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**THE MID-TERM REVIEW OF THE  
COMMON AGRICULTURAL POLICY:  
ASSESSING THE EFFECTS OF THE  
COMMISSION PROPOSALS**

*P. Conforti, F. De Filippis, L. Salvatici*

December 2002

# **THE MID-TERM REVIEW OF THE COMMON AGRICULTURAL POLICY: ASSESSING THE EFFECTS OF THE COMMISSION PROPOSALS**

*Piero Conforti* - INEA, The National Institute of Agricultural Economics, Rome, Italy

*Fabrizio De Filippis* - University “Roma Tre”, Roma, Italy

*Luca Salvatici* - University of Roma “La Sapienza”, Roma, Italy

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Corresponding author: *Prof. Fabrizio De Filippis*  
*University “Roma Tre”*  
*Faculty of Economics “Federico Caffé”*  
*Via Ostiense 139, 00154 - Roma, Italy*  
*e-mail: defilipp@uniroma3.it*

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***DRAFT***

# **The Mid-Term review of the Common agricultural policy: assessing the effects of the commission proposals**

**Abstract:** *The paper is aimed at assessing the effects of the reforms proposed by the European Commission in July 2002 for the Mid Term Review (MTR) of Agenda 2000. The proposals are described in the framework of the long standing CAP reform process driven by political priorities such as the enlargement to the Central and Eastern European countries, the budget issues, and the ongoing WTO negotiations. The most important measures proposed are the full decoupling of direct payments, the modulation of direct payments, and changes in the support regimes for cereals and rice. Altogether, the proposals for the MTR appear substantial, especially considering the conservative attitude of the EU decision-making process. The Applied General Equilibrium model provided by the Global Trade Analysis Project was employed to simulate the effects of the MTR. Scenarios were designed to highlight especially the impact of the full decoupling and the modulation of direct payments. The Eastward enlargement of the EU was also introduced; in this case, direct payments were calculated starting from the financial perspectives indicated by the Commission after the Brussels Council. Results indicate that the full decoupling of direct payments is by far the most significant change proposed, whereas both the changes in the CMOs and the payment modulation appear to have a more limited impact.*

## **1. Introduction**

Following the mandate of the European Council held in Berlin in 1999, in July 2002 the European Commission tabled a mid-term review (MTR) of the EU Common Agricultural Policy (CAP) (European Commission, 2002b). This package of measures, if adopted, would imply quite a substantial reform of the agricultural policies.

In terms of market policy, still an essential element of the CAP, the Commission proposes to push further on the *decoupling* process. This would imply a further reduction of intervention prices, and the elimination of any residual link between production and direct payments in terms of planting requirement or crop-specific aids. This is meant to complete the shift from product to producer support, since it is also proposed that fully decoupled payments be made conditional upon cross-compliance to environmental, animal welfare and food safety criteria. Moreover, the proposal substantially increases EU support for rural development through what has been called a “dynamic modulation” of the direct payments; this is a progressive reduction and capping of aids with the exemption of small farmers.

The aim of this paper is to propose a first assessment of the effects of the MTR reform package proposed by the European Commission. The effects of the proposal are analyzed by considering separately the most important components of the reform package, i.e. the market measures, the full decoupling, and the modulation of direct aids; the last two measures are also assessed in the perspective enlargement to the Eastern European countries.

In order to simulate the effects of the MTR, we used the comparative static worldwide Applied General Equilibrium model provided by the Global Trade Analysis Project (GTAP; Hertel, 1997). In our application we use the most recent version of the database (Dimaranan

and McDougall, 2002), from which we built an aggregation including 16 regions and 15 products. This version of the GTAP database – known as *Version 5* – is referred to year 1997. Our simulation are all based on a 2006 baseline, generated by shifting a set of known (or projected) exogenous variables to that year, and by applying the Agenda 2000 reform started in 1999.

The EU enlargement is introduced in the picture by abolishing all trade measures and by making domestic support in the new Members consistent with the EU policies. As far as direct payments are concerned, rather than fixing exogenously the unit payments for the new member States, we based our simulation on the financial perspectives recently indicated by the European Commission after the recent Brussels Summit (Agra Europe, 2002). In particular, we adjusted the payments, in order to make the expenditure consistent with the financial guideline for the new Members.

In the following section, the main features of the MTR proposals are described in the framework of the long standing CAP reform process driven by political priorities, such as the enlargement to the Central and Eastern European countries, the budget issues, and the ongoing WTO negotiations. The third section is devoted to the description of the policy scenarios simulated with the GTAP model. Provisional results are reported in the fourth section, while the fifth provides few concluding remarks.

## **2. The Mid Term Review and the CAP reform process**

With the Berlin Agreement of March 1999, the EU Council endorsed and put in place the outcome of the debate over the reform of the CAP started after the publication of the Commission document on Agenda 2000 (European Commission, 1997). As it has been frequent in the history of the European agricultural policy, a promising starting point for the discussion – as they were the rather radical proposals offered in the Commission document – finally produced in practice a continuation on the previous track. The Berlin agreement ended up extending the approach of the 1992 Mac Sharry reform, watering down the innovative approach of the initial proposals. Farmers were compensated with semi-decoupled payments for a further reduction of market support, that is for getting a bit closer to world market conditions. On the other hand, all the hypotheses of degressivity or co-financing of the CAP direct aids were ruled out, and the reform of the dairy Common Market Organization (CMO) was completely set aside.

Symmetrically, three years later, an apparently weak provision of the Berlin agreement - as the one stating that the outcome of the reform process started in 1999 should be reviewed in the mid point of its implementation - is now proposing substantial elements of a radical reform. The MTR, in fact, was explicitly aimed only at assessing the conditions of the cereals, oilseeds and bovine meat markets; at formulating option for the future of the milk quota regime; at checking the trend of agricultural expenditure; and at formulating options for a further revision of the CMOs in line with the Agenda 2000 objectives. It is clear that what the Commission has proposed with the MTR implies at least a fairly wide interpretation of these tasks, not to say that it has gone beyond them.

Franz Fischler, the responsible for Agriculture in the Commission, explicitly proposed to go beyond the original mandate of the Berlin Council, in order to take the MTR as an opportunity to decide a long-term reform of the CAP, and to shape the European agricultural policy of the next decade. There are indeed several good reasons in favor of anticipating

some decisions that should be taken in any case in 2006 at the latest, that is at the end of the period covered by Agenda 2000.

Firstly, it seems wise to decide the reform before the full accession of the ten new Members States, an event that would dramatically reduce the likelihood of finding a consensus for any substantial future change in the CAP. Secondly, a significant reform would ease the pressure put by the ongoing WTO agricultural negotiation, which will enter in a crucial phase in 2003<sup>1</sup>. Thirdly, on the domestic side, the chance of “locking in” a new CAP for the period 2006-13 as soon as possible, thus avoiding the risk that the negotiations on the new overall financial provisions for the same period – due to start in 2004 - may further reduce the agricultural component of the EU budget.

In short, the MTR reform proposal (European Commission, 2002b) includes i) a set of market policy provision; ii) the full de-coupling of direct payments; iii) the so-called “dynamic modulation” of direct payments; iv) a set of cross compliance and farm audit requirements; and v) a set of changes in rural development measures.

Concerning market policy, the proposed changes are as follows:

*Cereals*: a further 5% decrease in the intervention price – that would affect to the same extent the related border protection system – and an increase in the direct payment in order to compensate 50% of the intervention price reduction.

*Rice*: a 50% reduction in the intervention price, together with a significant increase in direct payments, part of which will be granted for environmental purposes, since the Commission acknowledges that rice growers contribute to the conservation of the ecosystem in humid areas.

*Durum wheat*: a substantial reduction (-25%) in the specific payment granted to the so-called “traditional” growing areas, the abolition of the payment granted to the so-called “other traditional” growing areas, and the introduction of a new payment that would be granted to those producers that can demonstrate a minimum quality level<sup>2</sup>.

*Bovine meat*: full decoupling of all direct payments, together with the imposition of more severe animal welfare standards.

*Other products*: a lower and homogenous direct payment would be granted to dried fodder, and a payment per hectare would be introduced for nuts.

As far as the full decoupling option is concerned, the Commission proposes that all direct payments received at the farm level within the cereal and meat CMOs are converted into a single *decoupled income payment* per farm<sup>3</sup>. This payment would be granted without any planting requirements, or any other constraint in terms of land destination<sup>4</sup>, but it would be conditional upon compliance with mandatory environmental, food safety, and animal health and welfare standards (cross compliance). Such a fully decoupled payment would be

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<sup>1</sup> On the basis of the Doha mandate, the next steps of agricultural negotiations will be the agreement on the “Modalities” of the agricultural liberalization, to be reached by March 2003, and a draft of the final agreement, to be reached in the Cancun WTO Ministerial Conference in September 2003.

<sup>2</sup> This is mainly defined in terms of protein content.

<sup>3</sup> In the proposal there are few exceptions to this rule, as in the case of the specific payments to rice or durum wheat. It is also mentioned that CMOs presently excluded from the full de-coupling hypothesis may be included later. This is the case, for example, of the payments granted to olive oil, sugar, or to some specific fruits and vegetables.

<sup>4</sup> Also this rule has its exception: farmers cannot switch toward fruits and vegetables production.

calculated in relation to the hectares of land of the farm, so that the entitlement can be transferred with the land.

With the so-called “dynamic modulation” all direct payments would be reduced progressively by 3% per year up to a total 20%. This reduction is smoothed by a franchise, which is set at € 5000 for all farms up to 2 full time annual working units (AWU) and increases by € 3000 for each additional AWU. After the application of the franchise and modulation, the maximum sum paid to a single farmer would be € 300.000 (capping). Savings arising from this measure in the budget for direct payments (which lays in the so called “first pillar” of the CAP) would be re-allocated to the rural development budget (the “second pillar” of the CAP), without involving additional co-finance requirements from the Member States.

Coming to the cross-compliance element of the proposal, this would make all payments to farmers conditional upon compliance with a set of mandatory standards, concerning the environment, food safety, animal welfare, and the safety of workers. In order to verify the compliance, it is proposed – and financed – a specific audit system.

Finally, concerning rural development, the main novelty is the institution of three new types of measure. These are aimed, respectively, at promoting an increase in product quality and differentiation – e.g. through quality certification, the introduction of appellations of origin, and similar provisions – the compliance with environmental standards, and animal welfare.

Altogether, these measures make quite a substantial CAP reform, especially considering the traditional conservative attitude of the EU decision making process in the case of agricultural policy changes. Even if some elements of the Commission proposals may appear rather weak and ambiguous – as it is the case of the environmental cross compliance rules – other measures appear likely to introduce significant changes in the incentive structure faced by European farmers, as in the case of the full decoupling option.

In the debate over the CAP reform, we can divide EU Member States into two groups according to their net budgetary position: on one side there are the net beneficiaries of the CAP, aiming at maintaining the *status quo*; on the other there are the net contributors, willing to introduce significant changes. This latter group uses to blame the CAP for its various negative effects, with special reference to its financial voracity and to the uneven distribution of its expenditure.

Given this setting, the outcome of the recent meeting of the Council held in Brussels in October 2002 (European Council, 2002) may appear as a sort of compromise between these two groups. The agreement - reached by France and Germany and endorsed by the whole Council - states in fact that the budget for direct payments and market provisions will only be allowed to grow by 1% per year in nominal terms until year 2013. In other words, the CAP will be maintained, but the related expenditure will not be allowed to increase in real terms, even with the full participation of the ten new perspective Member States in 2013.

Moreover, it is worth noting that until the last Brussels Council in October, the discussion over the MTR had been kept formally separate from the issues concerning the EU enlargement, namely the way and the extent to which the CAP will be applied to new Member States, and the time of such extension (De Filippis and Salvatici, 2002). Despite this formal separation, it has always been clear that the two issues are closely related, and that any CAP revision or reform needs to take into account that sooner or later - but certainly by the year 2013 - agricultural policies must be homogeneous across the whole

EU-25<sup>5</sup>. The so-called Brussels compromise provides, in fact, an implicit acknowledgment of this linkage, even though only on the financial ground. The agreement provides, in fact, no indications on the content of the new CAP and on its extension to the new Member States, but it sets a precise budget constraint. This satisfies both the net contributors to the CAP – that are worried about extending the present costly agricultural policy to new Member States, and push for a radical reform– and the net beneficiaries, which want to maintain the *status quo* until possible.

