# Chapter 10.A
# Agricultural Domestic Support


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This chapter documents how domestic support levels are calculated from the OECD Producer Support Estimate (PSE)[1] and incorporated into the GTAP 8 Data Base.

The OECD PSE currently includes the following countries: Australia, Canada, European Union (27 members treated as a single entity), Iceland, Japan, Korea, Mexico, New Zealand, Norway, Switzerland, Turkey and the United States. Data is also available for selected non-OECD countries, such as Brazil, China, Russia, South Africa and Ukraine. Domestic support for the European Union is further disaggregated for the individual member states (see Chapter 10.B and 10.C for more details).

PSE estimates are available covering the period from 1986 to the present. For GTAP 8, the 2004 and 2007 numbers are included in the database. The PSE is composed of Market Price Support (MPS) and budgetary transfers. MPS is an estimate of indirect transfers to producers that includes the cumulated impact of various policies, notably domestic price support and border measures such as tariffs.

The key principles[2] used by OECD to determine the scope of policy measures to be considered in the estimation and measurement of agricultural support are:

- Transfers are generated to agricultural producers, irrespective of the nature, objectives or impacts
- Transfers are measured in gross terms, without accounting for any adjustments which producers may make to receive the support, e.g. to meet compliance requirements
- Transfers to individual producers are measured at the farm gate level

OECD estimates transfers that arise as a result of policies affecting domestic market prices (MPS). A variety of government policy measures may affect the domestic market price of a commodity, including measures imposed at the border, such as tariffs and export subsidization, as well as quotas on imports or exports. Domestic market interventions may include direct price administration and public stockholding. All these policy interventions alter the domestic market price of a commodity compared to its border price. To avoid double counting with the tariffs in the GTAP Data Base, MPS is not included in the GTAP domestic support dataset.

What is included in the GTAP database are transfers to producers other than those affecting market prices for agricultural commodities. These policies provide support based on: (a) actual budgetary transfers; and (b) revenue foregone by the government and other economic agents. Budgetary transfers are the most "visible" policy transfers. They are observed and do not need to be estimated. The measurement of direct budgetary transfers is an accounting task, which consists of the appropriate use of information on budgetary spending.

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1 Data for 2004 and 2007 are published in "Agricultural Policies in OECD Countries. Monitoring and Evaluation" 2008 Edition.

2 For a more detailed discussion of these principles, refer to "The PSE Manual", OECD 2010

Budgetary transfers through all government institutions, both national and sub-national, are included. However, budgetary transfers associated with the administration of policies (design, implementation and evaluation) are not included. Budgetary transfers are allocated to calendar years; in cases where agricultural, fiscal and calendar years do not coincide, various procedures are used to attribute transfers appropriately -for example allocate a payment of a particular crop year to the calendar year to which the production of that crop year is attributed.

Producers can also be supported through policy measures whereby governments or other economic agents forego revenue that they would otherwise collect from or charge to producers. Typical forms of revenue foregone are tax concessions, preferential lending, debt restructuring, and administered prices for inputs and services.

Budgetary transfers (and revenue foregone) are classified by OECD[3] into the following broad categories:

A2. Payments based on output

B. Payments based on input use

C. Payments based on current A/An/R/I[4], production required

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

F. Payments based on non-commodity criteria

G. Miscellaneous

Note that PSEs for individual commodities are no longer calculated (as was the case prior to 2007). Instead, a country total PSE is divided into Single Commodity Transfers, Group Commodity Transfers, All Commodity Transfers; and Other Transfers to Producers. This change reflects the fact that as a result of policy reform, support in many OECD countries is less tied to an individual commodity. Support is being increasingly provided to groups of commodities or all commodities in general, or without obliging a recipient to engage in commodity production at all. In this situation the link between some support transfers and individual commodities becomes less apparent. This necessitated an alternative presentation of support transfers with respect to their commodity specificity.

To translate this information into a form that is compatible with the GTAP Data Base, a number of manipulations are necessary. Standard formulas are applied to each country to allocate these transfers into four GTAP categories:

- Output payments
- Intermediate input payments
- Land based payments
- Capital based payments

For single commodity payments, the same principles are followed as in GTAP V6, allocating payments by factor to specific commodities. In GTAP 7 and 8, the key difference arising from the new OECD classification relates to group transfers-payments, which are allocated equi-proportionally across the sectors according to whether they apply to all commodities (ACT), or to groups of commodities

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3 The OECD revised its classification scheme in 2007.

4 The letters stand for Area (A), Animal Numbers (AN), Receipts (R) or Income (I).

(GCT, e.g. crops). That is, to reflect the fact that some payments are provided without requirements to produce specific commodities, the marginal incentive of the payment is equalized across the commodities concerned.

Other transfers to producers do not oblige a recipient to engage in commodity production at all. However, even if they choose not to produce, at least some minimum investment is usually required (e.g. maintain the land in good agricultural condition). Transfers in category E are allocated equi-proportionally to all commodities and all factors of production. Transfers in category F are based on non-commodity criteria such as long-term resource retirement (e.g. wetlands, conservation reserve) or non-commodity output (e.g. hedges). Because these do not relate to commodity production, they are not allocated in the GTAP Data Base. (See Chapter 10.C for the steps involved in actually incorporating this into the GTAP Data Base)

The OECD classification is based on implementation criteria – independently of objectives or effects. This is an important distinction as a given objective may be achieved through different measures. For a given policy measure, the implementation criteria are defined as *the conditions under which the associated transfers are provided to farmers or the conditions of eligibility for the payment.*

In the GTAP Data Base, the treatment of land and capital subsidies differs somewhat depending on whether the commodity/group is crop or animal based. Payments based on crop area in categories C and D are assigned to land-based subsidies. Payments based on animal numbers in categories C and D, and to fixed capital formation in category B are assigned to capital-based subsidies. Finally, payments based on revenue or income in categories C and D are assigned to labor-based subsidies.

The data inputs to the GTAP data base construction on domestic support for each region are provided in the following link:
https://www.gtap.agecon.purdue.edu/databases/v8/ch10_datafiles.asp

Particularly, the inputs for 2004 are available from this link and those for 2007 are available here. The aggregate power of domestic support is calculated by dividing the total value of payments by the value of production (as published by OECD) and adding 1 to the total. The percentage value shares of output, input, land, capital, and all factors subsidies are then used to allocate these payments to the corresponding tax wedges in GTAP. The methodology of allocation is explained in Chapter 10 C and the processed data fed into GTAP data construction procedure are available from these links: 2004 and 2007.