

10 Overview of the income items

This chapter provides an overview of the national accounts components distinguished on the income side, describing their main characteristics and highlighting items from micro data sources that may provide the best possible link. It also explores possible reasons for gaps between the micro aggregates and the national accounts totals and provides guidance on how to arrive at underlying distributions in case micro data is lacking.

10.1. Introduction

Three main aggregates are distinguished on the income side, i.e. *primary income* (B5), *disposable income* (B6) and *adjusted disposable income* (B7), as defined in the System of National accounts (European Commission et al., 2009^[1]) (hereinafter referred to as *2008 SNA*). Primary income is the income that accrues to units as a result of their involvement in the production process or because of ownership of assets that may be used for purposes of production. The main items for the household sector concern *operating surplus*, *mixed income*, *compensation of employees* and *net property income*. Disposable income is the income after re-distribution, involving transactions such as *current taxes on income and wealth*, *social contributions and benefits*, *non-life insurance premiums and claims*, and *other current transfers* like remittances. Adjusted disposable income is derived on the basis of disposable income, but also includes the value of *social transfers in kind* received by households. As mentioned before, these consist of goods and services provided to households by government and non-profit institutions either free or at prices that are not economically significant. They are a direct alternative to receiving a social benefit in cash for the purchase of these services and therefore are included to arrive at a more comprehensive and comparable income measure.

Adjusted disposable income is regarded as the most comprehensive income concept and therefore constitutes the main income measure in the DNA work. It is regarded to provide the best insight into the inequality in a country and the best measure to use for cross-country comparisons as well as analysis of dynamics of inequality over time.

10.2. Operating surplus from actual and imputed rentals (B2R)

The surplus accruing from the production process (before deducting any property income) is reflected by *operating surplus* and *mixed income*. For the household sector, only the surplus generated by home owner-occupiers in their capacity as producers of housing services for own final consumption and by households leasing dwellings is recorded as operating surplus (see 2008 SNA, §7.9 and §24.55). The surplus of unincorporated enterprises is recorded as mixed income. The main reason for the latter is that this surplus implicitly contains an element of remuneration of work done by the owner(s) of the enterprise that cannot be separately identified from the return to the owner as entrepreneur (see 2008 SNA, §7.9).

10.2.1. Owner-occupied dwelling services (B2R1)

In the 2008 SNA, households that own the dwellings in which they live are treated as owners of unincorporated enterprises that produce housing services consumed by these same households (see 2008 SNA, §6.117). The rationale is that the ratio of owner-occupied to rented dwellings can vary significantly between countries or regions and over short periods of time which may hamper international and inter-temporal comparisons of the production and consumption of housing services in case no imputation was made for the value of own-account housing services (see 2008 SNA, §6.34). Furthermore, in distributional analyses, not imputing for own-account housing services may lead to misleading results in which a house-owner and a household that is renting a house may seem to have similar levels of income, but in which the house-owner may be far better off with not having to pay any explicit rent. By imputing housing services produced by the house-owner, this benefit is reflected in its income, with a corresponding imputation on the consumption side to also reflect its consumption of these services.

The housing services are recorded at market prices and valued on the basis as the estimated rental that a tenant would pay for accommodation of the same size, quality and type. This is also the value that is recorded as consumption expenditure by the household. To arrive at operating surplus related to owner-occupied dwellings, the related intermediate costs should be deducted from the output of these housing services. This usually concerns regular maintenance costs (excluding major repairs, which should be

treated as gross fixed capital formation) and the payments for financial services in case that the house purchase has been financed by a mortgage loan (i.e. financial intermediation services indirectly measured (FISIM) related to interest payments on the mortgage loan (see also Section 10.5.1)). The resulting gross operating surplus is treated as being earned by the household in its capacity as the owner of the unincorporated enterprise owning the house.

The principle as described above applies to both main residences and second homes. However, in case the dwelling is located in another country, it is being treated as belonging to a notional resident unit in that country. The legal owner then has a financial claim on this notional unit, regarded as a foreign direct investment relation. The operating surplus from renting out the house is then treated as being withdrawn from the notional unit and fully remitted to the owner in the form of property income (i.e. D42). In this way, there are no retained or reinvested earnings as recorded under item D43 (see also Section 10.5.3). Furthermore, the consumption of the relevant housing services shows up in the consumption of the legal owner, being imported from the country where the dwelling is located.

