VIET NAM: ESTIMATES OF SUPPORT TO AGRICULTURE

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DEFINITIONS AND SOURCES

Table 1. Agricultural Support Estimates / Total Transfers contains country Total Support Estimate (TSE) and derived indicators, which cover all agricultural production, i.e. all agricultural commodities produced in the country. Definitions of basic data sets refer to the specific programmes applied in the country. For the Producer Support Estimate (PSE) and Consumer Support Estimate (CSE), each policy measure is classified according to implementation criteria, which include: the *transfer basis* of support (output, input, area/animal numbers/receipts/income, and non-commodity criteria); whether support is based on *current* or *non-current* basis; whether production *is required* or *not* to receive payment. Each policy measure is also assigned several "labels" indicating additional implementation criteria. "MPS commodities", which vary across countries, are those for which market price support is explicitly calculated in Tables 4.1-4.13.

Table 2. Breakdown of PSE by Commodity and Other Transfers provides a breakdown of the total PSE into four categories reflecting the flexibility in production choices given to producer receiving support. These categories are: Single Commodity Transfers (SCT); Group Commodity Transfers (GCT); All Commodity Transfers (ACT); and Other Transfers to Producers (OTP). All data sets in Table 2 come from Tables 1 and 3.1-3.13 where definitions are included.

Tables 3.1-3.13 Producer Single Commodity Transfers contains producer SCT by commodity, which are calculated for Viet Nam for the following 12 commodities: rice, natural rubber, coffee (green), maize, cashew nuts (with shell), sugar cane, pepper, tea, beef and veal, pigmeat, poultry and eggs (Tables 3.1-3.12) provided that the value of production of that commodity exceeds 1% of the total value of agricultural production. In addition, SCT for "other commodities" is also calculated (Table 3.13), which covers transfers *to single commodities other than MPS commodities*. All data sets in the calculation of producer SCT by commodity come from Tables 1 and 4.1-4.13 where definitions are included.

Tables 4.1-4.13 contain **Market Price Support** (MPS) and **Consumer Single Commodity Transfers** (consumer SCT) by commodity, calculated for the same set of commodities as in **Tables 3.1 to 3.12.** Definitions are provided only for basic data sets from which all the other data sets in this table are derived.

Definitions of the indicators, criteria for classification of policy transfers included in support estimates, and methods of calculation are contained in the PSE Manual (*OECD's Producer Support Estimate and Related Indicators of Agricultural Support: Concepts, Calculations, Interpretation and Use*) [http://www.oecd.org/tad/support].

TABLE 1. VIET NAM: Total Support Estimate

Definitions:

I. Total value of production (at farm gate): Total agricultural production valued at farm gate prices, i.e. value (at farm gate) of all agricultural commodities produced in the country. For the years 2000 to 2009, this is the sum of total gross production value of crops and livestock published by the FAO [1]. From 2010 onwards, data was sourced from the Statistical Yearbook of Agriculture and Rural Development.

I.1. Of which share of MPS commodities (%): Share of the 12 commodities for which MPS is explicitly calculated (in Tables 4.1-4.12) in the total value of agricultural production.

II. Total value of consumption (at farm gate): Consumption of all commodities domestically produced valued at farm gate prices, and estimated by increasing the sum of the value of consumption (at farm gate) of the 12 MPS commodities according to their share in the total value of agricultural production [(II.1) / (I.1) x100].

II.1. Of which MPS commodities: Sum of the value of consumption (at farm gate prices) of the MPS commodities as indicated in Tables 4.1-4.12.

III.1 Producer Support Estimate (PSE): Associated with total agricultural production, i.e. for all commodities domestically produced [Sum of A to G; when negative, the amounts represent an implicit or explicit tax on producers].

A. Support based on commodity output

A.1. Market Price Support: On quantities domestically produced (excluding for on-farm feed use -- *Excess Feed Cost*) of all agricultural commodities, and estimated by increasing the sum of MPS of the 12 MPS commodities according to their share in the total value of agricultural production [(ΣMPS for MPS commodities listed in the rows below) / (I.1) x 100].

