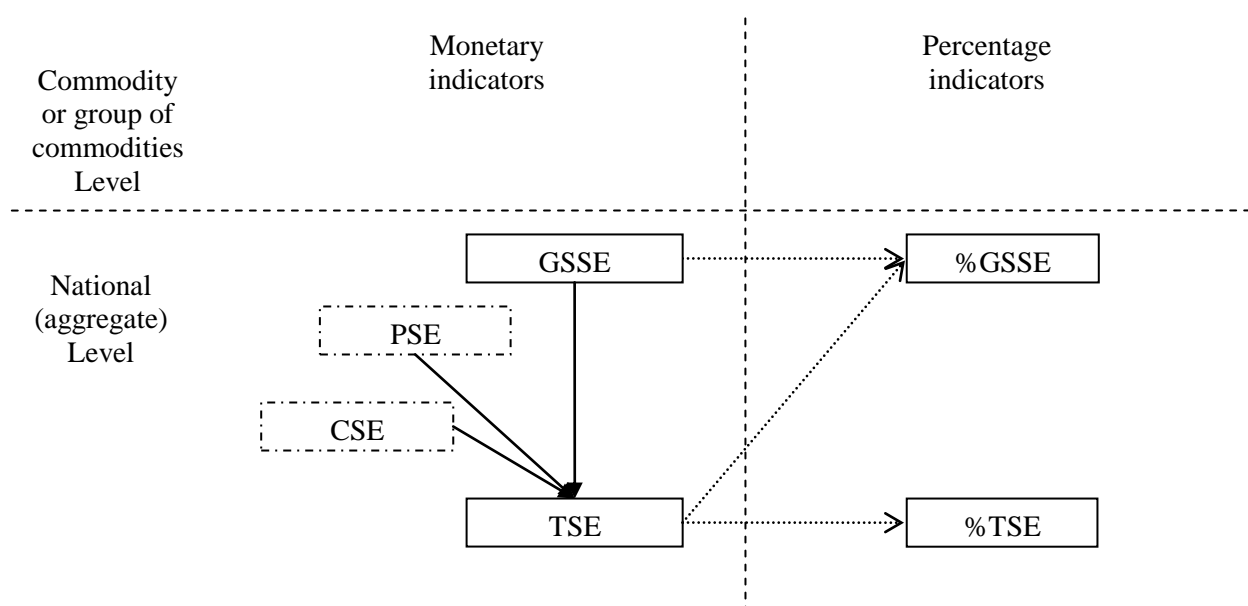


## CHAPTER 8.

### CALCULATING INDICATORS OF SUPPORT TO GENERAL SERVICES AND TOTAL SUPPORT TO AGRICULTURE

338. This chapter explains the calculation of indicators that measure support provided to producers through general services to agriculture, and that provided to the sector as a whole. The procedure for calculating these indicators is summarised in Diagram 8.1. The process begins by calculating the General Service Support Estimate (GSSE) (section 8.1). This is combined with the value of transfers calculated in the PSE and CSE to calculate the Total Support Estimate (TSE), with care taken to avoid double-counting of transfers (section 8.2). From these two absolute indicators, the relative indicators of support, the %GSSE and the %TSE are derived (section 8.3). As indicated by Diagram 8.1, these indicators are only calculated at the national (aggregate) level and not at the commodity or group of commodities level.

**Diagram 8.1. The procedure for calculating indicators of support to the sector**



#### 8.1. General Services Support Estimate (GSSE)

**General Services Support Estimate (GSSE):** the annual monetary value of gross transfers to general services provided to agricultural producers collectively (such as research, development, training, inspection, marketing and promotion), arising from policy measures that support agriculture regardless of their nature, objectives and impacts on farm production, income, or consumption. The GSSE does not include any payments to individual producers.

- GSSE values are calculated by summing the values for policy measures in categories H to N ([Box 3.4](#))

339. The GSSE measures the value of transfers provided through policies that support producers collectively rather than as individual producers. The GSSE can be estimated as:

$$GSSE = \sum GSSECategory \quad [8.1]$$

where: *GSSE* – GSSE for country *C*

*GSSECategory* - total value of transfers to GSSE category (from H to N; see Table 8.1)

340. A numerical example is presented in Table 8.1. In order to aid transparency and to assist in analysing the composition of the GSSE, the name of each policy and the resulting value of transfer are listed under the GSSE categories (from H to N) to which they have been classified according to the process set out in [section 3.4](#).

