Impacts of the flat rates and digressive schemes on the distribution of Direct Payments in the EU

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Abstract

The Mid-Term Review and the Health Check reforms of the EU's Common Agricultural Policy (CAP) include numerous options for national implementation of the Single Payment Scheme. After the far-reaching decoupling of Direct Payments, a further reform of the Common Agricultural Policy is necessary with respect to the financial guidelines to be established for the period after 2013. Referring to Germany, the principles of the hybrid and regional models and their effects on the distribution of Direct Payments are shown. With regard to future CAP, the impacts of alternative payment options are analysed based on farm individual FADN data of EU-27. Options of digressive premium schemes, including capping with regard to labour input and regionalised or EU-wide flat rates are analysed.

Keywords: CAP, Direct Payments, Decoupling, Modulation, FADN
JEL classification: Q12, Q18

1. INTRODUCTION

Direct Payments (DP) were introduced by the McSharry reform of the Common Agricultural Policy (CAP) in 1992. At first they were targeted to compensate for income losses due to reduced price support in the arable crops and beef sector. Further, Direct Payment schemes were extended to other sectors and decoupled in the Mid-term review and the Health Check via the Single Payment Scheme (SPS).

The Direct Payment budget is restricted by the financial guidelines until 2013. Negotiations aiming at the preparation of CAP after 2013 are going on. A communication of the EU Commission (2010a) on the future CAP was submitted in November 2010. National and scientific positions range from the maintenance or slight modification of existing schemes, simplification, further harmonisation of Direct Payment levels between Member States (MS), and partial or full transformation in favour of Pillar-II (Dutch Ministry of Agriculture, 2008; Bureau and Mahé, 2008; Heißenhuber et al., 2008, Zahrnt, 2008, 2009). A far-reaching proposal has been worked out by an expert group involved in a study for the Committee on Agriculture and Rural Development of the European Parliament, with a transitory payment scheme until 2020, and a general reorientation towards public goods afterwards (Bureau et al., 2010).

Referring to proposals of future CAP, the paper aims to analyse modifications of the Direct Payment scheme with regard to harmonisation within and between Member States and between farm sizes. The following options are considered: Flat rates referring to eligible areas, premium digression referring to Direct Payment level and labour input of farms as well as global budget cuts. The analysis is based on micro-level simulations using the EU Farm Accounting Data Network (FADN) as a data base.

The paper is structured as follows: In Chapter 2 the method, data and scenario assumptions as well as the distribution of Direct Payments are described. In Chapter 3 impacts of different decoupling schemes are analysed. The German Regional Model is taken as an example of transforming historic entitlements into regionalised ones. Then, impacts of above mentioned Direct Payment options are shown at Member State level, EU-15 and the new Member States. The paper closes with some recommendations.

2. MODELLING APPROACH, DATA AND SCENARIOS

The analysis of alternative Direct Payment options goes back to a study for the Committee on Agriculture and Rural Development of the European Parliament (Bureau et al., 2010) proposing a two-step procedure: a) progressive reduction of Pillar-I until 2020, b) increasing budget for Pillar-II, i.e., public money for the provision of public goods. Based on the authors' contribution, the modelling approach has been extended to deal with options included in the communication of the Commission (2010a) for a further reform of CAP after 2013. Option 2 of this proposal – referring to Direct Payments - includes the following measures under the guideline of a fairer distribution between the Member States:

- a base payment serving as income support
- a compulsory complementary aid with regard to environmental measures, partly compensating for additional costs
- complementary payments to balance more specially natural restrictions
- an optional coupled support component for special sectors and regions
- introduction of a new regulation for small farms
- capping of the basic rate, while also considering the contribution of large farms to rural employment.

These measures are not concrete enough for quantitative modelling. A referring paper published together with the communication of the Commission on CAP 2103 gives no signals on budget cuts (EU-Commission 2010b), although it is not reasonable to expect that the CAP budget remains unchanged.

Complementary to theoretical or conceptual papers (i.e., Wissenschaftlicher Beirat für Agrarpolitik, 2010, Bureau and Mahé 2008, Dutch Ministry, 2008) we try to contribute to this discussion by quantitative assessments of policy options based on simulations using EU-FADN data.

