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**Norway: Shadow WTO Agricultural Domestic
Support Notifications**

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CONFERENCE PROGRAM

Improving WTO Transparency: Shadow Domestic Support Notifications

Measurement Issues and Analysis for Eight Countries—
European Union, United States, Japan, Norway, Brazil, China, India and the Philippines
<http://www.ifpri.org/events/conferences/2008/20080314.asp>

Friday, March 14

- 9:00-10:00 An Overview of WTO Domestic Support Notifications
David Orden
Discussion Opener: Lars Brink
- 10:00-11:10 European Union
Tim Josling and Alan Swinbank
Discussion Opener: Erling Vårdal
- Coffee Break
- 11:30-12:40 United States
David Blandford and David Orden
Discussion Opener: Munisamy Gopinath
- Lunch
- 1:30-3:30 Brazil
André Nassar and Diego Ures
China
Fuzhi Cheng
Discussion Opener (both papers): Caesar Cororaton
- Afternoon Break
- 3:45-5:45 India
Munisamy Gopinath
Philippines
Caesar Cororaton
Discussion Opener (both papers): Yoshihisa Godo

Saturday, March 15

- 9:00-11:00 Japan
Yoshihisa Godo
Norway
Erling Vårdal
Discussion Opener (both papers): André Nassar
- 11:15-12:30 Wrap Up

ABSTRACT

As a result of the Uruguay round, Norway was committed to reducing its domestic support for agriculture, in particular its aggregate measurement of support (AMS), which was to be reduced by 20 percent. We show that Norway has complied with its WTO commitments. However, Norway's AMS and total support have remained stable during 1995-2007, implying that the reduction commitment amounted to no more than reducing the "water under" an inflated AMS bound rate. Thus, the reductions in domestic support have neither affected agricultural policy nor the programs implemented. In fact, Norway has even managed to expand agricultural output relative to the 1986-1988 base upon which agricultural reforms are measured under the Uruguay round agricultural agreement.

We analyze the implications of the proposed modalities for reduction commitments on agriculture under the Doha round of WTO negotiations in the Norwegian context. Simulation modeling is conducted to examine the consequences for the Norwegian agricultural sector based on the proposed reduction commitment scenarios. We find that Norway will be able to sustain a high level of agricultural support, thereby maintaining its current agricultural activity and production levels. To achieve this, however, Norway will have to change the composition of domestic support from market price support, paid for by consumers in the form of higher prices, to budgetary support. Market price support will be lower because of lower levels of tariff protection, but this can be offset by exploiting the scope for green box support.

Keywords: Norwegian agricultural policy, WTO Doha Round, notification of domestic support, AMS support, administered prices, WTO compliance

1. INTRODUCTION

Norway is a well-developed country in northwestern Europe. As in other developed countries, Norway supports and protects its agricultural sector. The agricultural sector's contribution to GDP is less than one percent and, together with forestry, agriculture accounts for less than three percent of employment, as measured in standard man-years of labor. Production is concentrated along a narrow range of activities, primarily dairy and livestock production (WTO 2004; NILF 2007).

Norwegian agricultural policy is aimed at maintaining high levels of agricultural activity in all parts of the country, implying that self-sufficiency is a goal among other non-production-related objectives. Agricultural policy has four principal objectives, ensuring that small-scale farming contributes to (1) rural development, employment and settlement; (2) supply of environmental public goods, linked to the preservation of the rural landscape; (3) long-term food security; and (4) consumer welfare linked to production methods that improve the health of animals and plants (WTO 2001a; NILF 2007).

To meet these objectives, a number of agricultural policy instruments are employed, including border protection to support the market price (such as tariff-based import regulations) and budgetary domestic support (including outlays supporting prices, income support, investment and indirect support through research, education and extension services). Agricultural products not produced domestically are generally subject to low or zero tariffs; however, products produced in Norway are protected by relatively high tariffs as a means of supporting income (WTO 2001a). According to the WTO (2004), the applied average tariff on all agricultural products under Chapter 2 of the harmonized system in 2004 was 38 percent. However, 44 percent of the bound tariff rates (i.e., the most-favored nation [MFN] rates) under agricultural line items have prohibitive tariffs that exceed 100 percent, mostly in the range of 100-400 percent, while 23 percent of the lines were duty-free (WTO 2001b). In addition, Norway has the highest number of tariff-rate quotas (TRQs) of any WTO member country: 232 lines relative to 1,425 total TRQs by all members. The TRQs cover products for which Norway has an import-competing sector. The in-quota tariff rates used to administer the TRQs also exceed 100 percent. This regulatory regime over imports has helped to ensure price stability and control over agricultural markets.

Another element of Norway's agricultural trade policy regime is preferential trade arrangements, primarily with European states (through the European Economic Area [EEA] and the European Free Trade Association [EFTA]) and with developing countries through the Generalized System of Preferences (GSP). Preferences are granted to other EEA and EFTA states, to countries with which EFTA has free-trade agreements, and under Norway's GSP scheme. However, average tariffs on agricultural products under Norway's trade agreements are generally slightly below the average MFN tariff rate (WTO 2004).

In addition to the import protection provided through high tariffs and market access quotas, farmers are the recipients of domestic support subsidized through the national budget. Norway's high domestic support levels are reflected in a high producer support estimate (PSE) value. According to OECD (2007) data, Norway's PSE in 2006 was 65 percent, ranking the country second, surpassed only by Iceland and followed closely by Switzerland with a PSE of 64 percent. Farm subsidies constitute a complex system that includes deficiency payments, structural income support, acreage and headage support, and indirect support measures (NILF 2007; WTO 2004). While there has been a slight improvement toward market orientation in Norway, an OECD report (2007, p. 203) notes that "Production and trade distorting measures still account for slightly over half of the support and the level of support remains very high".

For Norway, this policy mix of a high level of farm subsidization complemented by tight restrictions on market access has resulted in a few commodity cases (e.g., beef, pork and cheese) where, in some years, export subsidies have been required to release the surplus and ease downward pressure on domestic prices. Hence, the analysis of the implications of new rules and agricultural commitments from the Doha Round of trade negotiations for Norway is complicated because, in any given marketing year, multiple policy instruments are simultaneously applied under the three policy pillars, that is, market access, domestic support and export subsidization. While the general signals of the proposed new

modalities are clear (e.g., elimination of export subsidization, increased market access through reduction of tariffs, and reduction of domestic support), anticipating the government's domestic support policy response in terms of the composition (i.e., the respective values of green, blue and amber box support) and sorting out the likely scheduling changes to meet future reduction commitments will be more challenging for policy analysts.

