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# ANNEX A

# *Measuring Agricultural Support*

## 1. DEFINITIONS OF THE OECD INDICATORS OF AGRICULTURAL SUPPORT

***Producer Support Estimate (PSE):*** the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income. It includes market price support and budgetary payments, *i.e.* gross transfers from taxpayers to agricultural producers arising from policy measures based on: current output, area planted/animal numbers, historical entitlements, input use, input constraints, and overall farming income. The %PSE measures the transfers as a share of gross farm receipts.

***Market Price Support (MPS):*** the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level.

***Producer Nominal Protection Coefficient (NPCp):*** the ratio between the average price received by producers (at farm gate), including payments per tonne of current output, and the border price (measured at farm gate).

***Producer Nominal Assistance Coefficient (NACp):*** the ratio between the value of gross farm receipts including support and gross farm receipts valued at border prices.

***Consumer Support Estimate (CSE):*** the annual monetary value of gross transfers to (from) consumers of agricultural commodities, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on consumption of farm products. If negative, the CSE measures the burden on consumers by agricultural policies, from higher prices and consumer charges or subsidies that lower prices to consumers. The %CSE measures the implicit tax (or subsidy, if CSE is positive) on consumers as a share of consumption expenditure at the farm gate.

***Consumer Nominal Protection Coefficient (NPCc):*** the ratio between the average price paid by consumers (at farm gate) and the border price (measured at farm gate).

***Consumer Nominal Assistance Coefficient (NACc):*** the ratio between the value of consumption expenditure on agricultural commodities (at farm gate) and that valued at border prices.

***General Services Support Estimate (GSSE):*** the annual monetary value of gross transfers to general services provided to agriculture collectively, arising from policy measures that support agriculture regardless of their nature, objectives and impacts on farm production, income, or consumption.

***Total Support Estimate (TSE):*** the annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of the associated budgetary receipts, regardless of their objectives and impacts on farm production and income, or consumption of farm products. The %TSE measures the overall transfers from agricultural policy as a percentage of GDP.

*Source*: OECD (2002), Methodology for Measurement of Support and Use in Policy Evaluation, *www.oecd.org/agr/policy*.

## 2. RECENT DEVELOPMENTS IN THE OECD PRODUCER SUPPORT ESTIMATES

### Introduction

Each year since the mid-1980s the OECD has been measuring the monetary transfers (support) associated with agricultural policies in OECD countries (and increasingly, in non-OECD countries), using a standard method. For this purpose the OECD has developed several indicators of transfers, the most important and central one being the *Producer Support Estimate (PSE)*. The results, published annually by the OECD, are the only available source of internationally comparable and transparent information on support levels in agriculture. The support estimates have provided an important contribution to the international policy dialogue on agricultural and trade policy, and the methodology underpinned the measure of support (Aggregate Measure of Support) used in multilateral trade negotiations in the WTO.

Over the years, while the fundamental methodology to measure support has not changed, policy measures have evolved, which have been partially reflected in the breakdown of the component parts of the overall PSE to improve the evaluation of policy reform and for use in policy analysis. With the further evolution of policies, following a two-year period of discussion among experts, OECD member countries have decided, as from the 2007 report on *Agricultural Policies in OECD Countries: Monitoring and Evaluation*, to adopt a new classification of the generic policy categories in the PSE, to change the measurement of support to commodities, and the presentation of the relevant indicators. *These changes reflect the evolution of agricultural policies in OECD countries, and thus should enhance the ability to monitor and evaluate those policies.* This chapter explains the new PSE classification, and how the data and indicators can be used to monitor policy developments.

### Measuring agricultural support

The Producer Support Estimate (PSE) measures the annual monetary transfers to farmers from three broad categories of policy measures that:

- Maintain domestic prices for farm goods at levels higher (and occasionally lower) than those at the country's border (*market price support*).
- Provide payments to farmers based on, for example, the quantity of a commodity produced, the amount of inputs used, the number of animals kept, the area farmed, an historical reference period, or farmers' revenue or income (*budgetary payments*).
- Provide implicit budgetary support through lowering farm input costs, for example for investment credit, energy, and water (*budgetary revenue foregone*).

The classification of support resulting from agricultural policies is based on how policies are actually *implemented* – and not on the intended *objectives* or *impacts* of those policies. A crucial point to emphasise is that the estimates of support not only comprises *budget payments* that appear in government accounts (which is often the popular understanding of support), but also *budgetary revenues* foregone, and the gap between domestic and world market prices for farm goods – *market price support*. The latter element represents in many countries the largest component of the PSE, but has been decreasing as a share of overall support in many countries in recent years.