The first item of the proposal of the EU Commission can be interpreted as a base payment, i.e. defined as an EU-wide flat rate below present levels (cf. i.e. Heißenhuber et al., 2008). The second item goes in the direction of Pillar-II measures, where budget might be derived by the difference of the existing and the base payments. It's an open question if this new Pillar-II is complementary to existing Pillar-II programs with national co-financing and multi-annual contracts – and last but not least, if the income effects of these subsidies would be within the boundary set by WTO (Swinbank and Tranter 2005). The latter items can be interpreted as digressive payments referring to premium volume of farms and with regard to labour input. An improvement of the relative position of small farms could be reached by flat rates, i.e. per hectare (ha) at the Member State level or EU-wide, and a franchise excluding low Direct Payment levels from digression. An alternative would be the use of the existing Modulation scheme combined with ceilings referring to labour input. Capping measures were proposed several times by the EU Commission in previous reforms (Kleinhanss and

Manegold, 1998), but were never established due to strong opposition, especially from the German government. However, such measures do exist in the US Farm Bill (Thompson, 2010).

The harmonisation of Direct Payments between regions and Member States could be realised via regionalised flat rates as in Germany (BMELV, 2006) and England. In the analysis we assume unified flat rates at the Member State or EU-wide levels.[2] This could be combined with premium digression per farm, depending on premium level and labour input. We assume a doubling of parameters of the existing Modulation scheme (20 % > 5 T€[3] + 8 % > 300 T€), completed by capping referring to labour input (<= 15 T€ of DP per Agricultural Working Unit (AWU) for Direct Payments levels of farms > 50 T€).[4] The latter should be defined to reference levels of AWU in the past, i.e., the year before policy decision.

A last option, not considered in the communication of the Commission, is a general reduction of the Pillar-I budget. Cuts of CAP budget were mentioned in a so-called non-paper of the Commission in 2009. Alternatively we assume a 20 % reduction of the budget for Direct Payments. Budget cuts seem to be reasonable with regard to budget needs for future global policy targets (i.e., environment, biodiversity, etc). Scenarios with constant budget are defined as *Sc_Bcons*, those with budget cuts as *Sc_B-20%*.

2.1 Simulation approach and data

Based on 2007 FADN data, simulations[5] were realised referring to the year 2013. A comparative static simulation model has been developed to assess impacts of different Direct Payment schemes on the premium level and income. In a first step, gross premium levels (excluding compulsory and voluntary Modulation) are calculated for 2007. Then, a projection of premiums for 2013 is made, including the regional implementation of decoupling in Germany and England, as well as the upgrading of premium levels in the new Member States. Target year for the analysis is 2013, assuming a full phasing-in of Direct Payments also in Bulgaria and Romania. Premium totals per Member State derived from EU-FADN are calibrated to national premium budgets as well as with regard to Used Agricultural Areas (UAA) represented by FADN.[6]

Partial impacts of above-mentioned scenarios are derived referring to projected (Gross) Direct Payments under national implementation of decoupling (excluding Modulation). The results are weighted with farm individual weighting factors and aggregated to sector accounts.

The premium budget of EU-27 for Pillar-I amounts to 46 billion € in 2013.[7] Flat rates per ha of UAA derived from budget and statistical data vary between 83 €/ha in Latvia and 575 €/ha in Greece. An EU-wide uniform flat rate would amount to 266.3 €/ha.

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[2] Regional or EU-uniform flat rates per hectare are derived from the premium budget of EU member states or EU-27 together.

[3] T = thousand

[4] Parameters are determined by the author; variations can easily be introduced in the simulation model.

[5] The data base includes roughly 81 T farms, representing roughly 5.4 million farms in the EU-27; see http://ec.europa.eu/agriculture/rica/ index_en.cfm.

[6] Ongoing implementation of the Health Check decisions and remaining steps of the reforms of the Common market regimes for sugar, tobacco, olive oil, cotton, fruit and vegetables are implicitly considered by calibration.

