally limited) reduction of labour intensity.

In particular, this has occurred in the specific circumstances in which the farm activities supported by coupled payments are also among the most labour intensive.

In terms of the evolution of other labour attributes:

- The CAP reform seems to have favoured an intergenerational transfer with growing relative importance of farms managed by young farmers. However, it is difficult to attribute this change only to direct payment since there may be other important policy factors influencing this development, such as by rural development measures or national policy measures to support young farmers.
- Conversely, the reform did not have any impact on the relative importance of family labour and on part-time farming. Furthermore, the model of SFP implementation, per se, has not had a clearly identifiable and homogeneous effect on the considered labour attributes.

The following table provides a synthesis of the main results leading to the conclusion.

**In terms of the evolution of other labour attributes**

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis at macro-level of farms with holders ≥65 years old and farms with holders ≤ 35 years old with respect to SFP implementation model (1995-2010)</td>
<td>In the EU27, the relative importance of farms managed by holders ≤35 years old has decreased by -11.2% on average per year before the reform (2003-2005) and increased by +1.9% on average per year between 2005 and 2010. Conversely, the relative importance of farms managed by holders ≥65 years old has increased by +2.9% on average per year between 2003 and 2005 and decreased by -1.3% on average per year between 2005 and 2010.</td>
</tr>
</tbody>
</table>
| Statistical analysis at macro-level of labour provided by family members and of part-time farming with respect to SFP implementation model (1995-2010) | The relative importance of part-time farming as well as of the labour provided by family members has increased more or less constantly in both pre- and post-reform years.  
  - Family labour: decreased by -0.4% on average per year before the reform and -0.8% after the reform;  
  - Part-time farming: increased by +0.6% on average per year before the reform and +1.1% after the reform. |
5.3 To what extent have direct payments affected farm capital intensity?

The results of the analysis lead to the following conclusions regarding the effects of direct payments on farms’ capital intensity (capital intensity per ha and per unit of labour):

- The models of SFP implementation, per se, have not had a clearly identifiable effect on capital intensity per unit of land and per labour unit.
- The econometric analysis shows that in the years 2005-2009 both coupled and decoupled payments may have had a rather limited effect in terms of increasing farms’ capital. Moreover, direct payments may have induced some incentive to substitute capital for labour.
- The analysis conducted on the 12 case study regions highlights that large economic size\(^{26}\) farms that have experienced the strongest reduction in the relative importance of coupled payments, have often experienced a reduction (albeit generally small) in the amount of capital per hectare.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis 2004-2009 at macro-level of Capital intensity (K/ha and K/AWU) and of Contract work (total contract work/ha) with respect to SFP implementation model, size class and type of farming</td>
<td>The results show that the evolution of capital intensity highlights a large heterogeneity within the regions implementing each SFP model, i.e. the observed changes in the capital indicators are not similar among regions within the same model:</td>
</tr>
<tr>
<td></td>
<td>Concerning the evolution of capital per hectare:</td>
</tr>
<tr>
<td></td>
<td>• in the Historical model, the annual average variation ranges between -3.7% in Portugal to +7.6% in UK Wales.</td>
</tr>
<tr>
<td></td>
<td>• in the Hybrid model, the annual average variation ranges between -7.4% in Denmark to +2.9% in UK Northern Ireland.</td>
</tr>
<tr>
<td></td>
<td>• in the SAPS model, the annual average variation ranges between -18.8% in the BG Severna Iztochna region to +16.6% in Slovakia.</td>
</tr>
<tr>
<td></td>
<td>The evolution of capital per AWU is similar to that of capital/ha.</td>
</tr>
<tr>
<td>Econometric analysis at farm level developed by using two distinct models:</td>
<td>Estimated parameters for coupled and decoupled direct payments are both statistically significant and positive in the two models. However the values of the estimated parameters for coupled and decoupled payments are very low indicating a practically absent tangible role of direct payments in explaining farm’s capital intensity per land and per labour input:</td>
</tr>
<tr>
<td>(i) in the first model the dependent variable is capital intensity, value of capital per hectare; (ii) in the second model the dependent variable is capital per labour input (working hours).</td>
<td>• Model Capital per ha: coupled payments estimated parameter is +0.0058; decoupled payments estimated parameter is +0.0051;</td>
</tr>
<tr>
<td></td>
<td>• Model Capital per AWU: coupled payments estimated parameter is +0.0347; decoupled payments estimated parameter is +0.0267.</td>
</tr>
<tr>
<td></td>
<td>These results show that the values of parameters for coupled and decoupled payments in the model concerning capital intensity per labour input are slightly higher than the parameters per land. The comparison of the results of the two models on capital intensity suggests that direct payments may induce some incentive to substitute capital for labour.</td>
</tr>
</tbody>
</table>

