# Farm Payments in the EU – their Distribution and Justification

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**Abstract**

The introduction of decoupled direct payments in the EU was a substantial change of the Common Agricultural Policy (CAP) in 2003. After decoupling direct payments from production, it has become evident that distributional objectives are the major justification of farm payments. There are three facets: the distribution of payments among farmers within member states, the distribution of payments among member states, and the distribution of household incomes within member states. All of them will be affected if the volume and allocation of funds for the CAP will be changed in the new financial framework of the EU. The paper addresses the first distributional aspects. We provide an overview of the development of past and present research and findings on the distributional aspects of direct payments. We use the theory of federal fiscal relations to identify the policy agendas that should be handled at the EU level, at national levels, and at sub-national levels. We analyse how measures of concentration are affected if the criteria of direct payments are changed. This allows us to identify potential consequences after changing the way direct payments are distributed within EU member states.

## 1. Introduction

The theory of fiscal federalism is a normative concept that defines which government responsibilities should be transferred to the Union and which ones should remain with the member states (see Tabellini, 2003; Breuss and Eller, 2004; Caesar, 2004; Heinemann, 2005). It is based on the pioneer work by Musgrave (1959) und Oates (1972). The "optimal" political decision level for each single policy area is identified on the basis of cost-benefit considerations. Centralisation and decentralisation each have specific advantages and drawbacks that may differ from one government function to another. The weighing of relative benefits and costs of (de)centralisation of responsibilities will give guidance on the appropriate allocation of responsibilities to the different territorial authorities. Fiscal federalism tries to identify an efficient multi-level governance structure for the public sector.

Public services are viewed from the perspective of a benefit region. Public goods can be grouped whether they are locally, regionally, nationally or supra-nationally relevant. The "principle of fiscal equivalence" (Olson, 1969) states that the responsibility for the provision of a public good should be conveyed to that territorial authority where the community of beneficiaries corresponds to that of taxpayers. If the benefits of public goods provided by one region spills over to the inhabitants of neighbouring regions, the overall supply of public goods will be sub-optimal.

External effects can be internalised and a welfare-optimal supply of public goods will be generated by centralising the responsibility. However, centralisation does not necessarily mean that the entire responsibility rests with the higher-ranking government level: The central level can provide incentives to the sub-central authorities to take into account the spill-overs of their policy decisions via financial transfers (Oates, 1972). A co-financing of public tasks

and the sharing of responsibilities between different government levels in a federal state may be interpreted as intermediate steps on the way towards full centralisation. The centralisation may be meaningful for public goods and services offering substantial economies of scale in consumption.

However, decentralised responsibilities for economic policy can better adapt decisions to inter-regional differences of individual preferences. When preferences of the population concerning the quantity and quality of public goods differ across countries, a closer tie between policy making and citizens favours decentralised responsibilities. Lower information and dissatisfaction costs have to be considered as well (Oates, 1972). A general perception is that the centralisation of responsibilities tends to work in favour of uniform policies. With a view to the "optimal" allocation of responsibilities, there is thus a conflict between the supply of public goods according to popular preferences on the one hand, and the internalisation of regional external effects and the exploitation of economies of scale, on the other (Alesina, Angeloni and Etro, 2005).

Consequently, EU responsibilities would be policy areas where benefits of policy action extend EU-wide and/or where economies of scale in consumption are large enough so that they can be realised only at the EU level. In other cases, the individual member states (or regional or local territorial authorities) should provide the public good in question. In situations with spill-overs and economies of scale below the EU level, the countries concerned should co-operate, in order to establish a link between beneficiaries, decision makers and the tax payers for a particular public good.

In some cases competition between countries for internationally mobile companies and taxpayers can have welfare-enhancing effects. According to supporters of a competitive solu-

tion, firms can reveal their preferences for different sets of taxes and public services by choosing where to reside or produce if decentralised political responsibilities are possible (Tiebout, 1956). Competition between the territorial authorities is expected to promote the elaboration of innovative policy approaches ("laboratory federalism", Oates, 1999), and member states' governments would have stronger incentives to align their policy proposals to people's preferences.

An alternative view stresses that the competition for mobile factors of production could induce a circle of deregulation in major policy areas. The risk of a "race to the bottom" is seen in particular for capital taxation, threatening the financing of public goods and services (e.g. Wildasin and Wilson, 2004). According to this view, such competition holds the risk of erosion of the welfare state and of desirable regulations at the national level, such as for working conditions, environmental protection or the framework for competition (Sinn, 1997).