A.2. Payments based on output

B. Payments based on input use

B.1. Based on variable input use

Input subsidies within Program 135: The Socio-economic Development Programme for Ethnic Minorities and Mountainous Areas (known as Programme 135) is the largest and most important poverty reduction programme targeted on ethnic minorities and remote areas. Part of this broad programme includes subsidies for agricultural inputs and services such as extension. Available data would suggest that these subsidies represent around 13% of total expenditures on Program 135 and this share has been adopted for the whole period. The remaining 87% has been distributed as follows: 61% for category CB Storage, marketing and other physical infrastructure (see below) and 26% is considered as not provided for agriculture. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in ACT.

Irrigation fee exemption: Funding from central and local government to Irrigation and Drainage Management Companies, which are responsible for upper-level systems. The level of funding has doubled since 2009 when farmers were provided an exemption to paying an irrigation service fee. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in GCT for crop products.

Subsidy for high quality breeds of animals and high quality seeds: Budgetary expenditure by the Ministry of Finance to stabilise market prices for essential agricultural inputs. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in ACT.

Seeds and seedling subsidy: Central and local government support providing plant breeding material to farmers to encourage product diversification, improve the quality of production or support farmers in response to natural disasters and disease outbreaks. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in GCT for crop products.

B.2 Based on fixed capital formation

Machinery purchase to reduce post harvest losses (since 2010): Government funding to financial institutions to provide farmers with short-term concessional interest rate loans to purchase machines, mechanical equipment, facilities and materials. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in GCT for crop products.

B.3. Based on use of on-farm services

C. Payments based on current area planted/animal numbers/receipts/income – production required

Paddy field support (since 2011) central and sub-national, to keep about 4 million ha of paddy area: Direct per hectare annual payment to paddy farmers of VND 500 000 per ha of wet-paddy farming land and VND 100 000 (USD 5) per ha on other paddy farming land. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in SCT for rice.

Agricultural insurance fees (since 2012): Pilot insurance programme implanted in selected provinces, for certain commodities and for a specific list of risks. The government premium varied according to income classification of applicant, i.e. greater support for the less well off. [2]

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.
Payments are included in ACT.

D. Payments based on non-current area planted/animal numbers/receipts/income – production required

E. Payments based on non-current area planted/animal numbers/receipts/income – production not required

F. Payments based on non-commodity criteria

F.1. Long term resource retirement

Reforestation program (until 2010): Government expenditure to farmers to replant and protect forests with the goal of planting 5 million hectares. [2]

Use of labels: Production limits: NO; Variable payment rates: Not applicable; Input constraints: YES (voluntary-other).

G. Miscellaneous payments

III.2 Percentage PSE [100 x (III.1) / ((I) + (Sum of A2 to G))]

III.3 Producer NPC: For all agricultural commodities the producer NPC is estimated as a weighted average of the producer NPC calculated for the individual MPS commodities and shown in Table 4. For each commodity Producer NPC = [domestic price received by producers (at the farm gate) + unit payments based on output] / border price (also at the farm gate).

III.4 Producer NAC [1 / (100 - (III.2)) x 100]

IV. General Services Support Estimate (GSSE): total budgetary expenditure to support general services provided to agriculture [Sum of A to F].

H. Agricultural knowledge and innovation system

H.1. Agricultural knowledge generation

Agricultural research development: public financing of agriculture-related research institutions. [2]

H.2. Agricultural knowledge transfer

H.2.a. education

Agricultural education: public financing of agricultural schools. [2]

H.2.b. extension

Agricultural extension and advisory service: public financing of extension projects and National Agriculture Extension Centre. [2]

Improving public awareness and disaster risk management (since 2013): public financing of agriculture-related research institutions. [2]

I. Inspection and control

I.1. Agricultural product safety and inspection

I.2. Pest and disease inspection and control

Pest and disease inspection and control: public finance allocations for health, safety, grading and standardisation services relating to agricultural products. [2]

