TREATMENT OF SUBSIDIES IN NATIONAL ACCOUNTS*

BY JEAN-CLAUDE ROMAN
Statistical Office of the European Communities

This document contains a critical analysis of some aspects of the treatment of subsidies in the present system of national accounts (United Nations SNA and the ESA, i.e. the European System of Integrated Economic Accounts) as background to the current discussion of their revision. One of the conventions used is that subsidies are recorded as a resource in the accounts of the market producer units which actually receive them. Should this rule of the receiver be applied in every case? The paper suggests that it would be preferable to attribute subsidies to the beneficiary in those cases where a subsidy received by one unit is the counterpart of a reduction in price which he grants to another unit which buys something from him (and which is the real beneficiary), so long as the discount is only granted to specific categories of purchasers. Recording in the accounts of the beneficiary results in a better distribution in the branch accounts and moreover greater stability of the national accounts in the face of minor institutional changes.

The problem of allocation arises also for transfers designed to cover social risks or needs (illness, invalidism, old age, maternity). For this category of "social" goods and services for which general government wholly or partially assumes the costs to households, the transfer is treated either as a subsidy to collective consumption or a social benefit. The institutional arrangements, which vary from country to country, product to product and over time, give rise to profoundly different recording in the accounts. In order to restrict these differences, improve comparability between countries, permit analysis of trends over time, make the accounts less sensitive to different institutional arrangements and obtain a figure for household consumption which does not depend on the particular way in which the costs of such consumption is borne, the present document suggests that consumption subsidies should be treated as individual consumption expenditure of general government.

I. INTRODUCTION

This document analyses certain aspects of the treatment of subsidies in the present system of accounts (ESA/SNA). For the most part, reference is made to the European System of Integrated Economic Accounts (ESA), which is a version of the SNA adopted by the Member States of the European Community. Nevertheless, the remarks and proposals made can easily be applied to the SNA.

Critical analysis of the way subsidies are treated in the accounts at present raises a number of questions:

1. Current economic policy makes use of a number of instruments whose economic effects are similar to those of subsidies but which are treated in a radically different way in the accounts: tax relief, capital depreciation rules, loans at preferential rates, etc. How could the present accounting concepts be adapted in order to show these implicit transfers explicitly?

2. The deficits of public undertakings are recorded in the accounts as subsidies, i.e. as *current transfers*. To what extent can they be described as current and is it always right to consider them as such *in their entirety*? Is the dividing line with capital transfers satisfactory?

*I would like to thank my colleagues in SOEC for their useful suggestions on early drafts of this paper. Nevertheless the views expressed herein are the sole responsibility of the author.

3. Subsidies are recorded as resources in the accounts of the market producer units which receive them. Is this rule of the recipient, which is in keeping with the transaction principle on which the present system is based (although there are certain exceptions), entirely applicable to transfers of this kind? Is not the criterion of the beneficiary sometimes preferable? By way of exception, interest subsidies are recorded as resources going to the producer units which benefit and not to the credit institutions. In some countries, there are price reductions on diesel fuel purchased by farmers but the subsidy is actually paid to the diesel distributors. Would it not be more sensible to attribute the subsidy to farmers rather than to the diesel distributor? Should the principle of the beneficiary be extended and to what point?

4. Certain types of transfers are half-way between subsidies and social benefits, e.g. wage subsidies. Because they are received by enterprises, they are at present treated as subsidies. The similarity to social benefits (unemployment allowance) is obvious, however. Other types of transfers are recorded as miscellaneous current transfers in enterprises' accounts (payments made to public undertakings to cover exceptional retirement costs). They too are very similar to social benefits. Is the present treatment satisfactory?

5. There is a great similarity from an economic point of view between, on the one hand, social benefits or collective consumption and, on the other, certain subsidies which correspond to a defrayal of part of households' consumption expenditure by government. These flows are treated in different ways in the accounts, owing to their differing legal forms. Some Community countries already record as social benefits transfers made to public transport undertakings to compensate for fare reductions which the State obliges them to grant to large families. Can and should these "consumption subsidies" be harmonized, and how are they to be defined and treated?

The aim of this document is not to try to answer all the questions regarding subsidies but to analyse the problems raised in points 3 and 5: the principle of the recipient or the beneficiary (part IV of the document); and consumption subsidies (part V). In the case of consumption subsidies, the United Nations document on the revision of the SNA[1] explicitly showed the need to define them and to propose a new way of treating them in the accounts. A preliminary study of the problem was carried out by the Working Party on National Accounts of the Member States of the Community[2].

Before examining these two points, this document restates the definition of subsidies in the present system (part II) and presents the tables in which they are recorded (part III and Annex).

II. General Definition of Subsidies

At the outset of an analysis of subsidies in national accounts, it is necessary to recall the definitions of this flow given in the international systems of national accounts, namely the ESA and the SNA.

[1]The system of national accounts: Review of major issues and proposals for future work and short term changes, ESA/Stat/AC.15/2, page 20.

[2]The inclusion of consumption subsidies in the value of total consumption of the population. EUROSTAT/A1/CN 29, Meeting of the Working Party on National Accounts, December 8-9, 1982.