We provide an overview of the development of past and present research and findings on the distributional aspects of direct payments. We use the theory of federal fiscal relations to identify the policy agendas that should be handled at the EU level, at national levels, and at sub-national levels. We analyse how measures of concentration are affected if the criteria of direct payments are changed

## 2. Spending Responsibilities for the EU

### 2.1 Regulative policy areas for the functioning of the internal market

Several authors (e.g. Breuss and Eller, 2004; Caesar, 2004; Alesina, Angeloni and Schuknecht, 2005; Feld, 2005) have made suggestions on a favourable distribution of responsibilities in the EU. The consensus is that policy areas with significant economies of scale or

spill-overs of benefits at the European level and homogeneous preferences should be the core competencies of the Community. EU competencies are widely recognised in the areas of (i) protection of basic freedoms, (ii) preservation of a competitive framework, including control of member states' subsidies policy, and (iii) common foreign policy.

A sharing of responsibilities between the Community and the member states appears to make sense. As far as competition policy is concerned, this proposition is not without problems since views about the role of competition and the competitive framework differ to a considerable extent. Hence, homogeneous preferences can be assumed only subject to strong qualifications. Besides, not all problems of competition policy touch upon the smooth functioning of the Internal Market. In general, these policy areas mainly require intervention of a regulative and co-ordinating kind to secure the functioning of the Single Market, with only minor budgetary implications.

*2.2 Policy areas with significant differences in preferences between countries*

In a number of policy areas, an independent EU responsibility is contested due to significant differences in preferences between countries which may limit or even outweigh the possible benefits from exploiting increasing returns to scale and an internalisation of regional external effects. Differences in preferences arise mainly from the welfare differential between the national economies and from differing norms and value systems. In particular, this concerns the policy areas of (i) foreign and security policy, (ii) enlargement and development aid policy, (iii) international and global (as opposed to regional and local) environmental policy, (iv) trans-European networks for energy and transport, (v) research policy, and (vi) education policy.

Strongly heterogeneous preferences also imply that the Union should hardly become active in the area of social policy. First, there are large differences between individual member states' level of welfare, with the consequence of diverging perceptions about the appropriate policy in favour of social equality; second, attitudes towards a policy of redistribution are shaped by socio-cultural factors and differ markedly between the member states.

Nevertheless, social policy programmes may be reasonable if labour mobility across countries is high (e.g. Wildasin, 1998). In that case, the theory of fiscal federalism recommends redistributive policy to be centralised (Oates, 1972). Thus, a responsibility for setting minimum standards could be attributed to the EU in order to prevent a "race to the bottom" or "social dumping". Admittedly, there is no convincing empirical evidence in the literature for a race to the bottom actually taking place between welfare states (e.g. Hines, 2006). One should also bear in mind that setting high minimum standards would take away a competitive advantage from the less affluent member states.

*2.3 The special case of the Common Agricultural Policy*

The expenditure block still dominating the EU budget is the Common Agricultural Policy (CAP). In this regard, a distinction has to be made between market intervention and direct subsidies (first pillar) on the one hand, claiming a total of around € 44.5 billion (together with fishery policy), and policies for rural development (second pillar) on the other (some € 12.4 billion). Many economists hold the view that the arguments in favour of a policy of agricultural subsidies at the European level are not very convincing (e.g. Hoeller, Louppe, and Vergriete, 1996; Feld, 2005). However, in this regard a more nuanced look at the problem is deemed appropriate.

It is not certain that EU-wide agricultural market stability can be attained if internal prices levels are close to world prices. Given the income levels in the EU the possibility to buy agricultural products on world markets, the case for security of supply is rather weak. Therefore, the transition from market intervention to direct subsidies is to be welcomed from the economics perspective. However, the "first pillar" of the CAP is to serve primarily objectives related to the personal income distribution for which an EU responsibility can be challenged under current circumstances. Moreover, the conflict regularly arising in budget negotiations between member states with a relatively important agricultural sector versus states with a less important agricultural sector indicates that national preferences cannot be assumed to be homogeneous across the EU. Neither can EU-wide spill-over effects or returns to scale of any significant degree be identified. Thus, from a fiscal federalism perspective, a good deal could be said in favour of a re-nationalisation of the "first pillar" of the CAP. In that case, agricultural subsidies would have to be subjected to strict control in order to prevent member states from outbidding each other with higher subsidies (Schweickert, 2005).