The purpose of this chapter is three-fold: (1) to conduct a WTO-consistent assessment of Norwegian agricultural programs and policy since 1995; (2) to analyze the effects of applying agricultural support reduction commitments consistent with the modalities drafted during the Doha Round; and (3) to project the likely policy responses by the Government of Norway under post-Doha Round commitments.

This chapter is organized in 4 sections. Section 2 provides a brief review of Norwegian agricultural policies and programs that are in place to meet the stated objectives. Norway's WTO official agricultural support notifications, as required under the terms of the Uruguay Round Agreement on Agriculture (URAA), are reported and policy compliance is assessed in terms of its aggregate measurement of support (AMS) commitments during 1995-2004. In addition, unofficial domestic support notifications for 2005-2007 (i.e., shadow notifications) based on calculations from existing statistical data and budgetary information are presented. To examine differences between the Norwegian government's official notifications, which are based on its interpretation of its programs and policy, and our assessment of Norwegian agricultural policy and programs, we present unofficial domestic support notifications for 1995-2007 under alternative support definitions based on our interpretation of the Government's policy objectives, the effects of the policies, and the methods by which payments are made. In Section 3, the proposed reduction commitments, as specified under the February 2008 draft modalities, are summarized and analyzed in the Norwegian context. Policy reform scenarios for Norwegian agricultural markets are analyzed through simulations, assuming the implementation of policy changes prescribed by the proposed modalities. Section 4 provides some concluding comments and insight into the effects of policy reform and scheduling changes to be introduced by Norway.

2. DOMESTIC SUPPORT: WTO COMMITMENTS, COMPLIANCY AND COMPOSITION OF SUPPORT

Despite ushering in trade rules and agreements that were intended to introduce discipline into international agricultural markets, the WTO gave net agricultural importing countries such as Norway considerable flexibility in managing their agricultural policy, leaving them enough leeway to continue supporting and protecting targeted sectors. The WTO rules defined agricultural programs and production policies by categorizing domestic support in terms of member countries' specific policy objective (i.e., by separating national social objectives from trade objectives) and in terms of the degree to which a particular policy or program directly affects production and trade (e.g., price support, income support, or some equivalent measure of support).

In this section, Norway's WTO commitments from 1995 are presented and Norway's policy choices are discussed in the context of compliancy. Notification documents submitted to the WTO are reviewed and the composition of Norway's domestic support programs is analyzed in terms of their trade and economic effects and their evolution in response to changing priorities, policy objectives, or negotiating positions.¹

Norway's domestic support notifications report all values of support in Norwegian krone (NOK), which is also the currency in which our computations are based. For readers who are unfamiliar with the value of the Norwegian currency, the approximate exchange rate against the USD in June 2008 was NOK 5.00, the lowest rate in the last 25 years. A more representative value of the USD in terms of NOK would be to take the average value over the last 25 years, which is approximately NOK 7.50.

2.1. WTO Commitments and Compliancy in Domestic Support

During the Uruguay Round negotiations of the GATT, Norway established a base rate of its total value of AMS during 1986-1988 at NOK 14.3 billion. Norway's commitment required a 20 percent reduction in AMS from the base rate over the implementation period, 1995-2000. From 2000, the final bound total value of AMS has been NOK 11.4 billion. The actual annual outlays counting toward AMS, as reported in official notifications, have ranged between NOK 9.78 billion and NOK 10.89 billion, comfortably under the ceilings established by the bound rates. Essentially the requirement of reduction commitments, from an inflated base rate of AMS, merely involved a reduction in the "water under" the AMS bound rate. Table 1 lists the value of Norwegian current total AMS and the value of different types of domestic support for the years 1995-2007. For 1995-2004, the official notifications are reported, while the values entered for 2005-2007 are shadow notifications (unofficial calculations), which are based on official data taken from reports sent from the Ministry of Agriculture to the Parliament and from Statistics Norway (SN 2008).²

¹ Notification documents submitted by Norway to the WTO on domestic support can be accessed through the WTO's Documents On-line database, <http://docsonline.wto.org>. These documents have the document symbol G/AG/N/NOR/.

² Details of our shadow notification calculations are found at <http://www.jordbruk.uib.no>.

Table 1. Overview of domestic support and current total AMS relative to AMS bindings

		Official notifications										Shadow notifications		
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
		NOK billion												
Green box support		4.1	4.1	3.7	3.9	4.3	5.0	4.3	4.3	3.9	4.0	6.9	6.9	7.5
Blue box support		7.1	7.2	7.4	7.9	7.7	7.7	7.3	7.5	7.4	7.4	4.3	4.0	3.9
Total AMS		9.8	10.5	10.5	10.9	10.8	10.3	10.7	10.4	10.8	10.7	11.0	10.7	10.3
<i>De minimis</i> support		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
Total support		21.0	21.8	21.6	22.7	22.8	23.0	22.3	22.3	22.1	22.2	22.3	21.7	21.8
		%												
Share of support	Green box	19.5	18.8	17.1	17.2	18.9	21.7	19.3	19.3	17.6	18.0	30.9	31.8	34.4
	Blue box	33.8	33.0	34.3	34.8	33.8	33.5	32.7	33.6	33.5	33.3	19.3	18.4	17.9
	Current AMS	46.7	48.2	48.6	48.0	47.4	44.8	48.0	46.6	48.9	48.2	49.3	49.3	47.2
	<i>De minimis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	0.4	0.5	0.5
	Total	100.0	100.0	100.0	100.0	100.1	100.0	100.0	99.9	100.0	100.0	99.9	100.0	100.0
		NOK billion												
Value of ag. production, farm gate, excluding direct/indirect payments		19.8	20.2	19.8	20.2	19.6	19.7	19.3	19.5	19.9	20.2	19.9	20.3	21.0
		%												
Share of trade-distorting	Blue box	42.0	40.7	41.3	42.0	41.6	42.8	40.6	41.9	40.7	40.9	28.1	27.2	27.5
	Current AMS	58.0	59.3	58.7	58.0	58.4	57.2	59.4	58.1	59.3	59.1	71.9	72.8	72.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		NOK billion												
URAA AMS binding		13.8	13.6	12.9	12.4	11.9	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
		%												
Share of AMS binding		71.0	77.2	81.4	87.9	90.8	90.4	93.9	91.2	94.7	93.9	96.5	93.9	90.4