The PSE indicators are expressed in both absolute monetary terms (in national currencies, in US dollars and in Euros) and in relative terms – in the case of the %PSE as a percentage of the value of gross farm receipts (including support payments) in each country for which the estimates are made. The %PSE shows the amount of support to

farmers irrespective of the sectoral structure and inflation rate of a country, making this indicator the most widely acceptable and useful indicator for comparisons of support across countries and time.

The main purpose of the calculations is to show the estimates and composition of support each year, and to compare the trends across countries and through time, in order to monitor and evaluate the extent to which OECD countries are making progress in policy reform to which all OECD governments are committed. This monitoring and evaluation exercise is complemented by integrating the indicators of support in models to inform policy makers about the efforts made to meet their various objectives, and to analyse the effects of different policy instruments on production, trade, farm incomes and the environment.

## Changes in the PSE methodology

### *Previous classification of PSE and related indicators*

The PSE classification that has been used in recent years (including the 2006 report on *Agricultural Policies in OECD Countries: at a Glance*) is shown in Box A.1, with the definitions of the various elements shown in Box A.2.

Box A.1. **Previous classification of PSE and related support indicators**

***Producer Support Estimate (PSE) (A-H)***

A. Market price support *of which MPS commodities*
B. Payments based on output
C. Payments based on area planted/animal numbers
D. Payments based on historical entitlements
E. Payments based on input use
F. Payments based on input constraints
G. Payments based on overall farm income
H. Miscellaneous payments

Percentage PSE (PSE as a % of gross farm receipts)
Producer Nominal Protection Coefficient (NPC)
Producer Nominal Assistance Coefficient (NAC)

***General Services Support Estimate (GSSE)***

***Consumer Support Estimate (CSE)***

Transfers to producers from consumers
Other transfers from consumers
Transfers to consumers from taxpayers
Excess feed costs

Percentage CSE (CSE as a % of farm-gate value of consumption)
Consumer NPC
Consumer NAC

***Total Support Estimate (TSE) (A+B+C-budget receipts)***

Transfers from consumers
Transfers from taxpayers
Budget receipts

Percentage TSE (as a share of GDP)

### Box A.2. **Definitions of categories in the current PSE classification**

***A. Market Price Support (MPS)*** – transfers from consumers and taxpayers to farmers from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm-gate level.

***B. Payments based on output*** – transfers from taxpayers to farmers from policy measures based on current output of a specific agricultural commodity.

***C. Payments based on area planted/animal numbers*** – transfers from taxpayers to farmers from policy measures based on current plantings, or number of animals, in respect of a specific agricultural commodity or a specific group of agricultural commodities.

***D. Payments based on historical entitlement*** – transfers from taxpayers to farmers from policy measures based on historical support, area, animal numbers or production of a specific agricultural commodity, or a specific group of agricultural commodities, without any obligation to continue planting or producing such commodities.

***E. Payments based on input use*** – transfers from taxpayers to farmers from policy measures based on the use of a specific fixed or variable input, or a specific group of inputs or factors of production.

***F. Payments based on input constraints*** – transfers from taxpayers to farmers from policy measures based on constraints on the use of a specific fixed or variable input, or a specific group of inputs, through constraining the choice of production techniques.

***G. Payments based on overall farming income*** – transfers from taxpayers to farmers from policy measures based on overall farming income (or revenue), without constraints or conditions to produce specific commodities, or to use specific fixed or variable inputs.

***H. Miscellaneous payments*** – all transfers from taxpayers to farmers that cannot be disaggregated and allocated to the other categories of transfers to producers.

### *New classification of PSE and related indicators*

In recent years in the process of policy reform, policies in many OECD countries have been moving – to different degrees and speeds – towards providing support that is less dependent on producing a specific commodity. However, in some cases policies provide support to groups of commodities or on the condition that some commodity is produced, even if it is not specified as to what it should be. Policies are also increasingly providing support based on farm area or on historical criteria, which may be land, animal numbers, or income, for example. In some cases, production is required (but the actual commodities produced – currently or in the past – are not specified), in other cases no commodity production is required or support is provided for the production of non-commodity outputs (such as environmental goods and services). In many cases, there are other criteria that farmers must also meet in order to be entitled to support, such as implementing constraints on the use of inputs, or leaving land idle from commodity production but kept in "good agricultural or environmental condition".

