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Overview

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In 1957, at the twelfth session of the GATT Contracting Parties, held at Ministerial level, a Panel of Experts, chaired by Professor Gottfried Haberler, was established to review trends in international trade. The Panel was asked to examine the effect of agricultural protectionism, fluctuating commodity prices and the failure of export earnings to keep pace with import demand in developing countries. The 1958 Haberler Report stressed the importance of minimising the effect of agriculture subsidies on competitiveness, and recommended replacing price support by direct supplementary payments not linked with production, anticipating discussion on green box subsidies.[1]

Three decades later, the simple notion of a shift from price support to producer support was to become the backbone of an ambitious reform of the global agriculture system. As Stancanelli notes, in the 1980s, high administered prices paid to agriculture in industrialised countries led to self-sufficiency and the generation of large surpluses, which were channelled to the world market by means of export subsidies. As a consequence, the fiscal cost of protective measures increased, both through lower receipts from import duties and higher expenditure. This budgetary burden was further compounded by direct subsidies and the cost of storing non-export surpluses.

At the global level, after two successive oil crises in 1973 and 1979, the global economy had entered a cycle of stagnation and recession, combined with mounting foreign debt in the developing world. The perception that trade liberalisation could contribute to reversing this downward trend led to calls from academic and political circles for a new round of multilateral trade negotiations. The round would open up markets in services and high technology goods, and ultimately generate much-needed efficiency gains. With a view to engaging developing countries in the negotiations, many

1 See Stancanelli in this volume.

of which were "*demandeurs*" of new international disciplines, agriculture, textiles and clothing were added to the grand bargain.[2]

In the run-up to the 1986 Punta del Este Ministerial Conference of the Contracting Parties to the GATT, developed country farm groups that had benefited from past protectionist policies strongly opposed any specific compromise on agriculture. In this politically charged context, the idea of exempting production and trade-neutral subsidies from reduction commitments was first proposed by the US in September 1987, echoed one month later by the EU. The proposal appeared to have the merit of providing an adjustment mechanism that could offset the potential losses that farmers might incur as a result of the agricultural reform process. By guaranteeing farmers a continuation of their historical level of support, it also contributed to neutralising opposition to the round.[3] In exchange for bringing agriculture within the disciplines of the WTO and committing to future reduction of trade-distorting support, developed countries would be allowed to retain subsidies that caused not more than minimal trade distortion, on the basis that these could deliver various kinds of public policy objectives.

In a field so heavily riddled with controversy, this one fragile point of consensus has been the hinge upon which an extraordinary reform project has depended. Developed countries have indeed reduced their trade-distorting subsidies since the end of the Uruguay Round, although not by as much as their trading partners had hoped. At the same time, domestic policy-makers have taken a number of tentative and precarious steps down the road of 'decoupling' agricultural support from production, despite complex and fraught negotiations with constituencies at home.

The 1992 MacSharry reform in the EU, which for the first time introduced set-aside schemes for crop production and agri-environmental payments, was the first illustration of this process. Since then, agriculture support in the EU has been significantly decoupled from production, and its focus has switched from agriculture to the wider rural economy and the protection of the environment.[4] In 2003, the CAP reform targeted the blue box as an anachronism that a number of the EU's trading partners wished to see eliminated. As Swinbank notes, EU Agriculture Commissioner Franz Fischler's response was to press for a further decoupling of area and headage payments with the creation of the Single Payment Scheme (SPS). A farmer's entitlement would be based upon historic patterns of area and

2 Ibid. 3 Ibid. 4 See Swinbank in this volume.

headage payments, but future payments would no longer be linked to crops grown or animals kept.[5]

In the US, the economic philosophy of decoupling began to play a role in farm policy as early as 1981, culminating with the 1996 Freedom to Farm legislation. Driven by high prices, strong exports, budget deficits and a Republican majority that eschewed government involvement in the economy, the 1996 farm bill completely decoupled a portion of farm payments from production. The bill, which coincided with the conclusion of the Uruguay Round, called for these payments to decline over a five-year period, in theory to give farmers time to adjust to market forces.[6] Since then, decoupled payments have remained an important part of US farm policy even if the move toward decoupling has been stalled or even reversed in the 2008 farm bill.[7]

Overall, after 15 years of implementation of the WTO Agreement on Agriculture (AoA), green box payments represent an increasing share of agricultural support in the EU, the US and Japan.[8] Since the start of notifications in 1995, countries have been shifting support between the boxes that were established in the Uruguay Round. By and large, these shifts are in the direction implied by the AoA, namely from amber box to blue box and from amber and blue box to green box.[9] However, as an ever greater proportion of subsidies are notified as "green box", the success of the Uruguay Round bargain becomes increasingly dependent on the actual and perceived integrity of the principles enshrined in the box system. Green box subsidies must indeed cause not more than minimal trade distortion if other WTO members are to accept the transfer of support into this category. Developed country citizens must also remain convinced that their governments are genuinely advancing environmental, social