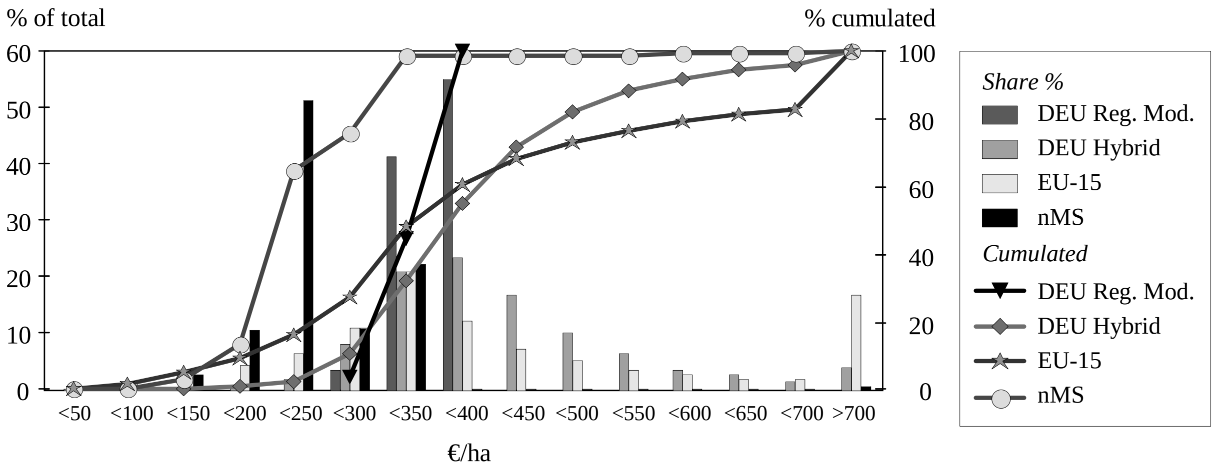
[7] Direct Payment plafond for Bulgaria and Romania in 2016 is assumed to be implemented in 2013.

2.2 Distribution of Direct Payments

Before presenting the results of scenario analysis, we give a brief overview on distribution of Direct Payments. Usually, Lorenz curves or Gini coefficients are used for distributional issues (Butault and Lerouvillois, 1999). Based on own experiences, the change of these indicators is not specific enough to show changes induced by underlying scenarios; therefore we apply distributional charts.

By the Single Payment Scheme (SPS) or the Single Area Payment Scheme (SAPS) Direct Payments are de-facto transformed into area (ha) based entitlements; the same would hold for flat rates per Member State or EU-wide. Therefore the distribution of Direct Payment levels per ha is of interest (Figure 1). Distribution of historical or hybrid models are represented by R-EU-15 (EU-15 excl. Germany) and the hypothetical German (DEU) hybrid model. The distributions are quite similar, while slightly skewed to the left in R-EU-15 and skewed towards the right in Germany. Applying mainly SAPS in the new Member States, half of Direct Payments received are between 250 and 300 €/ha, another 12 % are 300 and 350 €/ha and the remaining in groups with low entitlement levels. With the regional model in Germany, the distribution becomes very tight with 40 and 55 % for entitlement classes 300 and 400 €/ha.

Figure 1. Distribution of DP/ha



Source: EU-FADN-DG AGRI L-3; own calculation.

With regard to the communication of the EU-Commission, the distribution of Direct Payments related to labour input is of interest. Referring to the capping scheme defined in the scenarios, only farms > 50 T€ and Direct Payments / AWU > 15 T€ would be affected. In total, 28 % of Direct Payment volume would be affected by this measure (see Chapter 3.3).

3. EFFECTS OF FLAT RATES AND DIGRESSIVE SCHEMES

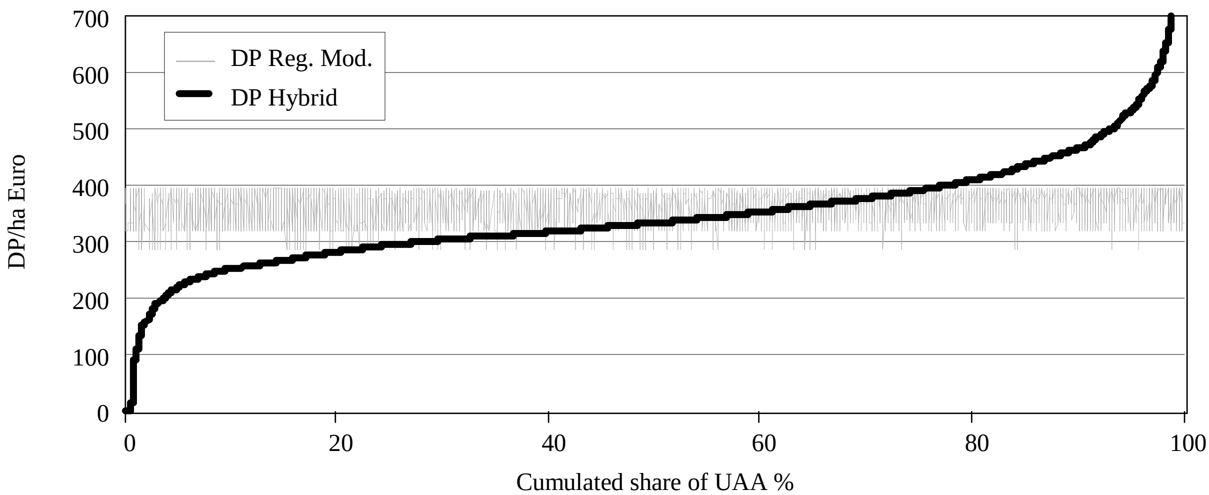
To get an idea of the distribution effects of regional flat rates, changes of premiums are shown for the implementation of the regional model in Germany in comparison to a projection of the hybrid model based on 2007 data. In a next step we discuss combined effects of unified flat rates per Member States and EU-wide with premia digression and global budget cuts.

