

Evaluation of effects of direct support on farmers' income

Common Agricultural Policy Evaluations

Evaluation carried out by
AGROSYNERGIE Groupement
Européen d'Intérêt Economique



European Commission
Agriculture and
Rural Development



One of the five objectives of the Common Agricultural Policy (CAP) established by the EC Treaty is to guarantee the agricultural community a fair standard of living, in particular by increasing the individual earnings of people engaged in agriculture.

This evaluation examined the effects of the direct support schemes, laid down in Council Regulation (EC) No 1782/03 (later Council Regulation (EC) No 73/09) with regard to this objective, that is the effects of direct support on the income of farmers.

Thus, the effects of direct payments on other CAP objectives, such as enhancing the competitiveness of the agricultural sector or ensuring sufficient and secure food supply, were not considered.

Regulation No 1782/2003 introduced a new system of direct support, known as the single payment scheme (SPS), under which aid is no longer linked to production (decoupling).

The decoupled support is calculated by multiplying the number of eligible hectares and the single payment entitlement. To calculate the reference amount for an individual farm Member States can choose from three basic SPS models: decoupling based on historical farm data (historic model), decoupling based on regional historical data (regional model) and a hybrid system.

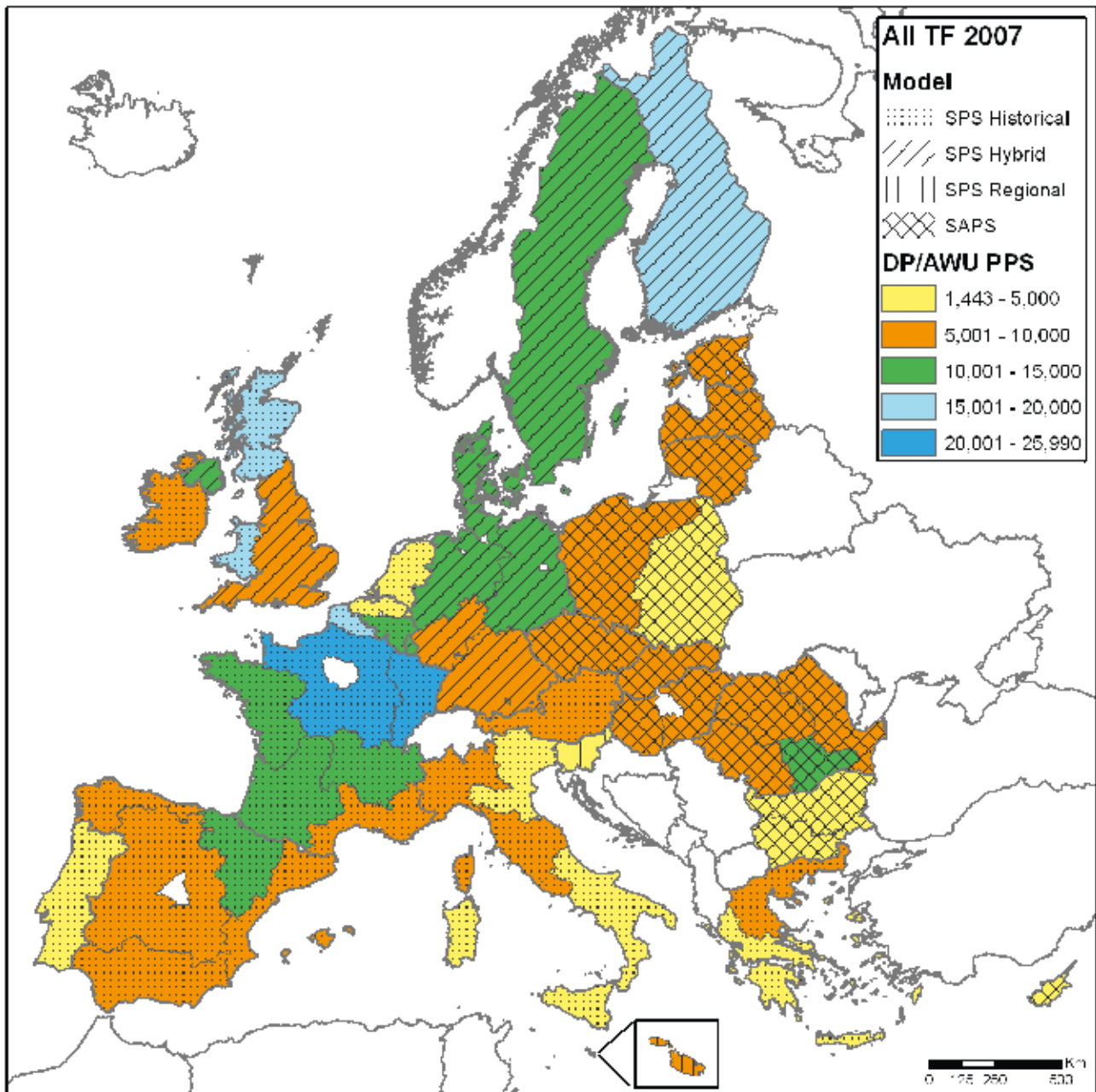
Farmers may also receive aid under other specific support schemes linked to their area under crops or to their type of production.

New Member States have the possibility, during a transitional period, to apply a Single Area Payment Scheme (SAPS). It involves the payment of uniform amounts per eligible hectare of agricultural land, up to a national ceiling laid down in the Accession Agreements.

The evaluation covered the 27 Member States of the European Union (EU27). The coverage was at the level of individual regions and the examination period started on 1 January 2005. To aid comparison, data going back to 2001 were used.



1. Direct payments per labour unit by macro-region (2007)



Source: EU FADN - DG AGRI

The evaluation methodology used a two-step approach:

- theoretical analysis of the effects of direct payments on the level and stability of farmers' income;
- empirical quantitative analysis and expert survey to test the theoretical assumptions.

The analysis was carried out at macro-economic level, based on agricultural statistics from EUROSTAT at regional level (NUTS II). The analysis was also carried out at micro-economic level, based on farm data from the Farm Accountancy Data Network (FADN) database (Source: EU FADN - DG AGRI) across 55 macro-regions.

The analysis distinguished seven agricultural sectors (field crops; horticulture; permanent crops (except wine); milk; grazing livestock: beef, sheep and goats; granivores; mixed farming), the choices of implementation of the single payment scheme, farm size, the type of farm organisation and the geographical location.

Because of the sparse and limited availability of data on farm household total income, the evaluation focused on farm business income, for which statistics satisfied the analytical requirements.

Direct payments have contributed to enhancing the income of farmers.

The results obtained by deducting direct payments from the weighted average of farm income¹ for the period 2004-2007 indicate that without direct payments, farm

income would fall by 27%. Figure 2 shows the average farm income in the seven sectors for EU27, EU15 and EU12².