\(^{26}\) Large farms are above 40 ESU (1 ESU corresponds to a farm’s Standard Gross Margin of 1.200 Euro/year).
In terms of capital intensity

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical correlation analysis on constant FADN sample (2004-2009) within 12 case study regions. Analysis conducted for the whole regional samples; by economic size class and by type of farming</td>
<td>Considering the whole sample, the evolution of capital intensity per unit of land (K/ha) is almost never correlated with the degree of decoupling (only in IT Emilia Romagna the correlation coefficient is statistically significant). These results suggest that the decoupling process has not been responsible, per se, for the changes in capital intensity per ha, apart in Del Alfold, Emilia Romagna, Alentejo and Slättbygdslän relating to large farms (correlation coefficient is statistically significant and ranges from 0.27 and 0.57). In these cases, the results indicate that the decoupling of direct payments is correlated with a reduction in the relative importance of capital per ha.</td>
</tr>
</tbody>
</table>

5.3.1 To what extent have direct payments affected farm specialisation?

The results of the analysis lead to the following conclusions regarding the effects of direct payments:

In terms of farm specialisation:
- The change in policy has contributed to the migration of farms from the less to the more specialised types of farming between 2004 and 2009: the greater freedom of decision related to decoupling of direct support has stimulated part of the holdings to focus more on the production activities (crops and / or livestock) for which market conditions allow higher profitability.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Statistical analysis of the EU25 FADN constant sample flows of farms that between 2004 and 2009: i) remained in the same TF; ii) migrated from a TF to another; iii) arrived in a TF from another TF. | In the sectors characterised by the lowest degree of specialisation, the number of farms decreased significantly in all models of SFP implementation:  
- about 39% of farms in TF Mixed cropping in 2004 migrated to more specialised sectors in 2009;  
- about 33% of farms in TF Mixed livestock in 2004 migrated to more specialised sectors (in particular specialist livestock) in 2009;  
- about 34% of farms in TF Mixed crops-livestock in 2004 migrated to higher-specialised sectors in 2009, expanding cropping or breeding activity.  
In sectors with a higher degree of farm specialisation (specialist field crops, horticulture, permanent crops and specialist grazing livestock), in the EU25 between 2004 and 2009 there was an increase of around +5% in the number of farms. |

In terms of farm strategies concerning land availability and land use choices:
- Overall, farms that decided to decrease their size have in most cases a larger size and farms that decided to increase their size have in most cases a smaller size. Therefore, a process of structural adjustment was observed, leading to convergence towards an "intermediate" farm size.

---

27 A farm is said to be specialised when a particular activity provides a standard gross margin of at least two thirds of the total SGM of the holding.
28 i.e. a sample consisting of the same farms in the analysed years.
- The implementation of the 2003 CAP reform has favoured a shift in land use towards easier, less “demanding” crops in terms of production factors, technical characteristics and business effort.
- Concerning strategic decisions of livestock farms, the change in direct support policy and in particular aids decoupling, seems to have allowed a strategic response to market conditions (i.e. the rise of cereal prices), namely of livestock farms with availability of land: in the EU15 regions, livestock farms with UAA (both specialised and mixed farms) have generally increased the number of livestock units, supported by the augmentation of land for animal feeding and/or for cereals (in the EU10 regions the results are less clear-cut, because in some types of farms the number of livestock units has increased and in others it has decreased).

