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The Agenda 2000 CAP Reform in the WTO Context: Distortion Effects of Compensatory Payments and Area Set-aside Requirements

INTRODUCTION

Although the immediate consequences of the Uruguay Round Agreement on Agriculture (URAA) on world agriculture should only be modest, its significance should not be underestimated. It places agriculture on the agenda of the next multilateral negotiations of the World Trade Organization (WTO) and it defines a negotiation framework in the form of three main areas: export competition, market access and internal support (Vanzetti, 1996). Recognizing that the long-term objective of substantial progressive reductions in support and protection resulting in fundamental reform is a continuing process, Article 20 of the URAA includes a commitment to engage in a new round of multilateral agricultural negotiations before the end of 1999. The so-called Millennium Round (MR) will use the negotiation framework of the Uruguay Round (UR) and the proponents of reform, that is the Cairns group and the United States (USA), are likely push for further commitments in terms of export subsidy cuts, market access improvement and internal support reductions.

The URAA commitments to reduce domestic support by 20 per cent will impose no adjustment needs on the Common Agricultural Policy (CAP) because of the accommodating treatment of Aggregate Measure of Support (AMS) reduction, in particular the exclusion of 1992 CAP reform compensatory payments from AMS computation and their inclusion in the so-called 'blue box'.[1] But it is likely that the MR will expose these blue box payments to close scrutiny; firstly, because the US FAIR Act of 1996 now leaves the European Union (EU) alone in sheltering its direct payments from challenge by means of the blue box (Josling and Tangermann, 1999) and, secondly, because most countries have been able to reduce their amber support levels much more than required under the URAA, suggesting that further internal support reductions are economically and politically feasible (USDA, 1998).

The Agenda 2000 CAP reform adopted in Berlin in March 1999 will deepen (cereals and beef) and extend (dairy products) the 1992 MacSharry reform

*INRA-ESR, Rennes, France. For this research, the authors have benefited from financial support from the European Commission under the FAIR5-CT97-3481 project, which is gratefully acknowledged. However, the opinions expressed are those of the authors and are not intended to reflect those of the European Commission.

through further shifts from price support to direct payments. Even if the EU does not assign weights to the various factors which have motivated this new reform of the CAP, it appears that it is mainly designed to cope with the constraints of the URAA, the preparation of the next WTO round and the EU enlargement to Central and Eastern European countries (Desquilbet *et al.*, 1999). The EU, however, makes no proposals to change existing world trade commitments and this suggests that what is proposed is as far as the EU is prepared to go in negotiation (Marsh, 1998).[2] In particular, in a WTO context, the Agenda 2000 reform appears to be based on the premise that blue box exemptions will be extended (Tielu and Roberts, 1998).

According to Article 1 of Annex 2 of the URAA, domestic support policies for which exemption from the reduction commitments is claimed 'shall meet the fundamental requirement that they have no, or at most minimal, trade distortion effects or effects on production' (Point 1 of Annex 2 of the URAA). However, this fundamental requirement has not really been used to determine whether specific policy instruments should be in the green box. In practice, policy measures have been considered as amber, blue or green according to Point 5 of Article 6 (which defines blue box direct payments under production-limiting programmes) and Points 2 to 13 of Annex 2 (which define green box 'government service programmes'). In particular, Point 6 of Annex 2 defines five criteria that direct payments to producers shall meet to be classified as decoupled income support measures. This box eligibility process has been criticized. For instance, the USDA (1998) notes that a problem of interpretation arises in implementing the URAA because of the undefined fundamental criteria for the green box that the reported programmes be no more than minimally distorting of production and trade. Consequently, 'some programmes reported in the green box could satisfy the policy-specific criteria for being green and yet also could have significant production effects with great enough financing and programme participation'. In the same vein, Tielu and Roberts (1998) state that, 'although the green box measures are supposed to be minimally production distorting, there could be substantial scope for reorienting support towards the measures in ways that could markedly increase production'. The purpose of this paper, then, is to analyse to what extent the Agenda 2000 CAP (with emphasis on cereals, oilseeds and protein crops) represents a further step in the direction of a more decoupled and less distorting internal support policy, firstly in terms of URAA green box criterion eligibility and secondly, in terms of distortion effects on production.