I.3. Input control

J. Development and maintenance of infrastructure

J.1. Hydrological infrastructure

Irrigation central and sub-national: public finance allocations to assist with the rehabilitation and expansion of irrigation networks. [2]

J.2. Storage, marketing and other physical infrastructure

Program 135: Part of the broad programme targeting ethnic minorities and remote areas includes support to build storage facilities at the village, communal and inter-communal level, as well as to construct local physical infrastructure. Available data would suggest that this support represents around 61% of total expenditures on Program 135 and this share has been adopted for the whole period. [2]

Agricultural transportation: public finance allocations to MARD to construct roads in rural areas. [2]

J.3. Institutional infrastructure

J.4. Farm restructuring

K. Marketing and promotion

K.1. Collective schemes for processing and marketing

Market information system: public finance allocations to link producers with markets. [2]

K.2. Promotion of agricultural products

L. Cost of public stockholding

Expenditure for paddy reserve: public finance allocations to hold a national reserve stock of rice (spread through out the country). [2]

Paddy farm gate price subsidy (since 2008): public finance allocations to subsidise the interest rate payments on loans taken out by enterprises that purchase rice for temporary storage. [2]

M. Miscellaneous

V.1 Consumer Support Estimate (CSE): Associated with agricultural production, i.e. for the quantities of commodities domestically produced, excluding the quantities used on-farm as feed -- excess feed cost. [Sum of O to R; when negative, the amounts represent an implicit tax on consumers].

N. Transfers to producers from consumers: Associated with market price support on all domestically produced commodities, estimated by increasing the transfers calculated for the MPS commodities according to their share in the total value of production [(O.1) / (I.1) x 100].

N.1. Of which MPS commodities: Sum of the values of transfers from consumers to producers associated with market price support for the MPS commodities as calculated in Tables 4.1 to 4.16.

O. Other transfers from consumers: Transfers to the budget associated with market price support on the quantities imported of domestically produced commodities, estimated by increasing the transfers

calculated for the MPS commodities according to their share in the total value of production [(P.1) / (I.1) x 100].

O.1. Of which MPS commodities: Sum of the transfers to the budget associated with market price support on the quantities imported of the MPS commodities as calculated in Tables 4.1 to 4.16.

P. Transfers to consumers from taxpayers

P.1. Commodity specific transfers to consumers: Sum of commodity specific transfers from taxpayers to consumers (farm gate level) from commodity MPS tables.

P.2. Non-commodity specific transfers to consumers: Sum of non-commodity specific transfers from taxpayers to consumers.

Q. Excess Feed Cost: Associated with market price support on quantities of domestically produced crops and used on-farm as feed as calculated [Sum of *Excess Feed Cost* in the MPS Tables for rice, maize, beef and veal, pigmeat, poultry and eggs]

V.2 Percentage CSE [100 x (V.1) / ((II) + (Q))]

V.3 Consumer NAC [(1 / (100 -(V.2)) x 100]

VI. Total Support Estimate [(III.1) + (IV) + (Q)] and [(S) + (T) - (U)]

R. Transfers from consumers [(O)+(P)]

S. Transfers from taxpayers [(III.1)-(O)+(IV)+(Q)]

T. Budget revenues [(P)]

Sources:

[1] Food and Agriculture Organisation of the United Nations (FAO), FAOSTAT website.

[2] Viet Nam Ministry of Agriculture and Rural Development (MARD), submission to OECD.

TABLE 2. VIET NAM: Breakdown of PSE by commodity specificity and other transfers

All data sets in Table 2 come from Tables 1 and 3.1-3.13 where definitions are included.

Definitions:

I. Producer Single Commodity Transfers (producer SCT): the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm level, arising from policy measures directly linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the payment. This includes policies where payments are specified on a per-commodity basis [Sum of SCTs for individual commodities from Tables 3.1-3.13].

Percentage producer SCT: is the commodity SCT expressed as a share of gross farm receipts for the specific commodities (including support in the denominator). This indicator can be expressed for the total SCT (Table 2), or for a specific commodity (Table 3.1 to 3.13).