1. *The Existing Definitions*

The European System of Integrated Economic Accounts (second edition, 1979) gives the following definition in paragraph 421:

> "Subsidies (R30) are current transfers which general government or the Institutions of the European Community make as a matter of economic and social policy to resident units producing or importing goods and market services with the objective of influencing their prices and/or making it possible for factors of production to receive an adequate remuneration."

Further clarification of this definition is given in paragraphs 422 to 427 of the ESA.

The United Nations System of National Accounts (1968 edition) gives the following definition of subisidies (page 237):

> "All grants on current account made by government to private industries and public corporations, and grants made by the public authorities to government enterprises in compensation for operating losses when these losses are clearly the consequence of the policy of the government to maintain prices at a level below costs of production."

The definition is explained in paragraphs 7.34 to 7.37 of the SNA.

It will be seen that there are a number of differences between these two definitions which will be examined at a later stage. On the whole, however, they are broadly similar.

2. *Fundamental Points of the Definition*

In order to be regarded as a "subsidy" in national accounts, a transaction must satisfy the following criteria:

1. It must be an *unrequited transfer*, i.e. a payment which does not involve in return the supply of goods or services, the use of factors of production or the constitution or increase of a claim. The term "unrequited" does not mean in any way that the subsidy is unconditional. In fact, the granting of a subsidy is often tied to some condition or other, such as the level of prices on the world market, the obligation to maintain prices at a certain level, the maintenance of employment or the restructuring of the enterprise, etc.

2. It must be a *current transfer*, i.e. constitute a partial defrayal of production costs for the period considered (generally a year). Consequently, grants made to enterprises for investment purposes, for absorbing operating losses accumulated over several financial years, or in the form of cancellations of debts contracted, are recorded in national accounts as capital transfers. Owing to their irregular nature, transfers made to offset exceptional losses due to external causes (such as floods, bad weather, earthquakes, etc.) are likewise not regarded as subsidies.

3. The definition of subsidies also implies that the current transfer must be made by a *government agency*. This rules out, in principle, any possibility of regarding certain transfers made by other sectors of the economy as subsidies. The subsidies from the rest of the world received by the Community countries are no exception to this rule; they are simply subsidies granted directly to producer

units by the Institutions of the European Communities as a government agency common to all the Member States.

4. As regards the recipient, a current transfer made by government cannot be a subsidy unless it is *paid to a market producer unit*, i.e. to a unit producing goods or market services. This means that a current transfer to a non-market producer unit or to a non-producer unit (e.g. a household as a consumer) will never constitute a subsidy but will be classified in another flow of the system.

It should be pointed out that the unit considered here is not the institutional unit but the unit of homogeneous production (as defined in the ESA) or the establishment (as defined in the SNA). As market producer units may exist within each institutional sector, including the sectors "General government" and "Private non-profit institutions," subsidies can therefore be paid to each institutional sector in their capacity as market producers.

III. Subsidies in the ESA Accounts of the European Community

In the ESA system of accounts there is a breakdown of subsidies according to the sectors which grant them.

Two sectors grant subsidies (see § 421 of the ESA)

- general government (S60): statistics shown in Annex Table 1;
- the Institutions of the European Communities (S92), sub-sector of the rest of the world (S90): statistics shown in Annex Table 2.

Annex Table 3 shows the total subsidies granted.

The subsidies paid by general government are also broken down according to purpose: Annex Table 4 shows the statistics in accordance with the SNA nomenclature (before the introduction of COFOG).

Production subsidies are also broken down according to the various recipient sectors: non-financial enterprises (S10+S80), credit institutions (S40), insurance enterprises (S50), general government (S60), private non-profit institutions (S70); or not broken down by sector in the case of import subsidies. These statistics are shown in Annex Table 5.

Lastly, Annex Table 6 shows the subsidies granted to the main branches; the statistics are taken from the input-output tables.

IV. The Principle of the Recipient or the Beneficiary

The first point considered by the document concerns the attribution of subsidies. Are they to be recorded in the accounts of the person *receiving them*, i.e. to whom the payment is made, or of the person *benefiting from them* (on account of the reduction in the price of the subsidized good or service which he purchases).

The ESA rule is quite clear: the criterion is the recipient; as the ESA adopts a transaction approach, it simply records the payment made. The ESA thus states (§ 427):

> "Production subsidies (R31) are recorded as resources in the generation of income account (C2) of the branches or sectors to which they are paid."

However, an exception is made to this principle in the case of "grants for interest relief, which are recorded as resources of the units benefiting from them."

It may be wondered whether this exception should not be extended. Let us take the example of a subsidy granted to the diesel distributor in order to compensate for a price reduction which he is obliged to grant to the farmer who buys the diesel from him.

This example is entirely similar to that of grants for interest relief. Should not the beneficiary rule apply in this case also? The enterprise receives a reduced-interest loan in the same way as the farmer obtains a reduced price. Why not therefore delete the subsidy from the diesel distributor's accounts in the same way as it is deleted from the account of the credit institutions? Is it "normal" to record the subsidy in the distributive trades branch rather than the agriculture branch?

The system is not stable, since a slight institutional change (the attribution of the subsidy directly to agriculture) causes a change in the treatment of the flows: increase in the value added at market prices of the distributive trades, decrease in the value added at market prices of agriculture.

For these reasons, it would be more logical to treat the subsidy as a resource of the beneficiary. This leaves an important question: how to define who really benefits?