3.1. The national implementation of SPS in Germany

In Germany, the SPS was implemented in 2005 with an almost full decoupling of Direct Payments. In a first step, a regional adjustment of premium volume was carried out between the Laender, changing the former Laender budgets by -5 % to +14 %. Regionalised area-related entitlement levels are combined with farm individual top-ups being based on the main part of the livestock premia and on the total of milk and sugar premia. The level of entitlements remained constant until 2009 (except the dynamic adaptation due to the upgrading of milk and sugar premia). From 2010, a progressive adaptation of the entitlement levels occurs up to the full harmonisation in 2013.

Referring to a hypothetical static hybrid model in 2013, the premium level would be less than 200 €/ha for 5 % of UAA (Salhofer et al. 2009). For about 75 % of UAA it varies between 200 and 400 €/ha, and for about 5 % of UAA it is more than 500 €/ha (Figure 2). The latter is true in particular for farms with intensive bull fattening and milk production. After full conversion to regional flat rates, the entitlement levels vary in the scope of administratively settled range. About one quarter of farms can expect considerably higher premiums, while in one fifth of farms considerable premium losses are to be expected. The regional implementation leads to considerable redistributions of Direct Payments to the disadvantage of intensive beef fattening and dairy farms. Also, a moderate regional redistribution occurs in favour of extensive and grassland-based cattle farms, as well as less favoured regions.

Figure 2. Distribution of entitlement levels related to UAA – hybrid versus regional flat rates (2013) Germany



Source: EU-FADN-DG AGRI L-3; own calculation.

3.2. Impacts of Direct Payment options with regard to CAP after 2013

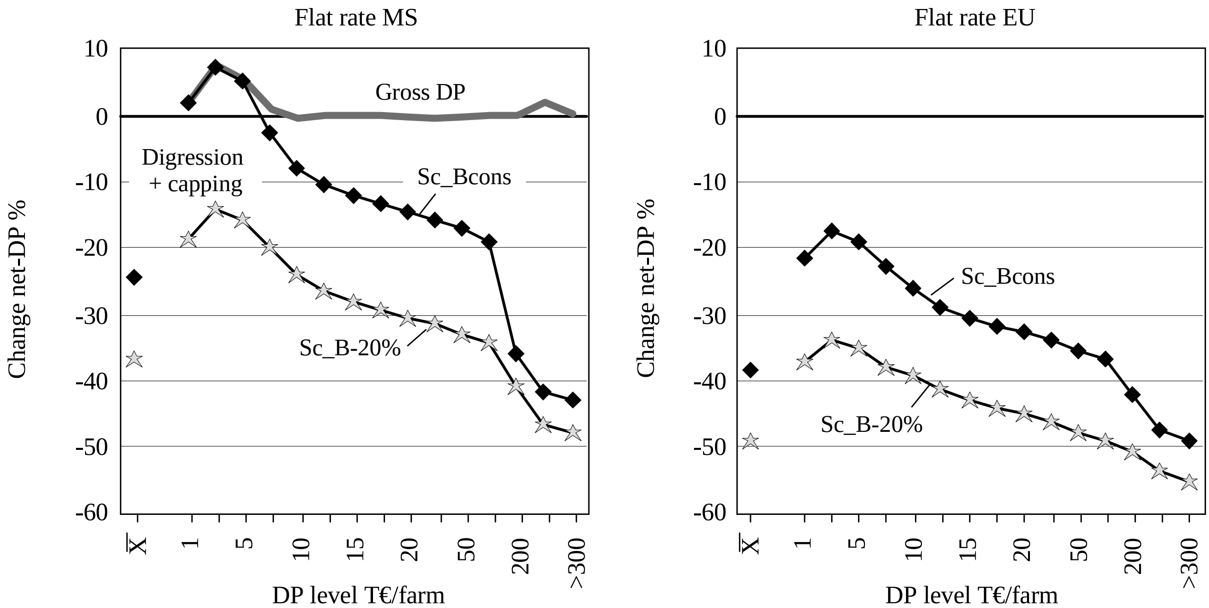
To indicate the combined effects of premium rearrangements, digression and capping with reference to manpower, the premium changes are shown in the following graphs as a function of premium volumes per farm (referring to national implementation).