More favourable is the judgement for the programmes in support of rural development. Although economic arguments will hardly be found for permanent subsidies to a shrinking agricultural sector, temporary measures to facilitate structural adjustment may be envisaged in the context of a regional development strategy (Sapir et al., 2003), although such measures, like those of social and employment policy, are rather considered appropriate at the national level. Nevertheless, a readjustment towards an ecologically-minded agricultural policy may justify an establishment of EU responsibilities. While the direct benefits of an environmentally responsible agricultural policy are predominantly local, such policy may still create positive effects at the international level which may not be fully recognised in national decisions.

## 3. Scenarios on direct payments and their distributional consequences

During the last 15 years direct payments have become the most important fiscal policy tool in the EU. In 2006, direct payments amounted to EUR 33.1 billion, which was equivalent to 31 per cent of the EU's total operating expenditure (EUR 106.58 billion). Decoupled direct payments (DPPs) subdivide into Single Farm Payments (SFPs, EUR 14.2 billion), and Single Area Payments (SAPs, EUR 1.7 billion). Output linked direct payments are granted for plants (EUR 12 billion) and livestock products (EUR 5.7 billion). According to the Economic Accounts of Agriculture, the share of direct payments in the factor income of agriculture amounts to 26.5 percent in 2006.

In 2000, about 953,000 holdings (21 percent) received more than EUR 5,000, which is equivalent to EUR 15.5 billion or 82 percent of all direct payments. Until 2006 the distribution has become more unequal: 1.3 million farms (18 percent of the 7.3 million recipients) got EUR 27.9 billion (84 per cent of direct payments).

A more sophisticated measure of (in)equality is the concentration ratio (CR). It has the same interpretation as the Gini-Coefficient, but it is calculated in a slightly different way. High levels of CR (close to 1) indicate that a small number of recipients get a large amount of payments while a low CR indicates a more equal distribution. The formal model is presented in the appendix. We use the methodology to analyse the consequences of policy changes on the concentration of direct payments if a scenario similar to the one proposed by the Commission of the EU in the "health check reform" is applied.

We assume that this proposal will not be endorsed by the Council of Ministers in November 2008, but the proposal to reduce transfers for those holdings that get more than 5,000 € will be on the roadmap of future reforms of the CAP. Another proposal we look at is the abandonment of payments below **500 €/farm**. Low payments entail relatively high transaction

costs and therefore it would make economic sense to define a minimum payment, as the Commission has suggested (250 €/farm). Almost 50% of the recipients (3.4 million from 7.3 million) obtained less than 500 € of direct payments in 2006. Compensating them with a one-time payment may allow significant future savings of administrative costs.

In Table 1 the results of various scenarios of alternative implementation schemes of the direct payments are provided. The scenarios are applied to statistics available for 2006. This implies that changes in the distribution are not accounted for. However, given that the distribution of land is rather similar to the distribution of direct payments, one would not expect that any change from the historic model the regional model would have major implications on the distribution of direct payments at member state level.

The results in Table 1 show that the distribution of direct payments (both decoupled ones and non-decoupled ones) is very heterogeneous among Member States. In several countries like Malta, Slovakia, Czech Republic, Estonia, Italy, Hungary and Portugal it is a small number of recipients that get a relatively large share of direct payments. In countries like Luxembourg or Slovenia, the payments are relatively equally distributed.

If only payments above 500 € would have been paid in 2006, this would have had significant effects on the distribution of direct payments, in particular in the Member States that entered the EU in 2004: the concentration ratio would significantly increase to a level of 90 from a level that is close to that of EU-15 Member States. While such a scenario has significant consequences, the distributive effects of a more intense modulation or a progressive modulation are relatively minor at the aggregate level. But in some countries (Belgium, Austria, Sweden) the effects would be significant.