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Statistical analysis (EU25 FADN constant sample 2004-2009) of land use % variation (i.e. the difference between the percentage share of each crop class in 2009 and in 2004), setting total UAA in 2004 and in 2009 =100. | In the EU25 regions, farms of the FADN constant sample show +4.6% increase of the total UAA between 2004 and 2009 (total farms across all sectors and SFP implementation models). This expansion hides three different behaviours of the constant sample farms:  
  - 51.2% has consistently increased their UAA;  
  - 30.3% has decreased their UAA;  
  - 18.6% maintained their UAA unchanged.  
  Farms that have increased UAA have, on average, increased their farm size from 84 ha in 2004 to 102 ha in 2009. Farms that have decreased UAA have, on average, decreased their farm size from 142 ha to 126 ha. There is, therefore, a convergence towards the average farm size of 113 ha.  
  Farms that decided not to change their size are those of smaller size (44 ha on average). For these farms it is likely that the small relative size of farms with unaltered UAA represents (for economic reasons) a constraint hindering the adoption of either expansion or contraction strategies. |
| Statistical analysis based on EU25 FADN constant sample 2004-2009 of farm land use by SFP model of: total UAA 2004=100 | In the EU25, the UAA expansion was accompanied by a growing use of land for COP crops (+4.9% UAA in cereals; +23.8% oilseeds and protein crops) and for livestock feeding (+8.5%). This occurred to the detriment of industrial crops (-27.4% UAA), mainly due to the partial or full decoupling of aid for tobacco and cotton and to the reform of the sugar sector, and because of the utilisation of almost 50% of fallow land and set-aside land existing in 2004. In the EU15 this is clearly to be attributed to the removal of the set-aside obligation for COP crops. |
| Statistical analysis based on EU25 FADN constant sample 2004-2009 of LSU in farms with UAA by model of implementation: total LSU 2004=100 | In the EU15 regions, FADN constant sample livestock farms with UAA (both specialised and mixed farms) have generally increased the number of livestock units: +11% in the Historical model and +8.4% in the Hybrid model.  
  In the SAPS model, on average the number of livestock units has decreased by -2.9%. This is the result of an increase of the number of livestock units in TF Specialist grazing livestock and TF Specialist granivores and of a decrease in TF1 Specialist |

Moreover, this group of farms shows the highest share (in 2004) of Fallow land & Set-aside. Therefore, less dynamic and less market-oriented farms would belong to this group.
In terms of farms strategies concerning land availability and land use choices

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis (EU25 FADN constant sample 2004-2009) of % variation livestock units and UAA for livestock feeding in farms with land belonging to TF with livestock, by model of implementation</td>
<td>field crops, TF6 Mixed cropping, TF7 Mixed livestock and TF8 Mixed crops-livestock. With regard to livestock farms with land, the grazing livestock stocking rate per hectare decreased in almost all types of farms and almost all models (conversely, in Mixed cropping farms of SAPS model regions an intensification is observed and this is due to a reduction in UAA for fodder crops larger than the decline in livestock units). This extensification may however only be apparent, since the greater increase in agricultural area for fodder crops (compared with the variation in livestock units) may conceal the substitution of animal feed purchased outside the farm with animal feed crops produced on the farm (choice determined by the change in relative prices). In the FADN constant sample livestock farms without land specialised in granivores, the number of livestock units has shrunk considerably in almost all models (-16.5% between 2004 and 2009) probably due (at least partly) to farms not being able to address the increase in cereals price by expanding their own production of livestock feed crops.</td>
</tr>
</tbody>
</table>

In terms of strategic changes concerning production factors:

- The analysis of different strategic choices made by farms bearing effects on their land, labour and capital leads to the identification of five farm strategies that can be related to the effects of intervened policy changes.
- The farm adaptation strategies oriented towards development have been implemented to a greater extent by holdings more exposed to the change in policy (i.e. grazing livestock). In such cases, the change has served to stimulate the reorganisation of holding structures. On the other hand, where policy changes have produced the least effects (i.e. fruits & vegetables) and where the need to adapt has thus been less urgent, the strategies of holdings have been oriented more towards the consolidation and/or downsizing of the existing production systems.