2. Farm income per labour unit, with and without direct payments (average 2004-2007, EUR converted in PPS)

		EU 27 Avg	EU 15 Avg	EU 12 Avg
With direct support	Fields crops	23.351	29.376	18.295
	Horticulture	22.630	24.880	11.957
	Permanent crops	19.298	21.603	8.749
	Milk	23.311	29.016	13.542
	Grazing livestock	19.160	21.861	11.406
	Granivores	25.475	40.211	16.821
	Mixed farms	17.999	28.242	13.181
	Average	21.604	27.884	13.422
Without direct support	Fields crops	12.991	16.179	10.131
	Horticulture	22.073	24.325	11.385
	Other permanent crops	17.474	19.656	7.486
	Milk	16.180	20.454	8.850
	Grazing livestock	9.632	10.693	6.564
	Granivores	21.576	36.332	13.010
	Mixed farms	10.433	15.873	7.605
	Average	15.765	20.502	9.290

Source: EU FADN - DG AGRI

Econometric models showed a positive net effect of direct payments on farmers' income.

¹ The variable representing the income of farmers is Farm Net Value Added per Annual Work Unit (FNVA/AWU). The FNVA/AWU was computed by converting the values into Purchasing Power Standard (PPS). PPS is the artificial common reference currency unit used by Eurostat in the European Union to express the volume of economic aggregates for the purpose of spatial comparisons in such a way that price level differences between countries are eliminated. Economic volume aggregates in PPS are obtained by dividing their original value in national currency units by the respective purchasing power parity. 1 PPS thus buys the same given volume of goods and services in all countries,

² EU15: Member States in the EU prior to the accession of candidate countries on 1 May 2004: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom. EU12: 12 countries that joined the European Union over the past years: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia.

Direct payments play a particularly important role in generating farmers' income in grazing livestock farms, field crop farms, mixed farms and dairy farms.

Direct payments are about 50% of the income of grazing livestock farms (beef, sheep and goats), over 40% of the income of field crop farms and of mixed farms (various crops and livestock combined) and over 30% of the income of dairy farms (EU27).

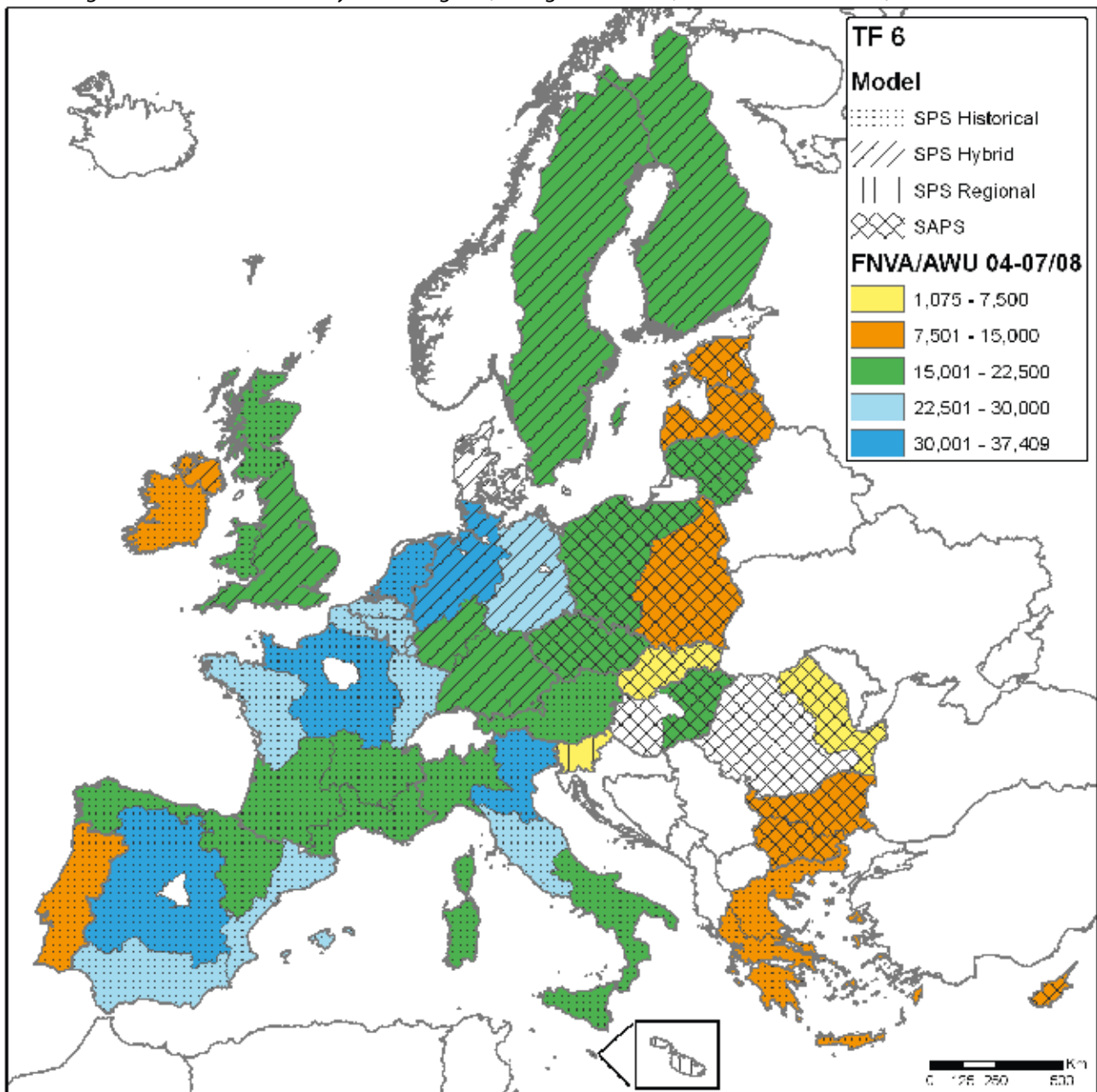
Farm income was analysed at the regional level for the seven agricultural sectors. Results for two of the most supported sectors are reported below.

Grazing livestock farms (beef, sheep and goats):
if direct payments did not exist, incomes would fall

across all macro-regions, but not in a uniform manner. In fact, in 3 macro-regions farms would make a loss (i.e. the income would be negative). In 14 macro-regions average income would decline by over 70%.

