Session Number: **3**

Session Title: International Standards for Income Distribution Statistics

Paper Number: 2

Session Organiser: Paul van der Laan

Discussant: …

Paper prepared for the 26th General Conference of

The International Association for Research in Income and Wealth

Cracow, Poland, 27 August to 2 September 2000

Reconciliation of micro-macro concepts and terminology

Coordinated by Anne Harrison from input from almost all the members of the Canberra group

For additional information please contact:

Anne Harrison
OECD
2 rue André Pascal
75776 Paris Cedex 16
France

E-mail: anne.harrison@oecd.org

Fax: +33 1 45 24 17 13
Phone: +33 1 45 24 88 34

This paper is placed on the following websites: www.stat.gov.pl

www.econ.nyu.edu/dept/iariw

Chapter 4: Reconciliation of micro-macro concepts and terminology

Chapter 4: Reconciliation of micro-macro concepts and terminology

Introduction and summary

The aim of this paper is to try to establish bridges between the micro and macro approaches to categorising income and to establishing distribution of income across household groups. It builds on a number of papers presented to earlier Canberra group meetings as well as the discussions there and at related meetings. A list of key documents is given at the end of the chapter.

In the first part of this chapter, we examine different categories of income and different ways of building income aggregates. What we are looking for is a series of "boxes" into which we can put agreed types of income so that we may assemble the boxes in different orders to meet the needs of different types of analyses coming from the two traditions. Then we examine the different aggregates to see how far these can be harmonised either by determining a common basis or, where this is not suitable, at least be linked clearly. Lastly we consider how to extend the reconciliation beyond income to cover the consumption and accumulation of households.

Defining income

Before we can talk about reconciling the categories of income, we must be sure that there is agreement about what exactly income is. A common-sense view of income includes all components that contribute to improving current economic well-being and includes both regular and irregular flows "if they can be spent today". Current expenditure can only exceed income through a reduction in net worth.

Within the system of national accounts (SNA), the difference between current and capital transactions is basically that current transactions are complete within the period in question. By the end of the period, they disappear like ripples on water and they have no effect on balance sheets. Capital transactions are precisely those that do have an effect in another period and thus impact balance sheets, the measures of wealth. Income is defined in the SNA as "the maximum amount that a household can afford to consume during the reference period without having to finance its consumption by reducing its cash, by disposing of other financial or non-financial or by increasing its liabilities". This formal definition accords with the ideas advanced in a number of Canberra group papers and which the group felt able to adopt as a definition common to both micro and macro work.

Type of income or means of payment

The existing international guidelines on income distribution are contained in the UN publication M61 which dates from 1977. It is still labelled provisional and relates to the 1968 version of the System of National Accounts. Previous attempts to update the M61 approach to bring it into line with the 1993 SNA categorise income according to the type of transaction which gives rise to the flow without regard to the medium in which the payment is made. The sequence is basically to measure first income generated in the course of production, then to allow for distribution of property income thus arriving at a concept called “primary income”. The next stage is to account for current transfers, widely interpreted and thus arrive at “disposable income”. This is either spent on consumption or saved. Saving is used either to finance investment or leads to net borrowing or lending.

The micro approach based on the way household survey data is collected has the opposite orientation. The means of payment is the main discriminatory factor and the rationale for the payment quite subsidiary. It starts by adding all items deemed to be in cash. From this a series of deductions are made to reach a measure of disposable income. Lastly transactions in kind are added. Some of the micro orientated definitions of income have not been extended further into the process of explaining how the income is spent so do not deal with consumption, investment or any aspects of personal wealth. As we shall see, though, it is difficult to avoid this extension if we wish to have a comprehensive reconciliation of micro and macro data sets.

The first step in trying to harmonise these two approaches is clearly to look at a two-dimensional categorisation where both source of income and means of payment are taken into account. The four types of income are as follows,

> (i) flows coming from involvement in economic activity, (production), for which wage and salary earnings are prototypical;
>
> (ii) flows coming from the ownership of financial and other assets, such as interest,
>
> (iii) transfers of a compulsory nature such as taxes, and
>
> (iv)voluntary transfers such as inter-household gifts and other receipts.

The seven means of payment are

> (A) payments received, typically in cash, where the recipient is free to use them for any purpose without restriction of any kind. They form the largest part of most households’ income. For simplicity these will be referred to as receipts in cash;
>
> (B) payments received as part of the employment contract but in such a way that the recipient has no choice about how they are spent. They include fringe benefits such as the provision of a company car and reduced cost travel or utilities. The car is typically provided without payment, the low-cost travel or electricity may be first paid by the household then any excess reimbursed. For simplicity, these payments are referred to as receipts in kind;
>
> (C) there are other payments some of which are made to some employees as part of the employment contract, some from other sources, where the recipient has no

choice but to save the receipts. For simplicity these are referred to as receipts of forced saving;

(D) some increases in welfare come from the production of goods for use by the household. For these we impute an income equal to the value of the corresponding goods in the market-place less any direct costs involved in producing the goods. The imputed rent of owner occupied dwellings(OOD) is treated in a similar way. These items are referred to as income from own account production of goods and OOD;

(E) for some measures of welfare, it may be interesting to include estimates of the value of services produced and used within the household. These are referred to as income from own account production of services;

(F) another extension to the concept of welfare includes including in consumption the services provided free or at reduced cost by government to households, notably health, education, welfare and cultural services. These are called social transfers in kind. In order to have an income concept equivalent to this extended value of consumption, imputed receipts of social transfers in kind are recorded;

(G) lastly it is occasionally necessary to record some receipts net of the corresponding payments so a further column is added where the corresponding outgoing is recorded.

The groups of rows for four types of income cross-classified by seven columns for the seven means of payment are presented in annex table 1. In the text which follows, we examine each of the nonempty cells and see how the detailed income items specified in chapter 2 fit into this two-way table.

Receipts in cash (Column A)

Recall that this is the shorthand expression we use for payments received, typically in cash, where the recipient is free to use them for any purpose without restriction of any kind.

Income from involvement in production

There are two entries for cash receipts coming from production. The first concerns wages and salaries earned by employees and the second the earnings of the self-employed

Employees

Item 1A below shows the items which would appear in the first cell of annex table 1, the row relates to wages and salaries, the column to payments received in cash.

Item 1A: Wages and salaries received in cash

A1	Wages and salaries (main job)
A2	Wages and salaries (other jobs)
A3	Tips
A4	Bonuses
A5	Profit-sharing including stock options
A6	Payments for fostering children
A7	Severance pay
A8	Parenting payment
K1	Allowances payable to military families, to expatriate workers, workers in remote locations etc as part of conditions of employment

Most of these items (those coded A) correspond to those in the heading "income from employment". They are the obvious and largest items of wages covering the basic rate of pay for both the main job and any other that may be done, including overtime and holiday payments, tips, bonuses and special allowances. We also include the sums paid for fostering children, even though the payments may be made out of a government assistance programme. . In addition we include allowances paid to families to cover expenses such as living in special quarters when relocation is part of the conditions of service of the job.

Self-employed

The remuneration a self-employed person takes out of his or her unincorporated enterprise includes an element which rewards the labour expended and also an element covering the return to the capital employed. For this reason, the SNA refers to the receipts as mixed income. Some countries will find it useful to distinguish the income of farmers from other self-employed income but it should be noted that large scale agricultural enterprises, or even smaller ones which are incorporated, would be treated differently in the SNA with those farmers being treated as employees of the enterprises and their income included with other employees in the sections above.

Two special activities should be included with other self-employment. These are the (net) income from renting property, vehicles or equipment and the royalties earned by individuals on writings, inventions and so on. As for farmers, this is only so if the individuals have not formed themselves into corporate entities in which case these earnings would be included under income from employment.

Item 2A: Mixed income received in cash

A9	(Net) nonfarm self-employment
A10	(Net) farm self-employment
A12	Net income(after expenses) of home production for barter transactions
C2	Royalties earned by households as unincorporated enterprises
C4b	Rental income other than on land earned by households as unincorporated enterprises

Property income

Property income is the name given to income which arises from lending some sorts of assets to another user. There are three main categories of such income, interest from financial capital, dividends on shares and rent from land.

A distinction is made in the SNA between renting buildings and equipment where the owner is responsible for the upkeep of the asset and provides a service to the lessor and renting assets where there is no such upkeep. Renting housing or equipment is regarded as a production activity and the income received is treated as part of mixed income and included in Item 2A above. (Technically this was the treatment recommended in the 1968 SNA also though a number of countries did not follow the recommendations and M61 also followed the practice of treating house rentals as property income.)

Whether rentals on housing is treated as income from employment or property income only matters if there is analytical interest in the distinction between these two forms of income. Both are included in the total of the two, primary income, which is the usual focus of attention.