The following table provides a synthesis of the main results leading to the conclusions.
In terms of strategic changes concerning production factors

Statistical analysis based on EU25 FADN 2004-2009 constant sample: classification of all holdings with UAA based on variations (increase, decrease, no change) between 2004 and 2009 of the following parameters: UAA; Machinery; Work Hours; Machinery/ha; Work Hours/ha

<table>
<thead>
<tr>
<th>Strategies and Characteristics</th>
<th>Geographical Distribution</th>
<th>Sector Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy 1 - Development and intensification of the use of factors</strong>&lt;br&gt;Based on the intensification of all production factors (UAA, machinery and labour), also leading to intensification of machinery and hours per hectare. This strategy thus also implies the intensification of production methods aimed at growth of farm total output. These holdings therefore appear to be the most dynamic and most reactive to change.</td>
<td>▪ adopted by 6% of all farms of the EU25 sample;&lt;br&gt;▪ most commonly adopted in the SPS Hybrid (7.8%), and least common in SPS Historical regions (4.7%);&lt;br&gt;▪ adopted by 11.4% of all holdings with increased UAA.</td>
<td>▪ highest percentage in TF1-Specialist field crops (7.2%);&lt;br&gt;▪ least common in TF2-Specialist in horticulture (3.2%) and in TF3-Specialist in permanent crops.</td>
</tr>
<tr>
<td><strong>Strategy 2 - Development with optimisation of production factors use efficiency</strong>&lt;br&gt;With a greater availability of UAA, an increase in either machinery or labour or in both of them in absolute terms (higher and/or lower compared with the increase of UAA) results in an increase in machinery/ha and a drop in labour/ha (or, vice versa, in a decrease in machinery/ha and in a decrease in labour/ha). This is therefore a development strategy based on the optimisation of capital and labour efficiency (maximising labour productivity through the replacement of labour with machinery and/or adjustment of capital/labour standard ratio).</td>
<td>▪ adopted by 17.5% of all holdings of the EU25 sample;&lt;br&gt;▪ most commonly adopted in the SAPS model (22% of farms), and significantly least common in SPS Historical (14.1%);&lt;br&gt;▪ adopted by 34% of all holdings with increased UAA.</td>
<td>▪ most commonly adopted in TF7-Mixed livestock (21%);&lt;br&gt;▪ least common in TF2-Specialist in horticulture (8%) and in TF3-Specialist in permanent crops (9.6%).</td>
</tr>
<tr>
<td><strong>Strategy 3 - Development with extensification</strong>&lt;br&gt;As the availability of land grows, there is a drop in intensity of hours and machinery (per hectare), even though both machinery and hours or one of them may rise in absolute terms. This is therefore a development strategy enacted through the extensification of production methods and/or a greater shift towards less capital and less labour-intensive farming (presumably for the newly acquired land)(^{30}).</td>
<td>▪ adopted by 23% of all holdings of the EU25 sample;&lt;br&gt;▪ most commonly adopted in the SAPS model (28.3% of farms), and least common in SPS Historical (20.3%);&lt;br&gt;▪ adopted by 45% of all holdings with increased UAA.</td>
<td>▪ most commonly adopted in TF7-Mixed livestock (33.5%);&lt;br&gt;▪ least common in TF2-Specialist in horticulture (17.7%) and in TF3-Specialist in permanent crops (17.4%).</td>
</tr>
<tr>
<td><strong>Strategy 4 - Consolidation, with or without downsizing</strong>&lt;br&gt;In the event of downsizing (or no change in holding size), the intensity (per</td>
<td>▪ this strategy is the most commonly adopted in EU25 (39.4% of holdings);</td>
<td>▪ mostly adopted in TF3-Specialist in permanent crops (49%);</td>
</tr>
</tbody>
</table>

\(^{30}\) It is not however possible to rule out the possibility (at least in certain farms) that: i) in 2004 there were elements of hidden unemployment and/or surplus machinery capacity. In this case, therefore, would be adopted strategy 2; ii) the decrease in machinery and labour is the effect of outsourcing one or more phases of production processes to contractors. In this case, therefore, the strategy would be similar to strategy 1, but with the use of external factors.
hectare) of labour and machinery (or labour only) rises. These holdings therefore apply a consolidation strategy by maximising the productivity of land and/or (alternatively) machinery or labour (probably in surplus in 2004 in some cases). This strategy also (presumably) implies the adoption of more intensive production methods and/or a shift towards capital-intensive and/or labour-intensive farming in some cases.