The thrust of many of the changes in policies has been to move in the direction of decoupling the basis for providing support from specific commodity production to other criteria. While there is increasingly more flexibility in *what* farmers can produce in order to be entitled to support, there is often less flexibility in *how* farmers manage their operations, with greater regulatory constraints or conditions. The consequence is that although the aggregate PSEs remain essentially unchanged, as policies have become more

varied and complex, they have also become more difficult to group into the previous PSE classification in ways that would permit a more accurate monitoring and evaluation of policy reform and use in quantitative policy analysis.

In reflecting these policy developments, the new PSE classification, which will be implemented in the 2007 report on *Agricultural Policies in OECD Countries: Monitoring and Evaluation* and the 2008 report on *Agricultural Policies in non-OECD Countries: Monitoring and Evaluation,* is presented in Box A.3.

The definitions of the categories and labels in the new PSE classification are shown in Box A.4.

### Box A.3. **New PSE classification**

**A. *Support based on commodity output***

A.1. *Market price support*
A.2. *Payments based on output*

**B. *Payments based on input use***

B.1. *Variable input use*
B.2. *Fixed capital formation*
B.3. *On-farm services*

**C. *Payments based on current A/An/R/I, production required***

C.1. *of a single commodity*
C.2. *of a group of commodities*
C.3. *of all commodities*

**D. *Payments based on non-current A/An/R/I, production required***

**E. *Payments based on non-current A/An/R/I, production not required***

E.1. *Variable rates*
E.2. *Fixed rates*

**F. *Payments based on non-commodity criteria***

F.1. *Long-term resource retirement*
F.2. *Specific non-commodity output*
F.3. *Other non-commodity criteria*

**G. *Miscellaneous payments***

Labels to be attached to each programme in the above categories of policy measures:

- *With/without L* (with or without current commodity production limits).
- *With V/F rates* (with variable or fixed payment rates).
- *With/without C* (with or without input constraints).
- *With/without E* (with or without any commodity exceptions).
- *Based on A/An/R/I* (based on area, animal numbers, receipts or income).
- *Based on SC/GC/AC* (based on a single commodity, group of commodities or all commodities).

*Note:* A (area), An (animal numbers), R (receipts) or I (income).

### Box A.4. **Definitions of categories in the new PSE classification**

**Definitions of categories:**

***Market price support*** and ***Payments based on output:*** as in **Box A.2**.

***Payments based on input use:*** transfers from taxpayers to agricultural producers arising from policy measures based on on-farm use of inputs to produce commodities:

- ***Variable input use*** that reduce the on-farm cost of a specific variable input or a mix of variable inputs.
- ***Fixed capital formation*** that reduce the on-farm investment cost of farm buildings, equipment, plantations,irrigation, drainage and soil improvements.
- ***On-farm services*** that reduce the cost of technical, accounting, commercial, sanitary and phyto-sanitary assistance and training provided to individual farmers.

***Payments based on current A/An/R/I, production required:*** transfers from taxpayers to agricultural producers arising from policy measures *based on current* areas, animal numbers, revenue or income.

***Payments based on non-current A/An/R/I, production required:*** transfers from taxpayers to agricultural producers arising from policy measures *based on non-current* (*i.e.* historical or fixed) areas, animal numbers, revenue or income, with current production of any commodity required.

***Payments based on non-current A/An/R/I, production not required:*** transfers from taxpayers to agricultural producers arising from policy measures *based on non-current* (*i.e.* historical or fixed) areas, animal numbers, revenue or income, with current production of any commodity not required but optional.

- ***Variable rates:*** payment rates vary with respect of levels of current output or input prices.
- ***Fixed rates:*** payment rates do not vary with respect to these parameters.

***Payments based on non-commodity criteria:*** transfers from taxpayers to agricultural producers arising from policy measures not based on commodity parameters (area, animal numbers, revenue, income), but based on:

- ***Long-term resource retirement:*** transfers for the long-term retirement of factors of production from commodity production. The payments in this subcategory are distinguished from those requiring *short-term resource retirement*, which is based on commodity production criteria.
- ***A specific non-commodity output:*** transfers for the use of farm resources to produce specific non-commodity outputs of goods and services which are voluntarily produced beyond what is required by existing regulations.
- ***Other non-commodity criteria:*** transfers provided equally to all farmers, such as a flat rate or lump sum payment, not based on commodity areas, animal numbers, revenue, income and input use.

***Miscellaneous payments:*** transfers from taxpayers to farmers for which there is a lack of information to allocate them among the appropriate categories.