Too wide a definition of the beneficiary would make the implementation of this new proposal completely inoperative. Any subsidy basically has a repercussion on the value of output. This price reduction is of benefit to all those who buy the product. Consequently, the application of the beneficiary principle would lead to the subsidy being attributed to all the purchasers of the subsidized product in proportion to their purchases—a solution which does not seem desirable, especially as the subsidy may be granted not only to reduce the price, but also to increase the compensation of employees the producer can pay or to keep the enterprise going in order to avoid redundancies.

The proposal is to limit the beneficiary rule to the case where the subsidy paid to the recipient is compensation for a price reduction granted to a "specific category" of purchaser, as in the example of reduced-price diesel fuel for farmers only (and for other purchasers but not all purchasers). To constitute a "specific category," at least one purchaser but not all purchasers must be involved.

It is for this particular case (which is only a generalization of what is done in the case of grants for interest relief) that the remainder of this section considers the repercussions of this new treatment in the accounts.

To analyse them, a distinction must be made according to the use which is made of the subsidized good or service purchased at a reduced price. Like any purchase, it may give rise to:

- intermediate consumption (on the part of all branches or sectors);
- gross capital formation (on the part of all branches or sectors);
- households' consumption;
- an export.

As regards subsidies to a unit (generally in the distributive trade branch) to enable it to export at reduced prices, there can be no question here of considering abandoning the recipient rule, which would lead to subsidies being granted to the rest of the world. In the case of subsidies to households' consumption, the problem is more complex and will be examined at a later stage.

In the following two sections we will therefore consider the application of the beneficiary principle to subsidies to intermediate consumption and capital formation.

1. *Subsidies to Intermediate Consumption*

The question here is the attribution of subsidies to the accounts of the person who, in buying a subsidized good or service, benefits from a price reduction which is specially granted to him and for which the producer of the good or service is compensated by means of the subsidy; this purchaser uses the good or service for his intermediate consumption. An example already mentioned is that of subsidies on the diesel fuel used by farmers. Another example is that of subsidies to compensate for tariff reductions on the transport of timber and ores.

In order to facilitate analysis of the repercussions on the accounts of the new treatment considered in this paragraph and the next, the input-output table and the production and generation of income accounts of the sectors have been set out in simplified form in the table opposite. For the input-output table, the basic equation is as follows:

> Primary inputs and intermediate consumption of the branch[3] in the columns = Intermediate and final uses of the product in the rows.

The principle of attributing the subsidy to the beneficiary's accounts would involve:

- for market producer unit R
  - in the production account: increase in output, since the recipient is now deemed to sell his product to the beneficiary at the "normal" market price, i.e. without reduction (imputed price); value added at market prices increases;
  - in the generation of income account, the production subsidy is deleted;
  - in the input-output table (producers' prices), the increase in value added is matched by the increase in intermediate uses.
- for market producer unit B
  - in the production account, intermediate consumption increases (higher imputed price), resulting in a decrease in value added (at market prices);
  - in the generation of income account, the subsidy is attributed and the gross operating surplus therefore remains identical;
  - in the input-output table, the increase in intermediate consumption is balanced by the decrease in value added (at market prices).
- from the point of view of the national economy, there would be an increase in output (from branch R) and an increase in intermediate consumption (of branch B), which would leave the GDP identical.

[3]In the ESA a "branch" is a group of units of homogeneous production, i.e. a pure principal product industry.

Input-output table at producers' prices:

Intermediate Consumption/Uses	Consumption			GCF	Exports
	of S80	of S60	of S70		

Value added at market prices =
= value added at factor cost
+ taxes linked to production
− subsidies
Imports

Production account:

Uses	Resources
P20 Intermediate consumption	P10 Output
N1 Value added at market prices	

Generation of income account:

Uses	Resources
R10 Compensation of employees	N1 Value added at market prices
R22 Taxes linked to production	R31 Production subsidies
N2 Gross operating surplus	

It should be pointed out that intermediate consumption would be valued at an imputed price (reduced price plus the value of the subsidy). The valuation of this flow should not, however, pose any particular problem other than that of valuing the amount of the subsidy currently shown in the accounts, especially as the imputed price should correspond to the "normal" price, i.e. that charged to all other purchasers. Moreover, this valuation corresponds to that of intermediate consumption in the input-output tables at basic prices. On the other hand, there are many arguments in favour of such a treatment:

- better estimate of the value added of branches R and B;
- much more "normal" attribution of branch B's subsidy;
- more stability of the system in the face of institutional changes, since the attribution of the subsidy directly to branch B does not affect the system of accounts.

It should also be pointed out that this change in treatment does not have any repercussions in the input-output tables at basic prices. In fact, intermediate consumption or uses are valued at basic prices, i.e. the subsidy (less taxes linked to production) is added to the market price. Value added at factor cost remains the same.

2. *Subsidies to Capital Formation*

As in § 1, these are "subsidies" granted to a market unit in order to enable it to grant a reduction in the price of its product to a specific category of purchaser. In this case, however, the product is used by the purchaser for gross fixed capital formation or stockpiling. The transfer which was entered as a subsidy in the recipient's accounts must now be recorded as an investment grant in the accounts of the beneficiary.