Table 1: Concentration ratios of all direct payments (ADP) and decoupled direct payments (DDP) in 2006 and for alternative scenarios

| | observed direct payments in 2006 | | Scenarios | | | | | | | |
| | | | >500 €/farm | | modulation 13% | | progressive modulation | | combination of all | |
| | ADP | DDP | ADP | DDP | ADP | DDP | ADP | DDP | ADP | DDP |
|---|---|---|---|---|---|---|---|---|---|---|
| BE | 57.0 | 57.7 | 57.2 | 58.1 | 55.8 | 56.4 | 55.7 | 56.4 | 56.0 | 56.8 |
| CZ | 85.6 | 85.6 | 85.9 | 85.9 | 85.0 | 85.0 | 84.7 | 84.7 | 85.0 | 85.0 |
| DK | 69.3 | 68.7 | 69.6 | 69.0 | 68.4 | 67.8 | 68.3 | 67.7 | 68.6 | 68.0 |
| DE | 70.7 | 70.5 | 71.0 | 70.8 | 69.7 | 69.5 | 69.1 | 68.9 | 69.4 | 69.2 |
| EE | 83.7 | 83.6 | 89.2 | 89.1 | 82.8 | 82.7 | 82.8 | 82.7 | 88.6 | 88.5 |
| GR | 66.7 | - | 71.0 | - | 66.0 | - | 66.0 | - | 70.5 | - |
| ES | 75.6 | - | 76.7 | - | 74.5 | - | 74.4 | - | 75.7 | - |
| FR | 57.3 | - | 57.4 | - | 56.5 | - | 56.4 | - | 56.5 | - |
| IE | 55.1 | 54.5 | 55.3 | 54.6 | 53.8 | 53.1 | 53.8 | 53.1 | 53.9 | 53.3 |
| IT | 81.5 | 86.2 | 84.8 | 87.8 | 80.6 | 85.7 | 80.5 | 85.7 | 84.1 | 87.4 |
| CY | 71.0 | 70.8 | 91.8 | 91.8 | 70.9 | 70.7 | 70.9 | 70.7 | 91.8 | 91.7 |
| LV | 71.3 | 71.3 | 91.7 | 91.7 | 70.8 | 70.8 | 70.8 | 70.8 | 91.5 | 91.5 |
| LT | 71.0 | 70.6 | 92.3 | 92.2 | 70.4 | 70.0 | 70.4 | 70.0 | 92.1 | 92.0 |
| LU | 46.3 | 46.1 | 46.4 | 46.1 | 45.5 | 45.3 | 45.5 | 45.3 | 45.6 | 45.3 |
| HU | 84.5 | 84.5 | 88.9 | 88.9 | 83.5 | 83.5 | 83.3 | 83.3 | 88.0 | 88.0 |
| MT | 94.1 | - | 97.0 | - | 94.0 | - | 94.0 | - | 97.0 | - |
| NL | 71.2 | - | 71.9 | - | 70.3 | - | 70.3 | - | 71.0 | - |
| AT | 56.7 | 63.2 | 57.4 | 64.7 | 55.4 | 61.9 | 55.4 | 61.9 | 56.2 | 63.5 |
| PL | 58.0 | 58.0 | 82.4 | 82.4 | 57.6 | 57.6 | 57.6 | 57.6 | 82.3 | 82.3 |
| PT | 85.5 | 88.7 | 88.8 | 91.8 | 84.5 | 87.9 | 84.4 | 87.9 | 88.1 | 91.3 |
| SI | 54.7 | - | 77.1 | - | 54.7 | - | 54.7 | - | 77.1 | - |
| SK | 90.9 | 90.9 | 91.5 | 91.5 | 90.6 | 90.6 | 90.5 | 90.5 | 91.1 | 91.1 |
| FI | 50.0 | - | 50.2 | - | 48.6 | - | 48.6 | - | 48.8 | - |
| SE | 68.4 | 67.3 | 68.9 | 67.9 | 67.3 | 66.1 | 67.2 | 66.0 | 67.8 | 66.7 |
| UK | 71.6 | 71.3 | 71.8 | 71.6 | 71.0 | 70.7 | 70.6 | 70.4 | 70.9 | 70.6 |
| EU10 | 77.6 | 78.0 | 90.4 | 90.6 | 76.2 | 76.6 | 76.0 | 76.4 | 89.7 | 89.9 |
| EU15 | 78.5 | 89.7 | 79.5 | 90.5 | 77.6 | 89.3 | 77.5 | 89.2 | 78.5 | 90.2 |
| EU25 | 82.5 | 90.4 | 83.9 | 91.9 | 81.7 | 89.9 | 81.6 | 89.8 | 83.1 | 91.5 |

Note: The figures are related to the total of direct payments (including both decoupled and not decoupled payments) and decoupled direct payments, respectively. In the 'scenario >500 €/farm' payments below 500 € per holding will be no longer paid; in the "scenario modulation 13%" amounts above 5,000 €/farm are reduced by 13%; in the 'scenario progressive modulation' payments between 5,000 €/farm and 99,999 €/farm per holding are reduced by 13%, payments between 100,000 €/farm and 199.999 €/farm are reduced by 16%, payments between 200,000 €/farm and 299,999 €/farm are reduced by 19%, higher payments are reduced by 22%.

