



EVALUATION OF THE STRUCTURAL EFFECTS OF DIRECT SUPPORT

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AGRICULTURE AND
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EVALUATION SCOPE AND METHODOLOGY

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 2003 Common Agricultural Policy (CAP) reform, 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.

Regulation No 1782/2003 introduced a new system of direct support, known as the Single Payment Scheme, under which aid is no longer linked to production (decoupling). The Member States could choose from three basic SPS models on how to calculate the reference amount for an individual farm: decoupling based on historical farm data (historic model), decoupling 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).

SFP implementation model by Member States and regions

SINGLE FARM PAYMENT (SFP)		Member States	
		SPS	SAPS
SPS	SPS Historical	Austria – Belgium – France – Greece – Ireland – Italy – Netherlands – Portugal – Spain – UK Scotland – UK Wales	
	SPS Regional	Malta - Slovenia	
	SPS Hybrid	Denmark – Finland – Germany – Luxembourg – Sweden - UK England - UK Northern Ireland	
SAPS		Bulgaria – Cyprus - Czech Republic – Estonia – Hungary – Lithuania – Latvia – Poland – Romania - Slovakia	

Source: DG AGRI

The evaluation covers the 27 Member States of the European Union (EU27) at regional level, and compares trends before and after the 2003 CAP reform.

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 survey.

Quantitative analysis is carried out at two levels:

- at macro level based on Eurostat regional data (NUTS II);
- at farm level based on the Farm Accountancy Data Network (FADN).

The analysis distinguishes across the alternative SFP implementation models and distinguishes by farm type¹ and economic size².

¹ The main production orientations: Specialist field crops; Specialist horticulture; Specialist permanent crops; Specialist grazing livestock; Specialist granivores; Mixed cropping; Mixed livestock; Mixed crops-livestock.

² Small size farms: Less than 24,999 euro of Standard Output (excluding SO equal to zero euro); Medium size farms: 25 000 – 249 999 euro; Large size farms: 250 000 euro and over.

The “Computer Assisted Telephone Interviewing” (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 regions³ with the objective of involving 1 000 farms beneficiaries of direct payments.

Limits of the evaluation

- In the 2010 Agricultural Census, DE, UK and CZ have excluded holdings with arable UAA lower than 5 ha.
- For the EU12 Eurostat data on farm structure are available only from 2003.
- In some Member states common land was not recorded until 2010 Agricultural Census.
- FADN data concerning capital in current value should be taken with caution.

EFFECTS OF DIRECT PAYMENTS ON FARM STRUCTURE

...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.

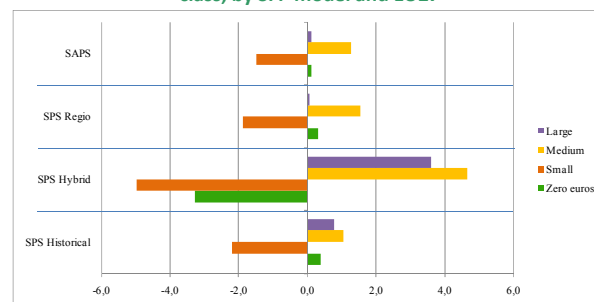
EU27 differences between pre-and post-reform years (2003-2005 and 2005-2010) in % of farm size class



Source: Eurostat

This structural development led to a greater homogeneity in farm distribution among size classes in all SFP models, and therefore for the EU27 as a whole.

Differences between 2010 and 2005 in % of farms by economic size class, by SFP model and EU27



Source: Eurostat

³ 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); Slättbygdsän (SE); England East (UK).

The exit from the agricultural sector has concerned also almost exclusively farms of small economic size: for all SFP models the average economic size of holdings has increased. After the reform, this process appears however to be faster for the two models applied in the EU15 than the two models applied in the EU12.

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

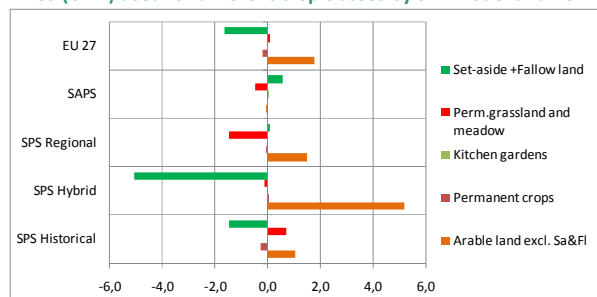
Farm concentration of surfaces and of livestock⁴ slightly increased in the EU15 Member States between 2003 and 2010 and it increased in a more important way in the EU12 Member States. However, in particular in Member States applying the SAPS model, structural changes leading to a greater concentration 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.



...in terms of change in agricultural land use

With the exception of most EU15 southern regions, direct payments did not have an effect on land use changes after the reform.