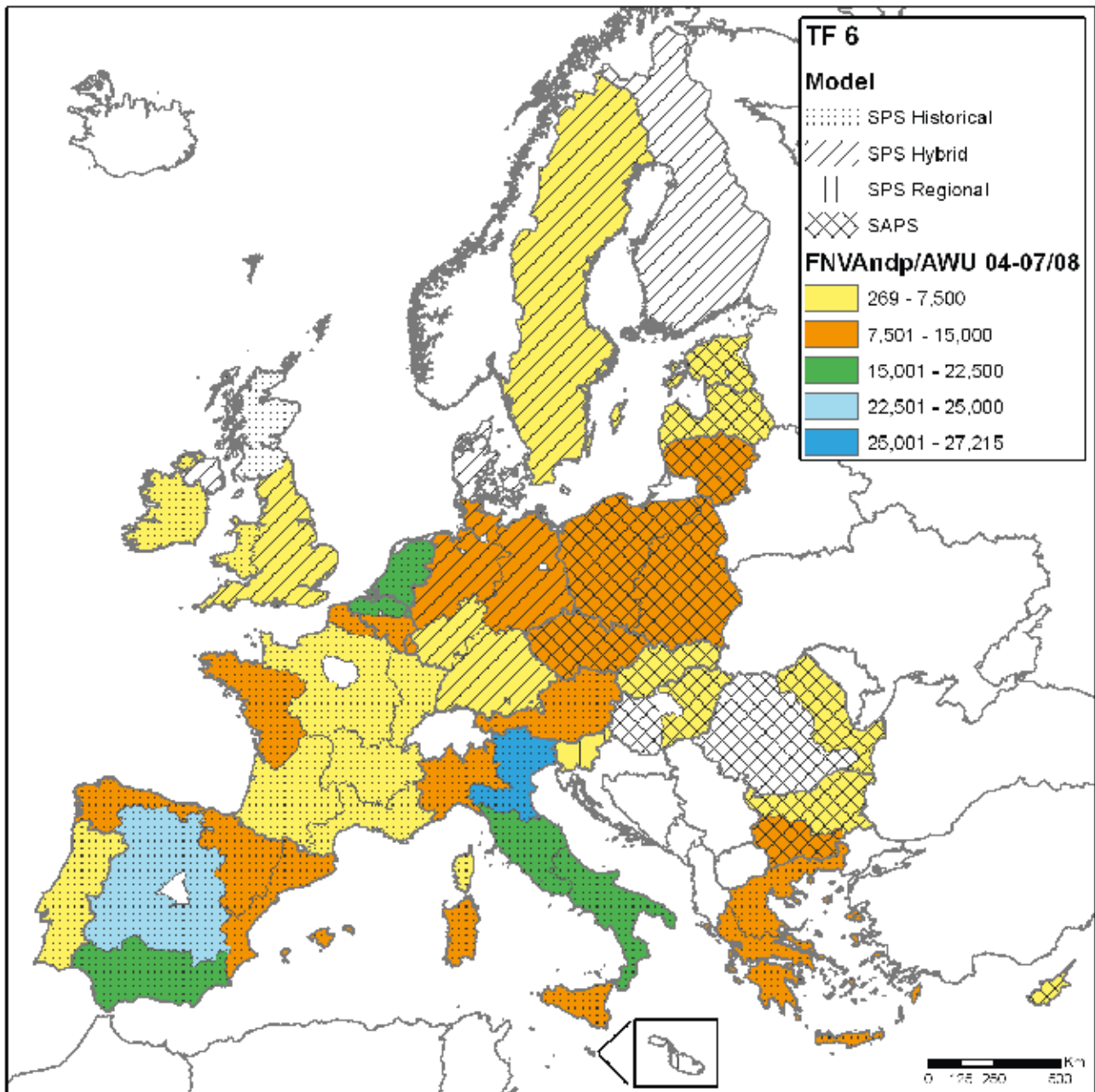
The maps below show the distribution of income with and without direct payments, in EU27 regions, disaggregated by the type of direct payment system (i.e. SPS, SAPS or the hybrid model).

3. Grazing livestock: farm income by macro-region (average 2004-2007, EUR converted in PPS)



Source: EU FADN - DG AGRI

4. Grazing livestock: farm income without direct payments by macro-region (average 2004-2007, EUR converted in PPS)



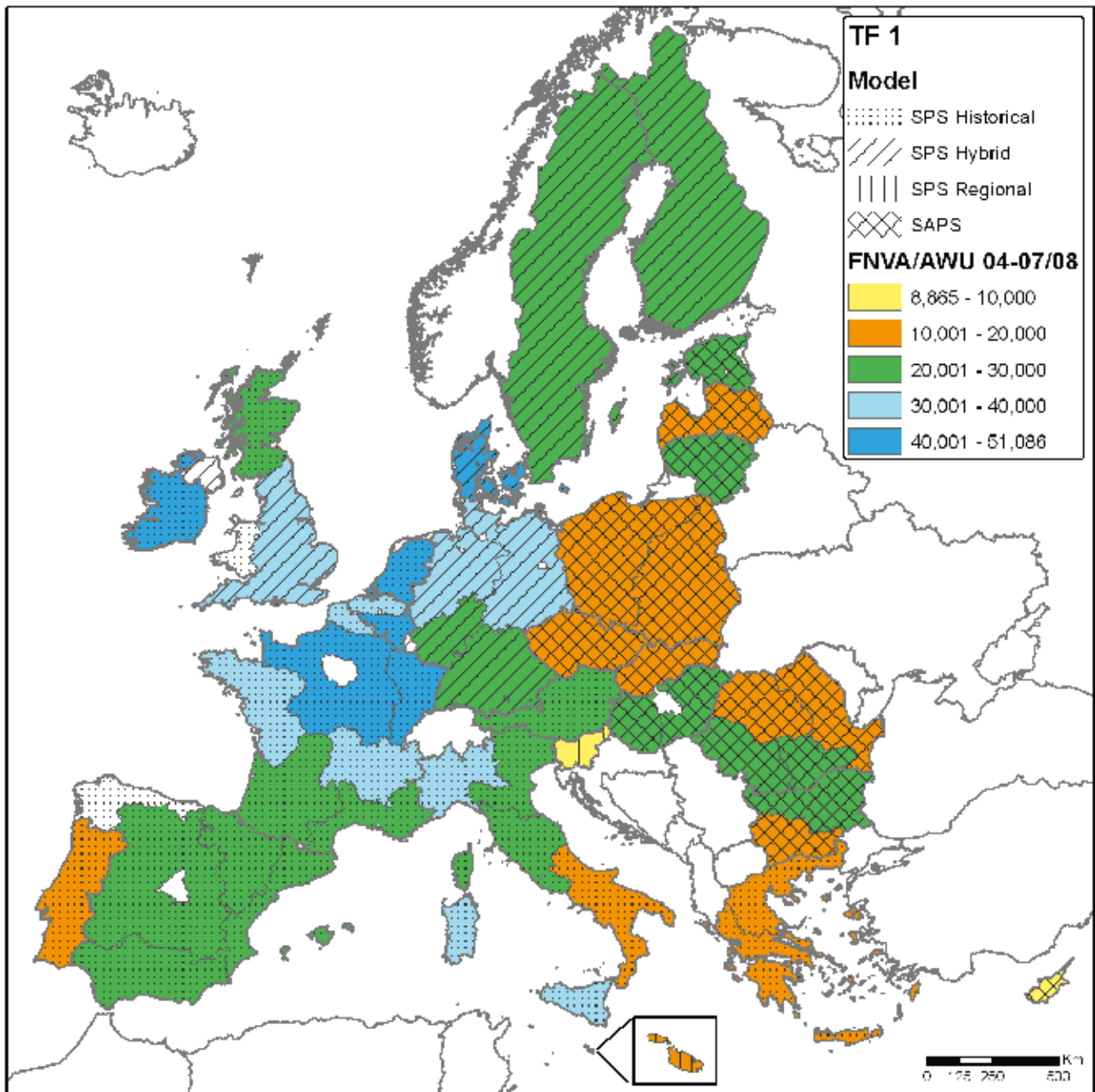
Source : based on data EU FADN - DG AGRI

In some cases the absence/inadequacy of FADN data for calculating averages led to the exclusion of macro-regions from the analysis. In the above maps the excluded macro-regions are shown in white.