Within the strategies described above (strategies 1, 2, 3 and 4) however, a share of the farms that have increased machinery (in absolute terms) have started a new contract work activity. Therefore, it is conceivable that in these cases the increase in machinery not only is related to the change of "agricultural" strategy, but (probably) also to the implementation of a diversification strategy (i.e. contract work for others).

**Strategy 5 - Disinvestment and/or disengagement from farming**

In the event of downsizing (or no change in holding size), intensity of hours and machinery decrease both in absolute terms and per hectare. The strategy is thus one of a gradual disinvestment of the two (machinery and hours) or all three production factors (land, machinery and hours). This implies the will to disengage from farming activities and the adoption of more extensive production methods. Accordingly, these holdings appear to be the least dynamic and the most resistant to change.

|  | it is adopted more in the SPS Historical model (44.3%) and relatively less in the SAPS model (31.4%); |
|  | adopted by 70% of holdings with decreased UAA and by 72% of holdings with unchanged UAA. It was also adopted by 9.6% of farms with increased UAA. |
|  | rightly least common TF7- Mixed livestock (30%). |

For these farms, in particular, it is a development strategy towards production methods and or farming activities more labour intensive, with a substitution of capital with labour.
5.4 To what extent have direct payments influenced farm competitiveness?

The results of the analysis lead to the following conclusions regarding the effects of direct payments:

**In terms of farm investment decisions:**

- The policy change has had a differentiated effect on farm investments in the regions implementing the SPS Historical and Hybrid models (EU15) and in those implementing the SPS Regional and SAPS models (EU10): decreasing farm investments in the former, vice versa increasing farm investments in the latter.

- These opposite trends are likely to be influenced by pre-existent structural differences with respect to level of farm capitalisation which was generally higher in the EU15 regions and lower in the EU10 and by the (new) support for agricultural investments through the RDPs.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis based on EU25 FADN constant sample 2004-2009: % share of farms with gross and net investment on fixed assets/ha &gt;0 with respect to SFP model, and type of farming; propensity to invest as % share of gross investment/farm capital</td>
<td>With regard to total farm investments, the share of farms investing on fixed assets (gross investment/ha &gt;0) decreases between 2004 and 2009 in the regions of the EU15 (from 53.2% to 50.2% in the SPS Historical and from 83.6% to 80.2% in the Hybrid model), whereas it generally increases in the EU10 (from 64.2% to 66.5% in the SAPS and from 60.2% to 74.4% in the SPS Regional model). The increase in the share of farms investing on fixed assets between 2004 and 2009 in the EU10, confirms a progressive rise in farm capitalisation that would reduce the gap with the EU15.</td>
</tr>
<tr>
<td>Econometric analysis at farm level</td>
<td>The results of the econometric analysis show that in the years 2005-2009 coupled direct payments may have had an effect in terms of increasing farm investments, whereas decoupled payments do not appear to have had an effect. Moreover, the regression analysis provides evidence that investment subsidies have a significant effect in terms of increasing farm investments. The results of the regression analysis also show that an increase of farm capital would produce a decrease in farm investments.</td>
</tr>
<tr>
<td>CATI survey</td>
<td>In the opinion of the majority of farmers investing on farm assets after 2005, farm investments have been facilitated by the introduction of the SFP. The proportion is much higher in the two regions of Poland and Hungary (applying SAPS), suggesting that investment decisions could be facilitated to some extent by the availability of additional financial resources, and more so in the regions where direct support was introduced following EU accession. Furthermore, CAP entitlements seem to have facilitated access to credit, particularly for young farmers.</td>
</tr>
</tbody>
</table>

**In terms of marketing strategies:**

- The analysis leads to conclude that direct payments have not played any role in farmers’ marketing decisions.