$\%SCT = 100* SCT / (\text{value of production}_{COM} + A.2_{COM} + B_{COM} + C_{COM} + D_{COM})$

Share in Total PSE (%): $SCT_{SHARE} = 100* SCT / PSE$

II. Group commodity transfers (GCT): the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures whose payments are made on the basis that one or more of a designated list of commodities is produced. That is, a producer may produce from a set of allowable commodities and receive a transfer that does not vary with respect to this decision [$GCT = B_{GROUP} + C_{GROUP} + D_{GROUP}$].

Share in Total PSE (%): $GCT_{SHARE} = 100* GCT / PSE$

Transfers to specific groups of commodities: The GCT involves the just one group of commodities: all crops.

III. All commodity transfers (ACT): 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 place no restrictions on the commodity produced but require the recipient to produce some commodity of their choice [$ACT = C_{ALL} + B_{ALL} + D_{ALL}$].

Share in Total PSE (%): $ACT_{SHARE} = 100* ACT / PSE$

IV. Other Transfers to Producers (OTP): the annual monetary value of gross transfers made under policies that do not fall in the above three cases (SCT, GCT, ACT). That is, payments that do not require any commodity production at all. [$OTP = E + F + G$]

Share in Total PSE (%): $OTP_{SHARE} = 100* OTP / PSE$

V. Total PSE: $PSE = A+B+C+D+E+F+G = SCT + GCT + ACT + OTP$

Percentage PSE: $\%PSE = 100*PSE / \text{Total Value of Production at farm gate}+A.2+B+C+D+E+F+G)$

TABLE 3. VIET NAM: Producer Single Commodity Transfers (by commodity)

Tables 3.1 to 3.13 provide information on Producer Single Commodity Transfers (PSCT) for the following 12 commodities: rice, natural rubber, coffee (green), maize, cashew nuts (with shell), sugar cane, pepper, tea, beef and veal, pigmeat, poultry and eggs, and "other commodities". All data sets in the calculation SCT by commodity come from Tables 1 and 4.1-4.12 where definitions are included.

Definitions:

I. Level of production: Data from respective commodity Tables 4.1-4.12 (Market Price Support tables)

II. Value of production (at farm gate): Data from respective commodity Tables 4.1-4.12 (Market Price Support tables)

III. Producer Single Commodity Transfers: Sum of transfers to respective single-commodity in categories A, B, C and D.

A. Support based on commodity output

A1. Market Price Support [Data for respective commodity from Tables 4.1-4.12]

A2. Payments based on output

Payments based on output (A.2) provided to respective single commodity [Data from Table 1]

B. Payments based on input use, single commodity [$B1_{COM}+B2_{COM}+B3_{COM}$]

B1. Based on variable input use

Payments based on variable input use ($B.1_{COM}$) provided to respective single commodity [Data from Table 1].

B2. Based on fixed capital formation

Payments based on fixed capital formation ($B.2_{COM}$) provided to respective single commodity [Data from Table 1].

B3. Based on on-farm services

Payments based on on-farm services ($B.3_{COM}$) provided to respective single commodity [Data from Table 1].

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

Payments based on current A/An/R/I (C_{COM}) provided to respective single commodity [Data from Table 1].

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

Payments based on non-current A/An/R/I (D_{COM}) provided to respective single commodity [Data from Table 1].

IV. Percentage producer SCT: $\%SCT = 100*(III)/((II)+(A.2)+(B_{COM})+(C_{COM})+(D_{COM}))$

TABLE 4. VIET NAM: Market Price Support and Consumer Support Estimate

Tables 4.1 to 4.13 contain calculations of the Market Price Support (MPS) and Consumer Single Commodity Transfers (consumer SCT) for the following 12 commodities: rice, natural rubber, coffee (green), maize, cashew nuts (with shell), sugar cane, pepper, tea, beef and veal, pigmeat, poultry and eggs, and "other commodities". The data sets used in calculations of the MPS and consumer SCT by commodity are described below.