Field crops: if direct payments did not exist, farm income would fall by over 50% (and in some cases by 60% or even 70%) in 17 macro-regions. In nine other

macro-regions, income would fall by less than 30%. However, in comparison to grazing livestock farms which, in the absence of direct payments, could make a loss, this is not the case with farms growing field crops – without direct payments, incomes would still remain positive.

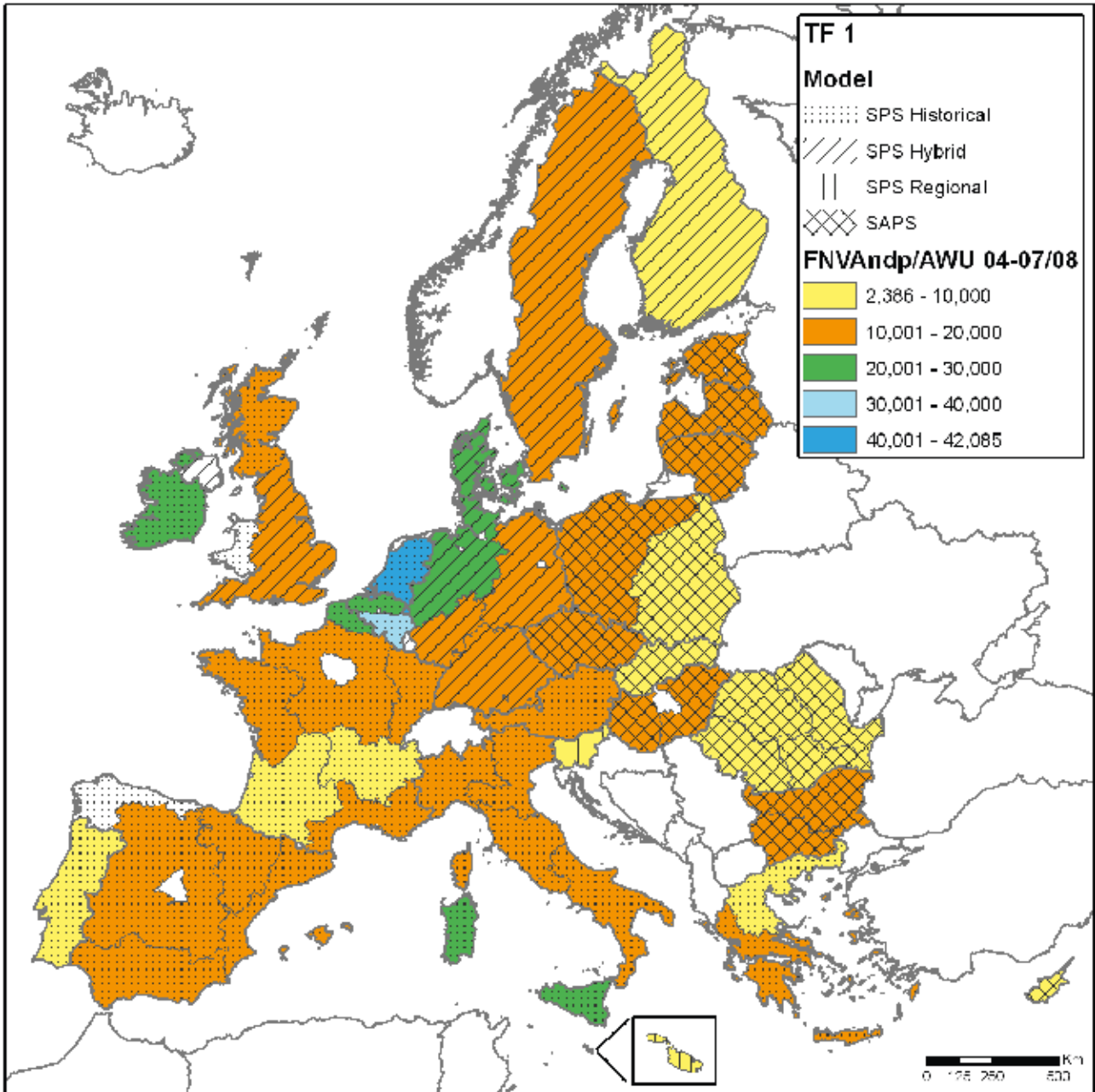
5. Field crops: farm income by macro-region (average 2004-2007, EUR converted in PPS)



Source : based on data EU FADN - DG AGRI



6. Field crops: farm income without direct payments by macro-region (average 2004-2007, EUR converted in PPS)



Source : based on data EU FADN - DG AGRI



Direct payments reduce the income gap between small and large farms.

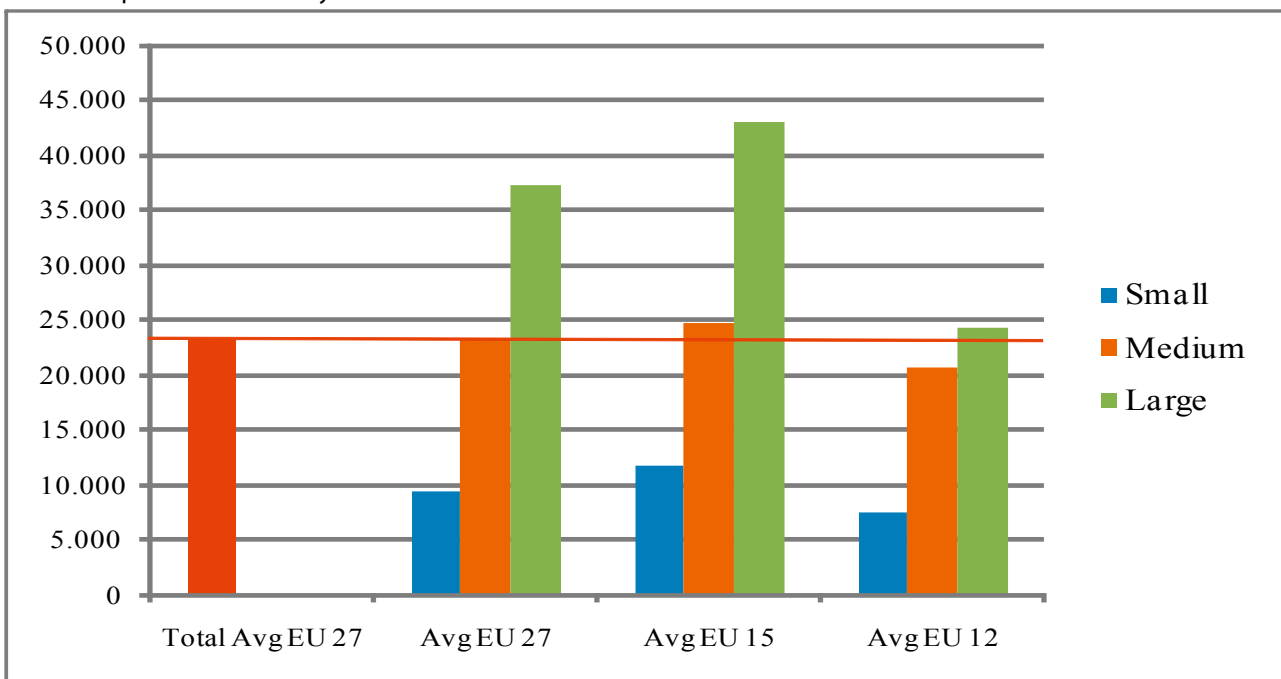
Farms were grouped into three size classes on the basis of their FADN classification according to European Size Units (ESU)³: Small farms <16 ESU; Medium sized farms 16-100 ESU; Large farms >100 ESU).