This involves:

- for market producer unit R
  - In the production account, there is an increase in output, which is in fact valued at a higher imputed price ("normal" market price). Value added (at market prices) therefore increases.
  - In the generation of income account, the subsidy is deleted.
  - In the input-output table (at producers' prices), the increase in value added (at market prices) is offset by the increase in final uses (GFCF or changes in stocks), now valued at the imputed price.
- for market producer unit B
  - The production account and the generation of income account remain unchanged.
  - In the capital account, there is an increase in investment grants on the resources side and an increase in GFCF or changes in stocks (valued at the imputed price) on the uses side.
  - The input-output table at producers' prices remains unchanged.

From the point of view of the national economy, this new treatment increases output and value added at market prices of branch R with a consequent increase in GDP. The arguments in favour of this treatment are exactly the same as those outlined in section 1.

The increase in GDP (at market prices) stems from the fact that in this case there is an increase in a final use but not in intermediate consumption as in the previous case. The same problem arises (see below) with regard to consumption subsidies. The increase in GDP is only the counterpart of the identical treatment of the financial assistance granted irrespective of whether this is given to a market unit which in return grants a price reduction to another market unit or whether the investment aid is granted directly to this latter market unit, which will then buy at the standard market price.

The net domestic product, on the other hand, should be lower because if the financial assistance is attributed to GFCF, the new treatment means that GFCF must be valued at the price paid plus the value of aid and consequently capital consumption at replacement cost will be higher.

In the case of changes in stocks, the subsidy should in fact give rise to intermediate consumption which has to be revalued, which in theory ought to exactly offset the increase in GDP over a period of time.

GDP at factor cost, on the other hand, remains exactly the same.

Lastly, in an input-output table at basic prices

- for branch *R* the flows remain identical:
  - On the resources side, value added at factor cost remains identical.
  - On the uses side, the final use remains identical. It is valued at a "notional" basic price (including the value of the subsidy, which is no longer regarded as a subsidy for R but as part of the market price).
- for branch B:
  - Resources and uses remain identical.

V. Consumption Subsidies

The problem raised here concerns certain transfers made to market units in order to reduce the price of goods and services consumed by households. According to the current rules of the SNA and the ESA, these transfers are treated as subsidies, but from an economic point of view, the effect of these subsidies is entirely similar to that of some other flows such as collective consumption or social benefits. This question is very closely linked to that analysed in the previous section, since it entails choosing between the principle of the recipient or that of the beneficiary. The question is very important because it has fundamental repercussions in the accounts. A few examples will serve to illustrate the problem.

Let us take the example of a transfer made to a health establishment. If this establishment is regarded as a market unit, the transfer will be treated as a subsidy. If it is regarded as non-market, for example if the value of the transfer exceeds the resources arising fom the sale of medical services, then the establishment will be allocated to the general government sector and the transfer is regarded as a transfer to a government agency.

This has important consequences in the accounts, since it affects the level of GDP. In the second case, the output of health services (equal to collective consumption plus households' partial payments) is valued at the costs of production whereas in the first case it is valued on the basis of the price (which is lower because it is subsidized).

Consequently, in the second case the non-market nature of the unit receiving the transfer leads to an increase in GDP compared with the first case.

The dividing line between transfers and subsidies is not the only problem to be considered. Another is that of the dividing line between subsidies and social benefits.

Taking once again the example of a market health establishment, the difference between the two types of treatment in the accounts can be compared. If there is a social benefit, this benefit is deemed to facilitate the purchase of medical services by households and households' consumption of medical services therefore includes the value of the transfer; if there is a subsidy, this will not be part of households' consumption (or of collective consumption either). In the former case, the transfer (benefit) will be included in GDP, whereas the subsidy will not.

These differences in treatment often create awkward problems, although in some cases they correspond to very slight institutional differences, with the result that in compiling their accounts some Member States of the Community (e.g. France) do not always comply with the principles of the ESA and treat certain subsidies or transfers to government agencies as social benefits; for example, certain transfers made directly to establishments for old or handicapped persons in proportion to the number of days spent there, or subsidies granted to public transport undertakings (mainly railways and urban transport) to compensate for the fare reductions granted to old persons or large families.

In other Member States (Denmark, Italy), an institutional change obliges them to regard as a transfer to a government agency what was previously a social benefit. This presents a very awkward problem from the point of view of an analysis of the trends in total government consumption, which in theory ought to increase appreciably in the year during which the institutional change takes place. It is for this reason that certain countries do not show the awkward institutional change in their accounts but recalculate their statistics for the period prior to the change as though the new institutional situation had always existed.

The question now is to know how to define and to treat these flows, which are at present regarded as subsidies to market units and which are "very similar from an economic point of view" to social benefits or collective consumption, since in all cases they involve a defrayal of households' consumption expenditure by general government.

1. *Definition of Consumpion Subsidies*

It should be noted first of all that the definition of these subsidies must be restrictive. It must not encompass all subsidies to market producer units, even if the goods or services produced by these units are for households' final consumption only. It is difficult to record a subsidy of this kind as a transfer to households (whatever the form in which this transfer is recorded): its aim may be equally to reduce the price of the good or service consumed, to bring about higher compensation of employees, to prevent the enterprise from going bankrupt, which would lead to redundancies, or to further the expansion of the enterprises. In order to arrive at a satisfactory definition of consumption subsidies, it must form the basis for solving the problem examined above, namely "to treat in a similar way flows which from the point of view of their economic effect are alike but which in the present system of accounts are treated in a fundamentally different way."

a) *The Branch Approach*

One possibility is to regard as consumption subsidies those subsidies made to a number of branches whose output is aimed at satisfying households' consumption. The definition of the branches can be based on the concept of coincident activity as defined in a paper by Franz and Schwarzl[4].