Note: For the purposes of calculating market price gaps, seven of the 12 commodities are treated as exported commodities: rice, natural rubber, coffee, cashew nuts, pepper, pigmeat and tea. The remaining five are considered imported: maize, sugar cane, beef and veal, poultry and eggs. Price gaps were calculated for all products except for pigmeat. For pigmeat, which is a marginally exported commodity subject to import tariffs, the price gap has been set to zero. For the remaining six exported commodities, the average export unit values registered at the Vietnamese border are used. The average import unit value at the Vietnamese border is used for maize. For the remaining four commodities, a variety of alternative reference prices are used because of the limited volume of imports into Viet Nam.

Definitions:

I.   Level of production (tonnes) [1]

Rice: Total production of rice, measured in dried, unhusked paddy terms.

Natural rubber: Total production of natural rubber, measured in fresh latex terms.

Coffee: Total production of coffee beans Robusta, measured in dried green bean terms.

Maize: Total production of maize, measured in dried, loose (without cob) terms.

Cashew nuts: Total production cashew nuts, measured in fresh with shell terms.

Sugar cane: Total production of sugar cane, measured in refined sugar terms.

Pepper: Total production of pepper, measured in dried terms.

Tea: Total production of tea, measured in semi-processed fresh terms.

Beef and veal: Total production of beef and veal, in carcass weight equivalent.

Pigmeat: Total production of pigmeat, in carcass weight equivalent.

Poultry: Total production of poultry (chicken and duck), in carcass weight equivalent.

Eggs: Total production of eggs in the shell, both layer and native chickens.

II.   Producer prices (at farm gate) [2]

Rice: Average farm gate price of dried, unhusked paddy sold by farmers in the Mekong River and Red River Deltas.

Natural rubber: Average farm gate price of natural rubber, measured in fresh latex terms.

Coffee: Average farm gate price of Robusta coffee, measured in dried green bean terms.

Maize: Average farm gate price of maize produced from hybrids CP888 and VN10, the most common and representative varieties, measured in dried, loose (without cob) terms.

Cashew nuts: Average farm gate price of cashew nuts, measured in fresh with shell terms.

Sugar cane: Average wholesale price of refined sugar.

Pepper: The weighted average price of black and white pepper, measured in dried terms.

Tea: Average farm gate price of tea, measured in semi-processed fresh terms.

Beef and veal: Average farm gate price of all categories of bovine animals on a carcass weight equivalent terms, obtained by dividing the average sale price of live weight by 0.51.

Pigmeat: Average farm gate price of pigs for slaughter on a carcass weight equivalent terms, obtained by dividing the average sale price of live weight by 0.74.

Poultry: Weighted average farm gate price of chicken and duck for slaughter on a carcass weight equivalent terms, obtained by dividing the average sale price of live weight by 0.74.

Eggs: Average farm gate price of hen eggs.

III.   Value of production (at farm gate) [(I)*(II)]

IV.   Level of consumption (at farm gate) [3]

Rice, natural rubber, coffee, maize, cashew nuts, sugar cane, pepper, tea, beef and veal, pigmeat, sheepmeat, poultry and eggs: total domestic use during the calendar year (total production, plus net trade), measured on the same type of product basis as production, e.g. carcass weight in the case of meat, refined sugar in the case of sugar cane, etc.

V. Consumption prices (at farm gate)

Implicit prices corresponding to reference prices plus the unit value of market transfers.

VI. Value of consumption (at farm gate) [(IV)*(V)]

VII. Reference prices

Rice: Average F.o.b. export unit price of rice. An adjustment factor of 0.66 is used to convert the export price (milled rice) into a dried unhusked paddy price, i.e. 0.66kg of milled rice is obtained from 1kg dried unhusked paddy. **[4]**

Natural rubber: Average F.o.b. export unit price of condensed latex in blocks (RSS1 or RSS3). An adjustment factor of 0.60 is used to convert the export price (latex blocks) into a fresh latex price, i.e. 0.6kg of condensed latex block is produced from 1kg of fresh latex. **[4]**

Coffee: Average F.o.b. export unit price of dried green Robusta coffee beans. **[4]**