Interest

The SNA proposes recording interest in a rather complex manner. Interest as observed should be separated into an element representing a payment for a service and a “pure” interest element. If interest is so split, interest receivable by households is higher, and interest payable is lower, than otherwise. The difference between these values of calculated interest and interest as observed is to be recorded as consumption expenditure on bank services. In consequence, disposable income and consumption will be higher than otherwise but saving will be the same as if no split is made. There is still controversy about how far this is practicable for households in total, still less for a disaggregation of households. This distinction is not followed through in the tables here.

The annex table shows the following entry in the column for cash receipts;

Item 5A: Interest received:

C1	Interest received
C5 (part)	Interest from estates and trusts

Dividends

Dividends represent the return to someone who has invested in an enterprise but does not work in it themselves. For incorporated enterprises they will simply be called dividends. For other enterprises they are referred to by national accountants as withdrawals from non-corporate enterprises. This latter term includes payments to sleeping partners.

Item 7A: Dividends received

C3	Dividends received
C5 (rest)	Dividends from estates and trusts
C8	Profits from capital investment in unincorporated businesses

Rent on land

As explained above, only rent on land appears as property income. Other rental payments are included in mixed income.

Item 9A: Rent on land received

C4a	Rent on land received by households as unincorporated enterprises

Transfers

The third main set of flows concerning the measurement of income are transfers. Transfers are the means by which income is redistributed and therefore a good classification of transfers is particularly important for studies in income distribution. Here there is a significant difference between the perspective of the micro-statistician and the macro-counterpart. From the macro point of view, all current transfers are recorded before the derivation of disposable income. The only issue of principle to decide is whether a transfer should be classified as current or capital in nature. The micro concern is different. Does the receipt of a transfer really represent income? Does the payment of a transfer represent a reduction in income or is it rather a decision on how to spend disposable income? Early in the chapter we considered the definition of income. 'Income' is the concept of choice because it provides a guide to the level of material living standards that people can sustain, given their current economic and social circumstances, without increasing/decreasing their net worth. However, in choosing to use income as a proxy for well-being, we must consider whether it functions equally satisfactorily in this role for all groups of households.

Income distribution statistics are intended to provide answers to specific questions. Decisions on conventions about which transfers to include in income should be guided by an understanding of the questions which producers are seeking to answer, and the questions which our audience(s) think are being answered.

Typically, the main questions concern:

The number of people on low incomes;

The degree of inequality in incomes;

Where particular groups are placed in the income distribution;

Changes over time in all the above.

Income distribution statistics also need some guiding principles. For the UK, for instance, these include:

1. Severe 'mislocation' of any group (of significant size) in the income distribution should be avoided – i.e. the group should not be placed in the wrong segment of the distribution.

2. Double-counting (e.g. including tax-financed transfers in recipients' income, and failing to deduct taxes from tax-payers' income) and zero-counting (e.g. deducting child maintenance from the payer's income but failing to add it to the recipient's income) should be avoided.

3. Where 1 and 2 conflict, priority is given to 1.

As a result of discussions in successive Canberra group meetings, it was decided to separate transfers into two groups. The first group relates to transactions that do affect disposable income. Many of the transfers falling into this group are compulsory in nature, such as payment of income tax, making contributions to compulsory pension schemes and paying alimony and child support. The second group of transfers include gifts between households and other transactions of a more voluntary nature. Although the recipient may be another household, it would not be sensible for this household to regard such transfer receipts as a reliable source of income. On the whole, these transfers may be treated as transfers of expenditure rather than of income. In this section we discuss both the receipts and payments of compulsory and regular family support. The treatment of voluntary transfers is described below under the section looking at the extension of the accounts to consumption and capital accumulation.

Compulsory transfers and regular family support

These include taxes on income, payments related to pensions and other social insurance generally and family support payments. Taxes on income are compulsory transfers paid by households. The other categories listed are both paid and received by households though not always by the same household.

The first question is whether to show receipts and payments separately or consolidated. While ultimately it is essential to exclude double counting, the approach taken here is to record compulsory transfers in two stages, first the receipts and then the payments. The two stage process allows the calculation of the proportion of total income devoted to alimony and child allowances and facilitates the recording of pensions as described below while still ensuring there is no double-counting overall.

Social insurance, social security and social assistance

A comprehensive recording of social insurance payments and receipts requires a fairly complex recording. Here there are three items referring to pensions. The first is the contribution made by employers on behalf of active employees. This is recorded as part of employee compensation. The employees then make a transfer to their employer (or a designated pension scheme) of a contribution which includes the whole of this contribution from the employer plus, frequently, a contribution by the employee. This is the second element relating to pensions. The third is the social insurance benefit paid to retirees or other beneficiaries. Both employer and employee contributions to pension schemes are recorded at the time they are made (thus deducting from disposable income of contributors) and benefits from schemes are recorded when actually paid (thus adding to disposable income of beneficiaries). This is reflected in differences in patterns of income and expenditure as between households still in the labour force and those retired. The process of recording the benefits and contributions in these three stages means that it is possible to see exactly how the existence of such schemes affect the redistribution of income from those in work to those not in work.

Criticism is made of the SNA because not all pensions are handled this way but only those qualifying as a social insurance scheme. This is one where the employer or government obliges participation. Note that this includes many schemes described as private pensions schemes if belonging to such a scheme is a condition of employment. It is only schemes undertaken voluntarily, without employer or government compulsion, which are excluded. A large proportion of them will relate to self-employed or even non-employed individuals. Even these people may be covered in some social insurance schemes, however, notably social security. To emphasise that most private pension schemes are included in social insurance, we refer to excluded schemes as non-employee pension schemes. These schemes are treated as use of saving to acquire financial assets which then yield a return. The evolution of these financial assets is tracked by the accumulation of interest, dividends etc. The rationale for treating non-employee pension provision in this way is (i) the practical difficulty of determining when a private individual is providing for a pension rather than simply deploying his/her saving effectively, (ii) policy interest in schemes with a "third party" involvement.

At first sight, it may seem that the benefits paid by a pension fund are similar to the payments of interest and dividends and so should be treated as property income. There are several reasons why the SNA does not do this. The first is that contributions are not like property income payments of interest; in the case of a funded pension scheme, they are additions to the capital of the fund which remain the property of households. However, not all pensions schemes are funded; many, especially in continental Europe, are financed on a-pay-as-you-go basis. This means the employer incurs a liability with no matching asset. The process is then more one of redistributing income from present workers to previous workers and for this reason, the SNA treats social insurance contributions and benefits, like insurance premiums and claims, as transfers and not as property income.

Social insurance benefits received

This covers all the benefits received under state social security schemes whether means-tested or not, whether they are dependent on past contributions or not (typically this last is often referred to as social assistance) as well as the benefits coming from employer-run social insurance schemes. Pensions will be recorded here and so for retired households, this item will probably represent the largest single contribution to total income. Equally for those not in work and dependent on social welfare, this item will tend to dominate other income receipts.

Household surveys often run through an enumeration of items for the respondent to check to ensure that no item has been inadvertently forgotten so it is possible that the total of benefits received could be disaggregated to show which come from which sort of scheme but depending on the analysis desired, this may not be necessary.

Items 10A, 11A, 12A: Social insurance benefits received

A13	Employer-based pensions or other periodic retirement including pensions bought with additional voluntary contributions (AVC)
A14	Foreign pensions
A15	Lump sum retirement payout
D1	Family or child benefits/credits/allowance
D4	Maternity benefits/allowances/grants
E1	Government social security (retirement and survivors) benefits
E2	Government disability insurance/incapacity/disablement benefits
E3*	Private disability insurance/incapacity/disablement

E4	Government unemployment benefit/job search allowance - not means tested
E5*	Private unemployment benefit/job search allowance
E6	Government compensation to workers for on-the-job injuries
E7*	Private compensation to workers for on-the-job injuries
E9*	Medical expenses reimbursed under private social insurance schemes
E10	Government scholarships & education assistance (excluding loans)
E11	Private scholarships & education assistance (excluding loans) from parent's employer
E12	Reduction in interest on student loans
E13	Government sickness/medical benefit
E14	Private sickness/medical benefit
E15	Payments for child care to permit employment
E16	Veterans' benefits (injury, pension etc)
F1	Means-tested child support assurance (public) benefits
F2	Means-tested public assistance or general welfare benefits
F3	Means-tested public assistance for elderly
F8	Means-tested unemployment benefits
F9	Means-tested disability support - means tested
F10	Means tested age pension
F11	Other means-tested transfer programs (catchall items where greater precision not possible)
F12	Child tax credit
F13	Earned income tax credit
F14	Other tax credits

* Only that part included in social insurance schemes as described above

For a discussion of the entries relating to tax credits, see the discussion of taxes on income below.

Social insurance contributions paid

This cell in column A covers only the contributions made by employees to this scheme. Contributions by the employers are considered below when column C is discussed.