Source: WTO notification documents (G/AG/N/NOR/ various years); NILF; SN

The total support that is reported in the table is the sum of the green and blue box support, the total AMS and the *de minimis* support (which is not to exceed five percent of the value of agricultural production). The sum of the blue box support and the total AMS is the total trade-distorting support. While the notifications confirm that Norway has met its commitments because the share of AMS binding is below 100 percent usage, it is clearly seen from the table that the WTO reduction requirements have not affected Norwegian agricultural policy or programs. Total support has remained stable during 1995-2007, as has total AMS. Nevertheless, the increase in the share of AMS binding from 71 percent to greater than 90 percent after 1998 suggests that any Doha Round reduction commitments on domestic

support will reduce the current total AMS and will become a binding constraint, which should reduce current production levels if reducing AMS lowers actual production incentives.

2.2. WTO-Consistency of Norway's Domestic Support Notifications

Amber Box Support

Domestic support measures under the amber box are any agricultural programs that encourage production through subsidization of the cost of inputs into production or support of market prices for agricultural outputs. Notifications of amber box support measures are presented in Table 2.

Table 2. Principal programs notified under the amber box, or AMS, 1995-2007

Selected amber box programs listed under AMS	Official notifications (NOK billion)										Shadow notifications (NOK billion)		
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Product-specific support:													
Market price support													
Non-exempt direct payments	10.1	10.8	11.0	11.3	11.4	10.6	10.9	11.1	11.6	11.5	11.6	11.4	10.9
Equivalent support measure	1.1	1.0	1.0	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
Non-product specific support:	-1.5	-1.3	-1.3	-1.1	-1.4	-1.0	-0.9	-1.3	-1.2	-1.1	-1.0	-1.1	-1.0
Associated fees/levies:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
<i>De minimis</i>													
Total amber support or AMS*	9.8	10.5	10.5	10.9	10.8	10.3	10.7	10.4	10.8	10.7	11.0	10.7	10.3

Source: WTO notification documents (G/AG/N/NOR/ various years); NILF; SN

*Total AMS might not add up exactly due to rounding.

The largest line item of product-specific support is market price support, which is the difference between an administered price (i.e., a target price that is agreed to by the Ministry of Agriculture and Food and producer groups, or fixed farm-gate prices in the case of grains) and an external reference price (i.e., the border price), multiplied by the eligible production. Price support is essentially support that consumers pay in the form of higher food prices rather than support based on a budgetary outlay. The target prices (primarily on livestock meat products, eggs, milk, and potatoes) are supported through trade-regulating market access restrictions and export management. This ensures that the internal domestic market prices are close to the target prices.

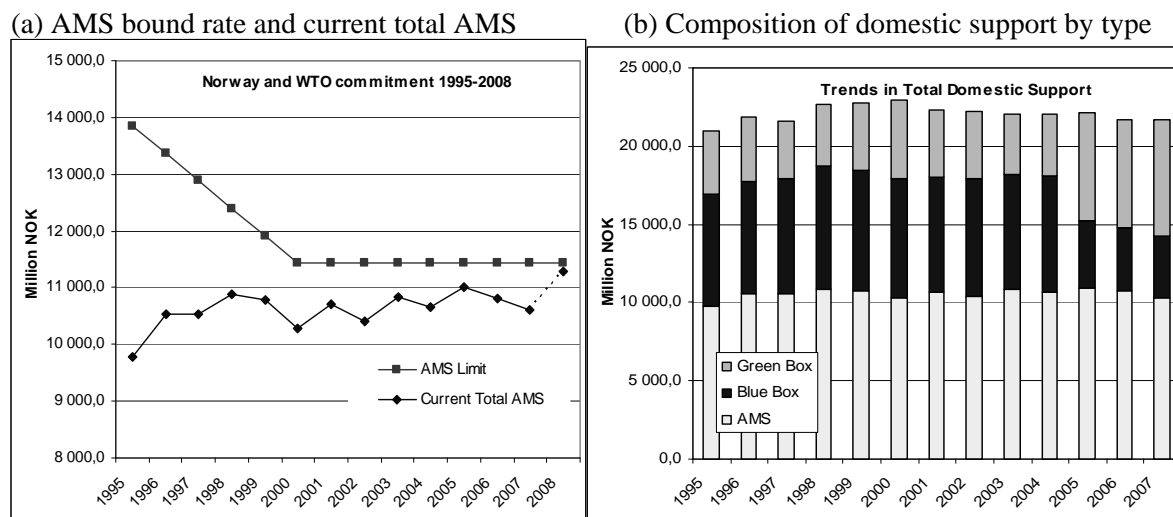
In addition to price support, there is product-specific support in the form of non-exempt direct payments. These are relatively small deficiency payments provided to milk, bovine, and sheep production. Other product-specific support includes transport subsidies for meats and eggs, and a farm feed adjustment (which is considered an associated fee). The feed adjustment value is subtracted to reduce the domestic support that is provided to livestock and milk producers for having to buy concentrated feed at a price above the world market price.

Payments made under product-specific equivalent measurements of support are subsidies related to marketing, storage, and transport of fruit, berries, and vegetables. (The subsidy equivalent for transporting fruit, berries, and vegetables was abolished in 1998.) Non-product-specific AMS and

associated fees and levies include insemination subsidies and taxes on fertilizers and pesticides, respectively. (The taxes on fertilizers were abolished on 1 January 2000.) Summing the product-specific and the non-product-specific support and subtracting the associated fees and levies generates the aggregate total AMS.