Small farms, which are mostly family farms, have in general the lowest average farm income per labour unit. In the absence of direct payments, the gap between large and small farms would increase, in

particular for farms specialised in field crops and for mixed farms.

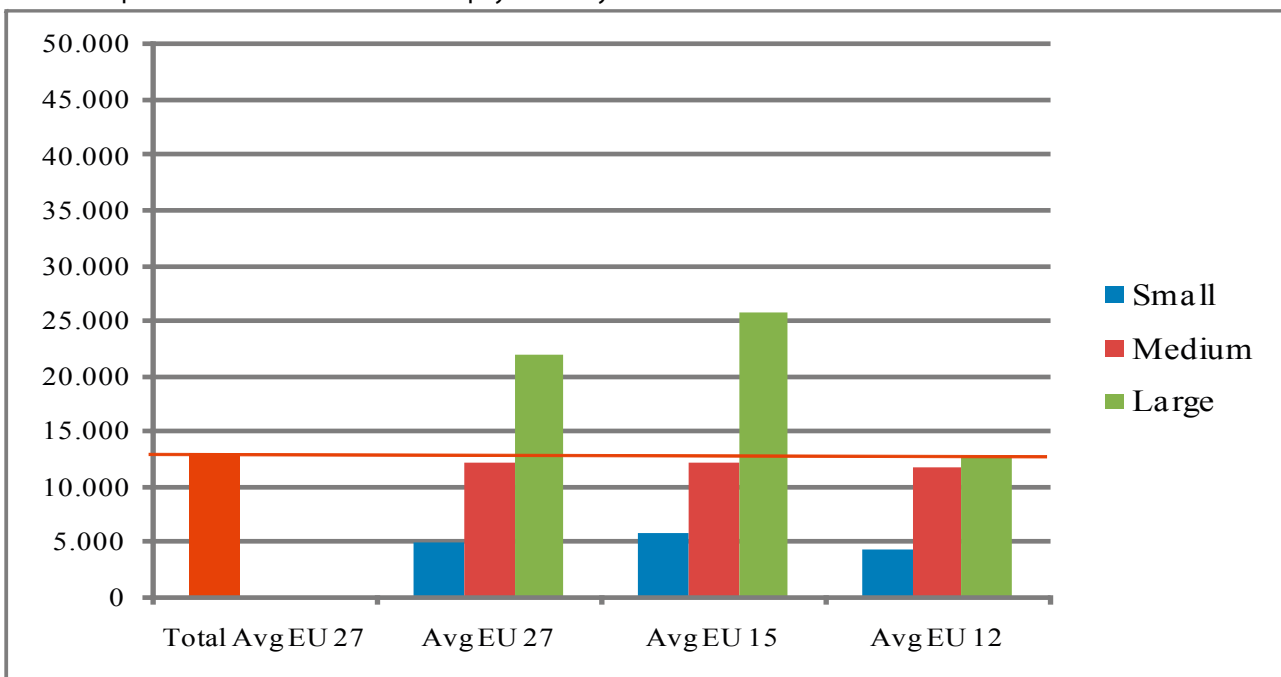
For field crops, figures 7 and 8 show that farm income (EU27 average for the period 2004-2007) was 37,370 PPS for large farms and 9,538 PPS for small farms. The study revealed that without direct payments, income would fall to about 5,000 PPS for small farms, and to 22,000 PPS for large farms.

7. Field crops: farm income by economic size class



Source : based on data EU FADN - DG AGRI

8. Field crops: farm income without direct payments by economic size class



Source : based on data EU FADN - DG AGRI

³ ESU = 1 200 Euros of Standard Gross Margin

Direct payments make a positive and significant contribution to the stability of income.

The largest effect on farm income stability is in those sectors which are the most supported by direct payments: field crops, grazing livestock (other than dairy farms) and mixed farms.

The smaller the farm, the greater is the effect of direct payments on income stability. In the absence of

direct payments, the incomes of small farms would be particularly volatile. It should be noted that, even with direct payments, the incomes of small farms are already more volatile than the incomes of medium-sized and large farms.

Direct payments help reduce the gap between average farmers' income and average income in the economy.

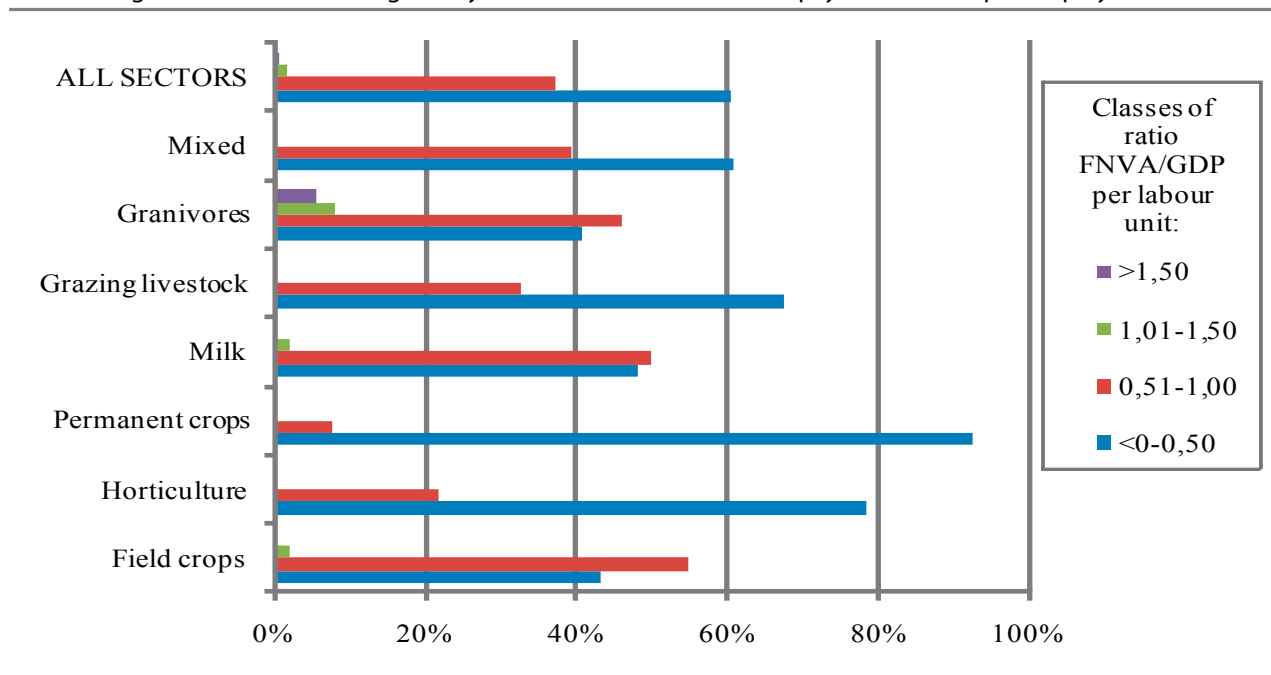
As already mentioned, one of the key objectives of the CAP is "to ensure a fair standard of living for the agricultural community". The European Community has never defined the concepts of 'agricultural community' and 'fair standard of living' as they appear in Article 39 of the Treaty on the Functioning of the European Union. There are therefore still no clear concepts or criteria which can be applied to measure these variables⁴.