Both survey and administrative data sources may provide relevant information for the allocation of the amounts to the underlying households. For example, surveys may ask whether respondents own the house they live in and/or about the value of the dwelling. In this regard, various countries use information from income and budget surveys for deriving the distributional breakdown. Furthermore, information may be available on the mortgage loan and on the related interest payments, as well as on the maintenance costs. Information may also be available on characteristics of the dwelling (e.g. the number of square meters, type of residence, neighbourhood) that may be used to estimate the imputed rent (see for example Tsakloglou et al. (2010_[2])). Some countries, for example, use cadastral information or census data. Furthermore, in some countries the imputed value of the income generated by production of housing services is taxed, so information may be available from fiscal records. All this information may cover both main residences and second homes. However, if (part of the) second homes are missing, this would require an explicit imputation.

As *operating surplus from owner-occupied dwellings* (B2R1) is the result of the production of housing services minus the costs of maintenance and repairs, FISIM and taxes (less subsidies) on production, it is recommended to also compile the distributional results for this item on the basis of these underlying components. This means that the national accounts item should first be broken down into these underlying components, after which each of these components should be linked to a corresponding item from the micro data sources. In case no direct information is available for one of the underlying items, its distribution can best be obtained by linking it to one of the other subcomponents. It is expected that this calculation will lead to better results than directly targeting the balancing item.

Operating surplus can be derived on a gross or on a net basis, i.e. before or after deducting *consumption of fixed capital* (i.e. depreciation) related to the dwelling. From a conceptual point of view, the net measure would be preferred, but because of challenges in arriving at accurate and comparable estimates of consumption of fixed capital, compilers may also decide to compile results on a gross basis. This is the approach that has been applied in the DNA work so far. In case results are presented on a net basis, it is recommended to separately show the results for consumption of fixed capital (see Section 10.2.2), so that users can derive both gross and net results. Furthermore, the same approach should be applied for both operating surplus and mixed income. The collection template includes a specific block to account for these estimates.

10.2.2. Leasing of dwellings (B2R2)

In accordance with gross operating surplus from owner-occupied dwellings, this category records the *operating surplus from leasing of dwellings* by households. In this case, the value of the output of the rental service is equal to the rental paid by the tenant, after which operating surplus can be derived by deducting the costs for the maintenance and repair of the dwelling, FISIM related to the mortgage interest payments

and taxes (less subsidies) on production. Furthermore, the costs may also include service charges paid to a rental agency.

Relevant micro information for the calculation of the distributional results may be available from both survey and administrative data sources. These may contain information on rent received by households and on costs related to renting out dwellings, although the latter may sometimes be combined with costs related to owner-occupied dwellings. It may also be the case that micro data sources include direct information on the profits made from leasing dwellings. However, it has to be borne in mind that the underlying concepts of the items in the micro data sources may not always match the national accounts concept for operating surplus from leasing of dwellings. The micro data source may for example combine income from renting dwellings with income from renting other fixed assets and natural resources. In the SNA, these relate to different items, i.e. *operating surplus* (B2) related to the rental from leasing dwellings, *mixed income* (B3) related to the rental from leasing other fixed assets, and *rent* (D45) related to the rent from leasing natural resources. If the item in the micro data source indeed combines some of these other components, a reclassification should be performed in order to align micro data to national accounts totals.

The best way to derive distributional results for *operating surplus from leasing of dwellings* will depend on the level of detail available from micro data sources. If micro information is available on the underlying components (i.e. output from rental services, maintenance and repairs, FISIM, taxes (less subsidies) on production, and service charges from a rental agency), it is recommended to derive the distributional results on the basis of the distributions of these underlying items. However, if only information is available on the profits made from leasing out dwellings, this can also be used to directly derive the distribution for this balancing item.

10.2.3. Consumption of fixed capital (memorandum item)

In theory, *operating surplus* and *mixed income* should be corrected for the *consumption of fixed capital*, as the latter reflects the reduction in the value of fixed assets due to their use in the production process. Its deduction would thus lead to measures that account for all costs related to production, providing net measures instead of gross measures. The concept of consumption of fixed capital is closely related to the concept of depreciation, but whereas in commercial accounting depreciation is often used in the context of writing off historic costs, the consumption of fixed capital in the SNA often depends on the current value of the assets.

Although conceptually it may be preferable to focus on net measures, gross measures are often used in national accounts, because of the difficulty of measuring consumption of fixed capital. As explained above, the underlying concept in commercial accounting often differs from the national accounts concept and reported information may often be derived on the basis of arbitrary assumptions which may lead to results that are not comparable across households.