**Definitions of labels:**

***With or without current commodity production limits:*** defines whether or not there is a specific limitation on current commodity production (output, area or animal numbers) that is eligible to receive payments or MPS.

Box A.4. **Definitions of categories in the new PSE classification** *(cont.)*

***With variable or fixed payment rates:*** defines whether payment rates vary with respect to levels of current output or input prices or production yields and/or area (variable rates); or do not vary with respect to these parameters (fixed rates).

***With or without input constraints:*** defines whether or not there are specific requirements concerning commodity production practices related to the programme in terms of the reduction, replacement or withdrawal in the use of inputs that are eligible to receive payments.

***With or without commodity exceptions:*** defines whether or not there are prohibitions upon the production of certain commodities as a condition of eligibility for payments based on non-current A/An/R/I of commodity(ies).

***Based on area, animal numbers, receipts or income:*** defines the specific attribute (*i.e.* area, animal numbers, receipts or income) on which the payment is based.

***Based on a single commodity, a group of commodities or all commodities:*** defines whether the payment is granted for production of a single commodity, a group of commodities or all commodities.

To reflect the way in which many policies are evolving, with the gradual shift away from direct commodity-linked support, the *total* PSE will be broken down into four categories. These categories are:

- Single commodity transfers (SCT), which are by definition granted by commodity.[1]
- Group commodity transfers, shown as one (aggregate) figure and complemented by country specific *satellite* tables, which will provide more detailed information concerning country specific groups and transfers related to those groups.
- All commodity transfers, shown as one (aggregate) figure.
- Other transfers, shown as one (aggregate) figure.

However, the PSE database will continue to provide complete information on the list of commodities to which each policy measure applies, provide the PSE by commodity up to and including for 2004, and show the basis on which those commodity PSEs were calculated.

## 3. AGRICULTURAL SUPPORT IN NON-OECD ECONOMIES: SOME MEASUREMENT ISSUES

### Introduction

The OECD indicators of agricultural support, of which the PSE and GSSE are the key ones,[2] provide structure and quantify policies that support the agricultural sector. These indicators constitute a comprehensive framework for monitoring of annual and long-term developments in agricultural policies. As such, this exercise offers an important input into national policy analysis and decision making. The method allows for cross-country comparison of agricultural policies, thus helping to make national policies more transparent and facilitating a more informed policy dialogue.

The OECD began evaluating agricultural support for non-OECD economies in the early 1990s. This analysis now covers a number of transition economies, such as Bulgaria,

Romania, Russia and Ukraine,[3] and has recently been extended to large developing economies such as Brazil, China, and South Africa (OECD, 2006b).

The purpose of this document is to continue the practice of informing governments and analysts about the approaches to the measurement of agricultural support in non-OECD economies.[4] It is important to stress that the evaluation of support for these countries is based on the same methodology as applied to OECD members. A consistent methodological treatment of countries is one of the key principles guiding the OECD analysis in this area. However, the evaluation of support in non-OECD economies has its specificities. First, because it often concerns policy measures that have relatively little prominence in OECD countries. Second, there is a greater need for careful interpretation of support estimates due to the fact that agricultural policies are being evaluated for the economies that undergo profound structural transformations and adjustment. Clarity about what underlies the estimates of support in non-OECD economies is important to facilitate understanding and interpretation of these estimates.

The document focuses on several support measurement issues that were encountered in the most recent OECD *Agricultural Policy Reviews* for Brazil, China and South Africa (OECD, 2005a; OECD, 2005b; OECD, 2006a). Where relevant, experience with other monitored non-OECD economies is also referred to.

The paper first looks at the measurement and interpretation of market price transfers for non-member economies. This issue has been discussed at previous OECD meetings and in publications,[5] but deserves regular consideration due to a growing interest in support estimates for non-OECD economies and the broadening base of data users. The second part of the document discusses several salient features of estimation of budgetary support, such as assistance though preferential credit, large-scale debt forgiveness, and support associated with developmental and social assistance programmes. None of these issues are relevant exclusively for non-OECD economies, but in these economies they become more distinct and therefore deserve more attention.

## Support measurement issues

### *Market price support*

The traditional way of supporting (or taxing) agricultural producers has been to alter the level of market prices they receive. Various measures are applied to this effect, such as imposition of taxes on imports or exports, often in combination with domestic market interventions, or direct price administration. Capturing the implicit support (or tax) arising from such measures is thus one of the principal tasks in estimating the government's policy transfers to (from) producers.