Differences between 2010 and 2003 in % of Utilised Agricultural Area (UAA) used for different crop classes by SFP model and EU27



Source: Eurostat

In the EU15, the withdrawal of compulsory set-aside in 2009 appears to have played the most important role in land use

⁴ Farm concentration is computed as: i) cumulative % of the number of holdings by size class and cumulative % of UAA by the same size classes; ii) cumulative % of the number of holdings by size class and cumulative % of livestock units by the same size classes.

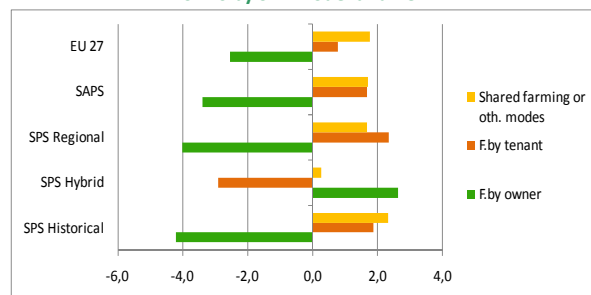
changes. In these regions, set-aside land has mostly been returned to its original purpose, and only a small share is used as fallow land. In regions implementing SAPS model, where the set-aside requirement has never been applied, there was a rise in the share of fallow land over total UAA.

...in terms of holdings' management structure

Legal status⁵ of holdings has not been influenced by policy change.

Conversely, holdings' organisational form⁶ has been indirectly affected by the 2003 CAP reform. Indeed, the observed decrease of land under "farming by owner" (most common organisational form among small holdings) seems linked to the farm concentration trends: there is a growing incidence of land under "Shared farming or other modes" and "Farming by tenant" (adopted more frequently by larger holdings) balanced by a decreasing share of land under "Farming by owner".

Differences between 2010 and 2003 in % of types of organisational forms by SFP model and EU27



Source: Eurostat

...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.

EFFECTS OF DIRECT PAYMENTS ON LABOUR FORCE

...in terms of labour use intensity⁷

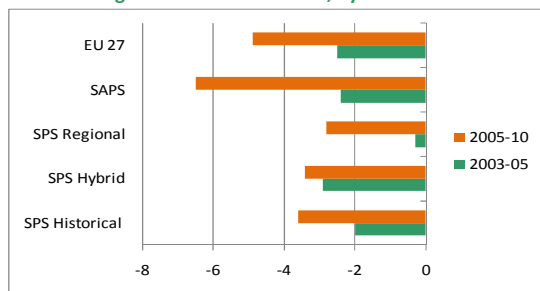
The CAP reform and in particular, decoupling of support, may have contributed to accelerate the reduction of labour use intensity in the farm sector occurring already before the 2003 reform.

⁵ 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.

⁶ The types of organisational forms are: farming by owner; farming by tenant and shared farming or other modes.

⁷ i.e work hours/ha.

Labour use intensity (hours/ha): Comparison of the average annual rate of change 2003-05 and 2005-10, by SFP model and EU27



Source: Eurostat

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.

Moreover, 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 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.

...in terms of the evolution of other labour attributes⁸

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.

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.

EFFECTS OF DIRECT PAYMENTS ON FARM CAPITAL

...in terms of capital intensity⁹

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.

⁸ I.e. family labour, age structure, part-time/full-time and farm organisation

⁹ Capital intensity per unit of land and per unit of labour.

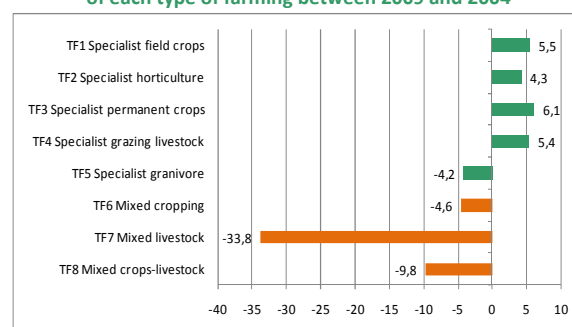
The analysis conducted on the 12 case study regions highlights that large economic size farms that have experienced the strongest reduction in the relative importance of coupled payments, have often experienced a reduction (albeit generally small) in the amount of capital per hectare.

EFFECTS OF DIRECT PAYMENTS ON FARM SPECIALISATION¹⁰

...in terms of type of farming

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.

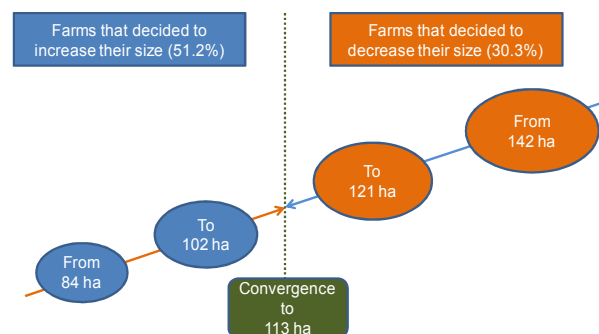
% variation of the number of farms of the FADN constant sample of each type of farming between 2009 and 2004



Source: EU-FADN-DG AGRI L-3

...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.