Figure 1 highlights the overall value of AMS and breaks down domestic support into sub-components. In panel (a), the bound rate of total AMS is the kinked line that decreases between 1995-2000 in accordance with the annual reduction commitments and then levels off at the new current total AMS ceiling after 2000.³ The annual value of AMS, represented by the lower line, is below the bound rate for the overall period but the gap between the bound rate and the actual annual value narrows over time, particularly after 2000, suggesting the bound rate is becoming a more binding commitment. In panel (b), the composition of the different types of domestic support is shown. The total overall domestic support is the summation of the green, blue and amber box support measures for agriculture. The AMS support, the lowest section of the bars, is stable throughout 1995-2007 at about NOK 10 billion per year. After 2005, however, the blue box value of domestic support is reduced and the programs are converted into green box support.

Figure 1. Domestic agricultural support and AMS in Norway, 1995-2008



Source: WTO notification documents, G/AG/N/NOR/ various years; SN

Green Box Support

Support schemes with no or minimal trade-distorting effect can, according to Annex 2 of the URAA, be placed in the green box. This type of support must be provided through a publicly-funded government program not involving transfers from consumers, and cannot have the effect of providing price support to producers. There are no ceilings or reduction commitments in the value of support under the green box type of agricultural programs. Table 3 lists the most important policy measures in the green box category.

³ AMS is calculated in nominal terms. Consequently, there will be a decrease in the AMS commitment level in real terms if a general price increase is considered.

Table 3. Principal programs notified and calculated under the green box, 1995-2007

Programs listed as green box measures	Official notifications (NOK million)										Shadow notification (NOK million)		
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Research, advisory and training													
Grain price support	621	565	478	542	574	577	496	397	447	529	745	745	745
Investment aid	504	690	741	724	626	709	711	533	523	671	453	450	486
Vacation and replacement scheme	741	763	654	713	849	771	858	853	632	664	740	723	753
Acreage and cultural landscape scheme	1436	1413	1281	1326	1394	1480	1400	1539	1161	1191	1183	1202	1208
All other green box measures											3012	2988	3000
	799	685	521	584	832	1475	851	1015	1118	931	739	820	1277
Total green box support	4101	4116	3675	3889	4275	5012	4316	4337	3881	3986	6872	6927	7469

Source: WTO notification documents (G/AG/N/NOR/ various years); NILF; SN

During the notification period, the largest single-entry line item listed under green box support has consistently been the “Vacation and replacement scheme”. This program gives refunds for farm-related expenses incurred when a farmer takes a vacation’ and is part of the welfare scheme for farmers. This kind of support is not mentioned in Annex 2 of the URAA. The support is quite substantial, constituting about one third of the total green box support notified. Since, in reality, this scheme can have an effect equivalent to a farm labor subsidy, it can be argued that the scheme has, in fact, stimulated production. In addition, payments made under this scheme are based either on the number of animals or the acreage in production, which appears inconsistent with the production-neutral requirement that must be met under green box support. Member countries could challenge Norway’s placement of this program under the green box, requiring the notification of such support under AMS instead.

Another potentially controversial measure notified under the green box is the grain price-support program, which according to the government includes two items. The main item is a payment to stockholdings for food security purposes,⁴ which is notified to the WTO under the “Public stockholding for food security purposes” rubric. The payment is given to processing industries who use Norwegian grain, which constitutes a price-reducing grant because the payment is given on a per kilogram basis for Norwegian grain that is purchased, and, in effect, reduces the price of Norwegian grain to industries who depend on grain as an input into their production. According to the WTO, an important criterion for payments under the “Public stockholding for food security purposes” is as follows:

“Expenditures (or revenue foregone) in relation to the accumulation and holding of stocks of products which form an integral part of a food security programme identified in national legislation. This may include government aid to private storage of products as part of such a programme. . . Food purchases by the government shall be made at current market prices and sales from food security stocks shall be made at no less than the current domestic market price for the product and quality in question” (GATT 1994, p. 58).

The price-reducing grant clearly does not satisfy this condition. The second item under “Public stockholding for food security purposes” is the compensation for expenses the government incurs in regulating the grain price. This outlay is quite small.

The “Research, advisory and training support programs” are services provided by the government, which are categorized as “General services” by the WTO. In accordance with Annex 2 of the URAA, “General services” are targeted to agriculture or the rural community, but should not involve

⁴ We could not find exact official figures on grain price support. The payment that we report here will therefore deviate from the notifications that Norway eventually will make to the WTO.

direct payments to producers or processors. Other important programming activities under general services provided by the government are pest and disease control and infrastructure services, which amounted to about 11 percent of total green box support in 2004.

“Investment aid” includes expenditures from the Agricultural Development Fund. Such aid is given under the WTO rubric “Structural adjustment assistance provided through investment aids”, which in Norway’s stated case is given as aid for structural adjustment and rural development services. Increasingly these funds have been redirected towards stimulating new business activities, in addition to “traditional farming”, in rural areas. However, increasingly less of this support is being given as investment support for traditional agricultural production activities (NILF 2007). This line item accounts for 15-20 percent of the total notified green box support. The two most important WTO conditions for this type of support are (1) that the payment must not give a producer the incentive to produce a certain product, and (2) that the payment must only compensate and assist the financial or physical restructuring of a producer’s operations to overcome the structural disadvantages, and must be given only for the period necessary for the realization of the investment (GATT 1994).

Under the shadow-notification period, 2005-2007, in Table 3 we report the “Acreage and cultural landscape scheme” as the largest green box measure. In 2005 this scheme was included as an important element in the National Environmental Programme (MLSI 2004, MLSI 2005 and MAF 2005). For a farmer to be eligible to receive such support, an environmental plan must be followed and the acreage must be managed in an environment-friendly manner. As a payment for compliance, the farmer receives a certain amount per hectare. In addition to this, support to help cover the cost of implementing certain types of production techniques is provided on an activity-specific basis. It is an open question whether this support complies with the URAA, which states that the payment can only compensate for the loss of income involved with complying with an environmental program. In 2007, another move was made by the Norwegian Ministry of Agriculture and Food whereby the support to grazing livestock, which earlier was considered part of headage support under the blue box, was included in the National Environmental Programme, making it a green box item.⁵ In Figure 1(b), the top segment of each bar represents the value of the green box payments. As a result of the program changes described above (i.e., the broadening of the National Environmental Programme), green box support increases in magnitude after 2004.

Blue Box Support

Support schemes classified under the blue box fall under three types: (1) payments based on fixed area and yields; (2) payments made on 85 percent or less of the base level of production; and (3) livestock payments made on a fixed number of head. As with the value of green box support programs in the URAA there was no WTO commitment requiring a ceiling on the value of blue box support. Table 4 lists all the programs under the blue box as notified from 1995-2004 and the shadow notifications for 2005-2007.