URAA GREEN BOX ELIGIBILITY OF AGENDA 2000 COMPENSATORY PAYMENTS

In this section, we only discuss the green box eligibility of compensatory payments granted in the arable crops sector (cereals, oilseeds and protein crops) and in the beef sector. As they are defined in the Berlin agreement, these compensatory payments satisfy the two basic criteria that domestic support policies shall meet to be included in the green box; namely, (a) they do not

involve transfers from consumers and they are publicly funded, and (b) they do not have the effect of providing price support to producers.

Let us now analyse the characteristics of these compensatory payments in the light of the five criteria of Point 6 of Annex 2 of the URAA, which defines decoupled income support. They clearly satisfy the first criterion that eligibility is determined by clearly-defined criteria, here the status as a producer. However, they do not fully conform to the four other criteria. Criterion 2, which states that 'the amount of payments shall not be related to, or based on, the type or volume of production undertaken by the producer in any year after the base period', is clearly not fulfilled because area and headage payments differ. Criterion 3, which lays down that 'the amount of payments shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period', might not be respected if the possibility, introduced in the Agenda 2000 CAP reform, to alter direct aid payments in the light of production, productivity and market conditions is effectively applied. Criterion 4 stipulates that 'the amount of payments shall not be related to, or based on, the factors of production employed in any year after the base period'. It is clearly not satisfied because the amount of direct aids received by a producer depends on cultivated area and/or the number of bovine animals. Criterion 5 requires that 'no production shall be required in order to receive payments'. It also is not satisfied because the aids remain tied to the obligation of producing certain crops and/or bovine animals.

The cross-compliance requirements included in the Berlin agreement are not sufficient to switch compensatory payments for price support cuts from the blue box to the green box by considering them as payments under environmental programmes, in accordance with Point 12 of Annex 2. As they are currently defined, direct aids do not fulfil conditions (i) and (ii) of this point because, firstly, they are not part of a clearly defined government environmental or conservation programme and, secondly, the amount of payment is not limited to the extra costs or loss of income involved in complying with the government environmental or conservation programme. In addition, it is unlikely that many EU member states will introduce cross-compliance.

The mechanism of Agenda 2000 compensatory payments will probably be contested in the MR (Swinbank, 1999). However, the EU could rightfully argue that they achieve a (slightly) greater degree of decoupling relative to the 1992 CAP area compensatory payments. Firstly, compensatory payments for arable crops are now non-crop specific (with the 'minor' exceptions of protein crops and durum wheat). Secondly, the set-aside is remunerated at the same rate for land in cereals and oilseeds, so that a farmer may decide to set aside and to draw the common subsidy if this option is more profitable than production. This implies that the fifth criterion of Article 6 is now respected, at least as far as COP (cereals, oil and protein) crops and producers are concerned. Thirdly, the amount of direct aids available to producers is constrained by the historical base area in the arable crops sector and by the density factor and various ceilings in the beef sector. These ceilings have been reduced in Berlin, making them more restricting than in the past. As a result, the fourth criterion of Article 6 is now 'more' satisfied since the amount of direct aids for beef

producers is less dependent on current livestock units and more dependent on the ceilings.

Finally, it is worth mentioning that the URAA definition of decoupled income support is somewhat fluid. Let us consider, for example, criterion 3 of Article 6 of Annex 2. The Agenda 2000 reform reserves the right to alter direct aid payments in the light of production, productivity and market conditions. This possibility is clearly introduced to avoid the repetition of the overcompensation which occurred following the 1992 reform. The EU could rightfully argue that the mechanism of reducing the level of compensatory payments if market prices are better than expected is a (second-best) way to reduce the distortionary effects of compensatory payments. Of course, the reasoning holds only if these compensatory payments are not increased when market prices are lower than expected.

PRODUCTION IMPACTS OF AGENDA 2000 COMPENSATORY PAYMENTS AND SET-ASIDE REQUIREMENTS

Several studies have already analysed the likely consequences of the Agenda 2000 CAP reform on market equilibria, agricultural incomes and budgetary costs (for example, FAPRI-UMC, 1999; Stolwijk and Merbis, 1999; USDA, 1999). Not all studies agree that the new policy is more decoupled and less distorting than the 1992 CAP. Differences arise because different choices are made concerning the base year/reference scenario against which the Agenda 2000 experiment is compared, alternative world price data are used, some studies have explicit as against implicit modelling of policy instruments, and there is dispute about whether or not changes in support prices are assumed to be fully transmitted to market prices.

