

CHINA: 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 4.1-4.15.

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 3.1-3.16 where definitions are included.

Tables 3.1.-3.16 Producer Single Commodity Transfers contain producer SCT by commodity, which are calculated for China for the following commodities: wheat, maize, rice, rapeseed, soybeans, peanuts, apple, sugar cane, cotton, milk, beef and veal, pigmeat, sheepmeat, poultry, and eggs (Tables 3.1-3.15) 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 3.16), 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 4.1-4.15 where definitions are included.

Tables 4.1-4.15 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 3.15**. 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/psecse>].

TABLE 1. CHINA: 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 [1].

I.1. Of which share of MPS commodities (%): Share of commodities for which MPS is explicitly calculated (in Tables 4.1-4.15) 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 value of consumption (at farm gate) of the 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 4.1-4.15.

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, estimated by increasing the MPS for the MPS commodities according to their share in the total value of agricultural production [(Σ MPS 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 subsidy programme (price subsidies to fertilizers, chemical and other input), (since 1993): subsidy made to compensate state-owned agricultural input manufacturers' losses resulting from selling their products to farmers at the state administered price for the purpose of reducing farmers' production cost. Fertiliser, pesticide and mulching film costs are covered.

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

New variety extension payment (since 2002): subsidies to support the sowing of improved quality seeds. The programme was launched in 2002 to promote the fine variety of soybean seeds and covered 10 million mu of demonstration fields testing the results of the fine seeds. Since then the programme was enlarged each year to cover new commodities on an extended area. In 2003, the coverage was extended to cover soybeans, wheat and maize; in 2004 and 2005, the scheme covered improved seeds of wheat, maize, rice and soybeans; and in 2006 and 2007, the payments concerned wheat, rice, maize, soybean, cotton and

rapeseed. The implementation of this subsidy may vary depending on commodity and province, but in principle takes the form of either direct payments per unit of land or reduced seed prices. As a direct payment, it is provided per unit of land at rates of 10 or 15 CNY per mu, depending on a crop. It is not monitored to determine if the payment is used for seed purchases or for other expenses. In other cases, it may be a payment to the seed company to provide specific type of seed at reduced price or a reimbursement to the farmer for seeds purchased.

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.

In 2002 payments are included in SCT for soybeans.

In 2003 payments are included in GCT for the group of following commodities: soybean, wheat and maize.

For the years 2004-05 payments are included in GCT for grains.

For the years 2006-07 payments are included in GCT for the group of following commodities: wheat, maize, rice, soybean, cotton and rapeseed.

Advanced hog breed nurturing programme (since 2007): partial compensation of costs of the extension of new varieties of hogs.

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.

Payments are included in SCT for pigmeat.

Advanced hog breed subsidy (since 2007): support for the extension of advanced breeds of hogs through partial compensation of costs of artificial insemination in selected counties.

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.

Payments are included in SCT for pigmeat.

Insurance fees subsidy to reproductive sows (since 2007): pilot programme implemented in the Middle West area with costs of insurance fees shared between the central government (50%), local governments (30%) and farmers 20%.

Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.

Payments are included in SCT for pigmeat.

Insurance fees subsidy for grains (since 2007): pilot programme with the cost of insurance fees shared by the central government, local governments and farmers. The shares may vary across provinces. For example in the Sichuan province it was 35% by the central government, 40% by local government and 25% by farmers themselves.

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

B.2 Based on fixed capital formation

National Agricultural Comprehensive Development Funds and Projects (since 1993): public finance allocations to support main agricultural areas and main grain production areas determined on the basis of output of key agricultural commodities at the province level. Provinces that are not eligible for such support are able to designate counties within their jurisdiction which can benefit from these funds. This programme is focused on improving land productivity through support for a wide range of local projects, but preference is given to the construction and up-grading of small-scale water supply systems for agricultural production. Support can also be provided e.g. for adjusting waste-land for agricultural production, construction and up-grading of local roads important for the transportation of agricultural

commodities, local afforestation initiatives, improvement of storage capacities for agricultural commodities, dissemination of new technologies for agricultural production, etc. All projects are co-financed by central government, provincial governments, county and township level authorities (those designated for the poverty relief funding are not requested to provide any funding), rural collectives and farmers. As projects supported within this programme have components which can be classified as on-farm amelioration and other which are focussed on infrastructure, 50% of amounts budgeted for this programme have been allocated to the category B2 (based on fixed capital formation) and 50% to the category K (infrastructure; see below).