In this context, to assess the contribution of direct payments to the income objective, the study compared farm income to an income variable used as a benchmark.

Several income measures – all appearing in official EU statistics – were considered as a possible benchmark: basic national minimum wage, annual gross earnings, Industrial mean earnings and gross domestic product. For reasons of comparability, the study chose Gross Domestic Product (GDP) per employee as the benchmark (Eurostat, average 2004-2007). The analysis was carried out at regional level for each sector.

In 60.5% of regions, average farm income per labour unit (including direct payments) for the analysed period is lower than half of the regional GDP per employee (see figure 9).

9. Percentage distribution of EU regions by ratio FNVA/AWU with direct payments /GDP per employee



Source: EU FADN - DG AGRI and Eurostat

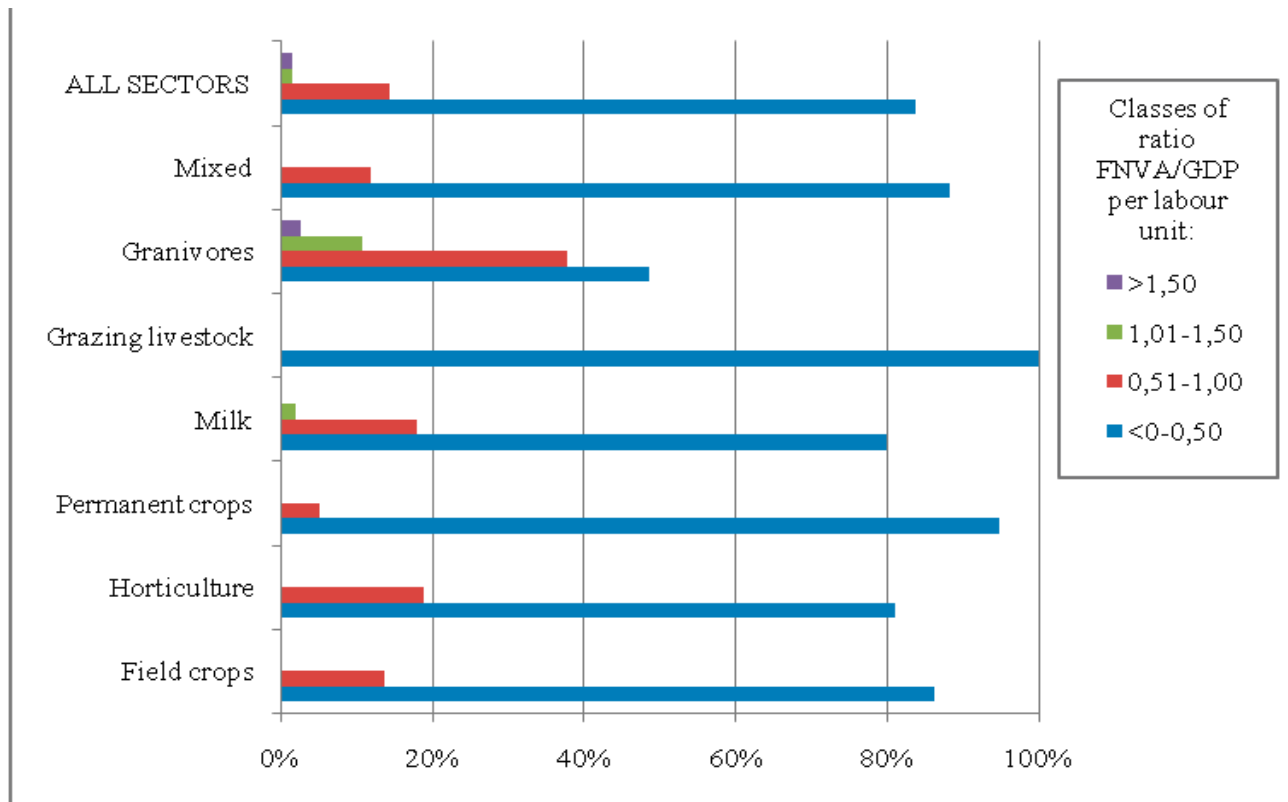
⁴European Court of Auditors (2004). Special Report No 14/2003 on the measurement of farm incomes (JOCE 2004/C 45/01).

In the simulated situation, without direct payments, 84% of regions would not reach the threshold of half of the GDP/employee (see figure 10).

the absence of direct payments would cause a further widening of the gap between farmers' income and GDP per employee, in a large number of regions.

In all of the four most supported sectors (field crops, dairy farms, grazing livestock farms and mixed farms),

10. Percentage distribution of EU regions by ratio FNVA/AWU without direct payments /GDP per employee



Source : EU FADN - DG AGRI and Eurostat

The study shows that, without direct payments, incomes of livestock farms would have remained below half of the regional GDP/employee in all regions. In the real situation (that is, with direct payments) incomes did not reach half of the regional GDP/employee in 67% of regions. In the field crop sector, the number of regions not reaching half of the GDP/employee would have doubled (from 43% to 86% after deducting direct payments).

In the same four sectors and in a large number of regions, farm income per family labour unit would fall below the remuneration level of paid employment in the reference region, suggesting a fragile situation in which either family labour or capital is under-remunerated.

The comparison between farm income and GDP/employee in all the three size classes confirms previous results, showing the particularly difficult situation faced by small farms.

Even with direct payments, in 98,1% of regions, average farm income for small farms is less than half that of the average GDP/employee. Concerning medium-sized farms, 73% of regions do not reach the threshold of

half the benchmark. In the group of large farms, the average farm income in the EU regions is lower than half the benchmark in 24,8% of regions.