The analysis was based on the replies of farmers in the twelve case study regions to the CATI survey. The farmers were asked whether they were members of a cooperative or producer organisation and

---

32 Bulgaria and Romania accessed the EU in 2007 and therefore could not be analysed using the FADN sample.
whether they had direct relationships with the processing industry and food retailers before the introduction of the single payment and if they maintain such marketing strategies today. Farm holders were also asked whether they have started direct sale of their products (on the farm or in farmers' markets, through mail order, internet sales, etc.) and whether the single payment has had any impact on this decision.

The analysis shows that the balance between farms starting up and abandoning specific marketing strategies is negative in the case of "Member of a Producers organisation / Cooperative" and "Direct relationship with processing industry", and zero for “Direct relationship with retailers” (i.e. the number of farms developing and abandoning this strategy is identical). A fair share of farmers appear to have started direct sale of farm products after the 2003 reform (21% of the total sample). However, only 18% of those who developed this marketing strategy declared that the introduction of the single payment has had some influence on the decision to start up direct sale.

In terms of diversification strategies:

- The policy change has had some differentiated effects on farm diversification decisions in the regions of the EU15 and in those of the EU10 (overall more marked expansion in the latter regions compared to the former, due in particular to increase of "Contract work to others" in the SAPS and "Product processing activities" in the SPS Regional model): yet other factors may have supported diversification choices, in particular rural development aids and other national policies (especially in the case of renewable energy production).
- A relatively high proportion of farms diversifies activities through undertaking contract work for others, which seems to be directly related to the increase in machinery investments and to the adoption of specific farm development or consolidation strategies (Strategies 1, 2, 3 and 4) after the 2003 reform. This is true, in particular, for the regions implementing the SAPS.
- The results do not suggest an impact of the 2003 reform (and in particular of direct payments) on farms’ adoption of organic farming.
- With respect to pluriactivity of farm holders it is possible to conclude that the decrease in the share of farm holder-managers with Main other gainful activities (consistent with the overall decrease in the number of holdings in the small size classes) may be an indirect effect of the 2003 reform’s contribution to speeding up the process of farm concentration across all groups of regions.

The following table provides a synthesis of the main results leading to the conclusions.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis of diversification strategies at farm level based on the 2004-2009 FADN constant sample across the EU25</td>
<td>The analysis based on farms of the FADN 2004-2009 constant sample shows that diversification of activities on the farm generally concerns a limited number of holdings (in general below 10%) and that the increase in the number of farms with diversified activities in 2009 compared to 2004 across all groups of regions is generally small (around +1% point). The only exception concerns “Contract work for others” in the regions of the SPS Historical (+4.2% points between 2004 and 2009) and SAPS models (+6.5% points) and Processing of farm products in the regions of the SPS Regional model (+3.8%)</td>
</tr>
</tbody>
</table>

33 As defined by the European Commission (“Other gainful activities: pluriactivity and farm diversification in EU-27”. Note to the file, 17 June 2008): a family farm manager is considered “… as pluriactive if he carries out any activity other than farm work for remuneration, be it on the holding itself (farm diversification), on another holding, or as employee in a non-agricultural enterprise. Farm diversification is understood as the creation of any gainful activities that do not comprise any farm work but are directly related to the holding, i.e. use its resources or products, and have an economic impact on the holding.”