Impacts in Germany

In Germany, redistributions were mainly realised during the national implementation of the regional model mentioned earlier. Distributions induced by a **country wide flat rate (_MS)** are rather low, shown in the top line of Figure 3. Farms with premium levels up to 5 T€ will have a slight increase of DP, because their location in regions with weak natural conditions are favoured by the harmonisation of entitlements. On the other hand, they are exempted from digression due to the franchise. Premium digression would impose a slightly progressive reduction of Direct Payments up to 22 %. Capping of Direct Payments with regard to labour use would impose premium reductions up to 43 % in farms with Direct Payment levels beyond 100 T€. Although defined for Direct Payments > 50 T€, farms with less than 100 T€ are less affected due to their labour input of 2 AWU on average. Larger farms in Germany are more specialised in arable cropping with low labour input. Therefore Direct Payments are much higher than the underlying ceiling of 15 T€/AWU. Due to expected large reductions of Direct Payments there is a strong opposition to this measure, especially by representatives of the new Laender.

A global reduction of Pillar-I budget by 20 % (Sc_B-20%) would induce even higher premium reductions. The partial effect in small farms is relatively higher than in largest farms because the capping effect would be less under these lower Direct Payment levels. The maximum reduction will be 47% for the largest farms.

Figure 3. Impacts of DP options - Germany



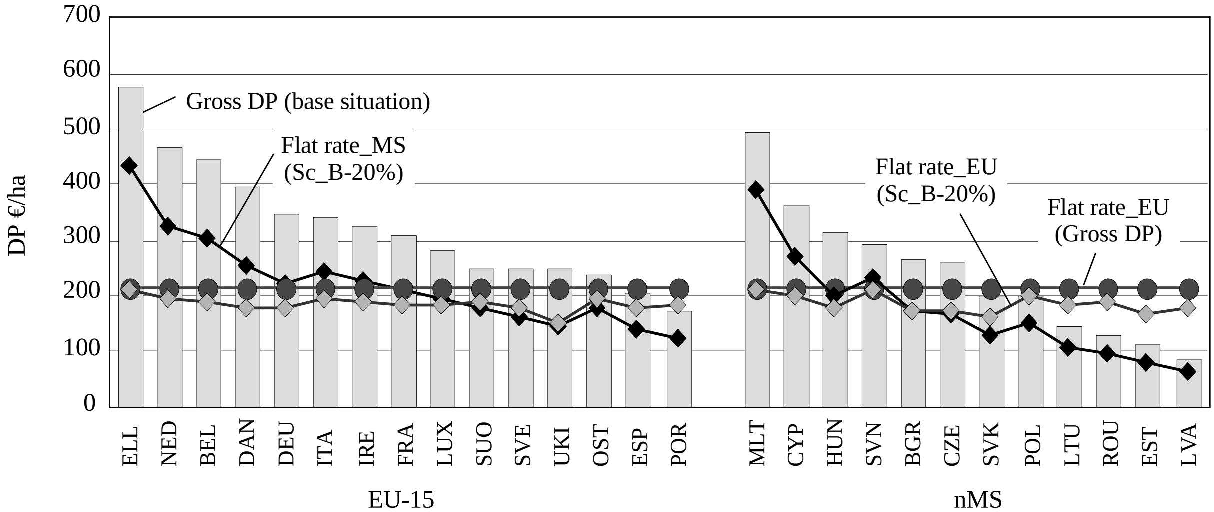
Source: EU-FADN-DG AGRI L-3; own calculation.

An **EU-wide flat rate** would induce significant reductions of Direct Payment levels in Germany, because the Direct Payment level, with 345 €/ha, is significantly above the EU average of 266 €/ha. The reduction of Direct Payment level by 23 % would induce almost similar effects as a global budget cut mentioned before, with changes of -20 % in small farms and of -48 % in largest farms. Average reduction would be 38%; it would rise to almost half (and 55 % for largest farms) by an additional global budget cut.

EU wide effects of Direct Payment options

Effects of Direct Payment options on net-DP at Member States levels are shown in Figure 4. Member States are sorted by Direct Payment levels and aggregated into EU-15 and new Member States. Gross direct Payment levels show a broad variation between 570 (Greece) and 170 €/ha (Portugal) in EU-15 and of 490 (Malta) and 83 €/ha (Latvia) in the new Member States. Depending on farm size, under conditions of flat rates per Member State, the net Direct Payments are reduced up to 30 % by a 20 % global budget cut and digression. Germany, Denmark and the United Kingdom would be particularly affected. EU-wide flat rates would induce considerable redistribution effects between Member States. In the EU-15, most Member States would have considerable Direct Payment losses, while about half of the new Member States would gain.