Item 17A: Social insurance contributions paid by the employee

H8	Employees' contributions to private social insurance schemes (pension, health, etc.)
H9	Employees' contributions to government social insurance schemes
H19	Employees' contributions to government-mandated unemployment insurance

Regular family support

Initially it seems that the SNA does not include transfers between households. This is only because in almost all applications so far, households are treated in aggregate and thus inter-household transfers net out. As soon as the sector is sub-divided, though, it is necessary to include these transfers just as it is necessary to include transfers between different levels of government when that sector is disaggregated.

The most important inter-household transfers are alimony and child support. It would seem logical that these should be covered even if not paid under a court order as long as it was regular and recognised by the donor as an exclusion from his/her regular disposable income and by the recipient as included in his/hers. In principle it may be desirable to include also regular payments to children studying away from home and elderly relatives on the same basis.

The intention is to include in regular family support items which will produce comparable data across countries despite institutional differences in the degree of judicial obligation in respect of family support. A further consideration is the impact of the definition of the family as a unit. If a child studying away from home is still regarded as part of the same household, then clearly transfers to the student are intra- and not inter-household payments. Because different countries treat students differently, this too is an area where explicit information should be provided by the countries on the conventions adopted when the data are to be used for international comparisons.

Item 13A: Regular family support -transfers received

G1	Alimony received from another household
G2	Child support received from another household
G5	Regular cash transfers received (gifts) from another household

Item 19A: Regular family support - transfers paid

H3	Alimony paid to another household
H4	Child support paid to another household
H7	Regular cash transfers paid (gifts)to another household

Taxes on income, wealth etc.

For many households, these constitute the only current transfer which is strictly speaking compulsory. It covers taxes on income, recurrent taxes on wealth and some items such as vehicle licence duties when the vehicle is not used for business. To reconcile exactly with national accounts figures, they should be recorded on an accruals basis. The most significant accruals adjustment is the tax refund many households receive at the end of a fiscal year to rectify overpayment during the year. Such refunds should be deducted from tax payments.

Although tax refunds and tax credits are both sometimes set against tax receipts, this is not always true for tax credits and conceptually and sometimes in practice, they should be treated separately from tax refunds. Tax credits, or tax allowances, serve to reduce the amount of tax payable. In macro data the amount of tax payable is given only after taking tax credits into account. For income distribution work, it may sometimes be desirable to calculate what tax would have been payable in the absence of tax credits and show total tax credits as an off-setting item in order to see the redistributional effects of different tax credit regimes.

There may be cases for some households where tax credits exceed tax liabilities. In some countries this remaining credit is simply lost to the beneficiary. In other countries, the remaining credit may be payable in cash to the beneficiary. In this case, the payments are shown as social assistance and included in item 12A. It is possible that in such cases, the macro data may not show these credits as payable by the tax authorities who may net them against other tax receivable.

The need to include imputed rent of owner-occupied dwelling in order to remove distortions from income (and more particularly expenditure) comparisons is described below in connection with item 3D. It should be noted that it is important not to double-count property tax in recording house rent. The normal assumption is that most tenants are responsible for paying property tax as well as the agreed rent. This treatment is carried over to owner-occupiers where imputed rent is calculated excluding property taxes payable. For tenants who are not liable to pay property tax separately, it would be desirable to separate out the tax element from the rent but data limitations may prevent this.

Some fines and fees charged by government may be called taxes or commonly referred to as such. Because these vary so much from country to country and the extent of service which may be received in return for paying the fee vary so much, it has proved impossible to determine a persuasive criterion by which to determine what should be regarded as taxes and what as fees for a service. A convention has thus been established that fees paid for hunting, shooting and fishing licences should be regarded as taxes and all other fines and fees payable to government should be regarded as payments for a service. These latter will then form part of the consumption expenditure of the household concerned. In practice, if such a distinction cannot be made in household survey data sources, it is unlikely that major errors will result.

Item 18A: Taxes on income, wealth etc.

H15	Income taxes net of refunds
H16	Property (real estate) taxes
H22a	Compulsory fees and fines for hunting, shooting, fishing

Receipts in kind (Column B)

Column B in annex table 1 contains only one cell. This entry covers all the benefits provided by an employer to an employee which are described as being "in kind" excluding contributions to social insurance schemes.

Item 1B covers all the items which may be given to an employee as part of the employment package but which cannot be translated into money that is freely available for any purpose of the employee's choice. The list below is typical but may not be exhaustive. The amount included for items B7 to B11 is difference between the invoiced amount and the part the employee is responsible to pay.

Business expenses such as items H10, employer reimbursements for non-discretionary work expenses, and H11 for the discretionary counterpart, are not included, these are taken to be part of the production expenses of the employer. They do not thus feature in annex table 1 or 2 at all, neither as income nor expenditure.

Item 1B: Wages and salaries received in kind

B6	Company cars
B7	Subsidised meals
B8	Subsidised (low-interest) loans
B9	Subsidised housing, electricity
B10	Subsidised child care
B11	Subsidised vacations

Receipts of forced saving (Column C)

Employers' social insurance contributions

The rather complicated way in which contributions to and benefits from social insurance schemes are recorded has been explained above. The relevant item in column C concerns only the contributions paid by employers into such schemes on behalf of their employees. Like the receipts in kind just considered, these contributions form part of the employment contract and are sometimes also described as "fringe benefits". The employee is better off having the employer contribute to a pension scheme on his/her behalf but these contributions must be saved and cannot be spent immediately.

Item 1C: Employers' social contributions

B1	Employers' contributions to private retirement (pension) plans
B2	Employers' contributions to private health insurance
B3	Employers' contributions to life insurance
B4	Employers' contributions to other employer insurance schemes (e.g. disability)
B5	Employers' contributions to government insurance (social security) schemes (including payroll taxes)

The schemes covered include both government mandated schemes applicable to all employees and those run by employers for the benefit of their employees only. They may cover pension provision only or other forms of social insurance for example insurance against disability and unemployment as well as health generally.

This item appears a second time in column C, this time as a deduction from income in cell 16C.

Item 16C: Employers' social contributions

B1	Employers' contributions to private retirement (pension) plans
B2	Employers' contributions to private health insurance
B3	Employers' contributions to life insurance
B4	Employers' contributions to other employer insurance schemes (e.g. disability)
B5	Employers' contributions to government insurance (social security) schemes (including payroll taxes)

Property income

Items 5A and 7A show the receipts of interest and dividends. In principle, both interest and dividends should be recorded in the macro-data on an accruals basis, that is when it is due to be paid and not when it is actually paid. This difference can sometimes be significant. Although it is unlikely that such information will be available for use in household distribution statistics, annex table 1 contains cells for these adjustments for the purpose of allowing a full reconciliation at macro level.

Item 5C: Interest due less paid.

	Forced saving - interest due less interest paid

Item 7C: Dividends due less paid.

	Forced saving- dividends due less dividends paid

Pension fund adjustment

There is in fact a fourth SNA item concerning pensions. Households pay contributions into social insurance schemes and receive benefits from them. Over a year, there will be a disparity between the two which shows up as a change in the net equity of pension funds. The funds are regarded as belonging to households and thus should be included in household saving. The SNA places this adjustment to saving in the use of income account so as to exclude it from disposable income but still include it in saving

The item belongs in the category of receipts of forced saving and like the accruals adjustments above, it may not be possible to incorporate this in household distribution statistics at present. If it could be disaggregated, it would be a step towards recording the evolution of the distribution of wealth.

Item 8C: property income attributed to insurance policy holders.

K2	Increase in the value of life insurance policies

Capital gains.

There is a language problem here stemming from the number of complicated ways of reckoning capital gains. (These are described as holding gains in the SNA to make clear that they refer not only to gains on fixed capital but also, and more importantly, to gains on financial and other assets also.) It is easiest to explain with a simple example. Suppose I buy an asset for 100 and five years later it is worth 500. Over five years there has been a ***nominal*** holding gain of 400. If I sell the asset, I have a ***realised*** holding gain of 400. If I do not sell the asset I have an ***unrealised*** gain of 400. This gain, however, relates to the five year period and for our income calculations, we only want the gain within the relevant accounting period, say a year. Suppose at the end of the previous year the asset was worth 450. During this year, the nominal holding is 50. Suppose the rate of inflation in the year is 10 per cent. Then 45 of this 50 is needed simply to maintain the real value of the asset. This 45 is called the ***neutral*** holding gain. The ***real*** holding gain is the remaining 5.

What do we want to include in income? The SNA says none of them because income must be measured on the same basis as production where holding gains are rigorously excluded. It can be argued that for some analyses one might want to include the real holding gain of 5. This accords with our definition above of being as well off at the end of the period as at the beginning. Conceivably one might for some purposes want to include the whole of the 50 but never the 400. It is true that expenditure might be financed by selling the original asset but then we would wish to include the whole of the 500 resulting from the sale. The calculation of the 400 total realised holding gain would be invaluable in an articulation of the distribution of wealth but that is not our concern at the moment.