To arrive at economically meaningful results in line with national accounts concepts, statisticians should estimate the present value of the stock of fixed assets, the lifetime of the various underlying assets and the appropriate patterns of depreciation (see also 2008 SNA, §6.240-257). Depending on the available information, compilers may try to come up with estimates as input for the distributional analyses, but if reliable input data is missing, compilers may also decide to publish gross measures. These are generally considered to be more comparable across countries (see 2008 SNA, §2.142), although the 2025 SNA will put more emphasis on net measures, encouraging countries to further invest in improving the relevant estimates.

10.3. Mixed income (B3)

Mixed income is the balancing item from the generation of income account for unincorporated enterprises owned by households. It measures the surplus or deficit accruing from the production by unincorporated enterprises owned by households after deducting compensation of employees, taxes on production and intermediate consumption (including FISIM), but before deducting any payment of property income. It is called mixed income as it implicitly contains an element of remuneration for work done by the owner, or other members of the household, that cannot be separately identified from the return to the owner as entrepreneur.

In addition to income from unincorporated enterprises which is usually reported in surveys or in administrative data, mixed income also covers the surplus from own account production and from underground production. As these components may differ in size across countries and may rely on different techniques for their allocation to the relevant households, it is recommended to treat them separately in deriving distributional results.

As was the case for operating surplus, mixed income can also be derived on a gross or on a net basis, i.e. before or after deducting *consumption of fixed capital* (i.e. depreciation). As explained before, the net measure is preferable from a conceptual perspective, but compilers may focus on gross measures from practical feasibility considerations. The latter is also the approach that has been applied in the DNA work so far. In case results are presented on a net basis, it is recommended to separately show the results for consumption of fixed capital (see Section 10.3.4), so that users can derive both gross and net results. The collection template includes a specific block to account for these estimates.

10.3.1. Own account production (B3R1)

The production boundary of the SNA includes the own-account production of all goods that are retained by their producers for their own final consumption or gross fixed capital formation. This may concern, for example, the production and processing of agricultural products, dairy products, beer and wine, weaving cloth, wood-cutting, hunting and fishing, and the supply of water (see 2008 SNA, §6.32). On the other hand, it does not include the own-account production of services within households except for housing services by owner occupiers (see Section 10.2.1) and the production of services by employing paid domestic staff for example to wash, cook or to look after children (see Section 10.3.3).

Output for own final use should be valued at the basic prices at which the goods and services could be sold if offered for sale on the market. When reliable market prices cannot be obtained, a second-best procedure must be used in which the value of the output of the goods or services produced for own final use is deemed to be equal to the sum of their costs of production. The goods produced for own-account production are treated as being consumed immediately by the relevant household and are recorded as part of consumption expenditure in the relevant COICOP (Classification of Individual Consumption according to Purpose) item.

Often no micro information will be available on own account production, although some countries report to have information available from income or budget surveys. In case no information is available, it may be relevant to assess the underlying assumptions that are used by the national accounts to impute for own account production and whether this may be linked to specific household characteristics that are available in micro data sources. For example, farmers may be assumed to produce and process more agricultural and dairy products for own final consumption than other households. In a similar way, other types of own account production may also be linked to people or households with specific characteristics. By combining this with information available in micro data sources, the amounts related to own-account production may be allocated to underlying households.

As there is a direct link between the own account production and consumption of goods, it has to be borne in mind that the same distribution should be applied to both income and consumption.

10.3.2. Underground production (B3R2)

In the national accounts, adjustments are also made to correct for the non-observed economy, i.e. economic activities that are illegal, underground or informal, or otherwise missed by the statistical system (see also Section 6.5). Depending on country practices, the adjustment for the non-observed economy may affect several components of the household accounts, in particular *compensation of employees*, *mixed income* and *property income received*.

As described in Tartamella and Coli (2010^[3]), *mixed income* is one of the items that is most heavily affected by the non-observed economy. For that reason, it is included as a separate sub-item (labelled “underground production”) under mixed income to separately allocate the relevant amounts to the underlying households. This category includes the deliberate concealment of legal production activities to avoid tax payments by registered and unregistered units and any illegal production activities.

Since information on underground production is not available in micro data sources, imputations will have to be made by modelling the likelihood of households to benefit from concealed mixed income. As explained in Section 6.5, it is important to first assess the underlying assumptions that are used by the national accounts to impute for underground activities and whether these assumptions may also be used to allocate the relevant amounts to underlying households. For example, if part of the underground economy is imputed on the basis of the assumption that specific types of jobs are more likely to be involved in such types of activity, this may be used to link the amounts to specific groups of households. Then, it is also important to assess which households may be more likely to be involved in underground activities, for example by looking at the plausibility of their overall results. If for some households or household groups consumption by far exceeds their income as reported in the micro data sources, this may be an indication that part of their income derives from underground activities which may not have been covered in the micro data.