The following sections are aimed at further analyzing these issues by reporting the results of a simulation that takes into account the main elements of this story, i.e. the MTR, and particularly the proposals in terms of market policy changes, the full decoupling and the modulation, with and without enlargement.

### 3. The simulation exercise

The impact of the MTR has been studied here with the GTAP model and the related database and simulation software (Hertel, 1997). The model is a comparative-static standard multi-regional applied general equilibrium, representing the global economy, including bilateral trade flows based on the Armington hypothesis, and a global bank linking total savings to total investment. In each region, there is a representative agent who maximizes its own utility. Private demand is based on a Constant Difference of Elasticity functional form, while supply is based on a nested Constant Elasticity of Supply production function. Factor mobility is assumed to be perfect for capital and labor, while land and natural resources are treated as sluggish endowments.

The model is based on standard (though modifiable) assumptions, such as perfectly competitive markets, and constant returns to scale. Policies are mostly included as price wedges among different markets.

The latest available version of the GTAP database (version 5) refers to year 1997. As the previous ones, this is the outcome of a complex data assembly and reconciliation procedure, in which are pooled national accounts – input output tables – bilateral trade flows, trade and domestic policy data, and macroeconomic data. The current 1997 version of the database includes up to a maximum of 66 regions, 57 sectors, and 5 endowments (Dimaranan and McDougall, 2002).

In this application, the model was run on an aggregation of the database including 16 regions - the present Member countries of the EU, the CEECs as a single region, and a “rest of the world” – 15 products (mostly agricultural and food) and 5 endowments; these are all reported in Table 1.

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<sup>5</sup> According to the Commission proposals of January 2002 (European Commission 2002a), the new Member States will be granted full and immediate access to the CAP, but for the direct payments, for which it is envisaged a transitional period. Starting from 2004, it would be granted the 25% of the aids paid in the present Members; this percentage will increase to 30% in 2005 and to 35% in 2006. For the subsequent years, the Commission proposed a phasing in of the direct payment ensuring that by year 2013 the new Members reach the full level of support applicable in that period in the present Members. Moreover, for the sake of simplification, the Commission offered the option of granting direct payments as homogeneous area aids, totally decoupled from production (De Filippis and Salvatici, 2002).



**Table 1**

regions	products	endowments
Austria	paddy rice	land
Belgium	Cereals	natural resources
Denmark	fruits and vegetables	labor
Finland	Oilseeds	capital
France	sugar cane & beet	
Germany	other primary	
Greece	Livestock	
Ireland	raw milk	
Italy	vegetable oils	
Portougal	dairy products	
Spain	processed rice	
Sweden	processed sugar	
The Netherlands	other food products	
UK	secondary sectors	
CEECs	Services	
Rest of the world		

In our application, the baseline has been updated to the year 2006. The 1997 database was slightly modified - with an “altertax” procedure<sup>6</sup> – in order to change the ratio between the direct payments for cereals and oilseeds in the EU. The database was updated by shocking a set of known variables – GDP, the labor force, total factor productivity and population – and by implementing the Agenda 2000 reform. The sources of information for the exogenous variables are reported in Table 2.

**Table 2**

variable	source
GDP	International Monetary Fund
labor force	FAO - Faostat database
total factor productivity	Hertel and Martin (2000)
population	UN projections

Several recent papers introduced improvements in the representation of the CAP measures within the standard model. Among them, it is worth recalling the effort to model the intervention mechanism and its interaction with the export subsidy GATT limitations (Van Torengeeren and Van Meijl, 2000), or the introduction of a public budget at the EU level (Brockmeier *et al.*, 2001). Being the present paper mostly a work in progress, the modeling of the CAP instruments - both in the Agenda 2000 and in the MTR - is based on relatively simpler policy representation.

Direct payments are introduced as *ad valorem* subsidies to factor use, i.e. as a subsidization of land in the case of cereals and oilseeds, and as a subsidization of capital in the case of livestock. In reality, direct payments per hectare (per head) are reduced if the cultivated land (the herd size) exceeds the maximum threshold. In order to represent this financial stabilizer, a mechanism was added to the standard model by which the expenditure for direct payments to cereals, oilseeds and livestock is fixed, and the unit subsidy adjusts to changes in production. Moreover, since direct payments are fixed in nominal terms, payments were reduced by 2% per year.

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<sup>6</sup> This is conceived as a shock aimed at implementing a change in the GTAP database while minimizing changes in all the other variables (Hertel et al, 1997).

Changes in intervention prices are modeled as changes in the ratio of domestic to import prices, while milk production quotas are introduced by fixing the output at the quota level and allowing the production tax to adjust. Finally, land set-aside provisions are not represented, since Agenda 2000 did not change the rate of the year 1997, but only established that rate as a fixed one. The shocks implemented in the case of Agenda 2000 are summarized in Table 3

**Table 3: Implementation of the Agenda 2000 to obtain the 2006 database**

measure	shock	Sources of calculation
introduction of a slaughtering (coupled) bovine premium	increase in the output subsidy for the livestock sector	ratio of expenditure to the value of production in AGLINK; weight of bovine on total livestock from Van Tongeren and Van Meijl (2000)
increase in the semi-decoupled premium for bovines	increase in subsidy to capital for the livestock sector	44% decrease in the premium; weight of bovine on total livestock from Van Tongeren and Van Meijl (2000)
increase in direct payment for cereals	increase in the subsidy to land in the cereal sector	+ 16%, from 54 to 63 Euro/ton
decrease in intervention price for cereals	decrease in the ratio of domestic to import price and in related export subsidies	change in market price after change in the intervention price as in Van Tongeren and Van Meijl (2000); import price as 1.55 times intervention price
decrease in direct payment for oilseeds	decrease in the subsidy to land in the oilseed sector	-33% from 94 to 63 Euro/ton
increase in milk quotas	increase in raw milk output	2.4%

Once obtained the 2006 baseline, we turn to the modeling of the MTR reform proposed by the Commission. Among the measures mentioned in the previous section, cross compliance provisions and changes in the rural development policy setting were not considered. As far as the former is concerned, the effect of introducing mandatory standards will change according to farm characteristics, and it is difficult to translate these different effects into a single change for the representative producer. Concerning rural development provisions, also these measures cannot be directly represented in the standard GTAP framework: they should be conceived as income transfers to one specific group of producers, but the model only deals with a single “representative household” for each region.

Thus the changes enclosed in the MTR package that could be simulated were mainly the market measures for cereals and rice – durum wheat is not available as a single sector in the database – the full decoupling of direct payments for cereals and livestock (and their distribution as a flat-rate subsidy to land), and the modulation of direct payments.

Accordingly, our simulation takes into account:

- the proposed 5% reduction in the intervention price of cereals, modeled as in the case of Agenda 2000, through a reduction of the ratio of domestic to import prices;
- the proposed 50% reduction in the intervention price of rice, modeled like the one for cereals;
- the increase in the direct payment for rice growers, implemented as a subsidy on value added, since a subsidy to land only would have been too large to be introduced;

- the full decoupling option, and the introduction of a flat rate *ad valorem* subsidy on land use corresponding to the total budget expenditure for direct payments in the baseline. The representation of this measure is similar in concept to the one adopted for the stabilization mechanism of direct payment expenditure introduced in the scenario without decoupling. Total expenditure for direct payments is fixed exogenously, all previous subsidies on land and capital are abolished, and a new homogeneous subsidy on land is determined endogenously on the basis of available budget, with the exclusion of fruits and vegetables producers.
- the modulation of direct payments, introduced as a 15% reduction in the decoupled payments. Since the proposal envisages a 20% reduction, this means that in our experiment the smoothing effect of the franchise is higher than the increased reduction in direct aids due to the capping mechanisms.

There are (at least) two significant limitations in the representation of the CAP instruments just described. Firstly, the change in the intervention price levels is approximated through changes in the border protection. This implies that the lowering of an institutional price, meant to guarantee a minimum price level, is treated like a tariff reduction, i.e. assuming that there is a fixed transmission between institutional and domestic market prices<sup>7</sup>.

Secondly, the representation of the modulation is quite limited. On the one hand, farm-level effects are not taken into account, while in this case the policy is explicitly aimed at promoting a redistribution of the benefits among farmers; this effect is completely ignored by the model. On the other hand, since farm level outcomes cannot be calculated, the combined effect of the franchise and of the capping can only be approximated through an arbitrary guess, which, at this stage, we are roughly imposing to be the same in all the member countries. Finally, it is worth recalling that the money saved through the direct payments reductions should be spent on rural development policies: these policies, as it has been mentioned, are not considered into the model.

The policy experiments can be summarized as follows:

1. MTR without decoupling (i.e., only the CMOs changes);
2. MTR with decoupling;
3. MTR with decoupling and modulation;
4. MTR with decoupling and enlargement;
5. MTR with decoupling, enlargement and modulation.

These scenarios were conceived with the aim of highlighting especially the consequences of the full decoupling and the modulation options, since they are unanimously considered the most significant and innovative changes proposed in the MTR, as well as the most sensitive on the political ground.

The EU enlargement perspective was also included, in order to assess its impact in the context of the MTR. As mentioned, we chose to model the enlargement by sticking to the latest financial figures provided by the Commission (Agra Europe, 2002), based on the budget ceiling for the CAP recently decided in the Brussels compromise (European Council, 2002)<sup>8</sup>. These figures indicate the total expenditure available for direct payments and

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<sup>7</sup> As mentioned, Van Tongeren and Van Meijl (2000) propose a possible way to model such a transmission.

<sup>8</sup> In particular, the ceiling is set on budget line 1A of the EAGGF-Guidance section, i.e. the so-called “first pillar” of the CAP. No ceiling was set, instead, for the rural development measures (the “second pillar”).

market measures in the enlarged EU, together with the relative shares of the present Member States and those of the new Members. Moreover, the so-called Brussels compromise between France and Germany indicated that this expenditure will only be increased by 1% per year<sup>9</sup>. Since the agreement it supposed to hold over the 2006-13 period, this budget is supposed to finance the full extension of the CAP to the new Members.

In the simulation of the enlargement, most applications extend the direct payments to the CEECs, applying to the new members the same rates of input subsidies observed in the present 15 Member states. Using the information about the budget available for this purpose, in our application we decided to proceed the other way round: we set exogenously the budget allocation indicated by the Commission, allowing the model to calculate endogenously the direct payments that this implies for the CEECs. This means that, strictly speaking, our enlargement scenarios should not be referred to the year 2006. In that period, as mentioned, the Commission schedules to extend to the Member States only the 35% of direct payments granted to actual Members. rather, in our simulation we calculate a maximum level that such payments may reach given the available budget. It is worth noting that, according to the Commission estimates, the full extension of the CAP direct aids to the 10 new members would imply an expenditure of about €5 billions. This is a relatively small figure, compared to €28 billions budget for direct payments in the EU 15, probably due to the low reference yields employed in the calculation of the payments in the new members<sup>10</sup>.

## 4. The results

### 4.1 The Baseline

The 2006 baseline, which constitutes the benchmark for all the MTR scenarios, was obtained by implementing the shocks shown in Table 4, as well as by introducing the Agenda 2000 reform (see the previous section). Compared to the 1997 database, this baseline describes a world in which prices for agricultural commodities have fallen between 5% and 10% in the EU, while they have grown by almost the same percentages in the CEECs.

The full application of Agenda 2000 brings about an agricultural supply reduction, ranging approximately from 10% to 20% in volume terms, while endowments, and especially capital, show a migration toward non agricultural activities. In other words, Agenda 2000 seems to promote a reduction of agricultural activities compared to other economic sectors, although to a limited extent. Concerning policies, in the 2006 baseline it can be observed an increase in the overall expenditure for the CAP direct payments. This is not the case for oilseeds, due to the alignment of the direct payments for this sector to those for cereals<sup>11</sup>. As

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<sup>9</sup> It should be noted that this is a tighter constraints compared to the actual one, since up to now the financial allowances were corrected for a supposed 2% rate of inflation.