⁵ This is included in the item “All other green support measures”.

Table 4. Principal programs notified under the blue box, 1995-2007

Direct payments under production-limiting programs	Official notifications (NOK million)										Shadow notifications (NOK million)		
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Acreage and cultural landscape	2751	3209	3305	3752	3176	3123	2969	3023	2976	3003	0	0	0
Structural income support, dairy	1539	1483	1143	1425	1394	1330	1176	1306	1214	1175	1067	1008	980
Deficiency payment, milk	450	432	434	433	450	428	382	414	416	421	453	378	437
Deficiency payment, meat	506	512	516	523	512	473	539	537	518	540	664	527	556
Headage support	1871	1611	1678	1748	2142	2317	2265	2251	2236	2295	2111	2107	1914
Total blue box support	7117	7246	7375	7880	7674	7669	7330	7531	7360	7434	4295	4021	3887

Source: WTO notification documents (G/AG/N/NOR/ various years); NILF; SN

“Structural income support” (to dairy farmers) and “Regional deficiency payments” for milk and meat production are categorized as payments on 85 percent or less of base level production.⁶ The aim of the regional deficiency payments is to even out profitability or income between farmers located in more remote areas and those located closer to urban markets.

“Headage support”, a per unit livestock payment, is Norway’s largest blue box income-support payment. This support is intended to even out differences in profitability among different lines of production and among farms of different size. In 2007, the government made a change in the application of the support to grazing livestock, which disaggregated the payments that are relevant to the National Environmental Programme, claiming those payments to be green box support (MAF 2006). This has had the effect of reducing the overall value of blue box support after 2004. In Figure 1 (b), the middle segment of each bar is the part of total overall domestic support that falls under the blue box. The blue box together with the amber box (AMS) is the overall trade-distorting support, which constitutes about two-thirds of the overall domestic support in Norway.

2.3. Notifications under Alternative Support Definitions

In the previous section we argued that grain support and the vacation and replacement scheme do not belong in the green box. Furthermore, since those two items do not satisfy the criteria for blue box support (payments under production-limiting programs), they must be counted as AMS and hence included in the amber box. In Table 5, the official notifications of support under the interpretation of the Norwegian government are reported and compared with the values obtained using our interpretation of the programs in terms of their consistency with WTO rules and agreements.

⁶ The way we have calculated blue box support for 2005-2007 differs slightly from the calculations used by the Norwegian government in its notifications to the WTO during 1995-2004. One reason for this difference is that until 2002, payments given to the acreage and cultural landscape scheme were only reported as aggregated payments. However, some elements of this payment fall under green box support.

Table 5. Support levels under different interpretations of WTO-consistency, 1995-2007

Type of support	Support level according to:	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
		NOK million												
Amber box or AMS	Government's interpretation										1066			
	Our interpretation	9886	10529	10530	10886	10787	10293	10700	10399	10831	5	10959	10748	10599
	WTO commitment	11725	12633	12548	12935	12807	12467	12811	12471	12516	1252	12595	12399	12293
	Government's interpretation	13834	13357	12880	12403	11926	11449	11449	11449	11449	7	11449	11449	11449
Blue box	Government's interpretation													
	Our interpretation	7117	7246	7375	7880	7674	7669	7330	7531	7360	7434	4295	4021	3887
Green box	Government's interpretation													
	Our interpretation	4101	4116	3675	3889	4275	5012	4316	4337	3881	3986	6872	6927	7469
	Our interpretation	2162	2013	1652	1840	2255	2838	2205	2546	2413	2234	5236	5276	5776

Source: WTO notification documents (G/AG/N/NOR/ various years); NILF; SN

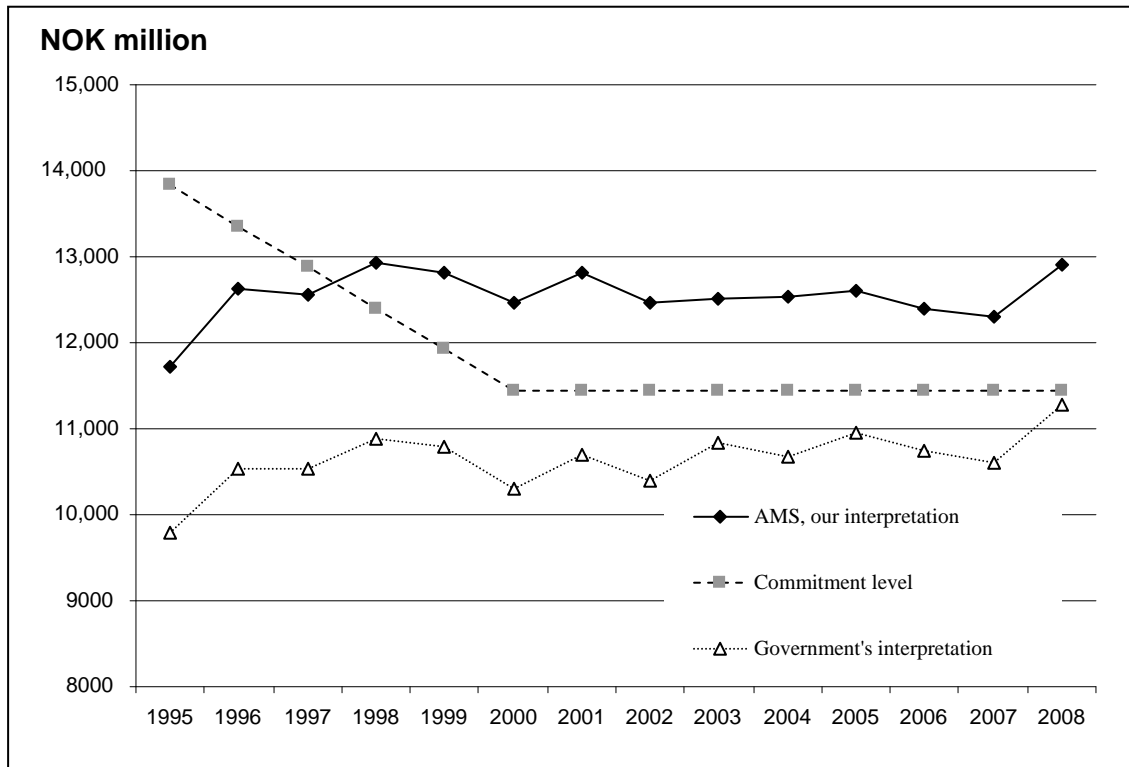
To illustrate the relevance of the differing interpretations of the policies implemented by Norway, the AMS support levels reported in Table 5 are plotted in Figure 2. According to our AMS interpretation, Norway has broken the AMS ceiling every year since 1998, and will exceed the AMS-ceiling by 30 percent in 2008. However, this calculation assumes that the Government will not react if the ceiling is broken. Surely, such passive behavior is unlikely. Norway has on several occasions been on the edge of breaking the ceiling, and on each occasion has played the “avoidance card”.