An activity is said to be coincident if it can be market or non-market in the system of accounts.

[4]Franz A. and Schwarzl, R. ICP 1980—A Brief Account from Austria, *Review of Income and Wealth*, Series 30, No. 2.

According to the above document, coincident activities can be defined by the following categories and classes of the ISIC:

92 Sanitary and similar services
93 Social and related community services
    931 Education services
    932 Research and scientific institutes
    933 Medical, dental, other health and veterinary services
    934 Welfare institutions
    935 Business, professional and labour associations
    939 Other social and related community services
94 Recreational and cultural services

The SNA gives an implicit definition of coincident activities in § 5.11:

> "Governmental departments engaged in the usual social or community activities of government, for example, national parks, health, educational, cultural and sanitary services, and scientific or technical research and assistance, should not be considered public industries unless the fees set for these services are clearly designed to approximate the full costs of production."

In the ESA, coincident activities are mentioned in § 313: after defining the services "which, *by convention*, are always deemed to be non-market", the ESA specifies the services which are market or non-market depending on whether (or not) "the resources of the producer unit are mainly derived from (. . .) the proceeds of sales".

These services are the following groups of the NACE/CLIO nomenclature:

921 Refuse disposal services, sanitation services and the like
931 High schools
932 General teaching schools
933 Professional training and retraining schools
934 Infant schools
940 Research and development
951 Hospitals, clinics and sanatoriums
952 Other health institutions
954 Dental practices and clinics
956 Veterinary surgeons and veterinary clinics
962 Social homes
963 Professional associations and economic organizations
964 Employers' federations
975 Entertainments (except for cinemas and sports)
977 Libraries, public archives, museums, botanical and zoological gardens
978 Sports grounds or halls, sports clubs, and independent sports teachers or coaches
979 Recreational services n.e.c.

In our opinion, the branch approach cannot be used to define consumption subsidies. Certain subsidies to coincident branches must not be regarded as consumption subsidies and, conversely, consumption subsidies can be paid to branches other than coincident branches.

For example, transfers granted for the research done in universities must not be regarded as consumption subsidies; conversely, subsidies to transport undertakings to offset fare reductions granted to large families must be regarded as consumption subsidies.

b) *The "Social Benefits" Approach*

In order to define consumption subsidies, it is sufficient to take the definition of social benefits as a starting point. It is a matter of defining an appropriate treatment for the subsidies which correspond to a defrayal of households' consumption expenditure by general government, which in other institutional systems is effected by means of expenditure on social benefits or collective consumption.

An appropriate definition of consumption subsidies, along the same lines as the definition of social benefits given in § 475 of the ESA, might be as follows: "consumption subsidies comprise all transfers to market producer units in order to

1. finance the production of goods and services, which are granted personally to households and which are intended to relieve households of the financial burden created by the appearance, or existence, of certain risks or needs, or
2. ensure that a specific category of households benefits from a price reduction specially granted to them."

The list of risks or needs would be defined in an identical way to that for social benefits, i.e. it would comprise the following:

(a) sickness
(b) old age, death and survivors
(c) disability
(d) physical or mental infirmity
(e) industrial injury and occupational disease
(f) unemployment
(g) family responsibilities
(h) personal injuries suffered because of acts of war, other political events and natural disasters,
(i) vocational training of adults
(j) housing.

The definition calls for a number of comments:

- The definition must include transfers to market producer units in order to "enable a specific category of households to benefit from a price reduction specially granted to them." There are two reasons for this: firstly, so as to have a definition which is consistent with the beneficiary principle discussed in the previous section and, secondly, so as to take into account a number of transfers which do not correspond to the risks and needs covered, e.g. the subsidies to transport undertakings to offset fare reductions for members of the armed forces. When the reduction is granted to large families, it corresponds to the need "family responsibilities," but in the case of the armed forces it does not correspond to any of the "needs" in the list.[5]

- The definition excludes transfers *which do not correspond* to the financing of goods and services consumed by households. Accordingly wage or pension subsidies are not regarded as consumption subsidies.
- Examples of consumpton subsidies are all the transfers to market medical services (clinics, day nurseries) with the aim of reducing the daily charge, transfers to private education establishments with the aim of limiting the cost of studies for households, transfers to offset reductions in public transport charges, electricity charges, television licence fees for old persons, members of the armed forces, large families, etc.
- In terms of the new COFOG nomenclature, consumption subsidies relate basically to the following functions:

  04 Education affairs and services
  05 Health affairs and services
  06 Social security and welfare affairs and services
  07 Housing and community amenity affairs and services

It should be noted, however, that other functions may be involved, such as

12 Transportation and communication affairs and services: subsidies to public transport to offset fare reductions to old persons or large families (coverage of the risks "old age" or "family responsibilities").

On the other hand, certain subsidies to education or health should not be regarded as consumption subsidies (e.g. those relating to research).

As already stated, the definition of consumption subsidies cannot be based on branches. Nevertheless, the main branches concerned are the coincident activities, namely education, medical services, other social services, recreational and cultural services.