## 4. Discussion and Conclusions

The EU budget is interpreted as the result of compromises negotiated among national governments that act in their interest of being re-elected and therefore have to mind the specific concerns of influential interest groups. Such powerful lobbies may block progress towards closer integration, if they fear disadvantages from further market liberalisation in Europe or are uncertain about their market prospects. The inclusion of income-maintenance

elements into the EU budget, which is criticised from a fiscal federalism perspective, may serve the purpose of compensating potential losers of increasing market integration in the member states (Bhagwati and Srinivasan, 1969). Thus, a transfer of agricultural policy to the European level in the early 1960s is seen in political economy terms as a concession to the powerful French farmers' lobby in order to weaken resistance against market opening.

The centralisation of agricultural policy at the European level may be criticised from a narrow economics perspective, but may also be taken as a political precondition for progress in integration. This also explains why countries like Austria or Germany, which on balance can expect additional benefits from further market liberalisation, are ready in principle to accept being a net contributor to the system.

Since the mid-1990s, the EU is steering the CAP towards reform with the aim of price liberalisation while strengthening incentives for more environmentally friendly forms of agricultural production. It shifts back the emphasis towards allocative aspects of agricultural policy. From the theoretical point of view it is not entirely clear whether status-quo interests have a greater influence at the national or the European level. Whether or not these reforms could have been achieved in a regime of exclusively national responsibilities remains an open question.

Given the results of our simulations it is evident that changing the rules on the allocation of direct payments as the Commission suggested in the 'health check' process will affect the distribution. The interesting finding is that changes of the distribution within member states are happening 'relatively' easy while the relative ranking of concentration between member states is relatively stable. Only in a scenario of minimum payments of 500 € per holding and year the ranking of concentration between member states changes significantly.

Currently CAP payments are hardly motivated by distributive considerations alone. Currently they are justified to ease the process of integration for the agricultural community of Member States that have recently entered the EU. Another purpose is to facilitate structural adjustment of farms that are exposed to freer market conditions after decades of CAP interventions. Moreover, as direct payments are only granted if standards of good agricultural and environmental condition ("cross compliance") are met, such payments have an environmental facet as well. The current debate about strengthened modulation or abandoning the historical model provides possibilities to improve the distribution of direct payments. At the same time, taking into account the principle of "fiscal equivalence" (Olson, 1969) could give guidance for the question which of the issues currently addressed by direct payments should be addressed at EU level or at the level of Member States. Income goals and environmental objectives are brought forward to justify direct payments financed by the CAP budget. From a 'fiscal equivalence' perspective both objectives should be handled by Member States, and financed as well.

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APPENDIX

**Lorenz Curve Estimation and Concentration Ratio Computation**

The data of Eurostat (2008) provides ten classes of farms (x) and direct payments received (y), of which cumulative proportions are calculated. We use the functional form proposed by Rasche et al. (1980) to estimate Lorenz curves. The explicit functional form is as follows:

$$(1) \qquad y = \left[1 - (1-x)^{\alpha}\right]^{1/\beta} \quad where\ 0 < \alpha \leq 1,\ 0 < \beta \leq 1;$$

The computation of the Concentration Ratio (CR) is based on the functional form specified in equation (1). It is defined:

$$(2) \qquad CR = 1.0 - 2.0 \int_0^1 \left[1 - (1-x)^{\alpha}\right]^{1/\beta} dx,$$

substituting variables

$$(3) \qquad u = 1 - (1-x)^{\alpha},$$

this is equal to:

$$(4) \qquad \begin{aligned} CR &= 1.0 - 2.0 \left(\frac{1}{\alpha}\right) \int_0^1 (1-u)^{1/\beta}\, u^{1/\alpha-1}\, du \\ &= 1.0 - \frac{2.0}{\alpha} B(1/\alpha, 1/\beta + 1) \end{aligned},$$

where B represents the beta distribution. It ranges between zero (absolute equality) and one (absolute inequality).