A decomposition of effects on production and consumption is necessary to assess the degree of decoupling/distortion of the whole Agenda 2000 package and of each instrument. Cahill (1997) has performed this decomposition for the 1992 CAP. His results suggest that the 1992 compensatory payments are effectively fully decoupled for some crops (wheat, rapeseed and soybeans), but only partially decoupled from production in the case of coarse grains and sunflower. Moro and Sckokai (1998) have used the Cahill methodology to evaluate the degree of decoupling of the 1992 CAP in Italy. Their results suggest that the degree of decoupling of the whole package varies as a function of market price changes and that for some combinations of prices the whole can even be considered as fully decoupled. Of course this does not mean that the 1992 compensatory payments are decoupled per se. In the case of France, Guyomard *et al.* (1996) have shown that the 1992 compensatory payments have only small effects on production and that the package is to a large extent 'neutral' in so far as the effects of 'own crop' compensatory payments are offset by cross-compensatory payments on substitutable crops. Their results are conditional on the fact that the total area in COP crops is constrained to be equal to the historical base area.

This section follows Guyomard *et al.* (1996) in developing an analytical framework allowing estimation of the effects of the new instrumentation of the

CAP (price cuts, compensatory payments and land set-aside schemes) on crop area allocation, supply and yields. The model distinguishes seven crops (soft wheat, barley, maize, other coarse grains, rapeseed, sunflower seed and field peas). It is applied to France using the Maximum Entropy (ME) approach with parameter calibration to reproduce the situation of the reference year (1997). The model is briefly described in the Annexe.

Experiment design

Three experiments are performed. In the first (no area compensatory payments and no mandatory set-aside), crop market prices are assumed unchanged at 1997 levels, area compensatory payments are suppressed and the mandatory set-aside is set to zero. Experiment I allows us to measure the effects on production of the package of 1992 area direct payments, including the provision that professional producers of COP crops (that is, those having an area sufficient to grow 92 tonnes of cereals, which would be about 20 hectares, depending on region) receive these arable area payments only if they set aside part of their arable land. In the second experiment (Agenda 2000), policy measures adopted in Berlin in March 1999 are implemented. Market price reductions for cereals are assumed lower than corresponding support price cuts. They are thus decreased by 5 per cent for wheat and 7 per cent for barley, maize and other coarse grains (FAPRI-UMC, 1999). Market prices of oilseeds and protein crops are assumed unchanged at their 1997 levels. Compensatory payments are increased by 16 per cent for all the cereals, while they are decreased by 32 per cent for oilseeds and by 7 per cent for protein crops. The set-aside requirement corresponds to an increase of 2.2 per cent in land in COP crops. In the third experiment (Agenda 2000 without area compensatory payments and no mandatory set-aside) market price changes of the second experiment are applied. Comparing experiments II and III allows us to evaluate the degree of decoupling of the package of Agenda 2000 compensatory payments and set-aside requirements. Experiment results are shown in Table 1 (land area allocation) and Table 2 (output supply).

Experiment results

Let us first consider experiment 1. Although the compulsory set-aside rate is fixed to zero, total cultivated area in COP crops is lower than the total base area (12.458 million hectares compared with 12.536 million). There is still land left in fallow on a voluntary basis (78 000 hectares). This suggests that the total base area is not binding or, in other words, that it is not profitable to devote all the predetermined area corresponding to the base area to the seven COP crops. This first experiment leads to an increase by 6.9 per cent in cultivated land relative to 1997 (Table 1). The area increase is unequally distributed among the various crops, the area under cereals increasing by much larger percentages than the area under oilseeds. This outcome is directly linked to the fact that compensatory payments per hectare were initially much higher for oilseeds than for cereals. The first experiment leads to different supply

TABLE 1 *Experiment results: impacts on land allocation (1000 hectares, changes in percentages in parentheses)*