Not only does the terminology of capital or holding gains present difficulties, they also present considerable difficulties in measurement. The recommendation here is firstly that all holding gains should be excluded from measures of property income. However, real holding gains within the accounting period should be an optional item for inclusion in aggregate measures of income. Neutral holding gains should be confined to explaining changes between opening and closing balance sheets.

Item 15C: Real holding gains or losses

This item is related to but not identical with:	
C6	Realised capital gains
C7	Unrealised capital gains

Own account production of goods and owner occupied dwellings (Column D)

Own account production

Mixed income covers only the excess of the value of production over the cost of the inputs not including interest payments. When the products are actually sold, placing a value on them is relatively straightforward. Sometimes, though, the products will be intended for use by the household. This is especially the case for subsistence agriculture in many third world countries but is conceptually true even for kitchen gardens or allotments in developed countries also. Instead of showing such production as payment in kind, it is shown as own account production which we put into a separate column. For many micro-data exercises this column may have to be ignored for lack of data.

Item 2D: Own-account production

A11	Income element of home production for home use (i.e. excludes value of items bought for use in production process)

Some production may be neither sold nor used for own consumption but bartered. In principle, bartered production should be included with items which are sold with an increase in mixed income. It is thus included in item 2A. In practice, bartered production may not be easily distinguished from own account consumption and the bartering process may be recorded as gifts between households (item 21A below).

Owner-occupied housing

The treatment of housing presents difficulties in compiling data for comparison either over time or across countries. Some people own a house outright and thus have no regular outgoings for housing. Others live in subsidised housing and have comparatively small outgoings. Often it is some of the poorest households who live in rented accommodation and have to face the highest rental costs.

In order to even the treatment of housing, the SNA treats every house owner as an unincorporated enterprise which leases the house back to household. The value of the lease is set at the market rent for a similar house (excluding property taxes) and the imputed income is equal to this value less the costs incurred by the household in their role as landlord. Though this is easily said, it is sometimes far from easy to implement as rental values of houses depend critically on location and the rental market may be very shallow in many areas. This may be true in remote rural areas and also in shanty dwellings around the large urban areas of developing countries.

In principle, the national accounts for all countries should include such estimates, though it may be difficult to break these down for groups of households. Item 3A is included for completeness and because of the importance of the costs of housing in comparing well being for different groups of households.

Item 3D: Operating surplus from owner-occupied dwellings

K6	Net imputed return on the equity in one's own home

Own account production of services (Column E)

Household well-being also depends on the services which are produced and consumed by the members of the household itself, such as cooking, housekeeping and child-rearing.

Unlike the production of goods for own use and the imputed rent from owner-occupied dwellings, the SNA does not make any allowance for these services. There are great difficulties in putting a value on them and for many policy analyses, for example to examine tax burdens, inflation or the balance of payments, it would not help to have monetary values placed on household services and include them in GDP. This is not to say that they are not economic activities or that they are unimportant. For studies of household well-being, , it may be very desirable to include such estimates if they exist and so item 4E is included in the annex table for such a possibility.

Item 4E: Income from own account household services

	Income from services produced and consumed within the household

Social transfers in kind (Column F)

In all countries, government provides some services to individual households. These most often concern education, health and social welfare. In addition, it is not uncommon for some types of cultural services such as museums or sporting facilities to receive most of their funding from government sources. These services are referred to as individual services since they are identifiable as being consumed by individual households. In general the extent to which one household benefits affects the extent of the benefit which can be offered to other households. In addition, government provides services such as public administration, law and order and defence services. These are available to all households collectively and where no allocative process is involved. Such services are referred to in the national accounts as collective services and often by economists as pure public goods.

The level of well-being of households depends on the level of service provided by government. It could be argued that in cross-country comparisons some allowance could be made for the extent of collective services provided, but it is difficult to find a metric by which it would be possible to say by how much greater expenditure on defence or on road-building increased the well-being of the inhabitants. Because of this difficulty, it is not usual to involve the level of government collective services in income comparisons.

By contrast, the level and distribution of individual services does affect comparisons across different groups of households where levels of entitlement may vary from one to another and across country where the extent of state provision differs markedly. Column F is included in annex table 1 to allow for the allocation of individual consumption expenditure to households. These flows are described as social transfers in kind.

There are a number of ways in which social transfers in kind can be allocated. One basis is that of entitlement to the benefit; depending on the household characteristics, the value of the entitlement is calculated such that the total of all entitlements across all households is equal to the value of the services provided.[1] Under this assumption, all households with equal entitlement are assumed to be equally better off by the provision of the state of the services in question, regardless of whether they actually avail themselves of the entitlement or not. One could regard the entitlement as equivalent to an insurance premium guaranteeing that the service would be provided if needed.

Conceptually it would also be possible to allocate the services on the basis of actual take-up. For some purposes, as discussed further below, this may give very useful information but it is not necessarily appropriate when thinking of the income equivalent of services provided. It may seem acceptable when considering a parent opting out of the state education system and choosing instead to send children to fee-paying schools but it is less acceptable in the case of health services. It is difficult to see when it would be desirable to reclassify a poor household to a rich category simply because they had the misfortune to require extensive medical services. Take-up of benefits is therefore not recommended as a means of allocating an income equivalent of social transfers in kind.

A third alternative for allocating social transfers in kind is possible and is frequently referred to as an insurance basis of allocation. Under this, there is no specific allocation to individual households but instead an allocation is made to a group of households depending on the average take-up for the group as a whole. Normally, this means of allocation will give a distribution fairly close to an allocation by entitlement but may show some drift if the level of take-up is strongly correlated with the groups of households being considered. Note also that for a different grouping of households, the allocation by insurance principle would have to be redone with the likelihood that the implicit allocation for an individual household will change if the previous and new groups of households with which it is associated have different patterns of take-up of the service in question.

The items covered by social transfers in kind include public health and education; provision of social security and social assistance benefits in kind (these are also sometimes referred to as consumer subsidies) and medical expenses which are initially met by individual households but are subsequently reimbursed by government. (This last is a very common means of financing medical services in some countries, particularly in continental Europe.)

[1] This statement begs two rather important questions. The first is that it is commonly observed that total take-up of social benefits falls below the level which would be observed if everyone took up their full entitlement. However, since the amount of services distributed reflects the extent of non-take-up, we simply assume that the global level of entitlement is scaled back to the total value of take-up. The second and very vexed question refers to the value to be placed on the value of services provided without cost to the beneficiaries. This matter is taken up again and at length in chapter 8; here we follow the national accounts convention that the value of the service is equal to the cost of providing it.

Item 14F: Social transfers in kind

D2	Government-subsidised health care services
D3	Public education
F4	Rental allowances (housing subsidies)
F5	Food subsidies or vouchers
F6	Subsidy element of publicly owned housing
F7	Surplus food and clothing
E8	Medical expenses reimbursed under government social insurance schemes

Corresponding outgoings (Column G)

Each of the columns A to F are measured to show total flows. In the case of interest, a decision has to be made whether to measure the flows of interest received and interest paid separately or netted one against the other. The annex table is structured to allow both possibilities by including the outgoings in a new column, column G.

It was noted above that mixed income from self-employment should be recorded before deducting interest payments. Rather, the possibility is allowed for showing separately interest paid in respect of production activities (which would include interest on mortgage payments for owner-occupied dwellings) and interest payments related to consumption. If such a separation can be made, then interest paid in respect of production can be deducted from mixed income to derive an income term the SNA calls entrepreneurial income. However, experience suggests that it is seldom possible to make this separation on income and entrepreneurial income is seldom calculated. Thus it may only be possible to have data for items 5G and 6G jointly.

Item 5G: Interest payments related to production.

H1	Interest paid on mortgage loans
H2(part)	Interest on non-mortgage loans related to business activities

Item 6G: Interest payments related to consumption.

H2(rest)	Interest on non-mortgage loans other than loans related to business activities

The entry in column C for forced saving was referred to above. This relates to the difference between interest payments when they are due to be paid and when they are actually paid. If the outgoing interest payment is recorded when paid rather than when due, part of item 5C will relate to interest payments and part to receipts.

Item 9A showed receipts of rent on land. Item 9G shows the counterpart item of payments of rent on land. Since not all land is rented by and to households, these items will not necessarily balance.

Item 9G: Rent on land paid.

	Rent on land paid by households

Introducing income aggregates

Annex table 1 consists of 20 rows showing different sorts of income flows and seven columns showing different means of payment. By making aggregates from successive rows and examining them for different combinations of columns we obtain a high degree of flexibility in defining income aggregates as well as a means of reconciling micro and macro data sources.

Income from production

The sum of rows 1 to 4 give income from production. Receipts in cash come from wages and salaries (item 1A) and mixed income from self-employment (item 2A). These two items will always typically be available from micro data sets. Item 1B relates to wages and salaries received in kind and item 2D relates to mixed income from the production of own-account production of goods. For many OECD countries these items may be small though they will have much greater importance in a developing country context. Where they are important, micro data sets are more likely to cover them.