2. *Proposed Treatment of Consumption Subsidies*

A document by J. Petre[6] provides a conceptual framework for proposing a suitable method of treating consumption subsidies in national accounts. One of the aims of this document is to arrive at a concept of households' total consumption, as envisaged in the U.N. document on the revision of the SNA.[7]

The paper by J. Petre makes a distinction between *individual* and *collective* expenditure of general government. Individual expenditure is defined as expenditure representing the defrayal of households' individual consumption by government.

[5]Transfers to offset fare reductions granted to members of the armed forces are recorded by some Community countries (e.g. France) as miscellaneous current transfers, whereas the ESA rule would classify them as subsidies.

[6]The treatment in national accounts of goods and services for individual consumption which are produced, distributed or paid for by general government. J. Petre, paper presented at the 17th General Conference of the I.A.R.I.W., Gouvieux, France, August 1981.

[7]Review of major changes . . . , *op. cit.*, page 17.

The individual expenditure of government comprises two distinct categories:
- goods or services *produced* and distributed to households free of charge;
- goods or services *purchased* and distributed to households free of charge.

The first category includes, for example, the output of education and health goods and services by government, distributed to households free of charge. The second category includes social benefits in kind. This latter category should also include social benefits in cash corresponding to a prior purchase by households, so as not to artificially increase households' income, whereas "the economic behaviour of the household which at the time it makes its initial outlay knows that it will be fully reimbursed is in the vast majority of cases identical to that of the household which can have the same goods or services supplied free of charge".[8]

Collective *and* individual expenditure on goods and services *produced*, as defined by J. Petre, constitute the collective consumption of government in the present ESA and SNA.

The new concept of households' consumption would comprise both households' consumption expenditure and individual expenditure of government.

Consumption subsidies should be included in the category of individual expenditure on goods and services *purchased*. They should appear as *individual consumption expenditure* of government.

The main changes in the system of accounts would be as follows:
- For market unit R
  - in the production account: increase in output, which now includes a sum equal to the subsidy corresponding to the individual consumption expenditure of government; on the uses side, there is therefore an increase in value added (at market prices);
  - in the input-output table at producers' prices: the increase in value added (at market prices) is balanced by the consumption expenditure of general government (S60).
- For the general government sector, the new item "individual expenditure of general government" increases, but collective consumption remains unchanged.
- For the national economy, there is an increase in GDP.

3. *Comments on the Treatment Chosen*

- The treatment chosen does not claim to resolve all the differences—but at least some of them—in the valuation of households' consumption. Its aim is to arrive at a valuation of consumption which is more or less independent of the institutional situation, or at the very least to prevent slight institutional differences being translated into sizeable differences in the accounts. The purpose of national accounts is to give a simplified picture of economic activity and not to exaggerate slight legal differences.
- In the present system, as is stressed in the document by J. Petre, the concept of households' consumption is largely devoid of meaning: it represents neither

[8]Ibid., p. 34 (§ 70). The flow "households' consumption expenditure" would obviously be reduced by the amount of the increase in individual consumption expenditure of general government.

the goods and services consumed by them nor their expenditure on goods and services. This is brought out very clearly by an analysis of, for example, households' consumption expenditure by purpose according to the ESA:

- For purpose 31 (gross rent and water charges) consumption represents 4.6 percent of households' total consumption in Ireland, compared with 12.1 percent in France. This difference reflects the large housing subsidies in Ireland.
- For purpose 5 (medical care and health expenses) consumption is 0.8 percent in the United Kingdom, compared with 12.5 percent in France. This reflects the fact that in the United Kingdom health consumption expenditure is made basically by government, whereas in France it is made by households, even if it is in fact financed by social benefits.

The published figures are therefore by no means a reflection of households' actual consumption (irrespective of the method of financing).

With the new treatment it would be possible to obtain internationally comparable statistics on households' consumption, both in total and broken down by purpose.

- The treatment of subsidies as individual consumption expenditure of government could be objected to on the grounds that it "artificially increases" GDP. The same could be said, however, of the frontier between social benefits and collective consumption. It is, moreover, for the latter reason that his treatment is proposed, in order to "standardize" the repercussions in the accounts of expenditure similar to social benefits or to collective consumption and to define as consumption subsidies only those which represent *individual consumption expenditure of government.*

Furthermore, it is not entirely correct to say that the treatment of subsidies (whatever their nature) as final consumption "artificially increases" GDP.

It may of course be said that the financing of subsidies by means of an increase in taxes linked to production would lead globally, with the new treatment, to an increase in GDP (increase in government consumption expenditure, with households' consumption expenditure remaining unchanged owing to the fall in prices exclusive of taxes linked to production, offset by an increase in taxes linked to production).

It may also be said that the new treatment results in a higher GDP than the old treatment. However, it could just as well be said that the present ESA treatment "artificially decreases GDP," since an increase in subsidies financed by an increase in tax on households' income leads to a fall in GDP.

Output at market prices decreases on account of subsidies; households may have the same volume of consumption expenditure (but the value will be smaller on account of the reduction in prices): their disposable income decreases in value terms, as does their consumption, their savings remain exactly the same but GDP decreases.

These reflections show the artificial side of GDP at market prices—an inevitably artificial side because, unless the system is revised in its entirety, the financing of subsidies by means of income tax or taxes linked to production has opposite effects. All this just goes to show that the new treatment of subsidies is no more "artificial" than the old one.