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

Agricultural environment, water and soil reservation (since 1996): payments to protect agricultural production resources.

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

Agricultural infrastructure (since 1993): various public finance allocations to support on-farm investments (50% of the total) and agricultural infrastructure (50% of the total, see category K below).

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

Mechanisation of farming (since 2004): a subsidy for the purchase of agricultural machinery. The subsidy is available to individual farmers, so called specialised households and agricultural machine service delivery organisations. The programme compensates the cost of purchases by reimbursing the purchaser or compensating the seller for 20% to 30% of the purchase price. The programme is implemented at the provincial level, and it is up to local governments to decide on the machinery and models eligible for the subsidy.

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

Agricultural technology extension payment (2004 and 2005): a small programme targeting large farms of sufficient scale warrant mechanisation.

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

Large-scale commodity grain base construction programme (since 1996, data available since 2004): a subsidy focussed on districts with potential growth in grain productivity. The funds are mainly invested in grain production infrastructure, in particular in water management systems, land amelioration, extension of advanced crop varieties.

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

High quality grain production project (since 2004): operates in 13 main grain production provinces and provides support for land amelioration projects, creation of specialised large-scale grain production units, promotion of modern technologies and machinery, dissemination of high quality grain varieties.

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

Double-low canola base construction in the Yangtze river region (since 2004): subsidies to promote the double-low canola production through investments mainly in the advanced seed nurturing and unified seed supplying system, small-sized agricultural land water resource projects, disease and pest prevention, and land fertility supervision and examination.

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

Sugar crop base construction (since 1991; data available since 2004): programme focussed on selected provinces including Guangxi, Yunnan, Guangdong, and Xinjiang. Provides subsidies for such projects as land consolidation, advanced varieties' nurturing, small-sized water resource infrastructure construction, pest and disease prevention.

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

Standardized hogs feeding pilot programme (since 2007): subsidies to support the standardization of hog production, water supplies, and vaccination.

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

Calculating and reducing the reimbursable capital owed due to comprehensive agricultural development (since 2006).

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

International advanced agricultural science and technology introduction programme ("948" Scheme) (since 2004).

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

Agricultural science and technology advancement programme (since 2004).

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

Water-saving techniques expansion in arid area (since 2004): support for water-saving techniques.

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

Improving soil organic matter levels pilot subsidy (since 2006).

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

Standardized livestock raising pilot programme (for the facility building of dejecta and sewage harmless disposal) (since 2006).

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

Small-sized agricultural land water resource infrastructure support programme (since 2005): central and local government support for private small-sized water resource facilities construction pilot programmes in 644 counties. The small-sized water resource infrastructure constructions supported within this programme include those operated by households, Professional Farmers Cooperative Associations, and village teams.

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

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

Agricultural extension and advisory services (since 1993): 50% of budgetary expenditures on advisory services has been allocated to this category and the remaining 50% to category I: agricultural schools (see below).

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

Pest and disease control (since 1993): 50% of budgetary expenditures on this programme has been allocated to this category and the remaining 50% to category J: inspection services (see below).

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

Animal epidemic prevention and control (since 2002): subsidy mostly for the vaccination against the foot and mouth disease and against the blue ear pig disease.

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

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

Direct payments to grain farmers (since 2004): payments based on current area sown to rice, wheat or corn and financed from the National Grain Risk Fund. Initially, payments were targeting 13 major grain producing provinces, but later were extended to almost all provinces. Not all sown areas are covered by the subsidy scheme. It is up to the local government to determine the “major producing area” which can obtain the subsidy. In general, the payment rate is CNY 10-15 per mu (1/15 ha) (USD 22-33/ha), but this can vary between localities as central government funding can be supplemented from local sources.

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

Payments for relief from natural disasters (since 1993): compensations for natural disasters, i.e. crop failures.

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

Advanced reserve cows subsidy (since 2007): payments of CNY 500 (USD 72.5) for each high quality dairy cow heifer produced from pure-bred breeding stocks with registered bloodlines.