Item 1C relates to employers' contributions to both state and private social insurance schemes. This item may often not be available from micro data sets but it is of significant size in most countries. Together, the three items in row 1 give the macro aggregate of "compensation of employees". Since the size of item 1C is known in total, it may be excluded from the macro aggregate when comparing how closely the data on wages and salaries from the micro and macro sources match.

Item 3A relates to operating surplus from the rent of owner-occupied dwellings. Inclusion of this item in micro data is theoretically desirable since the different status of home ownership can distort income distribution statistics which ignore it. In aggregate, a figure is available from macro data sets but distribution by type of household may provide serious practical problems.

Item 4E is the optional element allowing for an estimate of the value of services produced and consumed within the household. This data is seldom available from regular macro-economic data sets and will most often exist if at all as a result of a special exercise which may or may not be otherwise related to income distribution data sets. If it is included, than the sum of all elements in rows 1 to 4 will exceed the macro-economic estimate of income from employment and self-employment by this amount.

Property income

There are three types of property income received in cash; interest, dividends and land rent. These are shown in column A. Corresponding outgoing payments of interest and land rent are shown in column G. These items should be available from micro data sets. The items which conceptually reconcile micro and macro data for interest and dividends are the forced saving items shown in column C. In practice, however, problems of recording the flows in both micro and macro data sets may mean that full reconciliation is a more complex process.

The other element entering property income is the amount accruing to insurance policy holders, especially holders of life policies. This element should be well established in macro data sets but is very probably not to be found in micro data.

Total property income is the sum of all entries in rows 5 to 9 for columns A to E less column G. (Column F is empty for these rows.)

Primary income

This is the total of income from production and property income. The total for column A only may sometimes be all that is available from micro data sets. The total across columns A, B, C, D and G should be exactly that total shown as primary income for households coming from national accounts and macro data sets. The existence of the different columns means that different totals may be determined at will. Total primary income in cash is column A only as already noted. Primary income in cash and in kind is the sum of columns A and B. Primary income in cash and in kind including all own account production is the sums of columns A,B, D and E.

Total income, extended total income and disposable income

The other main element of income received consists of compulsory transfers and regular family support. These entries are shown in items 10A, 11A, 12A and 13A. The first three relate to social insurance benefits, the latter to alimony and other regular family support. In addition, social transfers in kind are shown in item 14F.

When these items are added to the total of primary income, a value of total income is reached.

Optionally, real holding gains and losses may also be added (item 15C) to give a measure of extended total income.

All the items appearing in column A should be available from micro data sets. Items 14F and 15C are available in total from macro aggregates. It may be possible to produce a disaggregated version of social transfers in kind using, for example, the insurance basis of allocation indicated above. By definition, this will have the same total figure as the macro data. Having real holding gains and losses disaggregated by groups of households would be interesting but presents serious practical problems since any data collected in micro data sets is likely to relate to realised rather than real gains and losses.

Both total income and extended total income include a considerable amount of double counting. These totals include both social insurance contributions and benefits and regular family support appears in the income of both the household paying and the household receiving this support.

Rows 16 to 19 represent payments of compulsory transfers and regular family support. Item 16C represents the payment of employers' contributions to social insurance schemes from the employees to the schemes themselves and item 17A the element that employees contribute out of their wages and salaries. Item 19A is the outgoing payment of family support payments and item 18A represents payments of income tax.

Deducting all of these items from total income gives a figure of disposable income. As before, we may calculate it in respect only of cash receipts (column A) or more broadly. If we include column F, social transfers in kind, than the total we derive is known in national accounts as "adjusted disposable income".

Extending the table to consumption and accumulation

It is straightforward to extend annex table 1 to cover consumption and accumulation. This is done in annex table 2. Now columns that related to incomings relate to outgoings and vice versa.

Consumption expenditure

Most disposable income is used to finance consumption. It can be interesting to explore the different consumption patterns of different groups of households but we do not pursue this possibility here. Instead we note a number of items listed in chapter 3 which are treated in macro data sets not as deductions from income but as consumption expenditure.

The first set of items cover costs associated with work but which are not paid for explicitly by the employer. These are the costs of getting to work and back, and the costs of caring for dependants while absent.

H12	Transportation costs
H13	Child care costs

Medical expenses covered by social insurance schemes have been covered in items 10A, 11A and 12A but there will be some elements of medical care not covered in this way. These form part of consumption expenditure and it may be of interest to identify them separately in order to reach total medical costs..

H18	Medical expenses other than those reimbursed under social insurance schemes

Under item 18A, the convention on miscellaneous government fees and taxes was described whereby only licences for hunting, shooting and fishing are regarded as taxes. The remainder of this item falls also under consumption expenditure in macro-data as it is regarded as a fee for services provided by government. Data limitations may preclude the separation of entries H22a and H22b in which case a judgement should be made as to which is the predominant part.

H22b	Compulsory fines and fees other than for hunting, shooting and fishing

For some purposes, it may be desirable to separate from the cost of goods and services purchased the value of the tax attaching at the point of sale. For most countries this can only be derived synthetically and then deducted from the recorded value of consumption expenditure.

H17	Sales or value-added taxes

Consumption expenditure and actual consumption

One of the useful distinctions that can be made concerning consumption is between the unit which pays for it and the unit which uses it. The total financed by a unit is called consumption expenditure; the total used is called actual consumption. Many household goods and service are bought and consumed by the same household so fall into both categories. The social transfers in kind discussed above are financed by government and consumed by households. Thus they form part of government consumption expenditure and household actual consumption. To demonstrate this we may set up the following table

Consumption expenditure

less social transfers in kind payable to another unit

plus social transfers in kind receivable from another unit

equals actual consumption.

Within the SNA interhousehold transfers are invisible because they are consolidated within a single aggregate for all households. For the purposes of income distribution statistics, though, we may extend this concept and deal with some interhousehold transfers in a similar way. Compulsory transfers and regular family support were dealt with under the discussion of income above. We are left though with some other transfers which affect the distribution of consumption if not income. First among these are interhousehold transfers.

Voluntary interhousehold transfers

Once regular family support is removed, two classes of inter-household transfers remain. The first of these cover irregular transfers in cash. These are most likely to be between family members in different households. This reinforces the need for clarity and precision about what constitutes regular family support. In any case, though, it is necessary to allow for irregular cash transfers received and paid.

Other transfers are irregular gifts such as presents exchanged between family members and non-family. Often they will take place by someone in household A buying a good and giving it to someone in household B. A uses part of its disposable income to undertake expenditure on behalf of B by buying the gift. B has neither income nor recorded expenditure but benefits by the acquisition and consumption of the gift from A. We include the gift in the consumption expenditure of A and the actual consumption of B, recording it as a transfers in kind between households. Another way of viewing this is to say that we treat voluntary inter-household transfers as transfers of expenditure rather than of income. That is, the actual consumption of the recipient is increased and that of the donor is decreased but disposable income, consumption expenditure and saving for both are unaffected.

Resolving a satisfactory analytical treatment is somewhat easier than solving the practical problems of data collection. Inevitably these transfers are going to be extremely hard to capture well in the basic data. Such errors, though, may not matter too much in the aggregate since on the average gifts in and gifts out will tend to be about the same order of magnitude though on balance maybe rich households give more and poorer ones receive more.

Even though these transfers are between households, some may be between domestic and foreign households. This sum will usually be small relative to domestic transactions. When it is significant (the diaspora sending money to Armenia in the early 1990's for example) there should be some knowledge about it. If a survey is conducted it may be captured; other estimates may be available via Balance of Payments statistics.

Household services performed for other households, care of other people's children and elderly relatives for example, could also be recorded in a similar way with the household providing the service making a transfer in kind of the expenditure corresponding to the imputed output of household services.

Item 21A: Interhousehold transfers

G3	In-kind interhousehold transfers
G4	One-time cash interhousehold transfers received (gifts)
H5	Payments on behalf of another household
H6	Interhousehold transfers paid (gifts)

Voluntary transfers between households and other units

There are a number of transfers which take place between households and other sectors of the economy which need to be considered. These are payments to and from charities, lotteries and insurance, both life and non-life (accident insurance). They are discussed in turn below. In each case a treatment is proposed which is not in strict accordance with the SNA and which will induce a slight difference in some but not all aggregates. This is done in part because the SNA does not consider explicitly the impact of desegregating flows between groups of households and in part to provide a basis for income distribution studies which pays attention both to desirable analytical properties and practical difficulties.

Transfers to charities

We consider first transfers from households to charities and then from those charities to other "households" including the homeless and those in institutions. Donations may be tiny or very considerable; they may be regular or quite irregular. Charities in the SNA are non-profit institutions serving households, NPISHs. (They are not identical with the concept of "non-profits" as understood in the US which often refer to institutions which are tax exempt because of the nature of their activity.) The SNA would treat all transfers to NPISHs as transfers of income so that disposable income of the NPISHs can be calculated according to normal practice. Another reason is that enterprises, government and the rest of the world may make donations to the NPISHs and for these units the notion of transfers of final consumption is not feasible since these units do not have final consumption.