Figure 4. Changes of DP by Member States - Sc_B-20%



Source: EU-FADN-DG AGRI L-3; own calculation.

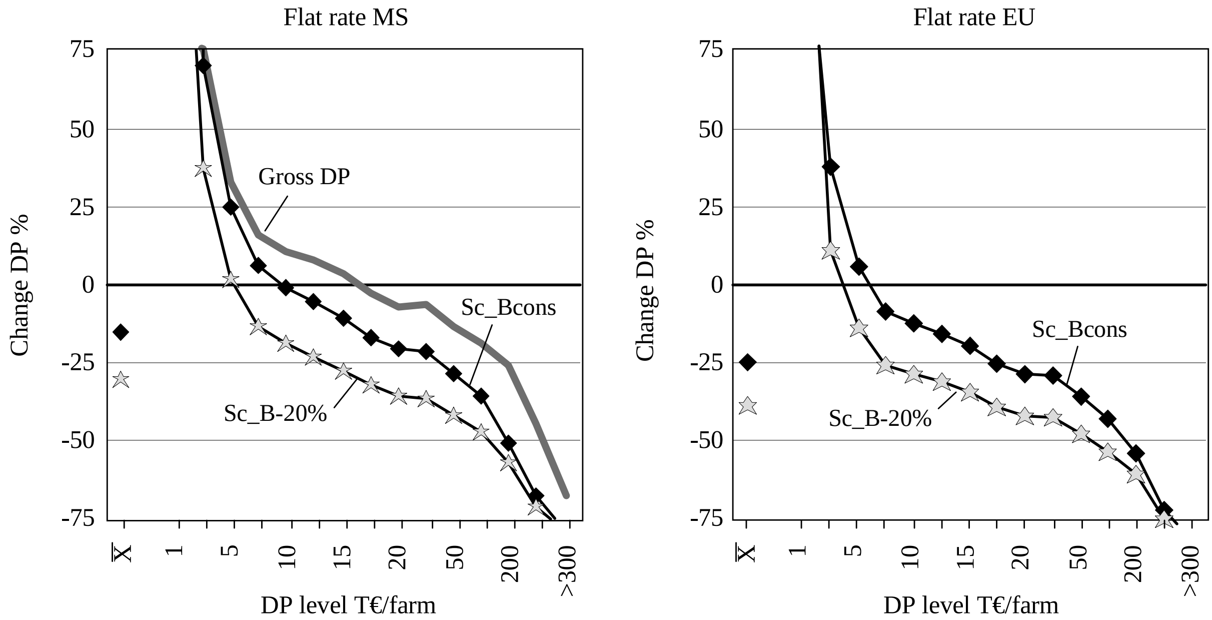
Aggregated effects for the rest of EU-15, mainly applying historic or hybrid schemes[8] in the reference, are shown in Figure 5. As premium reductions/capping are progressive with Direct Payment levels of farms, results are aggregated for farms by different payment classes. Impacts of **flat rates per Member States** are similar to Germany due to the implementation of the regional model (see Chapter 3.1). Farms with low premium levels will gain a lot. Net payments of farms with 20 to 200 T€ of Direct Payments will progressively decrease up to

[8] Impacts of Direct Payment options in the UK are similar to Germany and are not shown here.

25%, while larger farms will lose up to two-thirds. Digression and capping would include a further reduction of net-payments.

EU wide flat rates will have a further negative levelling effect because Direct Payment level of two-thirds of EU-15 Member States is above EU-27 average; the gross Direct Payment level will be reduced by 11 %. Only farms with less than 5 T€ will be on the winner side, while even farms with 10 to 50 T€ of Direct Payment will have premium losses of up to 25 %. Losses will progressively increase to more than 75 % in the largest farms.