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

Reproductive sows subsidy (since 2007): payment of CNY 50 (USD 6.6) per reproductive sow in 2007.

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

Agricultural input comprehensive subsidies (since 2006): payments to compensate farmers for an increase in prices of agricultural inputs such as fertilisers, pesticides, plastic films and diesel. The targeted key beneficiaries of this subsidy are grain producers, as the amounts transferred to provinces depend on grain planting areas. In fact, as these payments are made per unit of land, their implementation is similar to direct payments discussed above.

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

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

Poverty alleviation programme (since 1993): payments targeting poor farmers.
Use of labels: Production limits: NO; Variable payment rates: NO; Input constraints: NO.

F. Payments based on non-commodity criteria

F.1. Long-term resource retirement

Returning grazing land to grassland project (since 2003, data available since 2004): payments to encourage farmers to turn grazing land to grassland in west 8 provinces.

Use of labels: Production limits: NO.

"Grain for Green Programme" - Return Farmland to Forest Programme (since 1999, data available since 2000): payments to encourage farmers to turn fragile agricultural land to forest or pasture. Up to 2003, participating farmers were provided with grains and cash subsidies according to the area of damage-susceptible land they "retire". In 2004, the grain allocation was converted to a cash equivalent. The period for which "retired" land is subsidised is set at two years for land returned to pasture, five years for land converted to "economic" forests and eight years for land converted to "ecological" forests. In addition, farmers are provided with a one-time cash subsidy to purchase seeds or tree seedlings for planting, and a yearly subsidy for tending and miscellaneous expenses on the newly converted land. Funds are also provided to the forestry agencies to cover technical support and programme design.

Use of labels: Production limits: NO.

F.2. Specific non-commodity output

F.3. Other non-commodity criteria

G. Miscellaneous payments

III.2 Percentage PSE $[100 \times (\text{III.1}) / ((\text{I}) + (\text{Sum of A2 to G}))]$

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** $[1 / (100 - (\text{III.2})) \times 100]$

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

H. Research and development

Research and development (since 1993): public financing of agriculture-related research institutions.

Animal genetic variety conservation (since 2004): public finance allocations to strengthen animal germplasm resources management.

Advanced cow breed subsidy (since 2005): public finance allocations to foster the adoption of advanced cow breeds and increase the cow reproduction capacity.

Super rice research and development programme (since 2004): public finance allocations.

Science and technology for grain high yield project (since 2004): public finance allocations.

I. Agricultural schools

Agricultural schools (since 1993): public financing of agricultural schools.

Farmers training (since 2004): public finance allocations.

Agricultural extension and advisory Services (since 1993): 50% of budgetary expenditures on advisory services has been allocated to category B.3 (payments based on use of on-farm services; see above) and the remaining 50% to category I: agricultural schools.

Seed project (since 1996): public finance allocations.

New advanced varieties extension and demonstration programme (since 2004): public finance allocations.

Professional farmers cooperative associations support programme (since 2005): public finance allocations to assist Professional Farmers Cooperative Associations.

Scientific demonstration farm programme (since 2001; data available since 2005): public finance allocations for planning, arranging and building of production facilities, introduction, trial and demonstration of new technologies and varieties, training of farmers and local officials, purchase of basic production materials and small-sized equipment.

Conservation planting (since 2002; data available since 2005): public finance allocations for conservation planting in drought-stricken areas.

Establishment and modification of agricultural standards (since 1999; data available since 2005): public finance allocations for establishment and modification of agricultural standards.

Standardized farming demonstration programme (since 2005): public finance allocations speed up the popularization and application of agricultural standards.

Agricultural technology entering household demonstration project (since 2005): public finance allocations for pilot farms implementing new technologies. These farms are expected to provide demonstration effects and to attract other participants.

Apple bagging technique demonstration subsidy programme (since 2005): public finance allocations to encourage and support farmers using advanced bags, promote the adoption of apple bagging technique, and improve the quality of apples.

Rice raising and transplanting mechanization demonstration and extension (since 2007): public finance allocations. to demonstrate and promote rice raising and to promote mechanization of rice production.

Formula fertilization based on soil testing pilot programme (since 2005): public finance allocations.