<sup>10</sup> It should be noted, moreover, that an approximation was required in terms of the composition of the region “CEECs” in our simulation, and the related expenditure for agriculture. In terms of regions, Version 5 of the GTAP database contains data for Poland, Hungary, and for an aggregation named “Rest of Central European Associates”. Together with Czech Republic, Slovakia and Slovenia, this item includes also Bulgaria and Romania, whereas it does not include Estonia, Latvia and Lithuania, which are included in a “Former Soviet Union” aggregation. Thus the total expenditure figure decided by the Commission for direct payments for the actual 10 candidate countries - Poland, Hungary, Czech Republic, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Malta and Cyprus - was reported to the total land area of these countries. The per hectare value available for direct payments was then employed to calculate a total budget figure for our CEECs aggregate.

<sup>11</sup> Concerning the expenditure for direct payments, according to our calculation on the 1997 database the UK was the largest recipient in the EU 15; a fact that does not coincide with official figures.

it could have been expected, the most important changes in terms of welfare are due to the components related to the exogenous variables, such as the population and technical change. In any case, it is worth noting that the agricultural component of Agenda 2000 leads to a small improvement in terms of allocative efficiency.

#### *4.2 Agricultural supply response*

Coming to the MTR experiments, we firstly focus on the supply response. Should the MTR be implemented without the full decoupling, its effect would be negligible (Table 5), and it would affect mostly rice, which is a relatively minor product in EU agriculture, both in terms of land area and output value. Production of rice would decrease in Italy, which is the most important producer, while it would increase in Spain and especially in Greece<sup>12</sup>. Although it does not appear in our results, a significant impact there should be for the durum wheat, due to the cuts envisaged in the special direct payment for the traditional areas.

Once the direct payments are fully decoupled, we register a much larger agricultural supply response (table 6). Under this scenario, production decreases especially in those sectors where the actual payments are higher: this is the case of cereals, oilseeds and of the livestock sector (which includes bovine meat) with percentage reductions ranging approximately from 5% to 15%.

Cereal production decreases mostly in France, Belgium, Denmark, the UK and Germany; while oilseeds decreases in the same countries – up to 30% in some cases – but also in the Southern areas of the EU, like Spain, Italy and Greece. The decrease in cattle production results especially strong in Ireland (-25%) and in the UK, but also in France. For the all the other products, the supply reduction appears much smaller.

Altogether, the supply response indicates that the full decoupling may promote a significant and generalized reduction in the volume of agricultural production. This is confirmed by the observation (not reported in the Tables) that endowments, and especially capital, is reduced in all agricultural activities, while it increases in non-agricultural ones. This, in turn, indicates the possibility of a generalized extensification of agricultural production in the EU, and a corresponding adjustment in the rest of the economy.

Figures concerning supply response do not show significant changes under the scenario in which the modulation is introduced (Table 7). Considering also the relative strength of the consequences of the full decoupling, this seems to indicate that what really matters are the cross effects in terms of relative profitability of different agricultural activities, arising from the changes in the direct aids system. In other words, by switching from specific semi-decoupled payments to a homogeneous aid per hectare, the relative profitability of different crops changes dramatically. This seems to affect the supply response and the production mix to a greater extent compared to the actual level of the payments.

Since in our simulation the modulation is roughly modeled as a simple reduction of all payments for all farmers by a given percentage, it does not significantly affect resource allocation. Nonetheless, it is worthwhile mentioning that this result may be in part the effect of the mentioned limitation affecting the representation of this measure in the model: since distributional effects cannot be considered, also the different response of farm size classes are neglected. In turn, this means that if one crop is grown mostly in small farms, its total

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<sup>12</sup> It should be noted that the high percentage changes indicated in the table are the result of small increases in absolute terms, compared to very small production volumes in the baseline.

supply may be affected in a very different way and to a different extent compared to the supply of another crop grown in large farms.

After the EU enlargement, the situation does not appear to change radically in the present Member States. In the two scenarios including enlargement, the direct payments level resulting from the endogenous allocation of the (given) budget expenditure determines a level of subsidization roughly comparable with that of the present EU Member States (Table 8 and 9). It should be observed, though, that this result does not imply that payments are fixed at the same absolute (per hectare) level, but only that they constitute a similar share of the value of the land in the two regions. In other words, being the value of the land in the CEECs significantly lower compared to the one of the present EU Members States, the result indicates that the amount paid per hectare is different in different countries, given the financial provisions taken as a benchmark. This is consistent with the present situation, in which direct semi-decoupled payments per hectare are widely different among Member States in EU 15, due to the variability of the reference yields, which should be to some extent related to the market value of the land.

As mentioned, our enlargement experiment does not seem to affect significantly the supply response in the present Member States (Table 10), whereas in the CEECs it increases production significantly, especially for cereals, rice and sugar, and, to a more limited extent, for dairy products. The modulation appears to have limited consequences also in this case (Table 11) confirming, with all the *caveat* already mentioned, that the “substitution effect” (in terms of direct payments) is the major driving force of supply change.

The decrease in supply associated with some of the MTR scenarios, is obviously related with the behavior of market prices. In particular, the supply reduction is able to produce a significant domestic prices increase in the EU, notwithstanding the reduction in border protection due to the reduction of the intervention price for cereals and rice.

Under the “MTR without decoupling scenario” (Table 12) virtually only the price of paddy rice shows an increase in Italy and especially in Greece. As the full decoupling is introduced, price changes become substantial (Table 13), especially for those sectors that experience the highest reduction in direct payments, i.e. cereals, oilseeds and the livestock sector. For these goods, price increase ranges approximately from 12% to 15% for oilseeds, from 16% to 20% for cereals, and reaches even higher percentages for livestock, particularly in the case of the UK, but also in Ireland and in France. An opposite price behavior is present only for sugar and raw milk. Both products exhibit a moderate price decrease; for the former this is due to a moderate supply increase.

As already seen for the supply response, when the EU enlargement is introduced the price changes mostly occur in the CEECs (Table 15). In the new members, the simulation indicates that a major growth in market prices would occur for milk and dairy products, while for cereals, livestock and sugar prices price increases would not exceed 10%. The scenario including enlargement and modulation, as before, does not change substantially the picture (Table 18), even if prices in the CEECs increase slightly more than in the scenario without modulation. This is probably due to the fact that the measure reduces the incentives to increase production, and, in turn, this affects prices positively.

### 4.3 Trade effects

The effects on the trade balance for agricultural products appear consistent with the changes taking place in supply and market prices. Without decoupling, the MTR does not significantly affect the net trade position of the EU member countries<sup>13</sup> (Table 17), apart from Italy, Spain and Greece that would experience a significant deterioration in their paddy rice balances. Once decoupling is added to the picture, there is a generalized worsening of the trade positions of all present member countries, due to the changes in supply previously mentioned (Table 18). The widest changes occur for cereals, for livestock, and to some extent for oilseeds. Results also indicate a quite generalized increase in imports, not for the products that are directly influenced by the MTR, but also for fruits and vegetables. For these products the net position of some of the major European producers, like Italy and Spain, is worsened after the decoupling. Adding modulation to this scenario has virtually no effect on the agricultural trade balance.

With enlargement, the net position of the CEECs is worsened for most of the raw agricultural products (Table 20), apart from cereals and oilseeds, that experience a significant increase in net export. The position of this area appears to improve, instead, for some processed products like rice and sugar. For the present EU 15 members, the enlargement combined with the full decoupling of payments seems to imply a smaller effect on trade, with a lower worsening of the normalized balances. A possible explanation of this result is that enlargement provides an opportunity to supply a wider market, with a more dynamic demand for agricultural products compared to the present Member States. The modulation of direct payments does not affect the trade patterns even under the enlargement scenario (Table 21).

### 4.4. Welfare effects

The overall welfare change is negative if the MTR is implemented without the decoupling of direct payments (Table 22): the loss suffered by the present EU is by far higher than the small gains of the CEECs and the rest of the world. This is non an intuitive result, given that the MTR measures implemented in that scenario imply a reduction in border protection for cereals and rice. The result tells, most probably, that the significant increase in the semi-decoupled payment for rice implies an overall welfare loss that is higher than the gains due to the reduction in the border protection implemented to approximate the effects of the 50% reduction in the intervention price.

Apart from this scenario, in those in which the full decoupling of direct payments is implemented, results show welfare gains, which increases by little less than 50% with enlargement. The size of the gains is negligible compared to the GDP, whereas it is significant compared to the total public expenditure for agriculture, which includes direct payments, export subsidies, and output subsidies (Table 23). When the full decoupling option is implemented, the overall welfare gain represents about 30% of the agricultural expenditure.

Among the components of the welfare change, the one due to changes in resource allocation is the most important under all scenarios, including those with enlargement. Modulation

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<sup>13</sup> In Tables 17 to 21 changes in trade position are expressed as simple differences in the normalized balances:  $((X-M)/(X+M))*100$  with X = exports and M= Imports.

systematically implies an increase in this component, although the full decoupling is clearly the one that implies the higher reduction in the degree of distortion of the economy.

As far as the different countries are concerned, in all cases the UK and France present the highest welfare gains under all scenarios, followed by Spain and Italy if enlargement is not considered. With the EU enlargement, Germany becomes the third major gainer, probably as a result of its closer trade and economic linkages with the CEECs.

## 5. Concluding remarks

Notwithstanding the limitation of the analysis presented, the results confirm that the full decoupling of direct payments is by far the most significant reform proposed by the MTR, whereas both the changes in the CMOs and the payment modulation appears as less important issues in terms of economic impact. The latter, perhaps as a consequence of the simple modeling approach followed here, only dampens the effect of the other measures, whereas the former basically affect only the rice industry. Not surprisingly, in reality the decoupling has been the most controversial issue of the whole MTR package.

The full decoupling of direct payments implies a generalized reduction of the agricultural activity; the meaning of this result should be considered with caution. The welfare gain that the model associates with this measure most probably indicates that, as the competitiveness of the EU economy increases, the production of some agricultural commodities will become less profitable. Landowners, however, would receive the same total payment, whatever the intensity of the agricultural activities and production mix; thus they should not be worse off. Moreover, to the extent to which they are also farmers, they would definitely be better off with the full decoupling, since they may, at least in principles, increase the return on land, by choosing a more profitable production mix.

The evidence concerning the level of direct payments that is compatible with the budget decided by the European Council to finance this measure in the CEECs is somehow less clear cut. A comparable level of *ad valorem* subsidy to land in the CEECs may imply different things in terms of the actual level of the payments.

Finally, it is worth recalling that the evidence on the modulation, telling that this measure produces very few significant effects, needs to be considered with special caution, since the modeling of this measure suffers from great limitations. As mentioned, the modulation was approximated by a 15% reduction of all payments; this completely ignores the cross-effects of the franchise and of the capping. The level and the effect of a cutback in payments is widely different among farms according to their economic size and characteristics; and such a differentiated effect is one of the very aims of this measure.