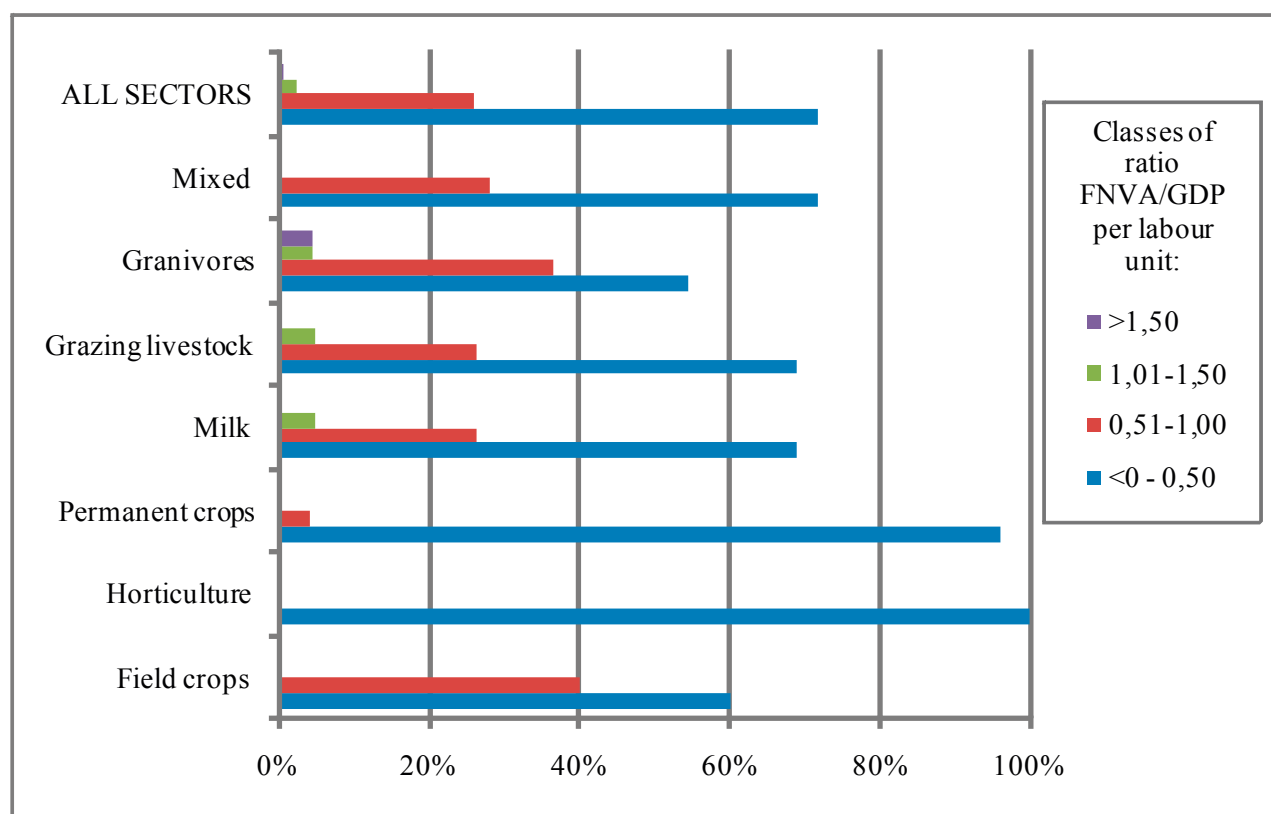
Direct payments reduce the gap in farmers' incomes between non-LFA farms and LFA farms.

Direct payments have a larger effect on farmers' income stability in LFA areas in comparison to non-LFA areas.

Direct payments contribute to reducing the gap between farmers' income in LFA areas (and in mountain

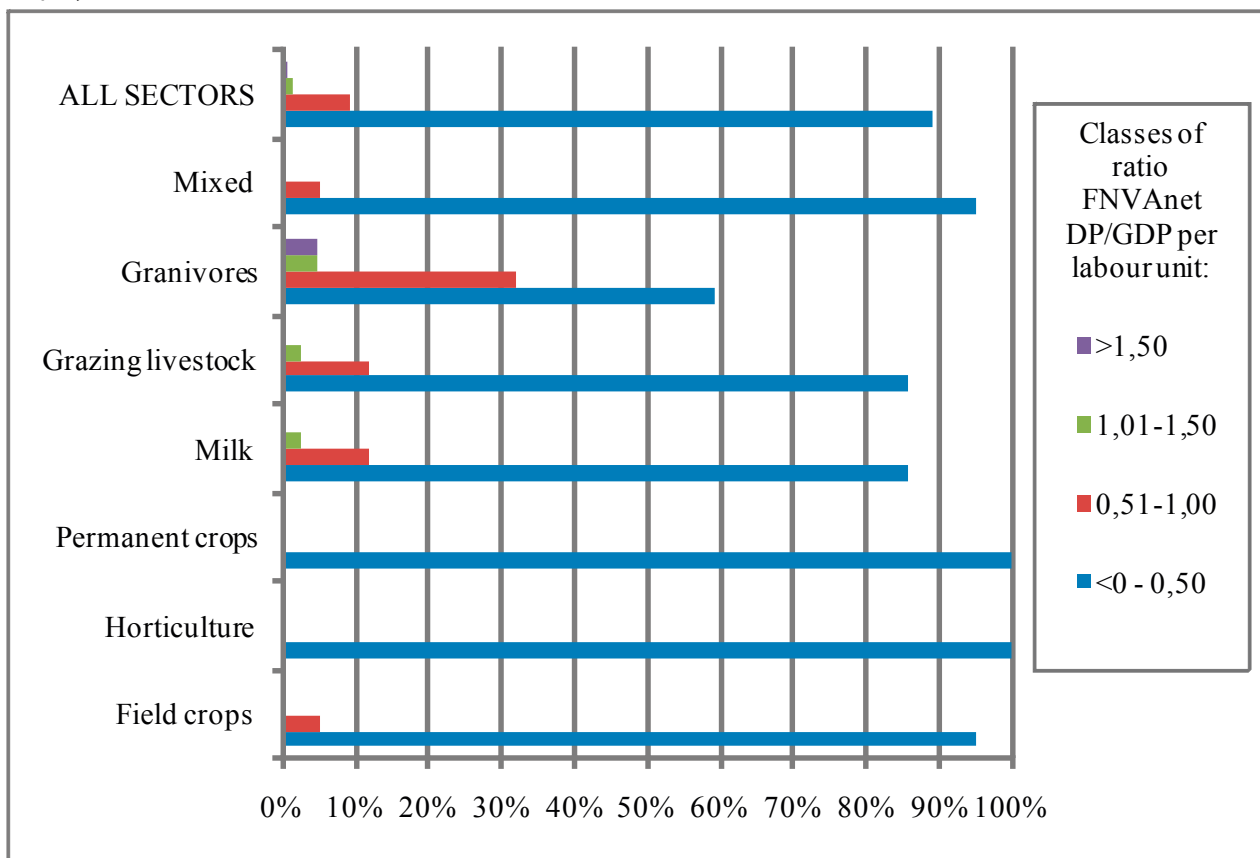
LFA areas) and GDP per employee, measured at regional level. Farmers' income did not reach half of the regional GDP/employee in 72% of LFA regions (Figure 11); without direct payments, the proportion would increase to 89% (figure 12).

11. Income in LFA farms: Percentage distribution of regions by ratio FNVA/AWU with direct payments /GDP per employee



Source : EU FADN - DG AGRI and Eurostat

12. Income in LFA farms: Percentage distribution of regions by ratio FNVA/AWU without direct payments /GDP per employee



Source : EU FADN - DG AGRI and Eurostat

Direct payments are crucial in ensuring the economic viability of farms in field crops, grazing livestock farms, mixed farming and, partly, in the milk sector.

A farm can be considered viable when it is able to guarantee a sufficient remuneration of family labour and farm capital.

The overall results indicate that in these four types of farming the removal of direct payments would mean that farm income no longer adequately remunerated capital and family labour.

In the analysed period, farms in which the share of paid labour is high (family labour <30%) are the most efficient in the EU15 and the least efficient in the EU12.