10.3.3. Mixed income excluding underground and own account production (B3R3)

This item covers mixed income excluding underground and own account production. This part of mixed income relates to the production by unincorporated enterprises owned by households for which the accounts are not sufficiently detailed to treat the activity as that of a quasi-corporation. In this regard, according to the SNA, unincorporated enterprises owned by households should be treated as quasi corporations, included in one of the corporations sectors when a full set of accounts, including balance sheet entries and information about withdrawals of income from the quasi-corporation, is available (see 2008 SNA, §4.42-4.46). Although frequently information may be available on the production activities, it may not always be possible to separate out other income flows, transfers and financial transactions relating to the production activity from those for the household in general. In that case, as well as in ones where even the information on the production activity is incomplete, the unincorporated enterprise is included in the household sector (see 2008 SNA, § 24.6). As their surplus implicitly contains an element of remuneration for work done by the owner that cannot be separately identified from the return to the owner as entrepreneur, the full amount is recorded as mixed income.

In most countries, mixed income is computed on the basis of administrative records, business surveys or a mix of surveys and administrative data. These usually cover information on self-employment income which could form a good proxy for mixed income, dependent on the exact definition of the income and the delineation of the self-employed. In micro surveys income from self-employment often includes the profit or loss that accrues to owners of, or partners in, unincorporated enterprises who work in these enterprises, after deduction of charges such as interest, dividends and rents payable that are related to the production

activities (see OECD (2013^[4])). Mixed income as defined in the national accounts corresponds to the value of output less operating costs (such as intermediate consumption, payment of compensation of employees and net taxes) and before any deduction and receipt of property income (i.e. interests, dividends and rents). Therefore, the main difference will often relate to the treatment of property income received/paid by the enterprises. A correction may be needed to align the micro concept with the national accounts concept.

Moreover, profits or losses from partners who do not work in these enterprises (i.e. “silent” or “sleeping” partners) may be treated differently. They may be included in dividend income in survey results, whereas they are included in *mixed income* (B3) or in *withdrawals from shareholders* (D422) in the national accounts. Also, for this issue, there may be a need to conduct a specific correction in order to better align the concepts. Finally, differences may also occur due to a different treatment of *consumption of fixed capital*. It is recommended to start from gross figures, i.e. before deducting consumption of fixed capital, but in case the micro data are based on net figures, a correction will have to be applied to arrive at similar measures. In that regard, it also has to be considered that the consumption of fixed capital as included in micro data results may often be based on tax and accounting rules and may thus deviate from the concept as applied in the national accounts, where it is based on current replacement cost, not historic cost, and on estimates of actual prices of capital consumption (see also Section 10.3.4).

Looking at the delineation of self-employed for which the production surplus should be included in mixed income, the SNA defines them according to whether they keep separate accounts or not (see above). This delineation may differ from households’ self-perception and may lead to divergences between what is recorded as income from unincorporated businesses owned by households in the national accounts and what people declare as income generated as a self-employed business activity in surveys. Further complexity is added by the fact that, as legal arrangements vary across countries, even the compilers’ interpretation of national accounts rules may differ across countries. Although international guidelines have been developed on how to classify unincorporated enterprises, countries’ experiences still demonstrate difficulties in estimating the share of self-employment by institutional sector and pointing out issues with regard to comparability across countries (see Pionnier and Guidetti (2015^[5])). For these reasons, it is important that national experts try to harmonise the concepts used in micro data and in national accounts as much as possible (ex-ante), and to make corrections ex post in case of any remaining conceptual differences. The latter may be done by confronting the household data with information from the business register. This may provide insight for which households the comparability between micro and macro results may be hampered due to a different classification of activities related to unincorporated enterprises. On the basis of that information specific corrections may be applied at the micro level to better align the data.

In addition to conceptual differences, gaps between micro aggregates and national accounts totals may also occur due to other causes, such as misreporting and/or under- or over-coverage of specific household groups. Johns and Slemrod (2008^[6]) and Neri and Zizza (2010^[7]) have shown that self-employment income is one of the items that is most liable to underreporting in survey data. If part of a possible gap between micro data and national accounts totals is related to underreporting, it has to be assessed which households this most likely relates to.

The gap between micro and national aggregates may also come from households that do not report any information on this item (item non-response). This may call for different imputations. To arrive at appropriate imputations, it would be relevant to assess whether national accountants have already applied specific corrections in relation to possible underreporting and whether this provides information on how to allocate the amounts to the relevant households. Furthermore, it is important to assess which households may be more likely to have underreported their mixed income, for example by looking at the plausibility of their overall results. If for some household groups consumption by far exceeds their income as reported in the micro data sources, this may be an indication that part of their income has not been reported in the micro data. As it was the case for income from underground activities, this requires careful analysis of the data.