2.4. Playing the “Avoidance Card”

We use the phrase “to play the avoidance card” to describe the situation where a country lowers its AMS support by abolishing or redefining the purpose of the administered price on a specific product to remove the market price support from the AMS. By doing this, the product in question can be excluded from the market price support computation, see Orden (2008), and consequently, the AMS support will be reduced automatically. Japan was the first country to use this strategy.⁷

⁷ See Gordo (2008). Japan redefined its rice procurement program as being for the purpose of adjusting rice stocks for food security in 1998.

Figure 2. Our interpretation of the URAA compared to the Government's interpretation



The Norwegian Ministry of Agriculture and Food has on several occasions announced that it will abolish certain domestic administered prices, as a means of reducing the total AMS-support level. From 1 January 2007, the administered price of poultry meat was replaced with a reference price equal to the administered price in 2006. In a proposition to the parliament (MAF 2005), it was argued that this would remove poultry meat from the AMS calculation and reduce the total AMS support by NOK 800 million. Furthermore, in the May 2008 negotiation between the farmers' unions and the Ministry of Agriculture and Food, it was agreed to increase prices on most agricultural products, an action that would lead to breaking of the AMS ceiling. This problem was solved by removing pigs and sheep from the AMS support. We expect that the government will continue to play the avoidance card as a means of meeting future AMS and overall trade-distorting support commitments.

3. POLICY REFORM SCENARIOS AND SIMULATION ANALYSIS

3.1. Proposed Reduction Commitments

The reduction commitments under the most current proposed modalities (as of March 12, 2008) under the agricultural negotiations of the Doha Round are applied in the case of Norway to analyze the potential effect on agricultural production and trade as a result of policy reform. The revised draft modalities for domestic support from February 2008 (WTO 2008) are used and the resulting reduction commitments for Norway are reported in Table 6. In general, the commitments require a computation of the overall trade-distorting domestic support (OTDS) based on a specified formula and a reduction in the value by at least 50 percent; the determination of the final bound total AMS through a reduction in the AMS by 52.5 percent; and the construction of a ceiling for blue box support, which amounts to a 52.5 percent reduction over the average annual value of blue box support during 1995-2000. In Norway's case, the final value of its OTDS would be NOK 10,371 million under a 50 percent reduction commitment. However, because the combined maximum of its new final bound rate of AMS (NOK 5,438 million) and blue box ceiling (NOK 3,560 million) is NOK 8,998 million, which is less than the final OTDS value, these parameters become the binding constraint upon Norway's total trade-distorting support.

Table 6. Reduction commitments according to the latest revised draft modalities for agriculture

Computation of overall trade-distorting support (OTDS)				
Components of OTDS	Value in million NOK	Description	Value in million NOK for a reduction of:	
			50%	60%
Final current bound rate of AMS	11,449	Developed country members reduce base OTDS by 50% or 60%		
10% avg total value of ag production	1,798			
Higher of either:				
Avg blue box support, 1995-2000 or	7,494			
5% avg total value of ag production	899			
Total base rate of OTDS	20,741		10,371	8,296
Computation of AMS reduction commitment				
	Value in million NOK	Description of the component or reduction commitments		
Bound rate of AMS	11,449	Current final bound rate from 2000		
Base reduction commitment	5,152	Norway's value of AMS is less than US\$15 billion, placing it in the 3 rd tier, requiring a base reduction commitment of 45%.		
Additional reduction commitment	859	If final bound total AMS is at least 40% of the average value of ag production during 1995-2000, an additional reduction is required, that is, ½ the difference of the reduction rate in the lower two tiers, for example, [60 - 45] % resulting in a further 7.5% reduction.		
Final bound rate of AMS	5,438	A reduction commitment of 52.5%.		
Computation of Blue Box Support				
	Value in million NOK	Description of the component or reduction commitment		
Avg blue box support value	7,494	Average annual support, 1995-2000		
Reduction commitment	3,934	If the value of blue box support exceeds 40% of trade-distorting support for 1995-2000, then the ceiling is a reduction commitment equal to the percent reduction in final bound total AMS, that is, 52.5%		
Blue box support ceiling	3,560	A reduction commitment of 52.5%		
Binding commitment of OTDS base rate relative to combined OTDS under a 50% reduction	10,371	amber and blue support		
Combined value of the final AMS bound rate and box support ceiling	8,998	The combined value of the final AMS bound rate plus the blue box support ceiling becomes the binding constraint on the value of domestic support.		

Source: WTO 2008 (TN/AG/W/4/Rev.1)

Comparing the proposed domestic support ceilings with what was notified in 2004, the last officially notified year, suggests that the reduction commitments would be a binding constraint on Norway's agricultural policy regime. The current total AMS was reported to be NOK 10,665 million and blue box support amounted to NOK 7,434 million. This implies that Norway's trade-distorting programs and policies would have to be reduced in value by NOK 9,101 million from the 2004 value. Of that reduction, the share of blue box support would have to amount to NOK 3,560 million or less to be in compliance with the ceiling.

It is no surprise, then, that the government has already signaled changes to blue box support, specifically disaggregating payments that are part of the National Environmental Programme. In addition, the re-categorizing of the acreage and cultural landscape scheme, without a significant change in the implementation of the program, as a green box measure is consistent with this strategy. The shift in strategy, as shown under the shadow notifications, suggests that the government shall have reduced blue box support by NOK 3,747 million. This would essentially meet the blue box ceiling. Playing the avoidance card will give the government enough flexibility to reduce amber box support without having to require producers to reduce production or their revenue.