When only an import tariff or an export duty is in place, the task may seem straightforward – the applied tariff represents an implicit policy transfer. However identification of an applied tariff is often complicated by practical difficulties of estimating the "average" tariff applied in the presence of tariff rate quota regimes, seasonal variations in tariff protection, preferential trade agreements, and high diversification of tariff rates for certain products. The effects of formal tariffs can be substantially modified if quantitative trade restrictions, state trading or non-tariff measures are also in place. The measurement of price policy transfers becomes further complicated when border measures are applied in combination with other price interventions. In some cases such interventions are strictly formalised as, for example, the EU's Common Market Organisations (CMOs). However, as is

often the case in non-OECD economies, domestic market interventions may have an informal or *ad hoc* nature, or may be the responsibility of regional administrations, with variable application across regions.

Formal policy parameters of price interventions – import tariffs or export duties, subsidies, and levies – are thus often neither accurate nor sufficient indicators of price policy transfers. Given that, the basic OECD approach to the measurement of market price support has been to estimate an *effective tariff,* or a differential between domestic and world prices, which would reflect the totality of policy interventions affecting market prices.

Estimates based on the measurement of price differentials mean, however, that non-agricultural policy impacts may be captured in these estimates as well. The differential between domestic and world prices is theoretically the result of government interventions preventing market forces arbitraging away the price differences between domestic and external markets. "Theoretically" in particular means assuming a perfectly competitive market structure and that market agents can immediately absorb information and implement new contracts in response to price changes. In the real world these conditions rarely hold, as markets are characterised by various imperfections, while it takes time and cost for agents to react to new market signals. Therefore, market inertia creates price differentials independently of government price interventions. The degree of such non-policy "noise" increases in the case of non-OECD economies. Markets in these economies are characterised by underdeveloped physical infrastructure, poor information and weak market institutions, which impede price arbitrage. These deficiencies are even more pronounced in the countries with large territories, like Brazil, China, or Russia, where natural vastness exacerbates the effects of weak market organisation. The consequences of deficient arbitrage in the monitored countries become particularly visible in their crop markets, when temporary deficits or excess supplies due to weather conditions produce sharp market price reactions.

Another factor interacting with agricultural policies, and also contributing to the emergence of differentials between domestic and world prices, is macroeconomic instability. The majority of non-OECD economies went through periods of serious macroeconomic adjustments. Such adjustments – whether controlled or crisis – brought about shocks to relative prices. For example, macroeconomic reforms in Brazil, South Africa, and Russia were associated with massive exchange rate devaluations. Following the major reforms, all these countries saw additional currency shocks of varying intensity. The exchange rate devaluations pushed world prices, expressed in local currencies, above domestic price levels, and opened wide price gaps. Such abrupt and strong price disparities, emerging due to factors not related to agricultural policies, take time to dissipate and inevitably affect the measured price gaps.

In principle, if the PSE is to measure transfers arising from agricultural policies, the non-agricultural policy impacts should be filtered out from the measured domestic-to-world price gaps. This task is not trivial. One possibility would be to model producer prices, which would prevail with the given agricultural policies and in the absence of other impacts, such as structural impediments to transmission of international prices to domestic markets and exchange rate shocks. Price gaps calculated on the basis of these modelled domestic prices would provide approximations of agricultural policy impacts. However, this approach involves applying assumptions about various parameters of the model, which introduces its own bias into estimations. What is also important is that the modelling approach would transform the OECD PSE from a conventional measure based on observed data, to one based on non-observed variables.

The convention in the case of non-OECD economies has been to follow the same approach as for OECD countries that the PSE is a measure based on observed data. It has been considered appropriate to apply, as it is done in some cases for the OECD countries, certain assumptions to factor out non-agricultural policy impacts from the measured market price support. These assumptions can be better explained by concrete examples:

- When for *exported commodities* it is revealed that domestic prices are below the world price levels, but no taxing agricultural measures are applied – such as export duties, export restrictions, or administrative barriers to inter-regional movement of goods[6] – the price differentials are set to zero. The underlying assumption is that the lower domestic prices are due to factors not related to agricultural policies, which is equivalent to assuming that agricultural policies as such create a zero producer price effect.[7]
- When for *imported commodities* it is revealed that domestic prices fall below the world price levels, but these commodities effectively receive border protection and/or domestic price support – the negative price differentials are also set to zero. In this case it is assumed that the lower domestic prices are due to factors not related to agricultural policies and the net effect of market price support equals zero.[8]
- In all other cases, when positive or negative price differentials are revealed in the presence of agricultural policies respectively supporting or taxing producer prices, the measured price differentials are fully accounted for in the market price support.[9]

The assumptions described above are founded on standard economic principles and the facts about agricultural policy measures in particular countries. This approach permits the best approximation of measured transfers to those attributable to agricultural policies. However, because in many cases price differentials enter into the estimation of MPS directly, the MPS estimates for non-OECD economies remain overall composite transfers, resulting from interaction of agricultural measures, structural weaknesses and macroeconomic impacts.