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**Table 4. Changes in exogenous variables for the baseline 2006**

	GDP	labour force	total factor productivity			population
			agriculture	industry	services	
Austria	15.4	-1.2	2.0	1.0	2.8	-0.3
Belgium-Luxembourg	15.3	0.1	2.0	1.0	2.8	1.4
Denmark	13.0	-1.2	2.0	1.0	2.8	2.3
Finland	21.9	-1.7	2.0	1.0	2.8	1.6
France	17.7	3.6	2.0	1.0	2.8	3.0
Germany	11.5	-1.6	2.0	1.0	2.8	-1.8
Greece	23.5	3.8	2.0	1.0	2.8	1.2
Ireland	56.0	10.4	2.0	1.0	2.8	9.0
Italy	17.9	-0.4	2.0	1.0	2.8	-0.7
The Netherlands	13.0	0.2	2.0	1.0	2.8	3.8
Portugal	16.7	2.8	2.0	1.0	2.8	1.4
Spain	22.7	3.9	2.0	1.0	2.8	0.3
Sweden	18.4	-1.2	2.0	1.0	2.8	-0.2
United Kingdom	16.1	2.4	2.0	1.0	2.8	2.2
CEECs	42.6	24.6	0.3	0.2	0.4	-5.1
Rest of the world	22.5	8.2	1.4	0.7	1.9	13.8

Sources: IMF, FAO, Hertel and Martin (2002), UN

**Table 5 . Mtr without decoupling: % changes in supply compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-19.7	0.0	-0.1	-0.2	0.0	0.0	0.1	0.0	0.0	0.0	6.2	0.0	0.0
Belgium	85.1	0.1	-0.1	0.6	0.3	0.0	0.2	0.0	0.1	-0.1	142.6	0.3	0.2
Denmark	-30.5	0.4	-0.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	-6.3	0.0	-0.1
Finland	-14.7	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	48.6	0.0	0.1
France	15.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	0.0	0.0
Germany	-18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	0.0	0.0
Greece	26.6	0.1	0.0	-0.2	-0.1	0.0	0.0	0.0	-0.2	0.0	-7.1	-0.1	0.0
Ireland	-25.0	0.0	-0.2	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	-6.0	-0.1	0.0
Italy	-10.5	-0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-6.4	0.0	0.0
Portougal	-35.5	0.1	0.0	0.1	0.1	0.1	0.2	0.0	0.1	-0.1	2.6	0.0	0.2
Spain	4.9	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Sweden	-26.1	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	0.0	0.0
The Netherlands	35.2	0.4	0.0	0.0	0.1	-0.1	0.1	0.0	0.1	0.0	-6.0	0.1	0.1
UK	45.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	133.5	0.1	0.0
CEECs	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0
Rest of the world	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0

Source: GTAP model simulation

**Table 6. Mtr with decoupling: % changes in supply compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other livestock primary	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products	
Austria	-9.1	-5.0	-3.5	-8.8	0.2	-0.2	-3.1	0.0	-0.4	0.0	20.5	0.2	0.0
Belgium	149.1	-15.6	-2.8	-35.7	1.5	-0.1	-6.8	0.0	-0.3	1.5	204.9	1.4	-3.4
Denmark	-24.9	-6.3	-1.1	-12.9	0.8	0.1	1.0	0.0	-8.5	0.0	-11.4	0.8	-1.1
Finland	-6.1	-7.2	-1.7	-6.2	-0.1	0.4	-4.2	0.0	-0.4	0.2	65.7	-0.2	-4.3
France	19.6	-13.1	-2.9	-14.0	0.5	1.0	-7.3	0.0	-3.2	2.7	8.0	0.7	-0.1
Germany	2.5	-6.8	-1.8	-4.8	0.5	0.8	-1.8	0.0	0.0	0.1	22.0	0.5	-0.4
Greece	63.1	-6.5	-2.9	-13.5	4.5	0.5	-5.8	0.0	-14.0	0.8	2.9	4.7	-0.3
Ireland	-8.8	-18.0	-16.2	-25.5	3.4	1.0	-25.2	0.0	3.7	3.6	-8.8	3.7	0.7
Italy	-5.5	-2.5	-2.3	-7.4	-0.2	0.9	-2.7	0.0	-4.5	0.7	-4.7	-0.8	-1.4
Portougal	-35.5	-0.6	-1.1	-11.6	-1.1	0.6	-1.2	0.0	-2.3	-0.3	2.8	-2.0	0.3
Spain	11.5	-6.3	-5.4	-8.1	-0.2	0.2	-6.6	0.0	-2.8	2.3	1.1	-0.5	-1.4
Sweden	-23.5	-7.0	-3.4	-3.0	-0.2	0.2	-1.4	0.0	-2.9	0.0	0.2	-0.2	-1.4
The Netherlands	51.0	-15.9	4.4	-28.9	0.4	0.7	8.8	0.0	0.5	-0.4	-15.2	0.3	-0.5
UK	118.8	-9.6	-6.6	-9.7	-0.4	0.8	-11.6	0.0	-8.7	0.8	244.3	0.1	-1.5
CEECs	-0.5	2.9	0.2	2.1	-0.1	-0.4	2.3	-0.2	0.2	-1.3	-0.3	-0.2	0.0
Rest of the world	0.1	1.3	0.2	1.1	0.0	-0.2	1.1	-0.2	0.5	-0.6	-0.1	-0.1	0.1

Source: GTAP model simulation

**Table 7. Mtr with decoupling and modulation: % changes in supply compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-9.0	-5.1	1.8	-9.2	0.2	-0.3	-3.1	0.0	-0.5	0.0	20.6	0.2	0.0
Belgium	148.7	-15.7	0.4	-36.3	1.4	-0.1	-6.8	0.0	-0.3	1.5	205.0	1.3	-3.4
Denmark	-24.8	-6.3	1.2	-12.9	0.8	0.2	1.0	0.0	-8.6	0.0	-11.3	0.8	-1.1
Finland	-5.9	-7.2	1.1	-6.4	-0.1	0.4	-4.2	0.0	-0.4	0.2	66.2	-0.2	-4.3
France	19.6	-13.2	-3.2	-14.1	0.7	1.0	-7.2	0.0	-3.2	2.6	8.3	0.9	-0.1
Germany	2.7	-6.8	-1.6	-4.8	0.6	0.8	-1.7	0.0	0.0	0.1	22.3	0.6	-0.4
Greece	63.1	-6.5	-1.9	-13.8	4.4	0.5	-5.8	0.0	-14.4	0.8	2.9	4.6	-0.3
Ireland	-8.8	-18.0	-10.2	-25.7	3.4	1.0	-25.2	0.0	3.7	3.6	-8.8	3.7	0.8
Italy	-5.5	-2.5	-2.2	-7.4	-0.2	0.9	-2.7	0.0	-4.6	0.7	-4.6	-0.8	-1.4
Portougal	-35.5	-0.6	0.5	-11.8	-1.2	0.6	-1.2	0.0	-2.4	-0.3	2.8	-1.9	0.3
Spain	10.8	-6.3	-5.3	-8.2	-0.2	0.2	-6.6	0.0	-2.8	2.3	1.1	-0.5	-1.3
Sweden	-23.3	-7.0	1.8	-3.0	-0.2	0.2	-1.4	0.0	-3.0	0.0	0.6	-0.2	-1.4
The Netherlands	50.9	-16.1	5.6	-29.2	0.4	0.4	9.0	0.0	0.5	-0.4	-14.7	0.3	-0.3
UK	119.0	-9.6	-6.6	-9.7	-0.4	0.8	-11.5	0.0	-8.7	0.8	244.9	0.1	-1.5
CEECs	-0.5	2.9	0.1	2.2	-0.1	-0.4	2.3	-0.2	0.2	-1.3	-0.3	-0.2	0.0
Rest of the world	0.1	1.3	0.2	1.1	0.0	-0.2	1.1	-0.2	0.5	-0.6	-0.1	-0.1	0.1

Source: GTAP model simulation

**Table 8. Direct payments after Mtr with decoupling and enlargement**

as *ad valorem* subsidies to land use

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-91.2	-78.2	0.0	-78.2	-85.7	-78.2	-78.2	-79.7	0.0	0.0	0.0	0.0	0.0
Belgium	-94.7	-82.3	0.0	-82.3	-88.8	-82.3	-82.3	-84.0	0.0	0.0	0.0	0.0	0.0
Denmark	-88.3	-68.4	0.0	-68.4	-78.4	-68.4	-68.4	-70.3	0.0	0.0	0.0	0.0	0.0
Finland	-93.6	-81.8	0.0	-81.8	-88.3	-81.8	-81.8	-83.0	0.0	0.0	0.0	0.0	0.0
France	-96.5	-85.7	0.0	-85.7	-90.6	-85.7	-85.7	-87.1	0.0	0.0	0.0	0.0	0.0
Germany	-89.8	-77.2	0.0	-77.2	-83.1	-77.2	-77.2	-78.7	0.0	0.0	0.0	0.0	0.0
Greece	-92.9	-84.7	0.0	-84.7	-88.3	-84.7	-84.7	-86.4	0.0	0.0	0.0	0.0	0.0
Ireland	-96.5	-90.8	0.0	-90.8	-94.9	-90.8	-90.8	-91.9	0.0	0.0	0.0	0.0	0.0
Italy	-91.1	-77.8	0.0	-77.8	-85.1	-77.8	-77.8	-79.9	0.0	0.0	0.0	0.0	0.0
Portougal	-97.5	-93.0	0.0	-93.0	-96.8	-93.0	-93.0	-94.2	0.0	0.0	0.0	0.0	0.0
Spain	-98.4	-89.7	0.0	-89.7	-93.5	-89.7	-89.7	-91.4	0.0	0.0	0.0	0.0	0.0
Sweden	-95.8	-88.7	0.0	-88.8	-93.8	-88.8	-88.9	-89.8	0.0	0.0	0.0	0.0	0.0
The Netherlands	-94.1	-52.5	0.0	-52.5	-67.9	-52.5	-52.5	-56.8	0.0	0.0	0.0	0.0	0.0
UK	-96.2	-89.5	0.0	-89.5	-92.9	-89.5	-89.5	-90.3	0.0	0.0	0.0	0.0	0.0
CEECs	-78.9	-74.6	0.0	-74.6	-77.7	-74.6	-74.6	-74.8	0.0	0.0	0.0	0.0	0.0
Rest of the world	-2.3	-36.8	0.0	-6.3	-1.5	-0.1	-2.1	-2.6	0.0	0.0	0.0	0.0	0.0

Source: GTAP model simulation

**Table 9. Direct payments after Mtr with decoupling, enlargement and modulation**

as *ad valorem* subsidies to land use

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-80.8	-52.5	0.0	-52.5	-68.8	-52.5	-52.5	-55.9	0.0	0.0	0.0	0.0	0.0
Belgium	-90.2	-67.7	0.0	-67.7	-79.6	-67.7	-67.7	-70.7	0.0	0.0	0.0	0.0	0.0
Denmark	-83.2	-54.4	0.0	-54.4	-68.9	-54.4	-54.4	-57.2	0.0	0.0	0.0	0.0	0.0
Finland	-84.6	-56.0	0.0	-56.0	-71.7	-56.0	-56.0	-59.0	0.0	0.0	0.0	0.0	0.0
France	-96.4	-85.1	0.0	-85.1	-90.2	-85.1	-85.1	-86.6	0.0	0.0	0.0	0.0	0.0
Germany	-88.8	-75.1	0.0	-75.1	-81.5	-75.1	-75.1	-76.7	0.0	0.0	0.0	0.0	0.0
Greece	-91.2	-80.9	0.0	-80.9	-85.4	-80.9	-80.9	-83.0	0.0	0.0	0.0	0.0	0.0
Ireland	-94.7	-86.0	0.0	-86.0	-92.3	-86.0	-86.0	-87.8	0.0	0.0	0.0	0.0	0.0
Italy	-90.4	-76.1	0.0	-76.1	-84.0	-76.1	-76.1	-78.3	0.0	0.0	0.0	0.0	0.0
Portougal	-93.8	-83.3	0.0	-83.0	-92.3	-83.0	-83.0	-86.0	0.0	0.0	0.0	0.0	0.0
Spain	-98.3	-88.7	0.0	-88.7	-92.8	-88.7	-88.7	-90.5	0.0	0.0	0.0	0.0	0.0
Sweden	-88.9	-70.2	0.0	-70.3	-83.5	-70.3	-70.3	-72.8	0.0	0.0	0.0	0.0	0.0
The Netherlands	-90.5	-23.4	0.0	-23.4	-48.1	-23.4	-23.4	-30.3	0.0	0.0	0.0	0.0	0.0
UK	-96.1	-89.1	0.0	-89.1	-92.7	-89.1	-89.1	-89.9	0.0	0.0	0.0	0.0	0.0
CEECs	-76.0	-71.1	0.0	-71.1	-74.6	-71.1	-71.1	-71.4	0.0	0.0	0.0	0.0	0.0
Rest of the world	-2.3	-36.8	0.0	-6.3	-1.5	-0.1	-2.1	-2.6	0.0	0.0	0.0	0.0	0.0