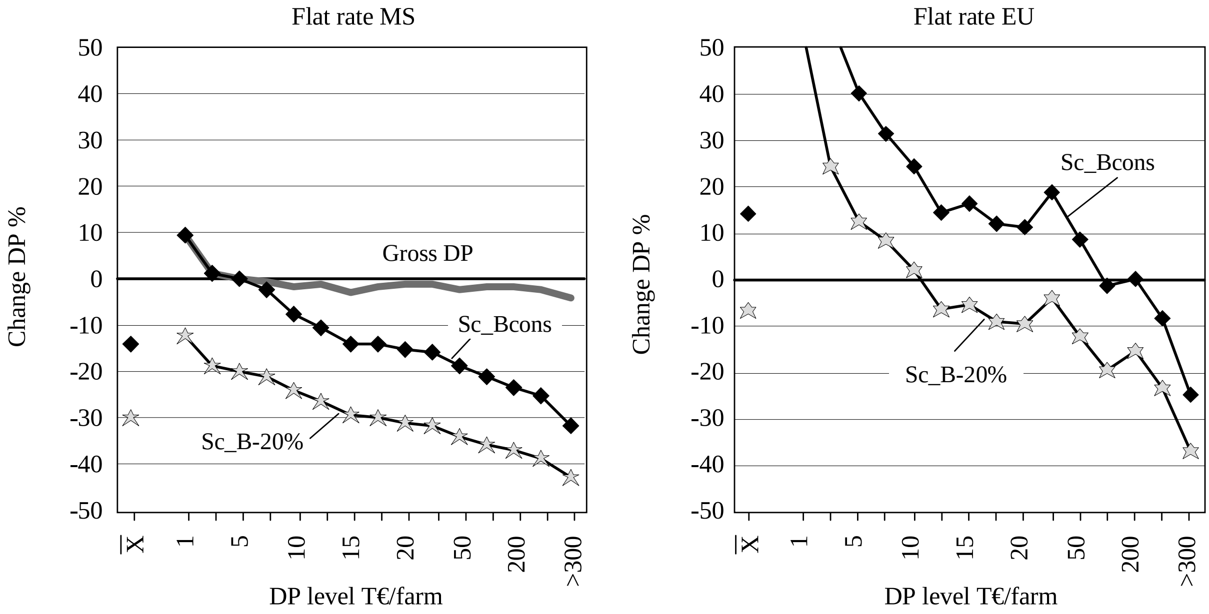
Figure 5. Effects of DP options in rest of EU-15



Source: EU-FADN-DG AGRI L-3; own calculation.

In the new Member States**,** effects of **national flat rates** are rather insignificant as most of them apply SAPS (see Figure 6). Net-payments will be progressively reduced by digression. The total harmonisation of Direct Payment-levels between Member States via **EU-wide flat rates** would be in favour of most new Member States; the gross Direct Payment-level would increase by one-third on average. Small farms will gain a lot and farms with Direct Payments of 10 to 20 T€ would get higher net-premiums. Due to digression and capping and a further budget cut of 20 %, small farms will still be on the winner side, net-payments in medium sized farms would be slightly negative, while largest farms will have losses up to one-third.

Figure 6. Effects of DP options in the nMS



Source: EU-FADN-DG AGRI L-3; own calculation.

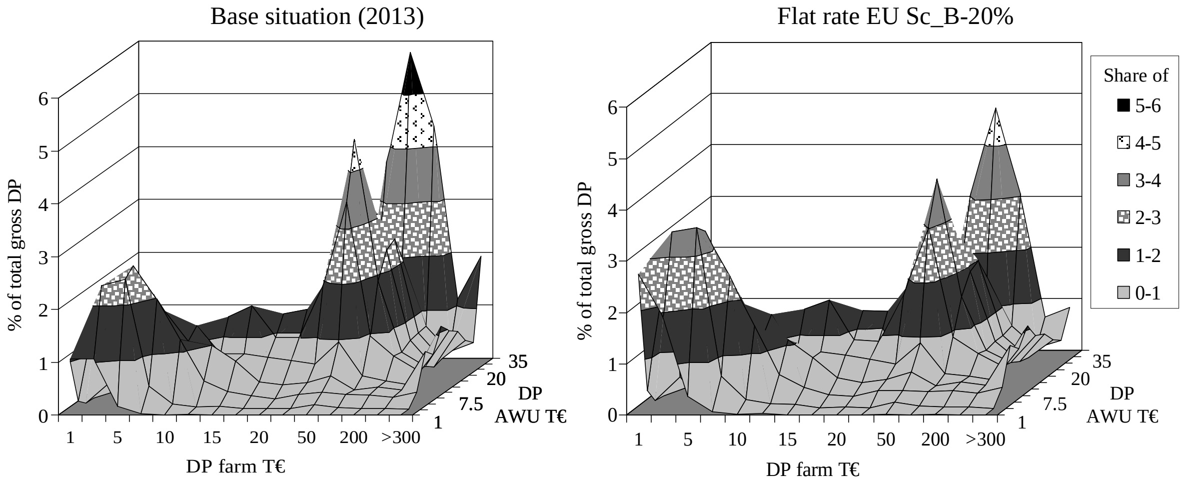
3.3. Changes of overall distribution of Direct Payments