	Base levels	Current decoupling (I)	Agenda 2000 (II)	Agenda 2000 decoupling (III)	(III) – (I)	(III) – (II)
Wheat	4 844	5 237	4 992	5 156	–81	+164
		(+8.12)	(+3.07)	(+6.45)	(–1.55)	(+3.28)
Barley	1 690	1797	1 735	1 780	–17	+45
		(+6.34)	(+2.67)	(+5.30)	(–0.95)	(+2.59)
Maize	1 857	1 928	1 887	1 893	–35	+6
		(+3.83)	(+1.58)	(+1.90)	(–1.82)	(+0.32)
Other cereals	794	976	858	934	–42	+76
		(+22.95)	(+8.12)	(+17.67)	(–4.30)	(+8.86)
Rapeseed	988	995	965	994	–1	+29
		(+0.75)	(–2.36)	(+0.60)	(–0.10)	(+3.01)
Sunflower seed	875	884	847	884	0	+37
		(+1.08)	(–3.17)	(+1.12)	(0)	(+4.37)
Field peas	607	641	627	642	+1	+15
		(+5.17)	(+3.27)	(+5.72)	(+0.16)	(+2.39)
Cultivated land	11 655	12 458	11 911	12 283	–175	+372
		(+6.89)	(+2.20)	(+5.39)	(–1.40)	(+3.12)
Set-aside land	881	78	625	253	+175	–372
		(–91.15)	(–29.00)	(–71.28)	(+224.35)	(–59.52)
Total land	12 536	12 536	12 536	12 536	0	0

TABLE 2 *Experiment results: impacts on production (1000 tonnes, changes in percentages in parentheses)*

	Base levels	Current decoupling (I)	Agenda 2000 (II)	Agenda 2000 decoupling (III)	(III) – (I)	(III) – (II)
Wheat	32 970	35 641	33 703	34 815	–826	+1112
		(+8.10)	(+2.22)	(+5.60)	(–2.32)	(+3.30)
Barley	10 126	10 552	10 204	10 381	–171	+177
		(+4.21)	(+0.77)	(+2.52)	(–1.62)	(+1.73)
Maize	16 832	17 567	16 997	17 058	–509	+61
		(+4.36)	(+0.98)	(+1.34)	(–2.90)	(+0.36)
Other cereals	2 618	3 303	2 783	3 068	–235	+285
		(+26.15)	(+6.31)	(+17.20)	(–7.11)	(+10.24)
Rapeseed	3 495	3 523	3 404	3 516	–7	+112
		(+0.81)	(–2.61)	(+0.60)	(–0.20)	(+3.29)
Sunflower seed	1 995	2 031	1 890	2 033	+2	+143
		(+1.80)	(–5.27)	(+1.88)	(+0.10)	(+7.57)
Field peas	3 055	3 187	3 131	3 187	0	+56
		(+4.32)	(+2.48)	(+4.32)	(0)	(+1.79)

increases across crops (Table 2). The supply of other coarse grains rises by the most (26.6 per cent) while that of rapeseed rises least (0.8 per cent). From the tables it can be deduced that yields are not very sensitive to the removal of area compensatory payments and compulsory set-aside requirements.

Experiment I shows that the whole package of 1992 CAP compensatory payments, including the provision that these direct aids are contingent upon idling a certain proportion of land area for professional producers, leads to production decrease for the seven COP crops considered here relative to a regime where both area compensatory payments and compulsory set-aside requirements were removed. Of course this result is conditional on the mandatory set-aside rate applied in the 1997 reference year.

To a large extent, experiment II results are consistent with those of the FAPRI-UMC (1999). Total area under COP crops increases by 2.2 per cent relative to the 1997 base (11.911 and 11.655 hectares, respectively). However, the whole Agenda 2000 has differential impacts for the seven crops considered here. The four cereals and field peas are favoured (increased area and supplies) while the two oilseeds are at a disadvantage (area and supplies drop). For the four cereals and field peas the increase, in percentage terms, in planted area is higher than that in supply, indicating that yields decrease relative to 1997.