J. Inspection services

Inspection services (since 1993), public finance allocations.

Pest and disease control scheme (since 1993): 50% of budgetary expenditure with the remaining 50% allocated to category B.3 (payments based on use of on-farm services; see above).

K. Infrastructure

National Agricultural Comprehensive Development Funds and Projects (since 1993): As projects supported within this programme have components which can be classified as on-farm amelioration and other which are focused on infrastructure, 50% of amounts budgeted for this programme have been allocated to the category B2 (based on fixed capital formation; see above) and 50% to the category K (infrastructure). For a more detailed description of the programme see category B2.

Agricultural infrastructure (since 1993): this category covers budgetary allocations for a number of projects targeting agricultural infrastructure, excluding those for which specific budgetary allocations have been identified such as National Agricultural Comprehensive Development Funds and Projects (see above) and those listed below within category K. The remaining amount has been divided into two components: 50% to category B2 (based on fixed capital formation, see above) and 50% to category K (infrastructure).

Advanced livestock and fisheries breed project (since 2004; data available since 2006): public finance allocations.

Plant protection programme (since 2006): public finance allocations.

Animal epidemic prevention system programme (since 2004): public finance allocations.

Modern agricultural demonstration project (since 1998; data available since 2004): public finance allocations.

Agricultural wholesale market project (since 2003; data available since 2005): public finance allocations for wholesale markets development and for wholesale market information system.

Industrialization of high-tech biological breed nurturing (since 2007): public finance allocations.

Continuous matching construction and water-saving modification in large-scale irrigation district (since 1998; data available since 2004): public finance allocations for large-scale irrigation projects.

Renewal transformation of large-scale storm drainage pumping station in four middle provinces (since 2006): public finance allocations for large-scale storm drainage pumping stations in Hubei, Hunan, Jiangxi and Anhui provinces.

Work relief programme (since 2004), public finance allocations to support a wide range of local projects, with the main focus on rural and agricultural infrastructure in poor areas.

Large-scale live hogs supplying county reward programme (since 2007): public finance allocations to support counties specialising in hog production.

Agricultural industrialization (since 2005): public finance allocations to support enterprises creating marketing linkages with farmers.

Agricultural information service delivery in TV, telephone and computer pilot programme (since 2005): public finance allocations for agricultural information service delivery.

L. Marketing and promotion

Promoting agricultural marketing programme (since 2006): public finance allocations to link producers with markets and to develop new markets.

M. Public stockholding

Public stockholding for food security purposes (since 1993): public finance allocations for public stockholding of agricultural commodities.

N. 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].

O. 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 $[(O.1) / (I.1) \times 100]$.

O.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 4.15.

P. 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 $[(P.1) / (I.1) \times 100]$.

P.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 4.15.

Q. Transfers to consumers from taxpayers

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

Q.2. Non-commodity specific transfers to consumers: Sum of non-commodity specific transfers from taxpayers to consumers, including:

Food price subsidies for consumers (since 1992): public finance allocations to offset the price increases of staple food products for urban consumers. Paid directly as part of wages and salaries. Currently of marginal importance, provided mostly as compensation for growth in meat prices. Allocations called in the Chinese statistical yearbooks as “Subsidies on price increases in grain, cotton and edible oil” are in fact used for public stockholding of agricultural commodities and as such have been allocated to category M above.

R. 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 4.1, 4.2, 4.3, 4.5]

V.2 Percentage CSE $[100 \times (V.1) / ((II) + (Q))]$

V.3 Consumer NPC: For all agricultural commodities the consumer NPC is estimated as a weighted average of the consumer NPC calculated for the individual MPS commodities and shown in Table 2. For each commodity consumer NPC = domestic price paid by consumers (at the farm gate)/ border price (also at the farm gate).

V.4 Consumer NAC $[(1 / (100 - (V.2)) \times 100]$

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

S. Transfers from consumers $[(O)+(P)]$

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

U. Budget revenues $[(P)]$

Sources:

- [1]. MOF (Ministry of Finance People’s Republic of China), China Financial Yearbook, various editions.
- [2]. MOF (Ministry of Finance People’s Republic of China), Outlay Documents of the Ministry of Finance.
- [3]. NBSC (National Bureau of Statistics of China), China Statistical Yearbook, various editions.
- [4]. ABC (Agricultural Bank of China), Statistical Yearbook of China’s Rural Finance and Banking.
- [5]. SSTC (State Science and Technology Commission of China), Statistical Data Collection of Science and Technology, 1995.