Source: GTAP model simulation

**Table 10. Mtr with decoupling and enlargement: % changes in supply compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
Austria	-11.3	-3.7	-0.9	-8.8	-4.9	0.4	-3.2	0.0	4.1	-0.3	16.4	-7.1	1.4
Belgium	143.5	-15.7	-1.4	-35.4	-2.2	0.7	-6.3	0.0	0.3	1.3	191.4	-2.3	-3.2
Denmark	-26.5	-5.5	-1.0	-12.2	-3.9	0.2	3.5	0.0	-7.5	-0.2	-17.2	-4.1	-1.4
Finland	-7.9	-6.9	-1.5	-6.5	-0.1	0.4	-4.4	0.0	-0.4	0.1	61.8	-0.3	-3.3
France	18.3	-13.8	-2.3	-13.9	-1.4	1.0	-7.4	0.0	-3.1	2.5	6.6	-2.2	-0.2
Germany	-0.3	-6.6	0.7	-3.9	-0.8	1.2	-1.6	0.0	1.0	0.0	15.6	-0.8	0.1
Greece	62.8	-6.8	1.4	-14.0	-1.1	0.7	-6.5	0.0	-14.5	0.7	6.5	-1.2	0.7
Ireland	-10.8	-17.8	-15.8	-25.7	-4.1	1.1	-25.1	0.0	3.8	3.6	-12.5	-4.7	1.9
Italy	-5.8	-2.9	0.1	-7.7	-1.2	1.1	-3.7	0.0	-4.7	0.9	-4.5	-3.3	-1.3
Portugal	-35.8	-0.7	-0.9	-11.6	-1.0	0.6	-1.1	0.0	-2.3	-0.9	2.4	-4.4	0.3
Spain	9.4	-6.6	-2.1	-8.5	-1.6	0.1	-6.8	0.0	-2.9	2.3	0.2	-3.1	-1.5
Sweden	-25.5	-5.9	-3.2	-1.1	-3.4	0.2	-2.9	0.0	-0.8	0.0	-3.0	-2.8	-1.6
The Netherlands	49.6	-16.7	8.8	-28.4	-3.0	1.3	8.4	0.0	2.9	-0.4	-18.7	-3.3	1.2
UK	113.7	-8.9	-6.4	-9.5	-2.1	0.9	-11.6	0.0	-8.6	0.7	234.9	-2.6	-1.2
CEECs	4.5	10.8	-18.0	-1.6	78.9	-1.2	0.0	0.0	-9.8	4.7	6.8	102.8	4.2
Rest of the world	0.0	1.0	0.3	1.1	-1.0	-0.2	1.2	-0.3	0.4	-0.9	-0.2	-2.1	-0.1

Source: GTAP model simulation



**Table 11. Mtr with decoupling, enlargement and modulation: % changes in supply compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
Austria	-11.2	-3.6	4.3	-9.0	-4.9	0.4	-3.2	0.0	4.1	-0.3	16.5	-7.1	1.4
Belgium	143.1	-15.8	1.8	-36.0	-2.3	0.7	-6.3	0.0	0.3	1.3	191.5	-2.4	-3.2
Denmark	-26.4	-5.5	1.2	-12.3	-3.8	0.2	3.6	0.0	-7.5	-0.2	-17.0	-4.1	-1.4
Finland	-7.7	-6.9	1.3	-6.7	-0.1	0.3	-4.4	0.0	-0.4	0.1	62.3	-0.3	-3.2
France	18.3	-13.8	-2.6	-13.9	-1.2	1.1	-7.4	0.0	-3.1	2.5	6.9	-2.0	-0.1
Germany	-0.1	-6.6	0.6	-3.9	-0.7	1.2	-1.6	0.0	1.0	0.0	15.9	-0.7	0.1
Greece	62.8	-6.9	2.2	-14.3	-1.1	0.7	-6.5	0.0	-14.8	0.7	6.5	-1.2	0.7
Ireland	-10.8	-17.9	-9.8	-25.9	-4.1	1.1	-25.1	0.0	3.8	3.6	-12.4	-4.7	2.0
Italy	-5.8	-2.9	-0.1	-7.7	-1.2	1.1	-3.7	0.0	-4.7	0.9	-4.4	-3.3	-1.2
Portugal	-35.8	-0.7	0.7	-11.9	-1.1	0.6	-1.1	0.0	-2.4	-0.9	2.4	-4.3	0.3
Spain	8.8	-6.6	-2.3	-8.5	-1.5	0.1	-6.8	0.0	-2.9	2.3	0.3	-3.0	-1.4
Sweden	-25.3	-5.8	2.1	-1.2	-3.4	0.2	-2.9	0.0	-0.8	0.0	-2.6	-2.8	-1.5
The Netherlands	49.5	-16.9	9.7	-28.7	-2.9	1.0	8.6	0.0	2.8	-0.4	-18.2	-3.2	1.4
UK	113.9	-8.9	-6.4	-9.5	-2.1	0.9	-11.5	0.0	-8.6	0.7	235.4	-2.6	-1.1
CEECs	4.5	10.5	-16.7	-1.9	78.4	-1.3	-0.1	0.0	-9.9	4.7	6.8	102.2	4.4
Rest of the world	0.0	1.0	0.2	1.1	-1.0	-0.2	1.2	-0.3	0.4	-0.9	-0.2	-2.1	-0.1

Source: GTAP model simulation

**Table 12. Mtr without decoupling: % changes in market prices compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
Austria	-3.4	-0.1	0.1	0.2	0.1	0.0	-0.2	0.1	0.0	0.0	-5.0	0.0	0.0
Belgium	-19.9	-0.1	0.1	0.2	0.1	0.0	-0.1	0.1	0.0	0.1	-24.2	-0.1	-0.1
Denmark	-1.6	0.1	0.1	0.1	0.1	0.0	-0.3	0.0	0.0	0.0	-0.8	0.0	0.0
Finland	-17.8	0.0	0.1	0.1	0.0	0.0	-0.3	0.1	0.0	0.1	-21.5	0.0	0.0
France	-3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-12.4	0.0	0.0
Germany	-0.6	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-3.4	0.0	0.0
Greece	9.3	-0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	3.8	0.0	0.0
Ireland	-2.1	-0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-2.2	0.0	0.0
Italy	5.3	-0.1	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	-0.4	0.0	0.0
Portugal	0.9	-2.6	0.0	-0.1	0.0	0.0	-0.3	0.2	0.0	0.1	-5.8	0.0	-0.2
Spain	0.7	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-4.4	0.0	0.0
Sweden	-4.5	0.0	0.1	0.2	0.0	0.0	-0.1	0.0	0.0	0.0	-4.6	0.0	0.0
The Netherlands	-8.1	-0.2	0.0	0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	-3.8	-0.1	-0.1
UK	-20.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-25.5	-0.1	0.0
CEECs	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: GTAP model  
simulation

**Table 13. Mtr with decoupling: % changes in market prices compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
Austria	-12.4	16.3	4.8	15.1	-1.6	-0.8	8.9	-4.9	0.81	-2.48	-10.58	-0.69	0.25
Belgium	-29.8	19.1	3.3	16.3	-1.2	-0.6	9.3	-6.0	0.52	-3.1	-30.36	-0.87	1.38
Denmark	-8.2	20.7	2.9	15.8	-2.2	-0.6	5.5	-3.1	4.64	-2.04	-1.71	-0.97	0.84
Finland	-26.0	18.2	3.0	11.0	-2.2	-0.8	8.8	-3.4	1.1	-2.58	-27.25	-0.19	2.86
France	-6.2	16.7	3.8	14.4	-1.7	-1.5	12.8	-9.2	2.58	-4.46	-13.41	-0.7	0.1
Germany	-14.8	18.5	3.3	14.8	-3.1	-1.0	6.7	-5.6	0.47	-2.54	-12.75	-1.09	0.56
Greece	-3.9	19.6	4.4	12.4	-3.9	-1.9	15.2	-3.7	8.68	-3.36	-6.55	-3.49	-0.12
Ireland	-11.1	20.6	10.1	12.4	-1.9	-0.9	19.8	-5.8	-0.28	-4.15	-4.03	-1.47	-0.15
Italy	-3.1	21.6	3.6	13.6	-1.9	-2.0	9.1	-5.4	4.69	-3.3	-3.13	-0.1	1.32
Portugal	-1.3	7.9	3.3	18.1	-0.9	-0.7	7.8	-4.4	2.17	-2.38	-6.79	0.11	-0.17
Spain	-1.0	18.3	4.9	12.6	-1.8	-1.2	14.8	-9.1	2.68	-6.14	-5.37	-0.61	0.82
Sweden	-11.6	13.6	3.7	10.7	-1.6	-0.4	7.5	-4.0	2.58	-2.52	-8.05	-0.85	1.33
The Netherlands	-9.6	21.2	1.1	15.1	-0.6	-0.7	4.3	-3.2	0.5	-2.11	-4.01	-0.42	0.91
UK	-33.0	20.3	10.8	16.9	0.2	-1.1	23.0	-7.9	5.37	-4.74	-34.42	-0.55	0.65
CEECs	1.1	1.8	1.3	1.8	1.2	0.4	0.9	0.9	0.53	0.45	-0.03	0.34	0.42
Rest of the world	0.5	0.5	0.4	0.6	0.4	0.1	0.3	0.3	0.25	0.1	0.27	0.16	0.08

Source: GTAP model simulation

**Table 14. Mtr with decoupling and modulation: % changes in market prices compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-12.3	16.4	0.9	15.6	-1.5	-0.8	9.0	-4.9	0.87	-2.45	-10.5	-0.63	0.26
Belgium	-29.6	19.4	1.6	16.6	-1.1	-0.5	9.3	-6.0	0.55	-3.08	-30.22	-0.8	1.43
Denmark	-8.1	20.7	1.1	15.9	-2.1	-0.5	5.6	-3.1	4.69	-2.02	-1.68	-0.93	0.86
Finland	-25.9	18.4	-0.7	11.4	-2.1	-0.8	8.9	-3.4	1.16	-2.53	-27.19	-0.16	2.86
France	-6.2	16.8	3.6	14.4	-1.7	-1.4	12.8	-9.2	2.6	-4.42	-13.38	-0.68	0.13
Germany	-14.7	18.5	2.8	14.9	-3.0	-1.0	6.7	-5.6	0.5	-2.51	-12.71	-1.06	0.59
Greece	-3.8	19.7	3.1	12.7	-3.8	-1.8	15.3	-3.7	8.91	-3.32	-6.45	-3.41	-0.1
Ireland	-11.1	20.8	6.7	12.5	-1.8	-0.9	19.9	-5.8	-0.25	-4.13	-3.99	-1.42	-0.15
Italy	-3.1	21.7	3.2	13.7	-1.9	-1.9	9.1	-5.4	4.74	-3.27	-3.1	-0.07	1.33
Portougal	-1.2	8.0	1.3	18.6	-0.8	-0.6	7.9	-4.4	2.27	-2.34	-6.75	0.14	-0.13
Spain	-0.9	18.4	4.4	12.7	-1.8	-1.2	14.8	-9.0	2.72	-6.11	-5.35	-0.59	0.81
Sweden	-11.5	13.7	0.0	10.9	-1.6	-0.4	7.5	-4.0	2.65	-2.48	-8.02	-0.81	1.34
The Netherlands	-9.6	21.4	0.3	15.3	-0.5	-0.5	4.4	-3.2	0.54	-2.09	-3.99	-0.34	0.91
UK	-33.0	20.3	10.5	17.0	0.2	-1.1	23.0	-7.9	5.39	-4.71	-34.4	-0.53	0.67
CEECs	1.1	1.8	1.2	1.8	1.2	0.5	1.0	0.9	0.55	0.46	0	0.36	0.43
Rest of the world	0.5	0.5	0.4	0.6	0.4	0.1	0.3	0.4	0.27	0.12	0.29	0.18	0.11