### *Transfers from taxpayers*

*Preferential lending*

One prevalent government practice in non-OECD economies is to reduce the cost of borrowing for agricultural producers. When agricultural producers are able to borrow at more favourable terms compared to other businesses, implicit policy transfers are created, which need to be accounted for in producer support.

In some countries, like in Russia or Ukraine, the governments do not intervene directly in lending conditions, but subsidise interest rates charged to agricultural borrowers. Usually, the lending banks receive budgetary compensation which covers part of the interest rate due on specified agricultural loans. In such cases the estimation task is straightforward, as transfers to producers associated with such support correspond to the budgetary disbursements.

However, some non-OECD governments operate under considerable fiscal rigidities, leading them to rely on such ways of credit support that do not imply actual budgetary disbursements. This is the case of Brazil, where the government imposes special conditions on lending to agricultural producers. The banks and credit co-operatives are required to allocate certain shares of their credit resources for agricultural lending at interest rates fixed by the government. Additional credit resources for agricultural lending come from special extra-budgetary funds, and are also lent at fixed interest rates.

When the government sets the interest rates and directs resources for lending, the estimation of the associated support is based on the measurement of a difference between the interest rate payments, which agricultural borrowers would have paid based on a "market" interest rate and the payments which they actually made based on preferential interest rates. This task demands good knowledge of agricultural lending conditions, which may vary by lending programmes and types of beneficiaries and may be subject to frequent changes. It is also important to have adequate information on allocations of preferential credit and the values of outstanding debt. A choice of appropriate "market" interest which would best represent an opportunity cost for preferential credit demands a good overall knowledge of credit market in a given country.

The importance of support through preferential credit can be illustrated by the fact in 2003-05 it accounted for almost one-half of Brazil's PSE and 4% of Russia's PSE (13% in 1992-95).

*Agricultural debt restructuring*

The fundamental market reforms that the majority of monitored countries implemented in the 1990s had, as their immediate effect, a considerable deterioration of agricultural terms of trade. Brazil, Russia, Ukraine, and Romania – all saw deep farm financial crises in the first half of the 1990s (Box A.5). The governments responded by the

### Box A.5. **Agricultural debt rescheduling in Brazil and Russia**

Hyperinflation plagued the Brazilian economy in the late 1980s and continued into the 1990s, with extreme volatility of inflation, the real exchange rate and relative prices. After the implementation of the Real Plan in 1994, inflation was tamed. However an exchange rate peg made the real overvalued and restrained growth in export-oriented and import-competing sectors. By 1995, the value of non-performing agricultural loans reached 30% of total outstanding agricultural credit, and the new bank lending virtually stopped. Under strong pressure from the agricultural and banking sectors, the Brazilian government decided on a broad rescheduling of agricultural debt. The repayment period for the overdue debt was extended by 20 and 24 years, depending on types of borrowers, and the interest rate was set at below-market rates. At the beginning of the 2000s, another rescheduling decision followed, this time concerning loans to small farmers and land reform beneficiaries, also providing for prolongation of repayments at reduced interest rates, partial write-offs and "good payer" rebates. At the end of 2005, the total outstanding restructured debt stood at BRL 17.3 billion (USD 7.6 billion) with overdue repayments reaching BRL 4.5 billion (USD 2.0 billion).

The Russian agricultural sector plunged into a deep financial crisis in the first half of the 1990s. Between 1992 and 1995, the share of unprofitable agricultural enterprises rose from 5% to 57%. As of January 1995, approximately 70% of agricultural enterprises had overdue debt on accounts payable, 43% on state taxes and contributions to the Pension and Social Security systems, and 28% on bank loans. The first large-scale agricultural debt rescheduling was implemented in 1994, covering the government's directed credit to agricultural producers. Additional restructurings followed in 1998, 2001, 2002, and the most recent in 2004. These concerned overdue taxes and contributions of agricultural enterprises to the Pension and Social Security systems, providing for extension of repayments for five to ten years and partial write-offs.