For income distribution statistics, there are two options for dealing with transfers to charities. The first is to regard these as "impersonal" family support and include them with compulsory transfers. This recognises that many households do in fact make regular contributions to NPISHs who rely on these as part of their normal income. It would also be consistent with the SNA treatment. The second option is to treat them in the same way as voluntary inter-household transfers. This would preserve a symmetry for the payments by households to NPISHs and for transfers by NPISHs to households. The second option is adopted here though individual countries may wish to adopt the first.

Items in chapter 3 which are relevant here include those relating to trades unions which are classed as NPISHs. As elsewhere, items prefixed H represent outgoings and those prefixed K represent incomings.

Items 22A and 22G: Transfers to and from NPISHs

K3	Union sick or disability pay
K4	Union strike pay
K7	Support from charitable organisations
H14	Union and professional dues
	Donations to charitable organisations

Lotteries and gambling

Lotteries and gambling are regarded in national accounts terms as relating solely to redistribution. The difference between total stakes placed and winnings paid is deemed to be a "service" provided by the lottery/gambling enterprise. This difference is shown as expenditure by households. Since the (remaining value of the) stakes and winnings are equal and represent inter-household transfers, they are not shown explicitly in the SNA, indeed are explicitly omitted. As professional statisticians, we should believe that there would be no net redistribution between income groups overall because of lottery or gambling winnings. There may of course be a difference between winnings and stakes for any group of households, exacerbated in a sample, but there is no reason to suppose that lotteries benefit one group more or less than another.

The assumption that stakes and winnings balance between households assumes government and enterprises do not gamble (which we may accept as reasonable) but also that all gambling involves only local households. This is not strictly so. In some countries (e.g. Monaco) the net inflow may be significant; for some Caribbean islands where UK football pools are much followed, there may be a net outflow. Probably for most countries this concern is more theoretical than practical.

A more pertinent practical consideration is the presumption that, like alcohol and cigarettes, gambling expenditure is systematically under-recorded in household budget surveys. Further, big winners may suddenly be too busy to fill in budget diaries and hardly feature in the raw data. Even if in principle some correction to the aggregate stakes and winnings could be made, in practice it may not happen.

If there were perfect data on stakes and winnings across income classes, it would in principle be possible to separate the stakes into the service part and the part that was the "pure" gamble. This is not a very transparent process, though, and given the reservations above, should probably be avoided in micro data sets. The proposal is therefore to show the total stakes as part of household consumption and to show the winnings (where known) as negative expenditure off-setting these.

There are two immediate objections that can be raised. One is that negative expenditure is not a very elegant concept. The second is that for big winners, the win may seem like a capital rather than current flow. Against this there are two counter-arguments. By number, most wins are small. Even if for an individual household the win is large, for the income group as a whole it may not be so significant. By excluding the winnings from disposable income, we exclude the possibility of the size of the winning influencing the income class of the winning household. On balance, it may be analytically defensible, even preferable, to include even large winnings as "negative expenditure" so that saving includes the balance of the winnings less any immediate corresponding spending from them rather than have possibly negative saving offset by this unusual capital transfer receipt. This is how lottery flows are shown in the accompanying tables but again countries may choose to adopt another presentation.

Item 23A: Lotteries and gaming stakes less winnings

K5	Lottery or gambling winnings
	Lottery or gaming stakes

Non-life insurance

Non-life insurance is taken to be synonymous with accident insurance and to include term life insurance. Whole life insurance is discussed below.

The recording of insurance flows is rather complicated in the SNA because of the need to present insurance companies and policy holders consistently. A simpler presentation should probably be sought for household micro datasets and analysis. Here is the SNA story in brief. Insurance companies actually pay out bigger claims than they receive in premiums. They do this by investing premiums paid at the start of the year and keeping the investment income earned. The SNA says in principle those investment earnings should accrue to the policy holders who then pay them back as "premium supplements". Then we take the difference between actual premiums and premium supplements on the one hand and claims payable on the other and call this the service charge of the insurance company. The relevant part of this is included in household consumption. The remaining part of the composite premium is a transfer paid by households and claims are transfers received by households. For the insurance company, these transfer payments in and out are equal (at least in the long term) but it is not certain that for the household sector they do; there may be some cross-subsidisation between households and enterprises, for example.

Micro-data for premiums and claims may be more complete and more reliable than for lotteries and gambling. At first sight, therefore, it looks as if we could follow the SNA procedure if we wished. This means allocating the premiums supplements across income classes, though and so involving one of the columns which we may want simply to leave as a "reconciliation to SNA" item. A more transparent solution would leave actual premiums in household consumption and again show claims as negative consumption for the sorts of reasons advanced above concerning lotteries. The premium supplements would appear in total only as a reconciliation item in disposable income and a matching expenditure. Thus the recording of premium supplements does not affect saving.

Even with a simplified presentation, the question arises whether some of the claims should be regarded as capital transfers rather than current. For an individual household, the payment to compensate a burglary, the write-off of a car or even the death of a person may seem like a capital transaction. For the insurance company, these are predictable statistically and this calculation is used in determining rates. Across a large enough group of households the number of occurrences will be such that the smaller and more common the risk, the more the insurance payments will seem like a regular and recurrent event. For the insurance company, these are sufficiently common to be treated as current rather than capital payments. In order not to distort national saving, the SNA treatment is to treat all non-life insurance claims as current. This is however under discussion by national accountants because of instances such as those following natural disasters where the present treatment can give counter-intuitive results.

Item 24A: Non-life insurance premiums less claims

H20	Premiums on non-employee health insurance
H21	Premiums on non-employee unemployment insurance
E3*	Private disability insurance/incapacity/disablement
E5*	Private unemployment benefit/job search allowance
E7*	Private compensation to workers for on-the-job injuries
E9*	Medical expenses reimbursed under private social insurance schemes
	Premiums on other accident (non-life) insurance
	Claims paid under other non-life insurance

* Only that part not covered in social insurance schemes as described earlier.

Saving

Saving is the difference between total income, actual consumption and the voluntary transfers listed in this section. Note that by definition, saving for columns B,E and F must be zero because there is consumption exactly matching the non-cash income. If some of the own-production of goods is for capital formation, it will show as saving in column D. The elements of cash income of unrestricted use (column C) all automatically form part of saving.

Saving is used to finance capital acquisition but may be supplemented by the receipt of capital transfers, receipts from the sale of assets, receipts from non-employee pensions or from new borrowing. These resources are accounted for by the acquisition of new capital formation (either fixed capital or changes in inventories), by the net acquisition of valuables (fine jewellery, antiques, old masters), by the purchase of non-produced assets (mainly land in the case of households) or a residual acquisition of financial assets or incurrence of liabilities.

Although this part of the table is not elaborated in detail, it is useful to see the potential to take forward the breakdown suggested for income through to consumption and accumulation.

Accumulation entries

A household may raise funds by disposing of assets or borrowing. These items are clearly not to be included in income and so do not feature in the list of items in chapter 3. In annex table 2 of this chapter, though, they would be classified in column G as sales of fixed capital (a house for instance), sale of valuables (the family silver), sale of land or incurrence of financial liabilities.

There are, however, some entries in chapter 3 which national accountants would also treat as accumulation entries. These are payments in respect of inheritances and life insurance.

Inheritances

Inheritances are a transfer and as with some other items above are not generally recorded in the national accounts since inheritances between households net out for the sector as a whole. The consolidation may not exactly cancel across the whole economy to the extent that inheritances occur between resident and non-resident households.

With disaggregation inheritances should be recorded explicitly as capital transfers. This may give a problem for the classification of the unit; is the composition of the household before or after the death of one of its members the basis to be used? For single person households who die, do we need a slot for “dead” households in the classification? This topic is not pursued here.

Items 31A and G: Capital transfers

G6	Inheritances received
	Inheritances paid

Life insurance

Life insurance policies are treated in the SNA as a form of saving. (The reasons behind this are discussed above in connection with describing social insurance schemes.) Payments of premiums and receipts of claims are treated as financial transactions and thus appear as part of the entries in row 25.

The two items from chapter 3 which appear here are item K8 which relates to annuity income from a self-financed scheme and A16 which covers the possibility of withdrawing money from a pension scheme prematurely as may be possible on changing jobs for instance.

Items 32A and G: Transactions in financial assets and liabilities

K8	Pension or annuity income from self-financed investments
A16	Withdrawal from pension schemes

Reconciliation with SNA/macro aggregates

In terms of the columns of annex table 1, the sum of A, B, C and D less G gives a figure for primary income of households conceptually identical with the SNA. Various micro-studies may optionally exclude some or all of B,C and D; they may include E and G.