Moreover, 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, i.e. aids decoupling, seems to have allowed a strategic response to market conditions (i.e. the

¹⁰ The analysis is based on FADN 2004-2009 constant sample of farms (42 114 farms). Accordingly, the results of the analysis concerning strategy changes only apply to the sample and not to the whole agricultural sector.

EFFECTS OF DIRECT PAYMENTS ON FARM COMPETITIVENESS

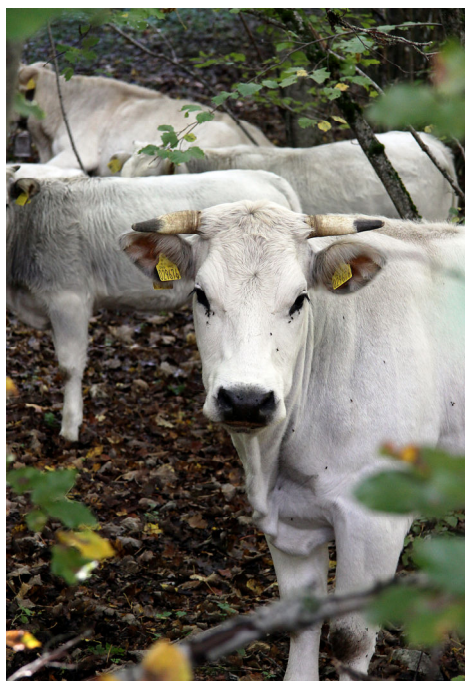
rise of cereal prices), namely of livestock farms with availability of land: in the EU15 regions, livestock farms with UAA (both specialised and mixed farms) have generally increased the number of livestock units, supported by the augmentation of land for animal feeding and/or for cereals¹¹.

...in terms of strategic changes concerning production factors¹²

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:

Strategies	% of farms in FADN constant sample
S1 Development and intensification of the use of all production factors	6.0%
S2 Development with optimisation of production factors use efficiency	17.5%
S3 Development with extensification	23.0%
S4 Consolidation, with or without downsizing	39.4%
S5 Disinvestment and/or disengagement from farming	14.0%

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.

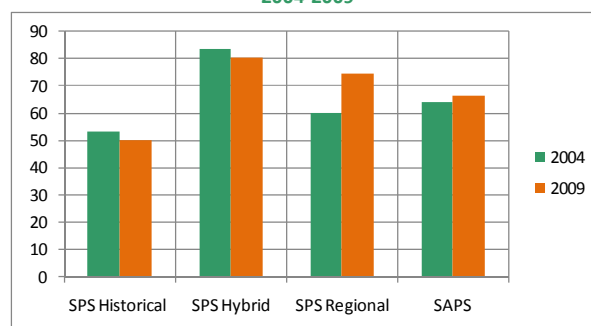


...in terms of farm investment decisions¹³

The policy change has had a differentiated effect on farm investments: decreasing farm investments in the EU15 and increasing farm investments in the EU10¹⁴.

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 Rural Development Programs.

% share of farms with total gross investments/ha>0 by SFP model 2004-2009



Source: EU-FADN-DG AGRI L-3

...in terms of marketing strategies

Direct payments have not played any role in farmers' marketing decisions.

...in terms of diversification¹⁵ in other gainful activities

The policy change has had some differentiated effects on farm diversification decisions: in the regions of the EU10 the expansion is overall more marked compared to the EU15, due in particular to increase of "Contract work to others" in the SAPS and "Product processing activities" in the SPS Regional model.

However 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 (S 1, 2, 3 and 4) after the 2003 reform. This is true, in particular, for the regions implementing the SAPS.

¹¹ In the EU10 regions the results are less clear-cut: in some types of farms the number of livestock units has increased and in others it has decreased.

¹² All farms with UAA of the FADN 2004-2009 constant sample have been classified and grouped on the basis of the observed changes in land, labour and capital (in absolute terms and per hectare) between 2004 and 2009 in order to identify strategic behaviours in some way related to the effects of CAP changes.

¹³ FADN constant sample 2004-2009.

¹⁴ Bulgaria and Romania accessed the EU in 2007 and therefore could not be analysed using the FADN sample.

¹⁵ 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, namely: tourism, renewable energy production, aquaculture, contractual work, processing of farm products, handicraft, wood processing, organic farming, other gainful activities n.a.e.

The 2003 reform (and in particular of direct payments) has not had an effect on farms' adoption of organic farming.

With respect to pluriactivity of farm holders, 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.

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