Maize: Average C.i.f. import unit price of maize. In order to take account differences in the moisture content of imported and domestically produced maize, an adjustment factor of 0.93 is used to convert the import price into a domestic equivalent, i.e. import product is assumed to have an average moisture content of 13% while the average domestic product has a moisture content of 20%. **[4]**

Cashew nuts: Average F.o.b. export unit price of dried shelled cashew nuts. An adjustment factor of 0.22 is used to convert the export price (dried shelled) into a fresh with shell farm gate price, i.e. 0.22kg of dried shelled cashew nuts is obtained from 1kg fresh with shelled product. **[4]**

Sugar cane: Average F.o.b. export unit price of refined sugar in solid form (HS 170199) from Thailand to the world. This value is increased by 2.26% to account for the transportation cost from Thailand to the Vietnamese border. **[5]**

Pepper: Average F.o.b. export unit price of pepper. **[4]**

Tea: Average F.o.b. export unit price of dried tea. An adjustment factor of 0.50 is used to convert the export price (dried) into a semi-processed fresh farm gate price, i.e. 0.50 kg of dried tea is obtained from 1kg of semi-processed fresh tea. **[4]**

Beef and Veal: Average F.o.b. export unit price of bovine meat, fresh or chilled (HS 0201 and 0202) from Australia to the world. This value is increased by 10% to account for the transportation cost from Australia to Viet Nam. A conversion factor of 0.70 is used to convert the export price (retail weight) into a carcass weight equivalent, i.e. 0.7 kg of retail weight beef is produced from 1kg of carcass weight. **[5]**

Pigmeat: Not applicable as Market Price Differential set to zero.

Poultry: Average F.o.b. export unit price of whole poultry, fresh or chilled (HS 020710) from China to the world. **[5]**

Eggs: Average farm gate price for eggs in China. **[6]**

VIII. Margins

Marketing margins: Domestic wholesale prices are not readily available for commodities in Viet Nam. Consequently marketing margins (the cost of transport from the farm gate to the place of processing and processing costs) were established in consultation with Vietnamese officials and experts. For 9 of the 12 MPS commodities (rice, natural rubber, maize, cashew nuts, pepper, tea, beef, pigmeat and poultry), it is assumed that the marketing margin, expressed as a percentage of the farm gate price, remains at the same level over the whole period. Consequently, its equivalent in absolute terms varies depending on the level of farm gate price in a given year. The constant marketing margins vary from product to product: 30% for natural rubber; 22% for pepper; 17% for pigmeat; 16% for cashew nuts and maize; 15% for poultry; 13% for tea; 7.5% for rice; and 6.4% for beef. For coffee beans, a constant marketing margin of USD 17 per tonne is used. For all products, the absolute value of the margin in a given year is subtracted from the border reference price. Marketing margins are not applied for the calculation of the Market Price Differential for sugar cane and eggs as for the former domestic wholesale prices are used for price comparison and for the latter China's farmgate prices are compared directly with Viet Nam's farmgate prices.

Port charges and transportation costs (between Viet Nam's border and domestic wholesale markets): were developed in consultation with Vietnamese officials and usually expressed as a percentage of the

border reference price: 4.2% for rice; 4% for sugar cane; 3% for pigmeat and poultry; 2% for natural rubber and maize; 1.6% for beef; 1.5% for tea; 0.3% for cashew nuts; and 0.16% for pepper. These percentages have been converted into absolute values and added to the CIF price for importables and subtracted from the FOB price for exportables. A constant port charge and transportation cost of USD 6 per tonne is used for coffee beans. Port charges and transportation costs are not applied for the calculation of Market Price Differential for eggs as Viet Nam's farmgate prices are compared with farmgate prices in China, thus adjustments are not needed.

Sources:

[1] Ministry of Agriculture and Rural Development (MARD), Statistical Yearbook of Agriculture and Rural Development, various editions.
[2] Provided by MARD.
[3] Import and export data used in the calculation of domestic consumption provided by MARD.
[4] Provided by MARD.
[5] COMTRADE database.
[6] OECD PSE/CSE database.