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

All data sets in Table 2 come from Tables 1 and 3.1-3.16 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 3.1-3.16].

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 3.16).

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

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

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}].

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

Transfers to specific groups of commodities: The GCT involves the following groups of commodities: all crops; all grains; wheat, maize and soybean; wheat, maize, rice, soybean, cotton and rapeseed; all livestock.

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}].

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

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]

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

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

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

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

Tables 3.1 to 3.16, provide information on Producer Single Commodity Transfers (PSCT) for the following commodities: wheat, maize, rice, rapeseed, soybean, peanuts, apple, cane sugar, cotton, milk, beef and veal, pigmeat, sheep meat, poultry, eggs and “other commodities”. All data sets in the calculation SCT by commodity come from Tables 1 and 4.1-4.15 where definitions are included.

Definitions:

I. Level of production: Data from respective commodity Tables 4.1-4.15 (Market Price Support tables)

II. Value of production (at farm gate): Data from respective commodity Tables 4.1-4.15 (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 4.1-4.15]

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].

CI. 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. CHINA: Market Price Support and Consumer Support Estimate

Tables 4.1 to 4.15, contain calculations of the Market Price Support (MPS) and Consumer Single Commodity Transfers (consumer SCT) for the following commodities: wheat, maize, rice, rapeseed, soybean, peanuts, apple, cane sugar, cotton, milk, beef and veal, pigmeat, sheep meat, poultry, eggs and “other commodities”. The data sets used in calculations of the MPS and consumer SCT by commodity are described below.

Note: for all below mentioned commodities relevant data have been collected and price gaps calculated. But, as for selected exportable products such peanuts, apples, beef and veal, pigmeat, poultry (poultry was exportable until 2001) and eggs no export subsidies and no other market price policy supporting or taxing producers have been identified, in line with the OECD methodology applied for other countries, the price gaps for these products have been set at zero.

Definitions:

I. Level of production [1, 2]

Wheat, maize, rapeseed, apple and milk: Total domestic production, no specific standard.

Rice: Total production of rice, in milled weight, derived by multiplying production of paddy rice by a conversion rate of 0.68.

Soybean: Total production of soybean (including soybean, black soybean and green soybean) in terms of shelled dry bean.

Peanuts: Total production of peanuts, in shelled weight, derived by multiplying production of dry peanuts by a conversion rate of 0.7.

Sugar: Total production of sugar from cane, in raw sugar equivalent, derived by multiplying production of cane by a conversion rate of 0.12.

Cotton: Total production of cotton lint.

Beef and veal: Total production of beef and veal, in carcass weight equivalent, derived by multiplying production in live weight by 0.54.

Pigmeat: Total production of pigmeat, in carcass weight equivalent, derived by multiplying production in live weight by 0.75.

Sheepmeat: Total production of sheepmeat, in carcass weight equivalent, derived by multiplying production in live weight by 0.55.

Poultry: Total production of poultry, in carcass weight equivalent.

Eggs: Total production of eggs in the shell, including chicken, duck and goose eggs, converted into tonnes using the coefficient 1 egg = 55 grams.

II. Producer prices (at farm gate) [3]

Wheat, rapeseed, milk and eggs: no specific standard. The farm gate price is the weighted average sale price received by farmers.

Maize: weighted average farm gate price in the province of Jilin, major area of commercial maize production in China.

Rice: weighted average farm gate prices of milled rice, obtained by dividing the weighted average paddy rice farm gate price by 0.68.

Soybean: weighted average farm gate price in the province of Heilongjiang accounting for about one-third of total soybean production in China. The vast majority of soybean produced in Heilongjiang is commercialised and used for further processing which in terms of quality makes it comparable with imported soybeans.

Peanuts: weighted average farm gate price of shelled peanut, obtained by dividing the weighted average sale price of peanut in shell by 0.7.

Apple: no specific standard. Weighted average farm gate price of all types of apples.