**Table 8.1. Calculation of GSSE (example)**

| Description                                     | LC million | Source / equation                |
|-------------------------------------------------|------------|----------------------------------|
| <b>General Services Support Estimate (GSSE)</b> | <b>140</b> | <b>H + I + J + K + L + M + N</b> |
| <b>H. Research and development</b>              | <b>35</b>  | <b>Sum of payments in H</b>      |
| National Agricultural Research Institute        | 25         | Data                             |
| Organic agriculture research - tender           | 10         | Data                             |
| <b>I. Agricultural schools</b>                  | <b>15</b>  | <b>Sum of payments in I</b>      |
| University bursary for farmers                  | 10         | Data                             |
| Professorship                                   | 5          | Data                             |
| <b>J. Inspection services</b>                   | <b>40</b>  | <b>Sum of payments in J</b>      |
| National Food Safety Authority                  | 20         | Data                             |
| National Grain Inspection Service               | 20         | Data                             |
| <b>K. Infrastructure</b>                        | <b>20</b>  | <b>Sum of payments in K</b>      |
| Irrigation and drainage development             | 10         | Data                             |
| Early Retirement Scheme                         | 5          | Data                             |
| Purchase of milk quotas                         | 5          | Data                             |
| <b>L. Marketing and promotion</b>               | <b>25</b>  | <b>Sum of payments in L</b>      |
| Market campaign to promote country's products   | 15         | Data                             |
| Commodity Grading Scheme                        | 10         | Data                             |
| <b>M. Public stockholding</b>                   | <b>5</b>   | <b>Sum of payments in M</b>      |
| Intervention storage of cotton                  | 5          | Data                             |
| <b>N. Miscellaneous</b>                         | <b>0</b>   | <b>Sum of payments in N</b>      |

## 8.2. Total Support Estimate (TSE)

**Total Support Estimate (TSE):** the annual monetary value of all gross transfers from taxpayers and consumers arising from policies 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.

- TSE values may be calculated in two ways, *i.e.* by summing over different recipients, or over different sources

341. Two methods exist to calculate the TSE for a country, and both are used to help to ensure that all indicators of support are correctly calculated (Table 8.2). The first method sums up the transfers distinguished by recipient, *i.e.* transfers **to producers** (*PSE*), transfers **to general services** (*GSSE*) and transfers **to consumers** from taxpayers, *i.e.* consumer subsidies (*TCT*):

$$TSE = PSE + GSSE + TCT \quad [8.2]$$

342. The second method sums up the transfers distinguished by source, *i.e.* transfers **from consumers** (*TPC + OTC*) and transfers **from taxpayers** ( $(PSE - TPC) + GSSE + TCT - OTC$ ), as shown in equation 8.3 (algebraically it can be reduced to equation 8.2):

$$TSE = (TPC + OTC) + (((PSE - TPC) + GSSE + TCT) - OTC) \quad [8.3]$$

**Table 8.2. Calculation of TSE (example)**

| Symbol     | Description                           | LC million   | Source / equation                                                         |
|------------|---------------------------------------|--------------|---------------------------------------------------------------------------|
| PSE        | Producer Support Estimate             | 684          | Table 6.7                                                                 |
| GSSE       | General Services Support Estimate     | 140          | Table 8.1                                                                 |
| TCT        | Transfers to consumers from taxpayers | 70           | Table 7.2                                                                 |
| <b>TSE</b> | <b>Total Support Estimate (TSE)</b>   | <b>894</b>   | <b>PSE + GSSE + TCT</b>                                                   |
| TFC        | Transfers from consumers              | 405          | TPC + OTC                                                                 |
| TPC        | Transfers to producers from consumers | 310          | Table 7.2                                                                 |
| OTC        | Other transfers from consumers        | 95           | Table 7.2                                                                 |
| TFT        | Transfers from taxpayers              | 584          | PSE - TPC + GSSE + TCT                                                    |
| BR         | Budget revenues                       | 95           | = OTC                                                                     |
| <b>TSE</b> | <b>Total Support Estimate (TSE)</b>   | <b>1 084</b> | <b>TFC + TFT - BR or<br/>(TPC + OTC) + (PSE - TPC + GSSE + TCT) - OTC</b> |

343. It should be noted that both methods for calculating the TSE involve the assumption that the total value of transfers from consumers to others (*OTC*) is received as budget revenue.

### 8.3. Percentage GSSE (%GSSE) and Percentage TSE (%TSE)

**Percentage GSSE (%GSSE):** transfers to general services (GSSE) as a share of TSE.

**Percentage TSE (%TSE):** TSE as a share of GDP.

344. Two relative indicators of support are derived from absolute values of *GSSE* and *TSE*. The %GSSE indicates the importance of support to general services within total support. It is calculated as the percentage share of the *TSE*:

$$\%GSSE = \frac{GSSE}{TSE} \times 100 \quad [8.4]$$

345. The %TSE indicates the level of total support to agriculture relative to a country's gross domestic product (*GDP*). The %TSE is found as a percent share of the value of *GDP*:

$$\%TSE = \frac{TSE}{GDP} \times 100 \quad [8.5]$$

346. Table 8.3 presents the results of these calculations. The %GSSE is estimated at 16% while the %TSE is estimated at 1.48%.

**Table 8.3. Calculation of %GSSE and %TSE  
(example)**

| Symbol       | Description                                           | Units      | Value        | Source / equation       |
|--------------|-------------------------------------------------------|------------|--------------|-------------------------|
| GSSE         | General Services Support Estimate                     | LC million | 140          | Table 8.1               |
| TSE          | Total Support Estimate                                | LC million | 894          | Table 8.2               |
| <b>%GSSE</b> | <b>Percentage General Services / Support Estimate</b> | <b>%</b>   | <b>16%</b>   | <b>GSSE / TSE * 100</b> |
| GDP          | Gross Domestic Product                                | LC million | 60 500       | Data                    |
| <b>%TSE</b>  | <b>Percentage Total Support Estimate</b>              | <b>%</b>   | <b>1.48%</b> | <b>TSE / GDP * 100</b>  |