VI. Conclusions

Objections may be raised to the proposals made in this document on the grounds that they make the system diverge from the transaction principle and that they lead to the valuation of imputed aggregates.

It must nevertheless be pointed out that there are many things in their favour:

- As regards the beneficiary principle:
    1. it tends to establish a consistent link with the existing treatment of grants for interest relief;
    2. it shows which branches are actually subsidized—information which does not exist in the present system;
    3. it is more stable to institutional changes.
- As regards consumption subsidies:
    1. the new treatment makes it possible to obtain a new aggregate, for households' consumption, which is comparable from one country to another;
    2. international comparisons of households' consumption by purpose would be possible, whereas the present statistics cannot be used for such comparisons;
    3. the new system is more stable to institutional changes.

Annex: Statistical Tables

Comments on the Tables

1. *Table 5*

Every sector (apart from the rest of the world) can, in principle, receive subsidies, which may be granted to all market producer units.

In actual fact, subsidies are mainly granted to enterprises (incorporated enterprises or unincorporated enterprises included in the household sector) (see Table 5). In the case of certain countries, such as France, the United Kingdom and Ireland, subsidies are also received by general government because, unlike in other countries (Germany, Netherlands, Denmark), this sector includes market branches.

Two countries (France and Belgium) grant subsidies to credit institutions. We may well wonder whether the treatment in the accounts is justified. In actual fact, transfers to credit institutions in most cases take the form of grants for interest relief, which (according to § 425 of the ESA) must be treated in the accounts as subsidies "to the *producers benefiting from them*, even when the difference in the interest is, in practice, paid directly by the government to the credit institution making the loan."

2. *Comparison of Tables 3 and 5*

There is a statistical inconsistency for the United Kingdom, where subsidies received are greater than subsidies granted.

3. *Comparison of Tables 3 and 6*

Subsidies can, in principle, be granted to all market branches. In practice, however, they are concentrated in five branches or groups of branches (Table 6):

- agriculture, including meat, milk and other food products;
- distributive trades;
- inland, sea and air transport;
- communication;
- housing.

The total subsidies received by the branches (Table 3) should be equal to the total subsidies granted by the sectors (Table 3).

A comparison of Table 6 with the data for 1975 given in Table 3 shows an inconsistency between these two sets of statistics for certain countries. It should be borne in mind that the statistical sources are different: Table 6 is taken from the input-output tables compiled every five years, Table 3 from the sector accounts compiled every year.

In the case of Ireland, the Netherlands and Denmark the differences are due to a revision of the statistics used in the sector accounts. In the case of the United Kingdom, however, the data show a very large discrepancy: the subsidies shown in the sector accounts (3702) are twice those shown in the input-output tables (1650.9). This is due to a differing interpretation of the concept of subsidies and/or to the use of different sources. A comparison between Tables 4 and 6 reveals that the housing subsidies shown in expenditure by purpose (1024) are not included in the input-output table.

In the case of Belgium, the subsidies granted to the main branches account for only a relatively small proportion of the total. This is because the transfers to credit instituions (see previous paragraph) are not included in the table; the total amount (6582) is shown under the branch "Credit institutions."

TABLE 1

SUBSIDIES GRANTED BY S60

(MILLIONS OF NATIONAL CURRENCY EXCEPT ITALY, THOUSAND MILLIONS, AND IRELAND, THOUSANDS)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
F.R. Germany	9,630	7,980	10,450	11,960	12,010	12,420	13,180	14,260	17,030	17,880	16,770
France	15,407	13,580	14,650	18,285	22,981	28,685	35,806	41,637	43,230	49,046	52,416
Italy	940	1,095	1,400	1,433	1,780	2,791	3.374	4,422	5,628	7,460	7,914
Netherlands	2,045	820	1,010	1,260	1,980	2,220	3,340	3,650	4,000	4,440	4,780
Belgium	36,355	34,618	41,627	50,935	55,916	67,991	84,583	94,942	101,783	111,060	114,586
Luxembourg	1,260	1,333	1,573	1,763	2,607	3,421	4,173	5,148	4,860	—	—
United Kingdom	884	939	1,153	1,380	2,892	3,360	3,254	3,112	3,295	4,018	4,665
Ireland	79,103	86,150	94,839	833,323	92,203	140,250	170,513	189,625	244,240	280,000	—
Denmark	3,413	3,763	4,085	3,171	5,131	3,408	4,475	4,258	4,829	5,642	7,014

TABLE 2

SUBSIDIES GRANTED BY S92
(MILLIONS OF NATIONAL CURRENCY EXCEPT ITALY, THOUSAND MILLIONS, AND IRELAND, THOUSANDS)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
F.R. Germany	70	1,980	1,800	3,080	3,010	3,040	3,530	5,060	6,910	6,960	6,910
France	25	3,619	4,866	6,666	4,376	6,811	9,150	10,891	13,349	14,766	166,34
Italy	44	200	323	394	279	550	706	778	874	1,490	2,254
Netherlands	0	960	1,230	1,920	1,540	1,760	2,740	3,210	3,640	4,550	4,080
Belgium	0	4,971	6,997	10,025	7,412	8,863	16,847	20,933	24,187	32,053	22,849
Luxembourg	—	71	95	281*	109*	281*	413*	413*	1,005	584	
United Kingdom	—	—	—	63	112	342	207	181	329	371	550
Ireland	—	—	—	37,200	71,300	125,200	130,600	294,600	387,700	403,200	—
Denmark	—	—	—	2,219	2,074	2,213	3,160	4,770	5,688	—	

*Calculated as the difference between the subsidies received by the sectors and those granted by S60.