The figure for disposable income of households summed across columns A, B, C and D less G will be less than the SNA definition to the extent that:

> net irregular transfers of expenditures between household in cash and in kind payable by domestic households to foreign households are less than the corresponding inflow from households;
>
> lottery and gambling winnings exceed the “pure” stakes (this will be equivalent in theory to transactions with the rest of the world, in practice it will reflect also data deficiencies);
>
> insurance claims by households exceed actual premiums and premium supplements paid by them;
>
> transfers paid to NPISHs exceed payments from NPISHs to households .

It is worth summarising again briefly why this divergence from the macro-standards is proposed.

> From the household rather than the national point of view, decisions on these types of expenditure are closely related to decisions on consumption expenditure. Nor is it rational for a household to consider incomings from these sources as regular income. Neither is it clear that such receipts should determine the group within a household distribution analysis into which the recipient household falls.
>
> In practical terms, the macro-level differences will generally be small. The micro-data sources are likely to poor in regard to each of these and attempts to include them may distort the results rather than enhance them

By including column F in disposable income, the SNA concept of adjusted disposable income of households is reached, subject to the four reservations above.

The total of consumption from columns A, B and D is identical with household consumption expenditure in the SNA. If column F is included, actual household consumption is obtained; identical with the SNA/macro concept.

The total of saving across columns A, C and D is identical with the SNA macro figure for household saving.

Conclusion

We have developed here a possible theoretical concordance in terms of definitions and presentation between income concepts in the micro and macro traditions. As far as possible, the practices of both traditions have been respected and flexibility allowed to derive aggregates familiar to both sets of practitioners.

Transfers within households are not treated explicitly within the SNA so new procedures are suggested here, guided by analytical usefulness from the point of view of desegregation household studies. This involves most importantly a distinction between compulsory transfers and regular family support on one hand and voluntary transfers on the other. It also extends the distinction between consumption expenditure and actual consumption to cover non-compulsory household transfers which are then treated rather as a transfer of expenditure than a transfer of income.

Both primary income and saving are fully reconciled between micro and macro aggregates. Four items remain where the suggestions here would produce minor discrepancies with the SNA but the options to preserve strict consistency remain available.

Annex table 1: Income distribution from both a micro and macro perspective

		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding outgoing
1	Income from production	Wages and salaries	Wages and salaries	Employers' social insurance contributions - private schemes - govt schemes				
2		Mixed income from self-employment			Mixed income from own-account production - goods			
3					Operating surplus from owner-occupied dwellings			
4						Income from own account household services		
Sub-total	I	*Income from production*						
5	Net property income	Interest received		Interest due less paid				Interest payments – related to production
6								Interest payments – related to consumption
7		Dividends received		Dividends due less received				
8				Property income attributed to insurance policy holders				
9		Rent (on land)						Rent (on land)
Sub-total	II	*Property income (net)*						
Sub-total	III	***Primary income (=I+II)***						

<table>
<tr><td></td><td></td><td>A: Receipts in cash</td><td>B: Receipts in kind</td><td>C: Receipts of forced saving</td><td>D: Own-account production –goods and OOD</td><td>E: Own-account production -services</td><td>F: Social transfers in kind</td><td>G: Corresponding outgoing</td></tr>
<tr><td>10</td><td rowspan="5">Compulsory transfers and regular family support received</td><td>Social insurance benefits
- private schemes
- govt schemes</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>11</td><td>Social security benefits</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>12</td><td>Social assistance benefits</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>13</td><td>Regular family support</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td>Individual consumption of government and NPISHs</td><td></td></tr>
<tr><td>Sub-total</td><td>IV</td><td colspan="7">Total income (=III+ compulsory transfers and regular family support received)</td></tr>
<tr><td>15</td><td>Optional item</td><td></td><td></td><td>Real holding gains or losses</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sub-total</td><td>V</td><td colspan="7">Extended total income (=IV+ optional item)</td></tr>
<tr><td>16</td><td rowspan="4">Compulsory transfers and regular family support paid</td><td></td><td></td><td>Social insurance contributions by employers
- private schemes
- govt schemes</td><td></td><td></td><td></td><td></td></tr>
<tr><td>17</td><td>Social insurance contributions by employees
- private schemes
- govt schemes</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>18</td><td>Taxes on income , wealth etc.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>19</td><td>Family support payments</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sub-total</td><td>VI</td><td colspan="7">Disposable income (=IV or V –compulsory transfers plus regular family support paid)</td></tr>
</table>

Annex table 2: Extension to consumption and accumulation

		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding incoming
20		Consumption expenditure less social transfers in kind to other households	Wages and salaries, mixed income received in kind		Consumption of own account production of goods and OOD	Consumption of own account household services	Individual consumption of government and NPISHs[1] plus transfers in kind from other households	
21	Irregular transfers of expenditure in cash and in kind	Irregular transfers in cash to other households domestically and in the rest of the world less corresponding incomings						
22		Transfers to NPISHs						Transfers from NPISHs
23		Lotteries and gaming stakes less winnings						
24		Non-life insurance premiums less claims		Property income attributed to insurance policy holders				
25				Adjustment for the change in net equities of households in pension funds				
		Saving		***Saving***	***Saving***			

Saving equals disposable income less consumption less irregular transfers of expenditure in cash and in kind. This can only appear for the two cash columns plus the own account column where saving is exactly equal to fixed capital formation and changes in inventories of own produced goods.

1 When the corresponding income element is on an entitlement basis, the expenditure item should show the take-up basis plus an adjustment showing the implicit transfer item (entitlement less take-up). When the income element is on an insurance basis, the expenditure item should be identical.

26		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding incoming
27	Accumulation	Fixed capital formation			Fixed capital formation			Sales of fixed capital
28		Changes in inventories			Changes in inventories			
29		Acquisition of valuables						Sales of valuables
30		Acquisition of land						Sale of land
31		Private pension contributions						Private pensions benefits
32		Capital taxes paid (inheritance taxes)						Capital transfers received (inheritances)
33		Acquisition of other financial assets		Interest due less paid; dividends due less paid; adjustment for the change in net equities of households in pension funds				Incurrence of other financial liabilities
		Net accumulation			***Net accumulation***			

Net accumulation in column A = saving column A less accumulation entries in column A less accumulation entries column G
Net accumulation in column D = saving column D

Annex 2: Chapter 4 codes on the order given in chapter 3

Chapter 4 code	Chapter 3 code	Item
A	1	Wages and salaries (main job)
A	2	Wages and salaries (other jobs)
A	3	Tips
A	4	Bonuses
A	5	Profit-sharing including stock options
A	6	Payments for fostering children
A	7	Severance pay
A	8	Parenting payment
A	9	(Net) nonfarm self-employment
A	A10	(Net) farm self-employment
D	A11	Income element of home production for home use (i.e. excludes value of items bought for use in production process)
A	A12	Net income(after expenses) of home production for barter transactions
0A	A13	Employer-based pensions or other periodic retirement including pensions bought with additional voluntary contributions (AVC)
0A	A14	Foreign pensions
0A	A15	Lump sum retirement payout
2G	A16	Withdrawal from pension schemes
6C	B1	Employers' contributions to private retirement (pension) plans
C	B1	Employers' contributions to private retirement (pension) plans
6C	B2	Employers' contributions to private health insurance
C	B2	Employers' contributions to private health insurance
6C	B3	Employers' contributions to life insurance
C	B3	Employers' contributions to life insurance
6C	B4	Employers' contributions to other employer insurance schemes (e.g. disability)
C	B4	Employers' contributions to other employer insurance schemes (e.g. disability)
6C	B5	Employers' contributions to government insurance (social security) schemes (including payroll taxes)
C	B5	Employers' contributions to government insurance (social security) schemes (including payroll taxes)
B	B6	Company cars
B	B7	Subsidised meals
B	B8	Subsidised (low-interest) loans
B	B9	Subsidised housing, electricity
B	B10	Subsidised child care
B	B11	Subsidised vacations
A	1	nterest received
A	C2	Royalties earned by households as unincorporated enterprises
A	3	ividends received
A	4a	ent on land received by households as unincorporated enterprises
A	C4b	Rental income other than on land earned by households as unincorporated enterprises
A	5 (part)	nterest from estates and trusts
A	5 (rest)	ividends from estates and trusts
5C	C6	Realised capital gains
5C	C7	Unrealised capital gains
A	8	rofits from capital investment in unincorporated businesses
0A	D1	Family or child benefits/credits/allowance
4F	D2	Government-subsidised health care services
4F	D3	Public education
0A	D4	Maternity benefits/allowances/grants
0A	E1	Government social security (retirement and survivors) benefits
0A	E2	Government disability insurance/incapacity/disablement benefits
0A/24A	E3	Private disability insurance/incapacity/disablement
0A	E4	Government unemployment benefit/job search allowance - not means tested
0A/24A	E5	Private unemployment benefit/job search allowance
0A	E6	Government compensation to workers for on-the-job injuries
0A/24A	E7	Private compensation to workers for on-the-job injuries
4F	E8	Medical expenses reimbursed under government social insurance schemes
0A/24A	E9	Medical expenses reimbursed under private social insurance schemes
0A	E10	Government scholarships & education assistance (excluding loans)
0A	E11	Private scholarships & education assistance (excluding loans) from parent's employer
0A	E12	Reduction in interest on student loans
0A	E13	Government sickness/medical