5 Ibid. 6 See Tutwiler in this volume.

7 Tutwiler argues that: "Green box measures in the United States have been increasing and will continue to increase as a share of overall budget assistance to the US food and agricultural sector . . . However, in terms of policy structure and payments to farmers, US farm legislation is continuing to move away from decoupled income support to re-coupled income safety nets – in WTO speak, away from green box and toward amber box, or box shifting in reverse . . . after nearly 20 years of slow, steady, incremental moves toward decoupling, it appears that the move toward decoupling may be stalled or may be thrown into reverse by the 2008 farm bill."

8 The situation in Japan has been slightly different, as explained by Yamashita and Honma. Japan had established an agricultural policy dominated by price support and high tariffs on key products such as rice. While Japan has been allocating high levels of green box subsidies in the form of general services, it still has to make a decisive shift away from price support and towards direct payments to farmers.

9 See Antón in this volume.

and developmental objectives through the subsidies received by farmers, if they are to provide the policy framework with their continued political support.

In short, as green box subsidies come under closer international and public scrutiny, policy makers will have to answer a series of questions that are summarised by Antón Lopez as follows:

> Do impacts on production remain . . . in green box measures? If so, and in the context of relatively high levels of green box expenditure, do these impacts on production generate spill-over effects on other countries, particularly developing countries? Do developing countries have room in the green box to develop policies that meet their own sustainable development objectives? Can the green box rules be improved in order to reduce the impacts on production? Is it always possible to achieve domestic objectives with "at most, minimal trade-distorting effects or effects on production?"

Finally, it is also important to ask whether domestic objectives are achieved with current green box programmes, and whether these objectives are themselves well defined. The following section seeks to shed some light on those issues.

Are green box subsidies trade-distorting?

A major concern surrounding green box subsidies is that payments may not respect the fundamental requirement described in paragraph 1 of Annex 2 of the AoA. As Nassar, Rodriguez, Costa and Nogueira point out, the findings of the WTO Panel in the cotton dispute between the US and Brazil proved, for example, that direct payments for cotton farmers – a decoupled income support programme in the US – did not qualify as green box subsidies because farmers planting fruit, vegetables and wild rice were not eligible for such payments. In other words, the scheme discriminated among producers or agricultural products and therefore could not qualify as a green box payment. According to Nassar *et al*, the 2003 CAP reform established similar restrictions on fruits and vegetables, seemingly confirming some of the developing countries' concerns.

Beyond the issue of compliance with green box criteria, the quantification of the economic impact of green box subsidies is an empirical question which requires an analysis specific to each type of measure and even each specific programme. As Antón points out, there are solid arguments in favour of the more decoupled payments based on land and with more production freedom. However, a broad consideration of the

economic effects of such programmes suggests that the absence of production and trade effects is very unlikely. As Galperín and Doporto point out:

> box shifting of one dollar, for example, from the amber to green box will have a smaller impact on production and trade. But the total amount of the more decoupled support also matters: the impact of a reduction of one dollar in a less decoupled subsidy may be more than compensated for by the impact of a larger increase in a more decoupled subsidy.

While some programmes have remained relatively uncontroversial, such as the provision of general services or domestic food aid, others such as decoupled income support payments have attracted much criticism. Looking at the 2003 Fishler reform in the EU, for example, Swinbank notes that, for any particular year, payments under the Single Payment Scheme are related to: the land area at a farmer's disposal in that year; the recipient's status as a farmer; whether the land has been kept in "good agricultural or environmental condition"; and whether various cross-compliance requirements have been respected. All of these reinforce the notion that payments are "related to, or based on, the factors of production employed".

The mechanisms through which decoupled payments may have trade- and production-distorting effects have been studied in the literature.[10] These include wealth effects, when a guaranteed stream of income influences a producer's willingness to plant; risk/insurance effects, which reduce the perceived income risk from agricultural production activities; or dynamic effects, including farmers' expectations about future government decisions on agricultural policy. Beyond green box programmes themselves, de Gorter raises concerns related to cross-subsidisation: the risk that subsidies on a production base indirectly finance losses on other production, thereby generating an exit deterrence effect. In a similar vein, Galperín and Doporto analyse the cumulative effect of green box subsidies when producers receive simultaneously support classified under different boxes, and argue that: "Intuitively, one can expect that the accumulation of subsidies may present a cumulative impact on the producer's decision of what and how much to produce." They also echo the proposal made by the G-20, which argues that "in the presence of distorting payments, 'green' policies do not properly perform their function. On the contrary,

10 See Antón, Galperín and Doporto, de Gorter or Nassar, Rodriguez, Costa and Nogueira in this volume.

their neutral nature is being abused and they merely follow the general orientation of the distorting policy."