3.2. Simulation Analysis

Unlike for the US and the EU, no official predictions have been made for future development of agricultural production in Norway. A reasonable guess is to assume that future production of the various agricultural products will be the same as current production. This line of reasoning is supported by the fact that the Norwegian agricultural authorities have designated maintaining current production levels as a primary policy goal. In this respect they have been successful because agricultural production has hardly changed over the last decade.

Based on the proposed reduction commitments of the Doha Round, outlined above, we use a partial equilibrium model for the agricultural sector in Norway to analyze the potential for maintaining agricultural production and activity. We take into consideration that the composition of domestic support will also have to change, from market price support to budgetary support, in line with the proposal by Ambassador Crawford Falconer that import tariffs should be reduced by 70 percent, and export subsidies should be eliminated.

The Model

The price-endogenous model of Norwegian agriculture⁸ consists of the most important commodities produced by the Norwegian agricultural sector, including 13 final and 8 intermediate product aggregates. Of the final products, 11 are related to animal products while 3 are related to crops. Inputs needed to produce agricultural products are land, labor (both family and hired), capital (machinery and buildings), concentrated feed, and an aggregate of other intermediate goods. The model distinguishes between tilled land and grazing on arable land and pastures.

Domestic supply is represented by about 400 "model farm" types. Each model farm is characterized by Leontief technology, having fixed input and output coefficients. Although inputs cannot substitute for each other at the farm level, there are substitution possibilities at the sector level. For example, beef can be produced with different technologies (under different model farm types), under either extensive or intensive production systems, and in combination with milk. Thus, in line with the general Leontief model in which each good may have more than one activity that can produce it, the isoquant for each product is piecewise linear. Also, production can take place on either small farms or larger more productive farms. Consequently, there is an element of economies of scale in the model.

The country is divided into nine regions, each with limited supply of different grades of land. This introduces an element of diseconomies of scale because, ceteris paribus, production will first take place in the best regions. Domestic demand for final products is represented by linear demand functions.

⁸ Model details and further references can be found in Brunstad et al. (2005).

The economic surplus (i.e., consumer plus producer surplus) of the agricultural sector is maximized, subject to demand and supply relationships, policy instruments and imposed restrictions. The solution to the model is the set of prices and quantities that result in an equilibrium in each market.

Implementation

The base year of the model is 2004. Since the production of various agricultural products, as well as agricultural support, has been relatively stable over the last decade, this can be thought of as the reference period. Impacts on agricultural activity of an agreement in the Doha round *à la* Falconer are analyzed by introducing ceilings on the AMS and blue box support. For AMS, the ceiling is set at NOK 6.7 billion (5.438 billion in Table 6), and for blue support the ceiling is NOK 3.9 billion (3.560 billion in Table 6). The ceilings in Table 6 are scaled to be consistent with the AMS and blue support levels in the model, which differ somewhat from the actual situation. The model simulation also assumes a 70 percent reduction in ad valorem import tariffs and a total elimination of export subsidies.

Some additional assumptions are made with respect to the computation of domestic support. As for blue and green support, we have followed the principles behind our shadow notification described in Section 2.2. The acreage and cultural landscape scheme and part of the headage support are counted as green, as well as the vacation and replacement scheme and the grain support program. Furthermore, the reported AMS levels in the simulations assume market price support according to administered prices, that is, the avoidance card is not adopted. The potential for using this strategy to release amber support enters into the discussion.

Results

The results of the model are presented in Table 7. As a reference, the base solution in column 1 shows the model's representation of current policy and production levels, as of 2004. To decompose the effects of the different reduction commitments, column 2 shows the isolated effects of the elimination of export subsidies only, and column 3 shows the effects of the elimination of export subsidies and a reduction in tariffs taken together. Column 4 presents the integrated solution, where all reduction commitments and ceilings are considered simultaneously *à la* Falconer.

The base solution in column 1 is close to the actual situation in the base year 2004. In spite of the climatic disadvantage, production is high and import low. Norway is self-sufficient in most of the specified products, with the exception of grain. About 10 percent of the milk production is exported in the form of cheese, by means of export subsidies.

As thoroughly demonstrated earlier in this chapter, the high activity level in Norwegian agriculture is sustained by substantial support. The total support generated by the model is NOK 20.4 billion, of which NOK 11.1 billion is budgetary support and NOK 9.4 billion is market price support. The model-generated OTDS is NOK 17.9 billion, disaggregated into NOK 13.1 billion on amber box support (AMS) and NOK 4.8 billion on blue box support. Observe that all relevant support measures are far above the ceilings that follow from the Falconer proposal. Thus, it will be hard to sustain current production levels if changes in policies to meet WTO commitments actually affect production incentives.

If export subsidies are abolished, then the export of cheese is no longer feasible and milk production declines by 10 percent. Market price support falls by NOK 1.5 billion because the present export subsidies are financed by domestic consumers of dairy products and not by budgetary support. AMS falls by NOK 1.6 billion, while blue box support levels are unaffected. The economic losses caused by export subsidies amount to about NOK 1.0 billion.

The elimination of export subsidies is insufficient to meet the specified reduction commitments on AMS and blue box support as proposed under the modalities specified in the Falconer text. As a next step, the ad valorem import tariffs are cut by 70 percent, which is within the range of proposed reductions on market access tariffs under the modalities (WTO 2008). As can be seen from column 3, production levels and input factor use are substantially reduced. That is, the proposed cut in import tariffs triggers imports and lowers domestic prices. Consequently, the domestic support level declines for two reasons:

(1) a reduction in domestic price implies lower market price support; and (2) lower domestic prices reduce agricultural activity, which reduces the budgetary support. AMS and blue box support are 40 percent and 25 percent below their ceilings, respectively. As a result of both lower prices and budgetary support, the economic surplus is increased by NOK 17 billion.

As an approach to maximize agricultural activity within the proposed reduction commitments, column 4 (the full set of commitments specified under the Falconer text) shows a simulation where the ceilings on AMS and blue box support are binding. The ceilings are made binding by a scaling of the exogenous subsidy rates underlying the base solution.