Source: GTAP model  
simulation

**Table 15. Mtr with decoupling and enlargement: % changes in market prices compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
Austria	-12.2	16.6	5.4	15.6	-1.4	-0.4	9.1	-7.3	0.9	-3.54	-10.42	-0.45	0.28
Belgium	-30.0	19.0	3.3	16.0	-1.4	-0.6	9.0	-9.5	0.4	-4.98	-30.54	-1.22	1.24
Denmark	-8.1	21.2	3.1	16.4	-2.1	-0.4	5.7	-5.5	4.73	-3.47	-1.72	-0.89	0.9
Finland	-26.0	18.3	3.1	11.0	-2.2	-0.7	8.9	-4.8	1.06	-3.59	-27.27	-0.21	2.83
France	-6.2	16.7	3.9	14.3	-1.7	-1.5	12.4	-11.7	2.56	-5.61	-13.43	-0.71	0.08
Germany	-14.6	18.8	3.7	15.0	-2.9	-0.5	6.7	-8.7	0.7	-3.73	-12.66	-0.8	0.75
Greece	-3.5	20.0	5.2	12.9	-3.6	-1.4	15.4	-5.0	9.07	-4.31	-6.21	-3.27	0.22
Ireland	-11.3	20.5	10.1	12.3	-2.1	-0.9	19.5	-7.9	-0.45	-5.57	-4.13	-3.02	-0.43
Italy	-2.9	21.9	4.1	13.9	-1.7	-1.7	8.8	-7.8	4.86	-4.63	-2.93	0.07	1.49
Portugal	-1.4	7.8	3.2	18.0	-1.0	-0.8	7.6	-6.5	2.04	-3.38	-6.9	-0.74	-0.3
Spain	-0.8	18.5	5.3	12.8	-1.7	-1.1	14.6	-12.2	2.71	-8.19	-5.28	-0.54	0.92
Sweden	-11.6	13.7	3.8	10.9	-1.7	-0.4	7.2	-6.1	2.58	-3.8	-8.07	-1.32	1.27
The Netherlands	-9.7	21.5	1.4	15.5	-0.5	-0.4	4.3	-5.6	0.02	-3.81	-4.1	-0.42	0.7
UK	-33.1	20.3	10.7	17.0	0.1	-1.1	22.9	-9.2	5.28	-5.52	-34.53	-0.88	0.53
CEECs	-3.1	4.1	37.3	0.4	10.9	1.8	7.1	57.4	1.65	23.95	3.84	3.31	1.99
Rest of the world	0.1	0.1	0.1	0.3	-0.1	-0.2	0.0	0.0	-0.03	-0.2	-0.05	-0.27	-0.2

Source: GTAP model simulation

**Table 16. Mtr with decoupling, enlargement and modulation: % changes in market price compared to the 2006 baseline**

	paddy rice	cereals	fruits and vegetabl es	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetabl e oils	dairy processe products	processe d rice	processe d sugar	other food products
Austria	-12.1	16.8	1.4	16.1	-1.3	-0.4	9.2	-7.3	0.98	-3.5	-10.32	-0.38	0.3
Belgium	-29.8	19.3	1.6	16.4	-1.3	-0.5	9.1	-9.5	0.44	-4.94	-30.4	-1.13	1.3
Denmark	-8.0	21.3	1.3	16.6	-2.0	-0.3	5.8	-5.4	4.79	-3.44	-1.69	-0.84	0.94
Finland	-25.9	18.5	-0.6	11.5	-2.1	-0.7	9.0	-4.8	1.14	-3.53	-27.2	-0.16	2.84
France	-6.2	16.7	3.7	14.4	-1.7	-1.4	12.4	-11.6	2.6	-5.56	-13.4	-0.67	0.12
Germany	-14.6	18.9	3.2	15.1	-2.8	-0.5	6.8	-8.7	0.74	-3.69	-12.61	-0.76	0.78
Greece	-3.4	20.2	3.8	13.2	-3.5	-1.4	15.5	-4.9	9.3	-4.27	-6.11	-3.18	0.25
Ireland	-11.2	20.7	6.7	12.4	-2.0	-0.9	19.6	-7.8	-0.41	-5.54	-4.08	-2.96	-0.42
Italy	-2.9	22.0	3.7	14.0	-1.7	-1.6	8.8	-7.7	4.92	-4.58	-2.89	0.1	1.51
Portougal	-1.3	7.9	1.2	18.4	-0.9	-0.7	7.6	-6.4	2.15	-3.33	-6.85	-0.71	-0.25
Spain	-0.8	18.5	4.8	12.9	-1.7	-1.1	14.6	-12.2	2.75	-8.14	-5.25	-0.51	0.91
Sweden	-11.5	13.7	0.1	11.1	-1.6	-0.3	7.3	-6.1	2.66	-3.75	-8.03	-1.28	1.29
The Netherlands	-9.6	21.7	0.5	15.7	-0.4	-0.2	4.3	-5.6	0.07	-3.77	-4.07	-0.33	0.71
UK	-33.1	20.4	10.5	17.0	0.2	-1.0	22.9	-9.1	5.31	-5.48	-34.5	-0.84	0.56
CEECs	-2.6	4.6	33.0	0.9	11.6	2.1	7.3	57.9	1.8	24	3.92	3.56	1.94
Rest of the world	0.1	0.2	0.1	0.3	-0.1	-0.2	0.1	0.0	0	-0.17	-0.02	-0.24	-0.17

Source: GTAP model  
simulation

**Table 17. Changes in the current account compared to the 2006 baseline - Mtr without decoupling**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
<i>net export</i>													
Austria	-4.4	38.8	-562	-41.6	-0.5	-723.1	135	-7.5	-191.2	-41	-35.7	-5.6	-465
Belgium	-80.9	-899.2	-917.9	-823.3	-1	-1454.1	1862.6	-7	401.4	-261.2	74.8	-72.7	-865.2
Denmark	-2.9	312.8	-342.7	-56.1	-0.6	357.6	5081.2	-2.5	-489.9	1393.4	-19.6	36.9	1741.7
Finland	-10.2	41.9	-256.2	-57.5	0.1	-504.2	230.1	-1.7	-16.6	-4.4	-15.8	-18.5	-506.9
France	-50.3	4989.1	-1195.9	544.9	2.3	-2064	2219.2	-19.9	-1386.8	1615.2	-214.1	1268.7	6385.9
Germany	-51	674.9	-6543.8	-1302.9	-1.8	-5609.3	-2793.4	-64.8	633.7	1029.1	-145.7	502.9	-658.8
Greece	27.4	-115.1	475.2	-151.4	-0.1	982.9	-965.6	0.8	292.1	-679.3	0.9	-21.8	-659
Ireland	-1.6	-28.9	-11	-11	-0.2	-13.1	1470.9	-0.6	-325	1444.5	-9.6	-3.8	1576.9
Italy	7.6	-1781.5	1745.9	-357.8	-1.3	-2618.3	-4820.5	-16.8	-1550.1	-2567	370	-201.2	3127.3
Portougal	-24.3	-449.2	-329	-317.1	-7.2	-727.3	-609.4	-0.3	-105.1	-12.8	-15.4	-173.1	-690.3
Spain	26.3	-1061.8	6029.5	-1181	5.8	-1291.7	112.3	-5.8	901.3	-983.3	33.5	-216.5	621.3
Sweden	-4.9	193	-682	-40.7	-0.7	-856.7	-215.3	-5.2	-31.3	-8.1	-38.1	29.5	-1089.4
The Netherlands	-52.4	-919	260.3	-1190.5	-1.2	2480.7	3706.2	-6.8	1457.6	1861.4	-17.6	20.4	7481.8
UK	-140.5	460.4	-4201.1	-583.3	-1.8	-2165.6	-1953.2	-44.9	-1104.8	-1801.3	-167.7	-684.1	1608.3
CEECs	-12.3	-298.4	-1030.2	-21.3	3.3	-2020.8	533.4	43.5	-760.3	515.6	-117.2	27.6	-1323.3
Rest of the world	309.3	-4798.8	523.3	3931	2.1	10032.3	-7842.6	139.8	-1375.3	-3665.2	-143	-1586	-26170.1
<i>change in normalised balance*</i>													
Austria	2.5	-0.2	0.0	-0.4	0.0	0.0	0.3	0.0	0.0	0.0	1.1	0.0	0.0
Belgium	3.4	0.0	-0.1	-0.1	0.0	-0.1	0.1	0.0	0.0	-0.1	21.0	0.2	0.1
Denmark	-2.9	-0.3	-0.1	-0.2	0.0	0.0	0.2	0.0	-0.3	0.0	-0.9	-0.3	-0.1
Finland	0.0	-0.4	-0.1	0.0	0.0	0.0	0.6	0.0	0.0	-0.1	2.6	0.0	0.0
France	20.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	6.8	0.0	0.0
Germany	1.3	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.3	0.0	0.0
Greece	-3.2	0.3	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	-12.3	0.0	-0.1
Ireland	5.0	0.3	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Italy	-32.9	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	-3.1	0.0	0.1
Portougal	2.4	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	-0.1	7.9	0.0	0.4
Spain	-10.4	0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	4.9	0.0	0.0
Sweden	-0.7	-0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-1.0	0.2	0.0
The Netherlands	15.8	0.2	-0.1	0.0	0.0	-0.1	0.0	0.0	0.1	0.0	-5.9	0.1	0.1
UK	3.3	-0.2	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	23.7	0.1	0.0
CEECs	0.0	0.1	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	-1.8	0.0	0.0
Rest of the world	6.6	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-1.1	0.0	0.0

\* normalised balance is  $(X-M)/(X+M)$  with X=exports and M=imports

Source: GTAP model simulation

**Table 18. Changes in the current account compared to the 2006 baseline - Mtr with decoupling**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
<i>net export</i>													
Austria	-4.4	38.8	-562	-41.6	-0.5	-723.1	135	-7.5	-191.2	-41	-35.7	-5.6	-465
Belgium	-80.9	-899.2	-917.9	-823.3	-1	-1454.1	1862.6	-7	401.4	-261.2	74.8	-72.7	-865.2
Denmark	-2.9	312.8	-342.7	-56.1	-0.6	357.6	5081.2	-2.5	-489.9	1393.4	-19.6	36.9	1741.7
Finland	-10.2	41.9	-256.2	-57.5	0.1	-504.2	230.1	-1.7	-16.6	-4.4	-15.8	-18.5	-506.9
France	-50.3	4989.1	-1195.9	544.9	2.3	-2064	2219.2	-19.9	-1386.8	1615.2	-214.1	1268.7	6385.9
Germany	-51	674.9	-6543.8	-1302.9	-1.8	-5609.3	-2793.4	-64.8	633.7	1029.1	-145.7	502.9	-658.8
Greece	27.4	-115.1	475.2	-151.4	-0.1	982.9	-965.6	0.8	292.1	-679.3	0.9	-21.8	-659
Ireland	-1.6	-28.9	-11	-11	-0.2	-13.1	1470.9	-0.6	-325	1444.5	-9.6	-3.8	1576.9
Italy	7.6	-1781.5	1745.9	-357.8	-1.3	-2618.3	-4820.5	-16.8	-1550.1	-2567	370	-201.2	3127.3
Portougal	-24.3	-449.2	-329	-317.1	-7.2	-727.3	-609.4	-0.3	-105.1	-12.8	-15.4	-173.1	-690.3
Spain	26.3	-1061.8	6029.5	-1181	5.8	-1291.7	112.3	-5.8	901.3	-983.3	33.5	-216.5	621.3
Sweden	-4.9	193	-682	-40.7	-0.7	-856.7	-215.3	-5.2	-31.3	-8.1	-38.1	29.5	-1089.4
The Netherlands	-52.4	-919	260.3	-1190.5	-1.2	2480.7	3706.2	-6.8	1457.6	1861.4	-17.6	20.4	7481.8
UK	-140.5	460.4	-4201.1	-583.3	-1.8	-2165.6	-1953.2	-44.9	-1104.8	-1801.3	-167.7	-684.1	1608.3
CEECs	-12.3	-298.4	-1030.2	-21.3	3.3	-2020.8	533.4	43.5	-760.3	515.6	-117.2	27.6	-1323.3
Rest of the world	309.3	-4798.8	523.3	3931	2.1	10032.3	-7842.6	139.8	-1375.3	-3665.2	-143	-1586	-26170.1
<i>change in normalised balance*</i>													
Austria	2.2	-8.4	-1.5	-11.7	0.0	0.3	-6.7	6.3	0.1	-0.1	2.8	1.1	0.7
Belgium	7.4	-6.6	-0.7	-2.5	-2.3	0.2	-3.2	3.7	1.8	0.6	24.7	1.3	-1.8
Denmark	1.5	-10.7	-0.8	-8.1	0.0	0.4	0.9	1.6	-4.7	-0.4	-1.7	1.5	-0.9
Finland	0.0	-13.9	-0.4	0.0	0.0	1.0	-10.1	2.0	-0.5	2.2	2.6	0.4	-5.1
France	21.3	-1.3	-1.7	-7.0	2.1	2.1	-11.7	11.2	-2.2	4.1	4.9	0.3	1.3
Germany	6.1	-10.9	-0.3	-4.2	5.3	0.8	0.0	0.6	0.9	-0.3	3.3	1.4	-0.3
Greece	-1.8	-11.2	-3.4	-4.7	0.0	2.8	-6.7	6.3	-12.3	1.0	4.9	5.2	1.6
Ireland	12.0	-13.4	-13.3	-5.8	0.0	-0.4	-11.7	10.3	0.7	1.1	-0.2	2.1	1.3
Italy	-19.1	-2.4	-1.8	-4.1	0.0	3.0	-3.0	0.0	-6.4	1.4	-2.4	0.0	-2.2
Portougal	1.9	0.5	-1.0	-0.2	0.0	-0.1	-0.5	6.7	-2.6	-3.5	8.5	-0.3	1.6
Spain	-1.7	-3.7	-2.0	-1.5	-0.2	1.9	-16.3	4.5	-2.2	5.9	4.4	1.2	-1.1
Sweden	2.2	-4.3	-0.3	-1.4	0.0	0.1	-3.2	0.0	-3.0	0.3	-1.0	0.8	-1.8
The Netherlands	20.2	-7.2	2.4	-9.2	0.0	0.3	5.7	0.9	0.6	-0.8	-11.8	0.5	-1.0
UK	5.9	-12.0	-2.9	-6.5	0.0	1.8	-30.8	3.3	-4.2	4.6	38.2	1.1	-0.5
CEECs	-0.1	7.3	1.2	6.1	-0.6	-1.1	9.2	-1.9	0.0	-3.4	-2.7	-0.9	-0.2
Rest of the world	6.5	3.2	1.8	2.3	-0.6	-0.6	5.8	-4.5	0.9	-2.7	-1.8	-0.4	0.5