*Source:* OECD, 2005a; FSSS, 1995.

large-scale restructurings of accumulated bad debt, often followed by other restructurings involving additional bad debts, and/or repackaging of previous schemes. All schemes incorporated concessions to debtors, such as extensions of repayment periods, reduced interest on overdue debt, and partial write-offs of debt. These restructurings were probably unavoidable measures of financial rehabilitation given the cash flow problems which the agricultural sector experienced at the time.

Estimation of subsidies arising from large-scale debt restructurings is therefore an important element of the evaluation of support in many monitored non-OECD economies. The approach to estimation is similar to that applied for preferential credit, *i.e.* the subsidy represents the difference between repayments due at "market" and at preferential interest rate. Where information is available on written-off debt and additional incentives for timely repayment, these are also accounted for. The implicit transfers to producers associated with debt rescheduling constituted 13% of the Brazil's aggregate PSE in 2003-05. For Russia, this support accounted for 1% of the aggregate PSE in 2003-05, but it was very important in 1992-95, compensating for a large part of producer price taxation.

*Alleviation of poverty and social inequality*

Alleviation of poverty and social inequality are key issues on the policy agenda of the monitored non-OECD economies. Access to farmland and to farming activity for disadvantaged social groups is viewed as one of the principal remedies in combating poverty and social division. Thus, Brazil and South Africa implement large-scale land reform programmes, which transfer agricultural land to the poor free of charge or at low cost. Land allotment is complemented by a plethora of programmes to subsidise investment, current production costs, and build infrastructure on emerging or existing farms run by the poor. Measures to involve the rural poor in agriculture are supported by investments in education, training and extension.

Programmes of this kind have a broad developmental nature and are fundamentally driven by social equity objectives. The conceptual issue is whether these programmes should be considered in the countries' agricultural support estimates. The answer to this question is yes, if these social objectives are pursued though support of agricultural activity. This approach is consistent with the PSE definition as transfers to support agricultural producers "*… arising from policy measures which support agriculture, regardless of their nature, objectives or impacts on farm production or income*" (OECD, 2006b).

In some cases land and small farmer programmes may be partly financed by international donors. In this respect another specific question emerges. Should this assistance, based on taxpayer transfers originating outside the national economy framework, be included into the country's support estimates? It has been agreed to include the support based on foreign aid, because it is the national policies that create and deliver this support. Although for the countries monitored to date international grants for domestic agricultural support is a marginal issue, it may potentially have important implications for those developing countries whose agricultural support relies heavily on official development assistance (ODA).

A challenge that developmental programmes pose in terms of their treatment in the PSE/GSSE is linked with the difficulties of separating clearly the elements of programmes related to agricultural production activity. Packages targeted to land reform and assistance to poor rural households are typically heterogeneous, encompassing, along with measures

supporting farming, assistance for education, territorial and infrastructural development, housing and healthcare improvements; activities which go beyond the support of agricultural producers or the agricultural sector. In some cases, even if the amount of agricultural expenditures can be identified, it is too aggregated to distinguish between support to individual producers and to general services. Two examples in Box A.6 illustrate the variability of elements that may be aggregated under the budgetary lines corresponding to programmes of this kind. It is therefore important to have access to more detail on such programmes, as well as their cost elements – a task, which can be best achieved through close co-operation with national governments.

### Box A.6. **Programmes combining social assistance and agricultural support**

Among other types of assistance, land reform beneficiaries *in Brazil*, receive preferential loans under the programme "Credit for Families Settling on Agricultural Lands". These loans are given for construction of family houses, purchase of food, but also for purchase of agricultural inputs, such as fertiliser, seeds, small animals and tools. These allocations therefore combine elements of purely social assistance, which should not be included in estimation of agricultural support, and elements that actually represent agricultural support. Another programme is called "Support of Municipal Projects on Development of Infrastructure and Services for Family Agriculture". It finances investments in infrastructure for collective use of families involved in small agricultural production, including electricity networks, irrigation, processing and storage, construction and overhaul of internal roads and ways for transporting harvested crops, construction and renovation of rural schools, communal centres, healthcare points, and public telephones. It means that this programme encompasses investments, some of which relate only to agriculture, some serve both agricultural and social purposes, and some are exclusively social.

A Comprehensive Development Plan for Agriculture in *China* supports (original wording): "improvement of low and medium-yielding fields; building of small-scale reservoirs; building of irrigation and drainage systems; building of electrical pumping wells; improvement of soil; purchase of agro-facilities for dry farming; building of roads; building of shelter-forests, building of agro-technical service stations and facilities for farmers' training". While part of the above mentioned (and similar) budgetary expenditures which have the objective of supporting rural infrastructure could be treated as input subsidies (*e.g.* "purchase of agro-facilities for dry farming"), other expenditures (*e.g.* on water supply or flood prevention included in other programmes under the general label of agricultural infrastructure) provide benefits to urban and industrial centres (*e.g.* township and village enterprises) in the vicinity.