In experiment III, market price reductions are applied but there are neither area compensatory payments nor compulsory set-aside rate requirements. In this case land left in fallow is still positive (253 000 hectares). Total land under COP crops increases by 5.4 per cent relative to the 1997 base (12.283 million hectares and 11.655 million, respectively). This change is unequally distributed among the seven crops, the area under other coarse grains increasing the most (17.7 per cent) with the rapeseed change being smallest (0.6 per cent). This experiment also has differential impacts on production by favouring the supply of cereals and field peas to a much greater extent than oilseeds.

In the context of the decoupling/distortion issue surrounding the Agenda 2000 reform, it is interesting to compare experiments II and III (last column of Tables 1 and 2). Relative to experiment II, the third experiment leads to (a) an increase in total cultivated COP land by 3.1 per cent (b) an increase in area allocated to each crop (from 0.3 per cent in the case of maize to 8.9 per cent for other coarse grains) and (c) a production increase for each of the seven crops (from 0.4 per cent for maize to 10.2 per cent for other coarse grains). It can be concluded that the whole Agenda 2000 package has less distortionary effects than a scenario with price cuts not being compensated by area direct payments and without compulsory set-aside requirements. Of course this conclusion is conditional on the fact that land left in fallow on both a mandatory and voluntary basis decreases in experiment III relative to the 1997 base year.

CONCLUSIONS

Strengthening internal support disciplines is very likely to be a key component of the multilateral agricultural negotiations of the Millennium Round. The Cairns group considers that insufficient progress was made during the Uruguay

Round, while the blue box exemption is now less useful than in 1994 from a US perspective. The Agenda 2000 reform does not go far enough for the modified area compensation payments to be included in the green box. However, the EU can justifiably argue that the whole Agenda 2000 package (at least for COP crops) is less production and trade distorting than the 1992 CAP. This is due to the fact that area compensatory payments are granted in conjunction with compulsory set-aside requirements. Since professional producers must set aside a percentage of their planted area, the ultimate impact on production and trade will crucially depend on the amount of land going into set-aside. At this stage it is important to remember that the Agenda 2000 requirement has a base level of 10 per cent. However, the Council of Ministers can vary the level to be applied annually.

More generally, the analysis shows that the decoupling/distortion issue should not be addressed by considering each instrument independently from other policy measures. A policy is a package of measures. Millennium Round discussions of the internal support dossier will begin sensibly only if each country recognizes that the rules should be defined in relation to the effects on trade of the whole package, rather than by picking off separate policy provisions. That would be an improvement on the way in which the Uruguay Round negotiators operated when defining the items for inclusion in the various boxes.

NOTES

[1]Domestic policies considered to have no or minimal trade distortion effects are not subject to reduction commitments. In addition to these green box policies, production-limiting direct payments are also exempt from inclusion in the AMS. Examples of blue box instruments are 1992 CAP reform compensatory payments in the EU and 1990 FACT Act deficiency payments in the USA.

[2]Strictly speaking, the comments apply to the European Commission (EC) proposals of 1997 and 1998, but they seem equally applicable to the reform finally adopted in Berlin in 1999.

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ANNEXE: MAIN CHARACTERISTICS OF THE MODEL

The complete structure of the model is detailed in Gohin *et al.* (1999). The main characteristics that must be underlined in the context of this paper are as follows. The model is a static non-linear programming model which describes the behaviour of French producers of COP (cereals, oilseeds and protein) crops. It is benchmarked to data for 1997. Producers choose area allocation, output supply and yields per hectare by maximizing their profit subject to market and technical constraints. These two types of constraints are easily handled by the use of a programming model. In particular, the main instruments of the Common Market organization for arable crops, that is, intervention prices, direct aids to cultivated land, direct aids to land left in fallow, set-aside commitments, base areas and so on are explicitly taken into account. As a result, the model is particularly well suited to simulate the effects of reforms in the arable crops sector. One original feature of the model is the calibration process of behavioural parameters on the basis of the Maximum Entropy (ME) approach. The ME approach is increasingly used in agricultural economics because it makes it possible to solve ill-posed problems like ours when the number of parameters is greater than the number of observations.

Seven COP crops are considered: soft wheat, barley, maize, an aggregate for other cereals, rapeseed, sunflower seed and field peas. The model calibrated with ME duplicates the 1997 reference year.