Green box as a tool for development?

For several decades, agriculture in developing countries has suffered from unfair competition due to heavily subsidised exports in developed countries, anti-competitive practices by multinationals and chronic underinvestment in infrastructure, research and development. The sudden increase in food prices in 2007 and early 2008 has highlighted the need to enhance agricultural production to generate the supply response necessary to stabilise prices. With a vast share of their population depending on agriculture for their livelihood, developing countries face a set of major challenges in this area. In short, they will have to produce more food to meet the changing diet of a growing population, with less water – as urbanisation leads to more water being used in cities – and, in several cases, with lower productivity resulting from climate change, including less precipitation, more extreme weather events and changes in temperature.

An analysis of agriculture subsidy notifications by developing countries to the WTO shows that a large portion of their total domestic support falls under the green box, and in particular under general services.[11] Nonetheless, the total amount spent and the amount this represents as a share of agriculture GDP remains very low compared to developed countries. In addition, most developing countries (and Cairns Group members in particular) have decreased their green box spending over the period for which they have submitted notifications. Finally, as Dhar notes, payments are highly concentrated among a few countries:

> with the advent of China, the share of the top five went up to more than 90 per cent, with China alone representing around 80 per cent of the green box expenditure of all developing country members. An important corollary of the above-mentioned observation is that the spending on this form of domestic support was relatively insignificant for most developing country members.

According to Xie, China's green box support in 1998 amounted to US$18.35 billion – very close to the EC's expenditure of US$18.5 billion in 2001. However, support at the individual farmer level averaged only

11 See Nassar *et al*, Dhar, Oduro and Xie in this volume.

US$280. This amount is not only far below the *per capita* support of developed countries, but is also lower than that of some developing countries, including Argentina, Mexico and South Africa. From the perspective of general economic theory and sustainable development, Xie argues that China's green box subsidies have been unevenly distributed, and highly concentrated on infrastructural services and on public stockholding for food security purposes. While this structure was appropriate for improving comprehensive production capacity and ensuring food security, it was relatively inefficient, and delivered comparatively limited benefits to farmers. In spite of these shortcomings, green box support is likely to play a major role in Chinese agriculture policy. As income disparity between cities and the countryside increases, this support will be critical in avoiding massive migrations to the cities and in helping China to feed its 22 per cent of the world's population with only 7 per cent of global arable land.

African countries are spending less on agriculture than other developing countries, despite the possibilities that the green box measures offer for increased spending. Generally, the less intensive use by developing countries has been attributed more to a lack of resources and lack of ongoing domestic reform processes than to constraints imposed by the green box criteria on policy design.[12] Interestingly, Oduro notes that this declining trend in agricultural spending is occurring within the context of rising total public sector spending in many African countries. She attributes this declining share to the emphasis that poverty reduction strategy papers place on social sector spending as opposed to agriculture.

In this respect, several authors concur in saying that developing countries have been constrained not only by real financial constraints, but also by certain disciplines that have prevented them from designating their support as green box compliant.[13] These constraints apply particularly to provisions governing the use of public stockholding for food security purposes, disaster relief or regional assistance programmes. Such programmes are of critical importance to most developing countries, and have nonetheless only been used by a few members.[14]

12 See Oduro in this volume. 13 See Dhar and Oduro in this volume.

14 Oduro argues, for example, that, in the case of payment for relief from natural disasters, the initial requirement that the production loss should exceed 30 per cent is particularly stringent for small-scale farmers for whom a much smaller production loss could have a significant impact on their incomes and welfare. She also recommends exempting developing countries from the condition that payments under regional assistance programmes can only be made when a disadvantaged region is a clearly designated

Do green box subsidies help to protect the environment?

Thriving wildlife, beautiful landscapes upon which rural tourism depends, clean water and well-functioning watersheds are all products of agriculture. As Brunner and Huyton point out, "wider society values these services, but they have no market value. This results in a market failure in which suboptimum levels of these public goods are delivered, resulting in biodiversity decline, water pollution and degraded landscapes and soils." In this context, the question is not so much whether government intervention is needed, but rather whether green box subsidies are the most effective tools in delivering these public goods?

Since the 1980s, agricultural subsidies have become a large component of farmers' incomes and consequently of land-use decisions. The way in which these subsidies are allocated plays a major role in shaping land-use patterns, particularly in the EU and US, and therefore has important impacts on the environment in rural areas. According to Steenblik and Tsai, amber box subsidies often create the strongest incentives for increasing outputs, intensifying the use of chemical inputs, and thus negatively affecting the environment. In principle, reducing amber box expenditure and increasing green box expenditure should be good for the environment. As described by Cavero, modern agriculture's contribution to greenhouse gas emissions is symptomatic of this reality. The production of fertiliser is not only an energy-intensive process; it also acidifies the soil, requiring the regular application of lime by farmers, the production of which in turn produces more carbon dioxide. Furthermore, fertilisers have the effect of suppressing microorganisms in the soil that otherwise break down methane in the atmosphere. Organic agriculture is probably one of the best alternative production methods available to farmers, insofar as it potentially allows them to reduce their greenhouse gas emissions, whilst at the same time enhancing sustainable agricultural practices. In most cases, however, these production methods are not economically viable and require support from the government.