Sugar: weighted average farm gate price of sugar cane in raw sugar equivalent obtained by dividing the weighted average cane farm gate price by 0.12.

Cotton: weighted average farm gate price of cotton lint.

Beef and Veal: weighted average farm gate price of all categories of bovine animals for slaughter, live weight, converted into carcass equivalent.

Pigmeat: weighted average farm gate price of all pigs for slaughter, live weight, converted into carcass equivalent.

Sheepmeat: weighted average farm gate price of all sheepmeat for slaughter, live weight, converted into carcass equivalent.

Poultry: weighted average farm gate prices of live chicken, converted into carcass equivalent.

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

IV. Level of consumption (at farm gate) [4]

Wheat, maize, soybean, apple, cotton, beef and veal, pigmeat, sheepmeat, poultry and eggs: total domestic use during the calendar year (total production, plus net trade, plus change in stocks).

Rice: total domestic use during the calendar year (total production, plus net trade, plus change in stocks) of milled rice, derived by multiplying use of paddy rice by 0.68.

Rapeseed: total domestic use during the calendar year (total production, plus net trade, plus change in stocks) of rapeseed plus mustard seed.

Peanut: total domestic use during the calendar year (total production, plus net trade, plus change in stocks) of shelled peanuts, derived by multiplying production of dry peanuts by 0.7.

Sugar: total domestic use during the calendar year (total production, plus net trade, plus change in stocks) in terms of raw sugar from cane.

Milk: total domestic use of milk during the calendar year (total production, plus net trade, plus change in stocks).

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

Wheat: C.i.f. import unit values, sum of durum wheat (HS 1001 10) and wheat except durum wheat (HS 1001 90) [5]. Wheat is the only commodity for which quality adjustment has been made by multiplying C.i.f. import unit values by a coefficient of 0.85 to reflect lower quality of wheat produced domestically compared to that imported. The coefficient has been calculated on the basis of detailed survey conducted by Jikun Huang and Scott Rozelle in October 2001.

Maize: F.o.b. export unit values of maize, except seed corn (HS 1005 90) [5].

Rice: weighted average reference price of Thai export price (Indica-type rice/white rice, 100% second grade, f.o.b. Bangkok. Source: Jackson Son & Co. (London) LTD) and US export price (Japonica-type rice 2/ F.A.S. basis (Free Alongside Vessel). Source: USDA). In line with changes in the composition of rice production in China, it has been assumed that the share of Indica-equivalent price was falling from 80% in 1993 to 70% in 2002 and the share of Japonica-equivalent price growing from 20% to 30% over the same period. For the period between 2003 and 2005 the same shares have been applied as for 2002 [6].

Rapeseed: C.i.f. import unit values of rape or colza seed, whether or not broken (HS 1205 00) [5].

Soybeans: C.i.f. import unit values of soybean, whether or not broken (HS 1201 00) [5].

Peanuts: F.o.b. export unit values of shelled peanut (HS 1202 20) [5].

Apple: F.o.b. export unit values of apples, fresh (HS 0808 10) [5].

Sugar: C.i.f. import unit values of raw sugar, cane (HS 1701 11) [5].

Cotton: C.i.f. import unit values, cotton, not carded or combed, (HS 5201 00) [5].

Milk: border price of milk is a calculated implicit value [7, 8]. The calculation method is based on two assumptions. First, world markets for tradable dairy commodities are competitive, which allows the formation of a single price for each of the solid components of raw milk, milk fat and protein, used to make dairy products. Secondly, each type of dairy product contains a unique and fixed amount of each of those solid components of milk. Under this method, the implicit price of milk at the border (P_b) is calculated from the prices of those components:

$$P_b = \left(\frac{a}{b}\right)P_{wb} + \left(\frac{c}{d}\right)P_{ws} \text{ where:}$$

a and b are milk fat contained in one ton of raw milk and butter respectively, c and d are non-fat-solids contained in one ton of milk and skimmed milk powder respectively, P_{wb} and P_{ws} are Chinese unit import values of butter and skimmed milk powder respectively. The reference price of milk at farm gate (P_r) is the implicit milk border price net of processing costs (C):

$$P_r = P_b - C$$

Beef and Veal: F.o.b. export unit values, bovine meat: cuts boneless, fresh or chilled and frozen (HS0201 30+ HS0202 30) [7].