This suggests that, in the latter case, there is an excess of paid labour. Therefore, the strategic goals of these farms might be different: more targeted to economic results in the EU15 and more focused on social aspects in the EU12.

After the 2003 reform, the remuneration of farm capital has improved more in the EU15 regions applying the hybrid SPS model than in the regions applying the historic SPS model. Thus, the hybrid SPS model has probably a stronger effect in terms of improving the economic viability of farms.

The efficiency of direct payments in targeting the appropriate recipients is quite high.

Direct payments can be considered as an efficient policy instrument if they support farmers whose income is lower than the GDP per employee and, furthermore, if they target the recipients in a way that reduces income disparities among farmers.

The analysis indicates that in 2007, 82% of the expenditure on direct payments went to farms whose income per labour unit does not reach the regional GDP per employee even with direct payments.

However, 11% of the expenditure went to farms that would have achieved a farm income per labour unit equal or above the regional GDP per employee even without direct payments.

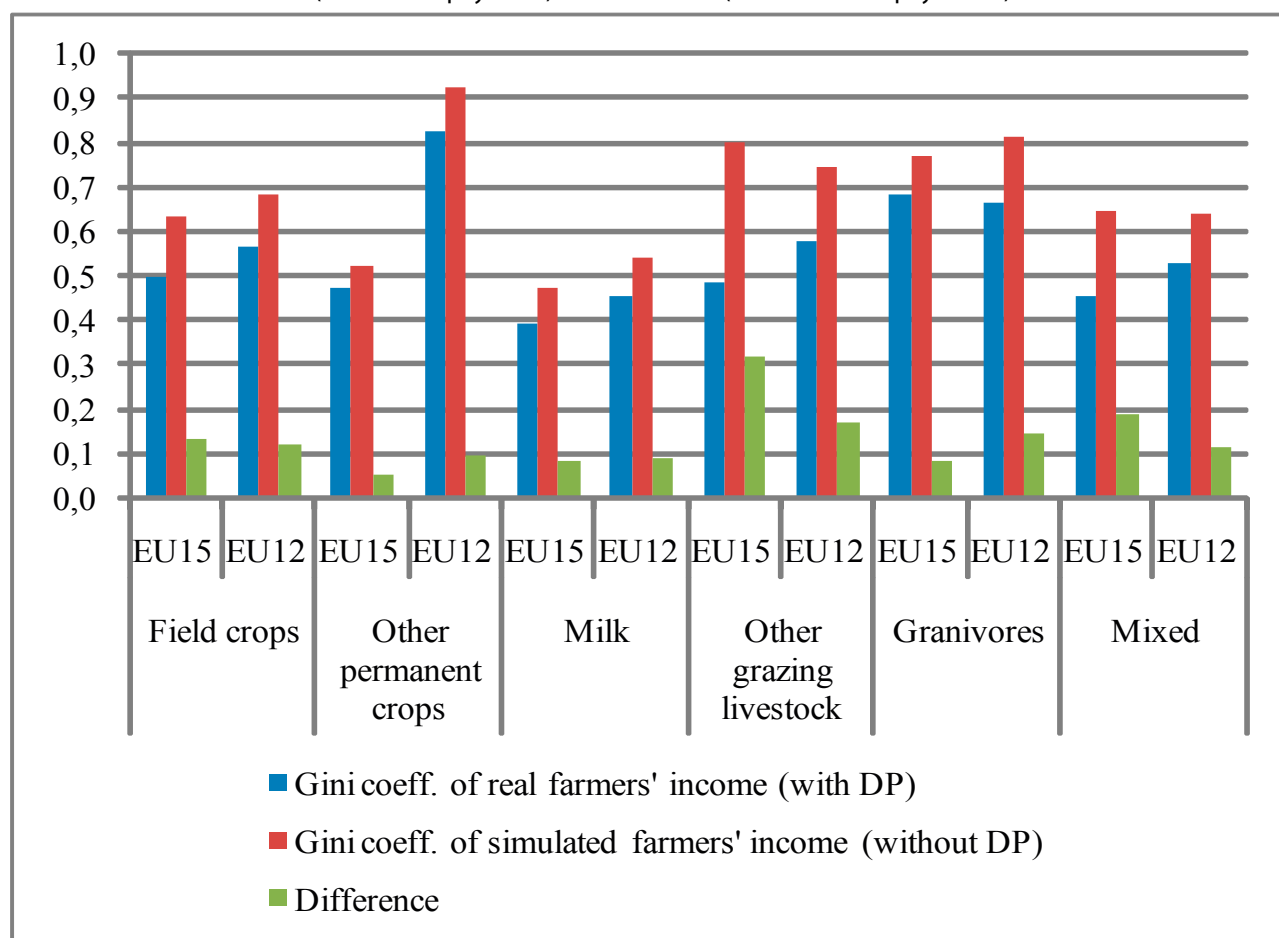
Those farms that reach the regional GDP per employee level thanks to the fact that they receive direct payments, account for the remaining 7% of expenditure.

However, the results show remarkable differences across regions.

The comparison of farm income concentration (measured by the Gini coefficient) leads to the conclusion that direct payments contribute to reducing the disparities among farmers' income across the EU. However, an uneven farm income distribution persists in most sectors and in most geographical areas.

Figure 13 compares the Gini coefficients for real farmer income (with direct payments) and for simulated income (without direct payments) in the EU15 and EU12 and over all sectors: the higher the coefficient, the higher the income disparity. The difference between coefficients in the real and simulated situations measures the contribution of direct payments to the reduction of income disparity (i.e. the green bars).

13. Gini coefficients for real (with direct payment) and simulated (without direct payments) farm income



Source : based on data EU FADN - DG AGRI

Direct payments have a larger positive effect on farm income equity in the regions applying the hybrid and

the regional SPS models than in the regions applying the historic SPS model.

Direct payments have been coherent with measures under the single CMO and rural development measures.

The study shows that in the period 2001-2007 the three instruments of the agricultural policy have been coherent with respect to enhancing and stabilizing farm income because in this time span they complement each other in response to changes introduced by policy modification.

Indeed, the three policy measures substitute each other over time and thus maintain the overall level of support at a more or less constant level.

Direct payments (at EU level considering all regions and all types of farming, for the period 2004-2007) have been coherent with the compensatory allowance

given to specific farms in a certain LFA area because the income of these farmers is lower or equal to the income of farmers not located in LFA areas and to the income of farmers located in LFA areas but not receiving the compensatory allowance.

However, analysis by type of farming and by groups of regions according to the SPS implementation model indicates that there are also cases where farmers receiving both a compensatory allowance and direct payments have an income higher than other farmers (i.e. farmers not located in LFA areas and farmers located in LFA areas but not receiving a compensatory allowance).



One of the five objectives of the Common Agricultural Policy (CAP) established by the EC Treaty is to guarantee the agricultural community a fair standard of living, in particular by increasing the individual earnings of people engaged in agriculture.

This evaluation examined the effects of the direct support schemes, laid down in Council Regulation (EC) No 1782/03 (later Council Regulation (EC) No 73/09) with regard to this objective, that is the effects of direct support on the income of farmers.

For further info:

http://ec.europa.eu/agriculture/eval/reports/income/index_en.htm



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