TABLE 3

SUBSIDIES GRANTED BY S60 AND S92
(NATIONAL CURRENCY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
F.R. Germany (mil.)	9,700	9,960	12,250	15,040	15,020	15,460	16,710	19,320	23,940	24,840	23,680
France (mil.)	15,432	17,199	19,516	24,951	27,357	35,496	44,956	51,928	56,579	63,812	69,050
Italy (thous. mil.)	984*	1,295	1,723	1,837	2,059	3,341	4,080	5,200	6,502	8,950	10,168
Netherlands (mil.)	2,045	1,780	2,240	3,180	3,520	3,980*	6,080	6,860	7,640	8,990	8,860*
Belgium (mil.)	36,355	39,589	48,624	60,960	63,328	76,854	101,430	115,875	125,970	143,113	137,435
Luxembourg (mil.)	1,260	1,404	1,668	1,872	2,888	3,702	4,586	5,561	4,974	—	—
United Kingdom (mil.)	884	939	1,153	1,443	3,004	3,702	3,461	3,293	3,624	4,389	5,215
Ireland (thousand)	79,103	86,150	94,839	120,153	163,503	265,450	301,113	484,225	631,940	683,200	—
Denmark (mil.)	3,413*	2,763*	4,085*	5,390*	7,205*	5,621*	7,635*	9,028*	10,517*	—	—

*Inconsistent data = differences (positive or negative) between the subsidies received by the sectors and those granted by S60 and S92.

TABLE 4

SUBSIDIES GRANTED BY S60 ACCORDING TO PURPOSE (SNA/ESA NOMENCLATURE), 1975
(NATIONAL CURRENCY)

	F.R. Germany (mil.)	France (mil.)	Italy (thous. mil.)	Netherlands (mil.)	Belgium (mil.)	United Kingdom (mil.)	Denmark (mil.)
1 General public services	0	67	0		1	0	130
2 Defence	0	11	0		73	0	0
3 Education	80	571	0		1,400	0	4
4 Health	80	138	0		0	0	18
5 Social security	610	800	0		5,484	0	0
6 Housing	1,060	4,618	0		4,858	1,024	931
7 Other community and social services	20	553	0		285	0	324
8 Economic services	1,0570	21,543	2,791		59,250	2,337	2,002
81 General administration	0		0		33	8	8
82 Agriculture	1,270		221		2,504	994	224
83/84/88 Industries	2,030		602		8,853	502	562
83 Industry					8,060		
84 Electricity, gas, water					o		
88 Other economic services					694		
85/86/87 Communication	7,270		1,968		47,860	833	1,208
85 Roads					538		
86 Inland waterways					46,628		
87 Other transportation					793		
9 Other purposes	0	384	0		707	0	0
TOTAL	12,420	28,685	2,791	2,170	72,058	3,361	3,409

TABLE 5

SUBSIDIES RECEIVED BY THE VARIOUS SECTORS—1975
(NATIONAL CURRENCY)

	F.R. Germany (mil.)	France (mil.)	Italy (thous. mil.)	Netherlands (mil.)	Belgium (mil.)	United Kingdom (mil.)	Ireland (thous.)
S10+S80 (Enterprises and households)	15,460	27,886	3,341	3,930	70,272	2,691	—
S40 (Credit institutions)	0	4,022	0	0	6,582	6	—
S50 (Insurance enterprises)	0	1,662	0	0	0		—
S60 (General government)	0	1,926	0	0	0	1,060	26,940
S70 (Private non-profit institutions)	0	0	0	0	0		—
Not broken down by sector	0	0	0	50	0		
TOTAL	15,460	35,496	3,341	3,980	76,854	3,756	

TABLE 6

SUBSIDIES TO THE MAIN BRANCHES
(SOURCE: 1975 I-O TABLES—NATIONAL CURRENCY)

	Italy (thous. mil.)	Netherlands (mil.)	Belgium (mil.)	United Kingdom (mil.)	Ireland (thous.)	Denmark (mil.)
Agriculture (010/310/330/350) and food products	658	541	5,053	717.3	125,499	2,719
010 Agriculture	510	37	3,530	563.0	26,706	523
310 Meat	26	75	415	3.4	54,218	610
330 Milk	62	79	450	33.8	33,311	1,481
350 Other food products	60	350	658	117.1		105
Distribution (570)	155	1,230	5,325	2.8	27,916	63
Transport (610/630)	1,687	1,012	34,794	345,6	26,670	1,206
610 Inland	1,545	1,012	33,348	254.8	26,229	1,187
630 Sea and air	142	0	1,446	90.8	441	16
Communication (670)	278	0	6,858	108.9	16,596	9
Renting of immovable goods (730)	0	962	4,823	0	26,940	836
Total for the 5 groups of branches	2,778 (83.1%)	3,745 (95.1%)	51,528 (67.0%)	1,174.6 (71.1%)	223,621 (90.1%)	4767 (80.7%)
Total for all branches	3,341	3,936	76,854	1,650.9	248,308	5,904