		benefit
0A	E14	Private sickness/medical benefit
0A	E15	Payments for child care to permit employment
0A	E16	Veterans' benefits (injury, pension etc)
0A	F1	Means-tested child support assurance (public) benefits
0A	F2	Means-tested public assistance or general welfare benefits
0A	F3	Means-tested public assistance for elderly
4F	F4	Rental allowances (housing subsidies)
4F	F5	Food subsidies or vouchers
4F	F6	Subsidy element of publicly owned housing
4F	F7	Surplus food and clothing
0A	F8	Means-tested unemployment benefits
0A	F9	Means-tested disability support - means tested
0A	F10	Means tested age pension
0A	F11	Other means-tested transfer programs (catchall items where greater precision not possible)
0A	F12	Child tax credit
0A	F13	Earned income tax credit
0A	F14	Other tax credits
3A	G1	Alimony received from another household
3A	G2	Child support received from another household
1A	G3	In-kind interhousehold transfers
1A	G4	One-time cash interhousehold transfers received (gifts)
3A	G5	Regular cash transfers received (gifts) from another household
1G	G6	Inheritances received
G	H1	Interest paid on mortgage loans
G	H2(part)	Interest on non-mortgage loans related to business activities
G	H2(rest)	Interest on non-mortgage loans other than loans related to business activities
9A	H3	Alimony paid to another household
9A	H4	Child support paid to another household
1A	H5	Payments on behalf of another household
1A	H6	Interhousehold transfers paid (gifts)
9A	H7	Regular cash transfers paid (gifts)to another household
7A	H8	Employees' contributions to private social insurance schemes (pension, health, etc.)
7A	H9	Employees' contributions to
		government social insurance schemes
0A	H12	Transportation costs
0A	H13	Child care costs
2A	H14	Union and professional dues
8A	H15	Income taxes net of refunds
8A	H16	Property (real estate) taxes
0A	H17	Sales or value-added taxes
0A	H18	Medical expenses other than those reimbursed under social insurance schemes
7A	H19	Employees' contributions to government-mandated unemployment insurance
4A	H20	Premiums on non-employee health insurance
4A	H21	Premiums on non-employee unemployment insurance
8A	H22a	Compulsory fees and fines for hunting, shooting, fishing
0A	H22b	Compulsory fines and fees other than for hunting, shooting and fishing
A	1	llowances payable to military amilies, to expatriate workers, orkers in remote locations etc as art of conditions of employment
C	K2	Increase in the value of life insurance policies
2A	K3	Union sick or disability pay
2A	K4	Union strike pay
3A	K5	Lottery or gambling winnings
D	K6	Net imputed return on the equity in one's own home
2A	K7	Support from charitable organisations
2G	K8	Pension or annuity income from self-financed investments

Items not included:

	G7	Other regular payments from outside the household (redundant?)
	H10/H11	Employer reimbursement for work expenses - treat as intermediate consumption for employer; neither expense nor reimbursement shows here

Annex 3: Reconciliation between draft chapters proposed for the handbook

In the process of drafting separate chapters, different numbering and lettering schemes have been used for the components of slightly different concepts of income. Ultimately, these will need reconciling exactly but as an interim measure, Annex 2 gives a cross-reference between the numbers used in the chapter detailing the items commonly available in income surveys. Although the chapter containing this summary is not presented to the IARIW meeting, it was instrumental in aligning the basic items available from the micro side with macro concepts.

The paper for the IARIW meeting by Church, Everaers, McDonald, Pietsch and Weinberg contains a conceptual framework with another list of income components in tables 2.1 and 2.2. The version of the tables in the first annex to the present paper is duplicated below with the item numbers from the Church et al paper added to the verbal descriptions to permit ultimate alignment.

The present paper introduces the concept of "transfers of expenditure" which lead to some differences from the conceptual paper, especially with respect to transfers to charities, transfers to and from the rest of the world, lotteries and insurance. These need to be further harmonised before the handbook is completed.

A further issue arises over reconciling a micro point of view with macro conventions. In the national accounts, interest payments and receipts appear in the same account because they are essentially redistributive for the economy as a whole with total receipts equalling total payments (after allowing for flows with the rest of the world). From a micro perspective, this is not necessarily desirable. Why should a person paying interest on consumer debt be regarded as having less income than someone with exactly matching incomings but no consumer debt? There seems no good reason to say so from a micro perspective, in theory at least. In practice it is often difficult to separate interest on consumer debt from interest on business expenses and housing loans (which should reduce income). Also by allowing income receipts to add to income but not allowing interest payments to be deducted, the global micro figure for household saving becomes different from the corresponding macro aggregate. The question of how far practical considerations and the general desirability of consistency should be allowed to overrule theoretically preferred alternatives is presented but not resolved.

Annex table 1: Income distribution from both a micro and macro perspective

		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding outgoing
1	Income from production	Wages and salaries 1.1, 1.2, 1.3, 1.4, 1.5, 2.2, 2.3	Wages and salaries 1.6	Employers' social insurance contributions 1.7				
2		Mixed income from self-employment 2.1			Mixed income from own-account production - goods 5.1			
3					Operating surplus from owner-occupied dwellings 5.3			
4						Income from own account household services 5.3		
Sub-total	I	*Income from production*						
5	Net property income	Interest received 3.1		Interest due less paid				Interest payments – related to production
6								Interest payments – related to consumption 11.4
7		Dividends received 3.2, 3.3		Dividends due less received				
8				Property income attributed to insurance policy holders				
9		Rent (on land) 3.4						Rent (on land)
Sub-total	II	*Property income (net)*						
Sub-total	III	***Primary income (=I+II)***						

		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding outgoing
10	Compulsory transfers and regular family support received	Social insurance benefits 4.2, 4.3						
11		Social security benefits						
12		Social assistance benefits 4.1						
13		Regular family support 4.5						
14							Individual consumption of government and NPISHs 9.1, 9.2, 9.3, 9.4	
Sub-total	IV	***Total income (=III+ compulsory transfers and regular family support received)***						
15	Optional item			Real holding gains or losses 18				
Sub-total	V	***Extended total income (=IV+ optional item)***						
16	Compulsory transfers and regular family support paid			Social insurance contributions by employers 7.1				
17		Social insurance contributions by employees 7.2						
18		Taxes on income , wealth etc. 7.4, 7.5, 7.6						
19		Family support payments 7.3						
Sub-total	VI	***Disposable income (=IV or V –compulsory transfers plus regular family support paid)***						

Annex table 2: Extension to consumption and accumulation

		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding incoming
20		Consumption expenditure less social transfers in kind to other households 11 (except part of 11.2a)	Wages and salaries, mixed income received in kind		Consumption of own account production of goods and OOD Part of 11.2a	Consumption of own account household services	Individual consumption of government and NPISHs[1] plus transfers in kind from other households 9.12, 9.2, 9.3, 9.4	
21	Irregular transfers of expenditure in cash and in kind	Irregular transfers in cash to other households domestically and in the rest of the world less corresponding incomings 4.7, 7.7						
22		Transfers to NPISHs 4.6						Transfers from NPISHs 4.4
23		Lotteries and gaming stakes less winnings 15.2						
24		Non-life insurance premiums less claims		Property income attributed to insurance policy holders				
25				Adjustment for the change in net equities of households in pension funds				
		Saving		***Saving***	***Saving***			

Saving equals disposable income less consumption less irregular transfers of expenditure in cash and in kind. This can only appear for the two cash columns plus the own account column where saving is exactly equal to fixed capital formation and changes in inventories of own produced goods.

1 When the corresponding income element is on an entitlement basis, the expenditure item should show the take-up basis plus an adjustment showing the implicit transfer item (entitlement less take-up). When the income element is on an insurance basis, the expenditure item should be identical.

26		A: Receipts in cash	B: Receipts in kind	C: Receipts of forced saving	D: Own-account production –goods and OOD	E: Own-account production -services	F: Social transfers in kind	G: Corresponding incoming
27	Accumulation	Fixed capital formation			Fixed capital formation			Sales of fixed capital
28		Changes in inventories			Changes in inventories			
29		Acquisition of valuables						Sales of valuables
30		Acquisition of land						Sale of land
31		Private pension contributions						Private pensions benefits
32		Capital taxes paid (inheritance taxes) 16.1, 16.2						Capital transfers received (inheritances) 15.1
33		Acquisition of other financial assets		Interest due less paid; dividends due less paid; adjustment for the change in net equities of households in pension funds				Incurrence of other financial liabilities
		Net accumulation			***Net accumulation***			

Net accumulation in column A = saving column A less accumulation entries in column A less accumulation entries column G
Net accumulation in column D = saving column D