Finally the questions arise: to which degree can the distribution of direct payments change and can a fairer distribution – as mentioned in the Commissions' communication – be reached. This will be discussed by comparing distributions of the base situation (national implementations of SPS and SAPS) and EU-wide flat rates for the whole EU-27 (see Figure 7). Referring to the base situation (left side of the figure) the distribution shows 3 peaks: one in farms with less than 5 T€ of Direct Payments and low rates referring to labour use. Another peak with around 10 to 15 T€ of Direct Payments/AWU is for farms with Direct Payment levels of 20 to 100 T€ and a further one with 30 and more T€/AWU for Direct Payment levels of > 200 T€ / farm.

Under conditions of Sc_B-20% the distribution of Direct Payments seems to be more balanced, but the 3 peaks are still there. The share of farms with 5 to 10 T€/AWU increases significantly in groups with less than 5 T€ of Direct Payments. On the other hand, the share of farms with high DP/AWU decreases in large farms. Therefore, distribution of DPs is still unbalanced, because it is mainly determined by the variation of farms size, especially land use.

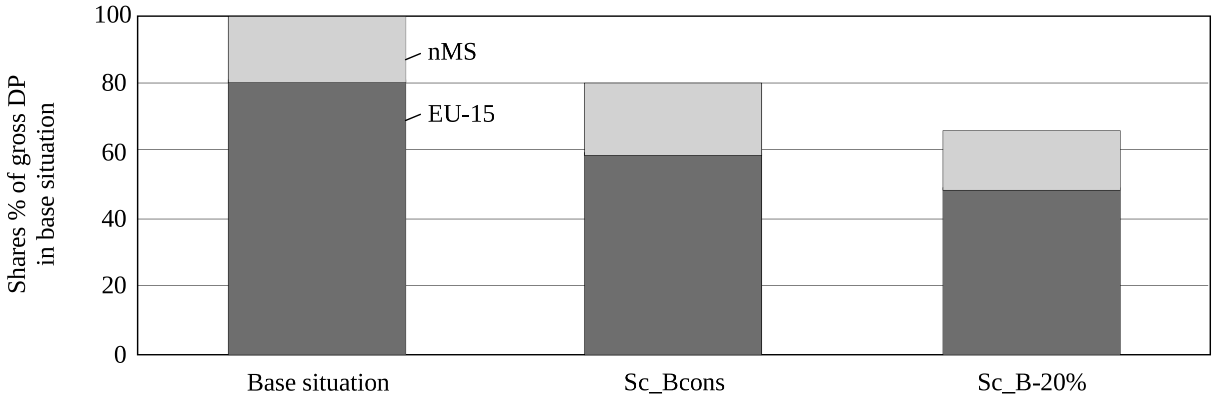
Another aspect is the distribution between old and new Member states. In 2013 80 % of gross Direct Payment volume is allocated to EU-15 and only one fifth to nMS (Figure 8). Under conditions of EU-wide flat rates and of constant budget the absolute share of Direct Payments in nMS will increase, while it decreases to less than two-thirds in EU-15. Including reduction of global budget by 20%, the total of Direct Payments is only two-thirds of the base level, while Direct Payments would be reduced by half in EU-15 and about 18 % remains for the nMS. Therefore the distribution of Direct Payments between EU-15 and nMS becomes more balanced.

Figure 7. Distribution of direct payments by farms and labour units



Source: EU-FADN-DG AGRI L-3; own calculation.

Figure 8. Distribution of DP in the scenarios under EU-wide flatrates



Source: EU-FADN-DG AGRI L-3; own calculation.

4. Conclusions

The simulation based on FADN data allows recommendations on the effects of alternative options of decoupled payment schemes. Regional flat rates by Member States lead to premium rearrangements within the Member States, especially of EU-15, mainly in favour of farms with a low premium volume in the base situation. Redistribution effects are close to the German regional model, which is to the disadvantage of intensive beef fattening and dairy farms and a moderate regional redistribution in favour of extensive and grassland-based cattle farms, as well as less favoured regions.

Uniform EU-wide flat rates induce clear re-distributions to the disadvantage of most EU-15 countries and in favour of most new Member States. Premium restrictions related to labour lead to significant reductions for farms with more than 100 T€ of Direct Payments, above all in Germany. In the new Member States, lower reductions arise from this option, due to the higher labour input of those farms.

Distribution of Direct Payments between old and new Member States as well as between small and large farms will become more harmonised by the considered policy options.

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