34 See § 5.3.

35 Other gainful activities of farm sole holder-managers are qualified as “Main” if the farm holder spends more time on these activities than on the farm work and as “Subsidiary” in the other case.
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical analysis of “contract work for others” at farm level based on the 2004-2009 FADN constant sample across the EU25</td>
<td>A high proportion of farms take up “Contract work for others” as a new activity in 2009: 25% of farms in the regions of the SPS Hybrid model, 19.6% for the regions of SAPS, 8.5% in the regions of the SPS Historical and 5.7% in the regions of the SPS Regional model. Within the strategies concerning production factors, in particular Strategies 1, 2, 3 and 4 (see § 5.3), we recall that a non-negligible share of farms implementing those strategies between 2004 and 2009, also decided to change their diversification strategy with respect to carrying out contractual work for others. Such results appear to confirm that strategic decisions concerning core farm activities and those concerning diversification are related. This relationship appears more important in the regions implementing the SAPS, where appreciable shares of farms (between 7.4% and 9.9%) are found within strategies 1, 2, 3 and 4.</td>
</tr>
<tr>
<td>CATI survey</td>
<td>One third of interviewed farmers have adopted some form of diversified activity after 2005, mainly developing educational activities(^{36}) on the farm (17.2% of total sample) and the production of renewable energies (11.9% of total sample). Out of all farms having started a diversified activity after 2005, 25.9% of responses indicate that the SFP has had some effect on diversification choices.</td>
</tr>
<tr>
<td>Organic farming:</td>
<td>The analysis based on farms of the FADN 2004-2009 constant sample shows that the number of organic farms very slightly increases in all SFP models (between 0.2 and 0.4% points). The analysis based on Eurostat data shows that between 2005 and 2010 the number of holdings adopting Organic farming methods grows everywhere, albeit more in the EU12 where it was less developed in the past, compared to the EU15.</td>
</tr>
<tr>
<td>Statistical analysis 2005-2010 of farm diversification strategies at macro-level with respect to SFP model and</td>
<td></td>
</tr>
<tr>
<td>Statistical analysis of diversification strategies at farm level based on the 2004-2009 FADN constant sample across the EU25</td>
<td></td>
</tr>
<tr>
<td>Statistical analysis at macro-level of number of sole holder-managers with Main or Subsidiary OGA with respect to SFP implementation model (2005-2010)</td>
<td>Pluriactive farm holders (on the farm and/or outside) engaged in activities that occupy the majority of their time (i.e. with Main other gainful activities) are more frequent than those engaged in Subsidiary other activities across all SFP models. Between 2005 and 2010, the overall share of pluriactive farm</td>
</tr>
</tbody>
</table>

\(^{36}\) Educational farms, also known as teaching farms, are working agricultural holdings that host school trips, families and adults' groups. Visitors are actively involved in several activities and fields focused around farming (conventional activities, recreational, environmental education, therapeutic, etc.). Norway, Sweden and Denmark were the first to launch educational farms in Europe, followed by Germany and The Netherlands.
In terms of diversification strategies

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| holders within the total number of farms with sole holder-managers increases for all SPS models, less in the regions of the Historical model (from 26% to 28%) and in a more accentuated manner for the regions implementing the SPS Hybrid model (from 47% to 52%)
On the other hand, the incidence of pluriactive farmers decreases in the regions applying the SAPS (from 39% to 35%). | In all groups of regions, the share of holder-managers with Main OGA decreases between 2005 and 2010 (albeit only slightly in the regions of the SPS Historical):
- SPS Historical: from 20% to 19%;
- SPS Hybrid: from 39% to 30%;
- SPS Regional: from 63% to 56%;
- SAPS: from 35% to 28%.
Vice versa, the incidence of holder-managers with Subsidiary activities increases.
- SPS Historical: from 6% to 9%;
- SPS Hybrid: from 9% to 22%;
- SPS Regional: from 8% to 19%;
- SAPS: from 4% to 7%.
Since Main other gainful activities are more frequently encountered in small size farms, this result appears to be entirely consistent with the long-term process towards increasing farm concentration (see § 5.1). |
| Statistical analysis at macro-level of distribution of holdings where holder-manager has OGA related/not related to the holding with respect to SFP implementation model (2010) | In 2010 the vast majority of pluriactive farm holders carry out other gainful activities outside the holding. The extent of this phenomenon varies across the four SFP models:
- 97% of all pluriactive farm holders in the regions implementing the SAPS are engaged in other gainful activities not related to the holding;
- about 84% of farm holders in the regions of the SPS Historical and Regional model;
- 63.7% of farm holders in the regions of the SPS Hybrid model.
However, it is not possible to make a comparison with previous years because this information was not collected prior to 2010. |

37 However, this larger increase appears to be related to the consistent drop in the number of small size farms in Germany and the UK (i.e. England and Northern Ireland) due to the increase of the UAA threshold to 5 ha in 2010.