\* normalised balance is  $(X-M)/(X+M)$  with X=exports and M=imports

Source: GTAP model simulation



**Table 19. Changes in the current account compared to the 2006 baseline - Mtr with decoupling and modulation**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
<i>net export</i>													
Austria	-5.7	20.2	-563.6	-56.2	-0.5	-716.0	55.9	-6.3	-192.0	-40.9	-34.1	-4.7	-442.9
Belgium	-219.7	-1000.0	-888.2	-858.4	-1.1	-1433.5	1696.3	-6.0	443.7	-234.0	216.9	-61.0	-1091.5
Denmark	-3.5	225.9	-343.5	-64.1	-0.6	364.7	5489.9	-2.3	-530.7	1352.5	-19.0	40.4	1672.0
Finland	-11.5	20.4	-249.5	-64.4	0.1	-490.5	150.5	-1.5	-17.5	3.5	-14.9	-18.2	-585.0
France	-46.7	4477.5	-1330.4	371.7	2.7	-1931.6	903.2	-14.9	-1453.2	1907.7	-196.3	1291.3	6806.1
Germany	-65.3	421.3	-6691.4	-1394.7	-1.6	-5511.2	-2917.3	-57.1	672.1	971.4	-139.6	525.3	-726.8
Greece	64.4	-158.9	458.8	-171.5	-0.1	1068.3	-1209.5	1.0	187.9	-650.4	1.9	-19.4	-619.0
Ireland	-1.7	-49.6	-46.6	-12.2	-0.2	-15.0	961.7	-0.3	-326.6	1493.7	-10.5	-1.2	1678.3
Italy	-19.9	-1886.1	1651.0	-441.0	-1.3	-2440.4	-5349.1	-14.9	-1776.8	-2452.6	313.7	-200.8	2757.0
Portougal	-43.1	-491.7	-322.1	-337.2	-7.1	-725.7	-613.9	0.0	-116.9	-26.4	-12.1	-174.0	-642.2
Spain	57.0	-1146.5	5709.8	-1342.9	5.7	-1216.4	-477.5	-4.7	842.0	-846.3	39.0	-210.4	511.0
Sweden	-6.1	165.3	-680.4	-44.5	-0.7	-852.2	-251.0	-4.8	-45.4	-6.8	-38.9	30.3	-1149.2
The Netherlands	-46.0	-1099.8	425.8	-1354.0	-1.2	2485.1	4789.9	-6.3	1489.7	1761.3	-34.3	22.0	7243.7
UK	-200.3	224.7	-4458.9	-660.1	-1.8	-2046.4	-4721.2	-35.8	-1169.4	-1588.5	-96.8	-664.1	1495.6
CEECs	-12.5	-234.9	-1031.7	0.4	3.2	-2061.2	937.1	38.2	-764.0	457.0	-122.5	23.3	-1338.0
Rest of the world	477.9	-3109.3	1253.4	4704.1	1.8	9357.1	-3227.2	116.0	-944.1	-4274.8	-321.3	-1655.9	-25235.9
<i>change in normalised balance*</i>													
Austria	2.2	-8.5	0.7	-12.1	0.0	0.3	-6.8	6.3	0.1	-0.1	2.8	1.1	0.7
Belgium	7.3	-6.7	1.4	-2.6	-2.3	0.2	-3.2	3.7	1.8	0.5	24.7	1.2	-1.8
Denmark	1.5	-10.7	0.6	-8.1	0.0	0.4	0.9	1.6	-4.7	-0.5	-1.7	1.5	-0.9
Finland	0.0	-14.1	0.9	0.0	0.0	1.0	-10.2	2.0	-0.6	2.1	2.6	0.4	-5.0
France	21.1	-1.3	-2.2	-7.0	4.0	2.1	-11.5	11.2	-2.3	4.0	5.1	0.5	1.3
Germany	6.1	-11.0	-0.4	-4.2	5.3	0.8	0.1	0.6	0.9	-0.4	3.5	1.5	-0.2
Greece	-1.8	-11.4	-1.7	-4.8	0.0	2.7	-6.7	6.3	-12.7	1.0	4.9	5.2	1.6
Ireland	12.0	-13.6	-7.9	-5.8	0.0	-0.4	-11.7	10.3	0.7	1.1	-0.2	2.0	1.4
Italy	-19.4	-2.4	-1.9	-4.2	0.0	3.0	-2.9	0.0	-6.4	1.4	-2.4	0.0	-2.2
Portougal	1.9	0.5	1.5	-0.2	0.0	-0.1	-0.6	6.7	-2.7	-3.5	8.5	-0.3	1.6
Spain	-2.5	-3.7	-2.0	-1.5	-0.2	1.9	-16.2	4.5	-2.2	5.9	4.5	1.2	-0.9
Sweden	2.2	-4.3	0.3	-1.5	0.0	0.1	-3.1	0.0	-3.1	0.2	-1.0	0.8	-1.8
The Netherlands	20.2	-7.4	2.8	-9.3	0.0	0.1	5.8	0.9	0.5	-0.9	-11.5	0.5	-0.9
UK	5.9	-12.0	-3.0	-6.5	0.0	1.8	-30.7	3.3	-4.2	4.5	38.2	1.1	-0.4
CEECs	-0.1	7.3	0.7	6.2	-0.6	-1.1	9.3	-1.9	0.1	-3.4	-2.7	-0.8	-0.1
Rest of the world	6.5	3.2	1.4	2.3	-0.4	-0.6	5.8	-4.5	0.9	-2.7	-1.8	-0.4	0.5

\* normalised balance is  $(X-M)/(X+M)$  with X=exports and M=imports

Source: GTAP model simulation

**Table 20. Changes in the current account compared to the 2006 baseline - Mtr with decoupling and enlargement**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
<i>net export</i>													
Austria	-5.6	32.7	-591.9	-56.4	-0.5	-715.7	52.7	-5.2	-186.1	-48.1	-34.1	-27.6	-304.1
Belgium	-209.4	-1002.1	-915.2	-860.4	-1	-1420	1728.4	-5.4	460.5	-252.8	204.1	-91.6	-1067.8
Denmark	-3.4	228.5	-353.6	-65.3	-0.6	367.2	5711.8	-2	-536.1	1322.8	-19.1	19.5	1632.8
Finland	-11.5	18.7	-263.1	-64.2	0.1	-494.5	141.7	-1.4	-17.9	0.6	-14.9	-20.3	-552.4
France	-45.4	4410	-1262.7	374.9	2.5	-1922.6	756.7	-12.4	-1443.6	1777.4	-201	1174.5	6788.6
Germany	-63.2	439.8	-6636.3	-1393.9	-1.6	-5461.7	-2931.1	-51.1	890.1	916.4	-145.2	483.3	-283.6
Greece	63.2	-161.8	599.1	-172.5	-0.1	1104.2	-1263.8	1.3	186.5	-652.9	4	-21.2	-555.2
Ireland	-1.7	-50.8	-70.6	-12.2	-0.1	-16.6	957.1	0	-327.3	1461.3	-10.6	-10.4	1741.9
Italy	-21.6	-1880.6	1956.3	-443	-2.8	-2417.9	-5633.9	-13.6	-1788.4	-2444.4	319.4	-230.1	2890.3
Portougal	-42.8	-491.2	-337	-336.1	-7.1	-724.1	-612.2	0.5	-115.7	-40.8	-13.1	-175.3	-643.6
Spain	55.3	-1144.5	6194.1	-1344.5	5.7	-1213.8	-535.2	-4.2	840.5	-860.1	35.5	-230.1	477.6
Sweden	-6	183.7	-697.7	-45.3	-2	-854.7	-292.2	-4.4	-27.2	-9.7	-39.1	18.9	-1153.6
The Netherlands	-46	-1116.3	538.9	-1385.4	-1.4	2524.9	4716.5	-5.7	1609.9	1673.1	-37.3	-14.2	7617.6
UK	-197.6	272.7	-4455.8	-659.6	-1.8	-2043.6	-4734.4	-33.1	-1167.5	-1616.7	-98.7	-749.1	1755.9
CEECs	-13.8	10.1	-3018.6	1	3.5	-2442.9	779.6	1	-1136.4	1087.9	17.9	1410.7	-1438.3
Rest of the world	471.3	-3385.8	1700.5	4733.4	4.4	9509.4	-2969	135.9	-989	-4564.3	-438.4	-2808.5	-27109.5
<i>change in normalised balance*</i>													
Austria	2.3	-3.3	0.8	-11.5	0.0	1.5	-7.3	14.0	4.3	-1.1	2.8	-19.7	5.9
Belgium	9.1	-6.9	0.8	-2.5	0.0	0.9	-2.9	4.6	2.4	0.0	23.3	-2.2	-1.6
Denmark	5.6	-10.4	-0.7	-8.4	0.0	0.5	1.4	9.1	-4.1	-1.9	-3.0	-8.2	-1.5
Finland	0.0	-15.6	-0.4	0.0	0.0	0.6	-11.4	3.2	-0.9	1.3	2.6	-5.0	-2.1
France	21.5	-1.4	-0.8	-6.8	2.1	2.4	-12.8	19.3	-1.7	2.3	3.2	-1.5	1.2
Germany	8.6	-10.3	2.4	-3.9	5.3	2.2	1.2	1.2	5.2	-1.1	1.2	-1.6	1.4
Greece	-2.3	-12.5	4.1	-5.0	0.0	3.3	-6.9	14.4	-13.0	0.6	13.5	3.0	5.1
Ireland	12.0	-14.2	-13.4	-5.8	66.7	-0.7	-11.8	21.4	0.6	0.9	-0.2	-4.6	2.1
Italy	-20.4	-2.6	1.7	-4.3	0.0	4.0	-3.9	0.0	-6.7	1.0	-4.3	-9.1	-1.6
Portougal	2.0	0.4	-0.6	-0.2	0.0	0.0	-0.6	17.8	-2.5	-7.4	5.9	-0.8	1.5
Spain	-2.9	-4.2	-0.7	-1.5	-0.2	2.1	-17.8	5.4	-2.3	5.7	1.4	-3.8	-1.2
Sweden	2.3	-2.1	-0.1	-1.6	0.0	-0.1	-5.7	0.0	1.0	-0.4	-1.1	-12.1	-1.7
The Netherlands	20.0	-7.9	4.5	-9.6	-6.8	0.3	5.3	4.6	2.3	-2.4	-13.8	-11.1	0.0
UK	5.9	-9.4	-2.4	-6.4	0.0	2.0	-30.6	5.0	-4.0	3.7	37.0	-5.0	0.5
CEECs	0.5	30.3	-26.2	6.3	-17.4	-5.5	-4.3	-82.0	-7.5	-8.8	72.2	44.6	9.0
Rest of the world	6.4	2.7	2.3	2.4	3.3	-0.4	6.1	0.2	0.8	-4.1	-3.0	-6.8	-0.5