Pig meat: F.o.b. export unit values, swine carcass & half carcass fresh, chilled or frozen. (HS0203 11+ HS0203 21) [7].

Sheepmeat: Japan import border price, sheep carcass & half carcass fresh, chilled or frozen (HS0204 21 + HS0204 41) [7].

Poultry: until 2001 F.o.b. export unit values meat of edible offal of the poultry, not cut in pieces, fresh, chilled or frozen, (HS020711+ HS020712). As from 2002 poultry became importable, China's import MFN tariff rate on frozen chicken products has been used as an estimation of the Market Price Differential. [5], [7].

Eggs: F.o.b. export unit values of eggs in the shell [6].

VIII. Margins

Marketing margins: estimated on the basis of price gaps between domestic wholesale and farm gate prices for a given commodity. Available technical coefficients were used when needed (e.g. to convert paddy to milled rice; sugar cane to sugar or live weight to slaughter weight). As data on wholesale prices were not sufficient to assess the level of margin, this source was supplemented for almost all products by phone interviews with various traders in China. A marketing margin for a given commodity was expressed as a percentage of a farm gate price. While it was assumed that the percentage margin remained at the same level over the whole period, its equivalent in absolute terms varied depending on the level of farm gate price in a given year. The absolute value of the margin in a given year was subtracted from the border reference price.

Wheat, wholesale price: the 3rd class white wheat; average wholesale price based on key wholesale markets [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 11%

Maize, wholesale price: the 2nd class yellow maize; average wholesale price based on key wholesale markets [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 15%

Rice, wholesale price: the 1st late Indica rice (milled); average wholesale price based on key wholesale markets [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 12%

Rapeseed, wholesale price: middle class [10]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 9%

Soybeans, wholesale price: the 3rd class soybean [10]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 10%

Peanuts, wholesale price: middle class [10]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 9%.

Apple, wholesale price: average price for Guoguang and Red Fuji apple [10]. Wholesale price was expressed as a percentage of farm gate price for the period 1995-2002, then the average margin was applied to all years.

Sugar, wholesale price: no specific standard. Data available for 2003 [11]. Wholesale price was expressed as a percentage of farm gate price, then the 2003 margin of 60% was applied to all years.

Cotton, wholesale price: middle class [10]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 28%.

Milk: average dairy processing margin (processing margin of butter & SMP from one tonne of raw milk) in major dairy exporters: Australia, European Union, United States and New Zealand.

Beef and veal, wholesale price: carcass weight [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 25%

Pigmeat, wholesale price: carcass weight [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 25%

Sheepmeat, wholesale price: carcass weight [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 25%

Poultry, wholesale price: carcass weight [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 25%

Eggs: converted into tonnes using the coefficient 1 egg = 55 grams [9]. According to phone interviews with traders, marketing margin (Farm gate - Wholesale) as % of farm gate price = 16%

Transportation costs (between China's border and domestic wholesale markets), assessed on the basis of phone interviews with traders and expressed as a percentage of the border reference price: 4% for rapeseed, soybean, sugar, cotton, all meats and eggs, 6% for rice, 9% for maize, 10% for wheat and apple. These percentages have been converted into absolute values and added to the CIF price for importables and subtracted from the FOB price for exportables.

Sources:

[1] NBSC (National Bureau of Statistics of China), China Rural Statistical Yearbook, various editions.

[2] NBSC (National Bureau of Statistics of China), China Statistical Yearbook, various editions.

[3] NDRC (National Development and Reform Commission), A Collection of References on Cost Benefit of National Agro-Products, various editions, China Price Press.

[4] FAOSTAT, FAO, Rome.

[5] CGAC (Customs General Administration of China), China Customs Statistical Yearbook, various editions.

[6] FAO estimations.

[7] Comtrade database.

[8] OECD PSE/CSE database.

[9] MOA (Ministry of Agriculture People's Republic of China), China Agricultural Development Report, China Agricultural Press, Beijing.

[10] MOA (Ministry of Agriculture People's Republic of China), Department of Market and Information.

[11] Guangxi Sugar Wholesale Market.