In the EU, the 2003 reform was the most important for the environment. The decoupling of agricultural support from production not

contiguous geographical area with a defined economic and administrative identity. She advocates explicit provision for spending to address land reform and farmer settlement programmes in general and proposes, in the case of public stock holding, the striking out of the requirement that the difference between the acquisition and external reference be included in the calculation of the Aggregate Measure of Support. Proposals along these lines have indeed been under extensive consideration at the WTO, and appear likely to be adopted as part of an eventual Doha Round agreement.

only removed the perverse incentive to over-produce, but established several schemes with explicit environmental objectives. For Brunner and Huyton, such environmental programmes are only effective if they "have clear objectives that are expressed in terms of measurable outcomes and targets, in order to promote greater understanding of agricultural support and assess its effectiveness". The authors argue that: "It is clear from the agri-environment experience in the EU that without strict rules to ensure its proper use, the tool will be abused both accidentally and wilfully, as a means for disguising income or even production support." This applies particularly to cross-compliance payments, which ostensibly are made to farmers for conforming to certain minimal environmental requirements: in most cases, the demand these standards place on farmers, and consequently the benefits they deliver, are disproportionately small relative to the size of the payments. The authors report that, on a 181-hectare arable farm in Cambridgeshire, England, it was calculated that the costs of implementing cross-compliance were approximately €75, although the farm nonetheless received some €27,000 in direct payments. It is therefore easy to conclude that the direct payment scheme as currently configured is much less focused on maintaining environmental standards than it is on improving farm incomes.

Looking at US green box payments, Jane Earley goes further and argues that:

> US green box payments may have perpetuated environmental problems if they have not actually been themselves the source of environmental harm, in that:
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> - direct payments stimulate some production (even if unintended), including on marginal lands, and reward annual row crops over perennial ones;[15] . . .
> - regularly awarded disaster assistance most likely encourages continued production on marginal lands, as perhaps does some farm credit;
> - Conservation Security payments have been awarded without a showing of additionality from producers and the program has been chronically underfunded;
> - most conservation payments go to large producers who are more likely to use them to maintain production than to retire land, and perpetuate grain and oilseed cropping.

15 Earley notes, however, that: "while it is likely that increased production will have these effects, it is not likely that direct payments will have as much of an effect on increased production as other market forces, like high commodity prices. These have most recently been associated not with direct payments, but with energy, specifically biofuels mandates, and high oil prices".

In this context, Earley argues that "green box programs for reduced adverse environmental effects could be approached by additional limitations on green box programs, or by redesign of the programs themselves". She adds that these programmes "are not for the most part the subject of environmental impact assessment in terms of their domestic effects, and assessment of extraterritorial or transboundary effects are totally lacking".

In the same vein, several authors[16] have highlighted limitations in the green box criteria from an environmental perspective. For Steenblik and Tsai, some policies are less cost-effective than they might otherwise be, because they have been designed to conform with green box criteria rather than to achieve an environmental objective. Similarly, Brunner and Huyton note that traditional or organic farming will continue to require some form of direct payment if they are to remain economically viable and thus continue to deliver the environmental and social benefits which they normally provide. However, the green box requires environmental payments to be based exclusively on "the extra costs or loss of income involved in complying with the government programme". Although this formula can work in intensive agricultural landscapes where payments are being made for some form of extensification, it is much harder to apply to situations where the benefits are already being delivered and there is very little income in the first place. In other words, it is also good economic and environmental sense to focus conservation efforts on maintaining existing biodiversity rather than losing it and paying to recreate it in the future. The same logic is applied when Earley argues that "such limitations on green box criteria are not helpful to future efforts to reward environmental performance, in particular for carbon sequestration".

Examining environmental payments from a developing country perspective, Nassar *et al* ask a more fundamental question:

> As farmers in developed countries receive payments to adhere to environmental restrictions . . . their governments are assuming environmental damages (i.e. negative externalities) for farmers, while for other sectors this is usually not the case in those countries. It is also not the case for farmers in developing countries.

A similar concern is raised by Josling and Blandford on the issue of biofuels. As they point out, biofuel subsidies have an uncertain place in the WTO, falling somewhat between agricultural and industrial subsidies.

16 See Brunner and Huyton, Earley or Steenblik and Tsai in this volume.