\* normalised balance is  $(X-M)/(X+M)$  with X=exports and M=imports

Source: GTAP model simulation

**Table 21. Changes in the current account compared to the 2006 baseline - Mtr with decoupling, enlargement and modulation**

	paddy rice	cereals	fruits and vegetables	oilseeds	sugar cane & beet	other primary	livestock	raw milk	vegetable oils	dairy products	processed rice	processed sugar	other food products
<i>net export</i>													
Austria	-5.6	32.9	-565.2	-56.9	-0.5	-716.1	51.6	-5.2	-186.3	-48.2	-34.1	-27.5	-303
Belgium	-209.4	-1002.7	-853.6	-860.6	-1	-1420.6	1730.4	-5.4	460.6	-253.1	204.7	-92	-1070.7
Denmark	-3.4	228.7	-344.6	-65.3	-0.6	367.8	5717.8	-2	-536.6	1323.3	-19.1	19.7	1634.8
Finland	-11.5	18.6	-250.1	-64.4	0.1	-494.8	141.1	-1.4	-18.1	0.4	-14.9	-20.3	-551.8
France	-45.7	4406.6	-1288.9	374.9	2.8	-1922.1	780.7	-12.4	-1445.4	1773.6	-200.4	1185.8	6811.3
Germany	-63.3	439.6	-6622.6	-1394.9	-1.6	-5463.1	-2914.6	-51.1	891	914.5	-145	486.1	-273
Greece	63.3	-162.2	611.2	-173	-0.1	1104.7	-1264.4	1.3	183.9	-653.3	3.9	-21.2	-554.9
Ireland	-1.7	-51.2	-47.6	-12.2	-0.1	-16.7	957.6	0	-327.5	1461.5	-10.7	-10.5	1747.4
Italy	-22.2	-1882	1917.8	-443.7	-2.8	-2418.4	-5630.5	-13.7	-1790.2	-2446.6	321.1	-230	2900.1
Portougal	-42.8	-491.3	-319.4	-336.5	-7.1	-724.6	-612.7	0.5	-116.4	-41	-13.1	-175.2	-644.5
Spain	53	-1145.7	6138.3	-1346.2	5.7	-1214.5	-530.9	-4.2	841.2	-861	35.7	-229.8	494.4
Sweden	-6	184.2	-680.6	-45.4	-2	-854.8	-291.9	-4.4	-27.5	-9.9	-39.1	18.9	-1152.8
The Netherlands	-46.1	-1119.8	552.1	-1386.2	-1.4	2506.4	4740.1	-5.7	1605.7	1671.4	-37	-14.2	7648.8
UK	-197.7	274.4	-4450.6	-660	-1.8	-2043.9	-4727.7	-33.1	-1167.8	-1618.4	-98.8	-748.8	1764.9
CEECs	-13.9	-4.5	-2867.6	-1.8	3.5	-2456.1	766	0.9	-1141.8	1087.4	17.7	1403.8	-1408.5
Rest of the world	470.6	-3376.8	1482.5	4739.7	4.5	9548.3	-2931.3	136.1	-984.9	-4564.5	-436	-2795.4	-27086.9
<i>change in normalised balance*</i>													
Austria	2.3	-3.3	3.0	-11.9	0.0	1.5	-7.4	14.0	4.3	-1.1	2.8	-19.6	5.9
Belgium	9.1	-7.0	2.8	-2.6	0.0	0.9	-2.9	4.6	2.4	0.0	23.3	-2.2	-1.6
Denmark	5.6	-10.4	0.6	-8.4	0.0	0.5	1.4	9.1	-4.1	-1.9	-3.0	-8.1	-1.5
Finland	0.0	-15.6	0.9	0.0	0.0	0.6	-11.5	3.2	-1.0	1.3	2.6	-5.0	-2.0
France	21.3	-1.4	-1.3	-6.8	4.9	2.4	-12.6	19.3	-1.7	2.2	3.4	-1.2	1.3
Germany	8.6	-10.3	2.2	-3.9	5.3	2.2	1.3	1.2	5.2	-1.1	1.4	-1.5	1.5
Greece	-2.3	-12.7	5.1	-5.1	0.0	3.3	-6.9	14.4	-13.3	0.6	13.1	3.0	5.1
Ireland	12.0	-14.5	-8.0	-5.8	66.7	-0.7	-11.8	21.4	0.6	0.9	-0.2	-4.7	2.2
Italy	-20.8	-2.6	1.3	-4.3	0.0	4.1	-3.8	0.0	-6.7	1.0	-4.2	-9.0	-1.5
Portougal	2.0	0.4	1.9	-0.2	0.0	0.0	-0.6	17.8	-2.7	-7.4	5.9	-0.7	1.5
Spain	-3.7	-4.2	-0.7	-1.5	-0.2	2.1	-17.6	5.4	-2.3	5.6	1.5	-3.7	-1.1
Sweden	2.3	-2.1	0.5	-1.6	0.0	-0.1	-5.6	0.0	0.9	-0.4	-1.1	-12.1	-1.7
The Netherlands	20.0	-8.1	4.7	-9.6	-6.8	0.1	5.4	4.6	2.2	-2.4	-13.5	-11.1	0.1
UK	5.9	-9.3	-2.6	-6.4	0.0	2.0	-30.5	5.0	-4.0	3.7	37.0	-4.9	0.6
CEECs	0.4	29.6	-24.8	5.6	-17.4	-5.7	-4.5	-82.6	-7.7	-8.8	72.1	44.5	9.2
Rest of the world	6.3	2.7	1.8	2.4	3.5	-0.4	6.2	0.3	0.8	-4.1	-3.0	-6.7	-0.5

\* normalised balance is  $(X-M)/(X+M)$  with X=exports and M=imports

Source: GTAP model simulation

**Table 22. Welfare changes compared to the 2006 baseline in million 1997 US \$**

	Mtr without decoupling			Mtr with decoupling			Mtr with decoupling and modulation			Mtr with decoupling and enlargement			Mtr with decoupling, enlargement and modulation		
	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*
Austria	-7.2	5.0	-1.8	108.0	-27.2	62.1	113.7	-19.6	76.4	202.7	89.3	292.7	208.1	97.3	307.2
Belgium	-25.1	-51.8	-76.6	148.3	-100.6	37.9	163.4	-97.2	56.8	214.2	-269.2	-66.7	228.7	-265.8	-48.5
Denmark	-5.2	3.4	-4.0	147.9	341.3	499.6	150.7	346.4	507.1	182.0	447.1	622.2	184.7	453.4	630.6
Finland	-7.2	3.7	-4.1	120.7	-25.2	112.6	126.6	-21.3	122.5	129.9	12.6	147.6	135.9	16.6	157.5
France	-25.9	27.5	0.7	2281.3	508.2	2868.2	2287.1	517.1	2882.8	2341.6	537.9	2922.1	2345.6	548.6	2936.3
Germany	-21.2	6.9	-14.8	809.0	-374.4	473.5	817.1	-338.6	517.8	1519.0	1054.8	2546.0	1524.7	1092.4	2588.9
Greece	-7.3	11.4	8.9	654.4	-304.4	64.5	663.5	-307.5	74.2	676.9	-245.6	205.9	685.2	-252.1	210.2
Ireland	-7.6	2.2	-5.7	695.7	-89.5	677.0	700.8	-88.8	681.4	703.1	-132.9	637.2	708.0	-132.3	641.3
Italy	-22.3	-29.3	-50.0	810.5	-765.9	124.0	821.0	-776.4	123.9	1112.8	-45.3	1056.2	1119.8	-63.8	1044.7
Portougal	7.1	-1.1	6.6	254.3	-229.3	-35.7	262.4	-225.8	-22.9	251.7	-277.6	-86.2	259.9	-273.6	-72.8
Spain	-8.1	2.2	-5.5	1104.0	-138.7	931.4	1117.9	-173.4	910.9	1166.1	62.9	1200.7	1180.1	15.7	1167.2
Sweden	-8.2	4.4	-4.4	142.8	-47.3	121.8	146.8	-40.9	131.8	180.4	-7.2	181.3	184.0	-0.6	191.1
The Netherlands	-9.2	-2.6	-13.0	211.8	202.0	434.8	222.1	199.5	441.6	420.4	387.4	791.5	428.9	381.2	793.0
UK	-24.8	5.1	-19.0	5862.7	-1484.5	4234.2	5862.9	-1461.6	4258.4	5906.3	-1431.5	4331.9	5905.8	-1406.2	4357.7
total EU15	-177.7	-12.1	-186.4	13372.3	-2546.8	10608.6	13308.4	-2528.3	10551.5	15030.7	162.4	14778.9	14953.1	161.0	14685.1
CEECs	1.7	-0.2	1.8	-69.8	114.9	36.4	-69.4	116.3	38.9	681.8	801.0	2000.5	796.0	833.5	2160.5
Rest of the world	10.2	12.3	18.5	-998.0	2424.7	1644.7	-986.3	2404.6	1649.0	-1602.6	-979.3	-2708.2	-1592.7	-1011.6	-2726.3

\* includes welfare change due to the difference between savings and invetment in single countries

Source: GTAP model simulation

**Table 23. Welfare changes compared to the 2006 baseline** as % of public expenditure for agriculture

	Mtr without decoupling			Mtr with decoupling			Mtr with decoupling and modulation			Mtr with decoupling and enlargement			Mtr with decoupling, enlargement and modulation		
	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*	allocative efficiency	terms of trade	Total*
Austria	-0.90	0.6	-0.2	13.8	-3.5	7.9	38.0	-6.6	25.6	26.5	11.7	38.3	74.0	34.6	109.2
Belgium	-1.93	-4.0	-5.9	11.6	-7.9	3.0	20.6	-12.3	7.2	17.1	-21.5	-5.3	29.7	-34.6	-6.3
Denmark	-0.33	0.2	-0.3	9.9	22.8	33.4	14.9	34.2	50.0	12.3	30.2	42.1	18.6	45.6	63.4
Finland	-0.86	0.4	-0.5	15.0	-3.1	14.0	39.3	-6.6	38.0	16.1	1.6	18.3	42.3	5.2	49.0
France	-0.23	0.2	0.0	20.6	4.6	25.8	21.5	4.9	27.2	21.2	4.9	26.5	22.2	5.2	27.8
Germany	-0.41	0.1	-0.3	15.8	-7.3	9.2	17.6	-7.3	11.2	30.2	20.9	50.5	33.5	24.0	56.8
Greece	-0.29	0.5	0.4	26.3	-12.2	2.6	33.1	-15.3	3.7	27.2	-9.9	8.3	34.2	-12.6	10.5
Ireland	-0.48	0.1	-0.4	45.1	-5.8	43.9	66.3	-8.4	64.5	45.6	-8.6	41.3	66.9	-12.5	60.6
Italy	-0.37	-0.5	-0.8	13.3	-12.6	2.0	14.6	-13.8	2.2	18.3	-0.7	17.4	20.0	-1.1	18.7
Portugal	0.83	-0.1	0.8	30.2	-27.3	-4.2	73.5	-63.2	-6.4	29.9	-33.0	-10.3	72.9	-76.7	-20.4
Spain	-0.12	0.0	-0.1	17.1	-2.1	14.4	18.7	-2.9	15.2	18.1	1.0	18.6	19.8	0.3	19.5
Sweden	-1.14	0.6	-0.6	20.5	-6.8	17.5	69.2	-19.3	62.1	26.1	-1.0	26.2	88.8	-0.3	92.2
The Netherlands	-0.81	-0.2	-1.1	19.0	18.1	39.0	35.2	31.6	70.0	38.0	35.0	71.6	68.9	61.3	127.5
UK	-0.16	0.0	-0.1	38.7	-9.8	28.0	40.0	-10.0	29.1	39.1	-9.5	28.7	40.4	-9.6	29.8
total EU15	-0.32	0.0	-0.3	24.3	-4.6	19.3	27.8	-5.3	22.1	27.4	0.3	27.0	31.5	0.3	30.9
CEECs	0.15	0.0	0.2	-5.9	9.7	3.1	-5.9	9.8	3.3	3.3	3.9	9.7	4.5	4.7	12.2
Rest of the world	0.04	0.1	0.1	-4.0	9.8	6.7	-4.0	9.8	6.7	-6.6	-4.0	-11.1	-6.5	-4.1	-11.2

\* includes welfare change due to the difference between savings and investment in single countries

Source: GTAP model simulation