Table 7. Model results under the base solution and reduction commitment scenarios

	Base solution	Eliminate export subsidies (ES)	Eliminate ES and 70% tariff cuts	Full Falconer text reduction commitments
Production (million kg)				
Milk	1516	1364	971	1516
Beef and veal	78	80	39	62
Sheep	25	26	20	21
Pig	117	116	0	0
Poultry	50	50	0	0
Eggs	52	52	53	53
Food grains	346	338	5	5
Coarse grains	919	899	101	104
Potatoes	289	290	291	291
Main inputs				
Land (million hectares)	0.95	0.95	0.42	0.56
Labor (1000 man-years)	54.4	53.6	33.9	42.9
Capital (NOK billion)	48.3	47.5	23.2	31.1
Support - PSE (NOK billion)				
Budget support	11.1	11.1	6.3	11.9
Market price support	9.4	7.9	1.7	0.2
Support - WTO categories (NOK billion)				
Green box	5.9	5.9	3.2	4.0
Blue box	4.8	4.8	2.9	3.9
Amber box (AMS)	13.1	11.5	4.1	6.7
Subsidies	0.4	0.4	0.3	4.0
Market price support (fixed ref. prices)	12.7	11.1	3.8	2.6
Overall total domestic support (OTDS)	17.9	16.2	7.0	10.5
Economic surplus (NOK billion)				
	20.1	21.1	38.3	34.8

More support, compared to the previous solution, means higher agricultural activity. This applies especially to roughage-intensive production activities such as milk, beef, and sheep, which, under current policies, are major recipients of both blue and amber box support. With respect to AMS, there is an obvious shift from market price support to subsidies as lower tariffs are compensated, within the ceilings, by higher budgetary support.

Compared to the current situation, represented by the base solution, an agreement in line with the Falconer proposal seems to affect Norwegian agricultural activity. Production declines, especially for grain and activities that intensively use concentrated feed (pigs and poultry). These activities must be

compensated sufficiently by budgetary support when tariffs are reduced. Aggregated land use and agricultural employment are about 60 percent and 80 percent of present levels. Observe that budgetary support is slightly higher than in the base solution, while market price support is lower.

Before drawing conclusions about the effects on agricultural activity of the reduction commitments specified in the Falconer text, several aspects should be considered. Compared to the model simulation, Norway has the possibility to raise its budgetary support. First, green box support in the model simulation is nearly NOK 2 billion below the notified level for this type of support. Also, if the policy instruments notified by Norway as green support are to withstand a WTO challenge, then no real limit on certain kinds of production support would appear to exist. Second, if Norway were to play the avoidance card, and thereby increase the level of amber subsidies by NOK 2.6 billion (which is released by abolishing administered prices), then very little reform to agricultural production would be expected.

There are, however, shortcomings in the model that tend to overstate the negative impact on agriculture. First, the available technologies in the model are based on current small-scale farming. If economies of scale are exploited, then the production level will be higher, especially for activities that do not depend on low-yield Norwegian crops that are adversely affected by the northern climate. For example, in concentrated-feed intensive production activities such as pigs, poultry, and eggs, producers can buy their feed on the world market. Second, the model assumes that domestic and imported agricultural products are perfect substitutes. The effect of lower import tariffs would be less severe if the Norwegian farmers were able to differentiate some of their produce and obtain a price premium compared with imported products.

As a concluding summary, the proposed reduction commitments of the Doha round seem to allow Norway to sustain a high level of agricultural support, and thus to maintain its current levels of agricultural activity and production. Lower market price support can probably be compensated by more budgetary support, by playing the avoidance card in combination with exploiting the scope for green box support. However, the composition of domestic support will have to change, from market price support to budgetary support. If Norway intends to pursue the course of maintaining high production levels, such a shift in the use of policy instruments involves serious challenges for Norwegian policymakers. Budgetary support, which is more transparent and exposed to public opinion than market price support, has to increase compared with the present level. Also, a substantial part of the budgetary support has to be green box support. Since most of the policy instruments that Norway notifies or plans to notify as green box support constitute masked production support, this strategy may leave Norway exposed to a WTO challenge. Finally, cuts in import tariffs and the elimination of administered prices removes important tools currently used to regulate the market and restrict competition.

4. CONCLUSIONS

According to official agricultural support notifications for 1995-2004 and our shadow notifications for 2005-2007, Norway complies with its URAA commitments. Nevertheless, the URAA reduction requirements have not affected Norwegian agricultural policy or programs. Norway has in fact managed to expand agricultural output relative to the 1986-1988 base period, and AMS and total support have remained stable during 1995-2007. Thus, the URAA reduction commitment has merely involved a reduction in the “water under” an inflated AMS bound rate. This applies especially to the implementation period of 1995-2000. After 2000, the gap between the AMS ceiling and Norway’s notifications has narrowed, and seems to be completely closed in 2008.

Although Norway’s notifications comply with its URAA commitments, we argue that several of its green box entries are questionable. For example, the “Vacation and replacement scheme” and the “Grain price support programme” seem to be amber support masked as green support. Also, it is an open question whether the “Acreage and cultural landscape scheme” complies with the URAA, which states that a payment can only compensate for the loss of income associated with complying with an environmental program.

On some occasions, Norway has been close to surpassing the AMS ceiling. In these cases, Norway’s response has been to abolish administered prices on certain products, thereby excluding the corresponding market price support from the AMS calculation. In this way, Norway has been able to keep up production and forestall agricultural restructuring.

The modalities currently being negotiated under the Doha Round should result in more binding reduction commitments on Norwegian agriculture. The elimination of export subsidies will mainly affect milk and cheese, but will also impact beef and pork. The combination of increased market access and reduced domestic support should have more serious consequences in regard to domestic price and production levels. Nevertheless, clever repackaging of current domestic support (masking amber box subsidies as green box ones) or eliminating “redundant” policy (i.e., by removing administrative prices) could forestall much agricultural restructuring.

To maintain current activity and production levels, budgetary support, which is more transparent and subject to greater public opinion than market price support, has to increase beyond the present level. Also, a substantial part of budgetary support has to be green box support. Since most of the policy instruments that Norway notifies or plans to notify as green box support seem to be masked production support, this strategy may be prone to a WTO challenge. Only if Norway were to lose such a challenge can policy reform be expected.

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