*Source:* OECD, 2005a; OECD, 2005b.

## Conclusions

Macroeconomic instability and structural weaknesses are characteristic of non-OECD economies. Agricultural policies create implicit transfers to, or from, agricultural producers in interaction with these factors, which may amplify or offset the impacts of agricultural measures as such. The non-policy impacts can not be perfectly filtered out of these transfers. It is therefore important to interpret the support estimates for non-OECD economies with care. In particular, long-term trends in support should take precedence over the estimates for one particular year. This, however, does not diminish the relevance

of PSE/GSSE estimates for policy analysis and monitoring, particularly given that market-oriented reforms in non-OECD economies have substantially progressed towards more developed market systems and macroeconomic stability.

As governments in non-OECD economies operate under fiscal rigidities, the assistance is often provided in forms which do not imply actual budgetary disbursements. Such implicit support as controlled (preferential) terms of lending to agricultural borrowers and large-scale debt restructurings have been common to many monitored non-OECD economies. Identification and evaluation of this support is an important task. Another characteristic of budgetary support to producers in non-OECD economies is that it may be partly based on international funds, *i.e.* ultimately financed by foreign taxpayers.

Many non-OECD economies are facing serious poverty and social equity problems. These problems are largely based in the rural population and solutions are often sought through support to agricultural activity among the poor. Evaluation of support arising from these actions, fundamentally inspired by social considerations, but largely pursued through agricultural support, is another notable feature of non-OECD economies, which requires attention. In particular, there is a need for careful separation of agricultural support from broad based assistance provided under poverty alleviation and development programmes.

Broadening the policy information and improving the quality of data underlying the PSE/GSSE estimates for non-OECD economies is an ongoing process. Success can only be achieved through an interest and active co-operation on the part of the governments of the countries concerned.

### *Notes*

1. In the previous PSE classification, commodity PSEs were calculated through adding support from policy measures *specific* to each commodity and from other policy measures through the use of allocation keys, such as based on the share of the commodity in total production.
2. See Section 1 in this Annex for definitions of indicators of support. For detailed definitions of the OECD agricultural support indicators see OECD 2006c.
3. Other non-OECD transition economies, Estonia, Latvia, Lithuania and Slovenia, are monitored as part of the European Union.
4. The OECD's experience with the measurement of agricultural support in non-OECD economies has been first reviewed by Harley (1996), and Kwieciński and Pescatore (2000). This issue was also broadly addressed at the OECD Global Forum on Agriculture and the Workshop on *Agricultural Policies in China after WTO Accession*, both held in 2002 (Melyukhina 2002a and 2002b).
5. See, for example Melyukhina 2002a and 2002b.
6. Administrative barriers to movement of goods are a common practice in Russia and Ukraine. Regional controls of product movements on various grounds – "regional" food security, or need to support local processors, and consequently, the local economy – are frequent in these countries. Technical barriers are also widespread, such as licensing, special permissions of local administrations to ship agricultural products outside the regions, as well as other administrative requirements for internal and external movement of agricultural products.
7. In the case of Brazil, such an assumption is applied in the estimation of MPS for soybeans, sugar, beef, pigmeat and poultry, all being net exports, whose domestic prices are actually below the export parity levels. In the case of China, this concerns peanuts, apples, beef, pigmeat poultry and eggs; and in the case of South Africa – grapes, oranges, apples and eggs.
8. In the case of Brazil, this assumption is applied in the estimation of MPS for key imported products – wheat, rice and maize. Specifically, in years when domestic price is below the world reference price, the MPS for these commodities is assumed to equal zero, while in years when the domestic-to reference price differential is positive, it is fully accounted for in the MPS. A similar

approach is applied in estimation of MPS for imported products in South Africa, such as wheat, maize, sunflower, peanuts, beef, pigmeat, and poultry.

9. In the case of Brazil, this approach is applied in the estimation of MPS for milk, and between 1995 and 1999, for sugar cane. In the case of China this occurs for wheat, maize, rice, rapeseed and soybeans; and for South Africa – sugar, milk, and sheepmeat. A full accounting of price gaps is also the case for the estimation of MPS for all commodities for Russia, and Ukraine.

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