10.3.4. Consumption of fixed capital (memorandum item)

As was the case with operating surplus, from a conceptual point of view mixed income should exclude consumption of fixed capital, to arrive at measures that account for all costs related to production. However, as explained in Section 10.2.2, because of the difficulty of measuring consumption of fixed capital, compilers may decide to only compile and publish gross figures. To arrive at economically meaningful results for consumption of fixed capital, statisticians should estimate the present value of the stock of fixed assets used in production, the lifetime of the various assets and the appropriate patterns of depreciation. Depending on the available information, compilers may try to come up with estimates as input for the distributional analyses. Otherwise, compilers may also decide to publish results at gross measures. These results are generally considered to be more comparable across countries (see 2008 SNA, §2.142), although the 2025 SNA will put more emphasis on net measures, encouraging countries to further invest in improving the relevant estimates.

If compilers aim to arrive at net measures, it is important to look for appropriate micro data to distribute the amount of consumption of fixed capital as recorded in the national accounts. In that regard, it has to be understood that depreciation as used to derive business profits in surveys is usually based on tax and accounting rules, based on historic cost. This may not reflect the actual value at which fixed capital is used up in the production process and may deviate from consumption of fixed capital as defined in the SNA, which is based on current replacement cost. In that regard, it may be better to derive estimates of consumption of fixed capital for the relevant households on the basis of estimates of the present value of their stock of fixed assets used in production, including assumptions on the lifetime of these assets and the appropriate patterns of depreciation. This may be done on the basis on assumptions of the type and amount of capital stock that would be needed in the production of goods and services in specific industries. This may then provide ratios between the amount of consumption of fixed capital and mixed income for specific industries, on the basis of which appropriate values can be allocated to relevant households in proportion to their mixed income in a specific industry.

10.4. Compensation of employees (D1R)

Compensation of employees is the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period. It has two components, i.e. wages and salaries, and social insurance contributions payable by employers, which includes both actual and imputed contributions to social insurance schemes.

10.4.1. Wages and salaries (D11R)

Wages and salaries include any social contributions, income taxes, etc., payable by the employee even if they are actually withheld and paid directly by the employer on behalf of the employee. Wages and salaries in cash include wages or salaries that are paid regularly; enhanced payments or special allowances, for example for working abroad, to cover the costs of travel to and from work; ad hoc bonuses; and commissions, gratuities and tips. They do not include reimbursements for expenditures made by employees to take up their jobs or to carry out their work, and payments to workers absent from work because of illness, accidental injury, maternity leave, etc. Wages and salaries in kind should include the value of goods and services that employers provide to their employees, either for free or at reduced prices, such as meals and drinks; housing services or accommodation; services of vehicles or other durables provided for the personal use; transportation to and from work; and childcare (see 2008 SNA, §7.43-7.55).

Micro information will usually be available from survey data and/or from administrative data sources. However, conceptual differences may exist that require adjustments. One important issue in this regard is the recording of wages and salaries while an employee is on sick, injury or maternity leave. These amounts

are not recorded as *wages and salaries* (D11R) in the SNA, but as *social benefits other than social transfers in kind* (D62R) (see Section 10.9), whereas they are usually included in wages and salaries in micro data sources. This means that a correction will be needed in matching the micro and macro data.

Another issue is that survey data may not always cover wages and salaries from secondary jobs, which may lead to under-coverage in comparison with national accounts totals. If that is the case, imputations should be made for those persons who are expected to have secondary jobs. On the other hand, survey results may sometimes lead to over-coverage due to the fact that they relate to a specific period in time that may not be representative of a full reference period. This would also require specific adjustments for the households involved.

Furthermore, wages and salaries in kind may be treated differently in micro data sources and in the national accounts. Almost any kind of consumption good or service may be provided as remuneration in kind, with the most common examples being meals and drinks, housing services, the services of vehicles, goods and services produced as outputs from the employers' own processes of production, transportation to and from work, sports, recreation or holiday facilities for employees and their families, childcare for the children of employees. Another form of income in kind that has become more popular over the past decade results from the practice of an employer giving an employee the option to buy stocks (shares) at some future date. It is often the case that the related amounts are not included in micro data sources. In that case, the relevant amounts should be allocated on the basis of assumptions on who is most likely to benefit from these forms of remuneration.

10.4.2. Employers' actual social contributions (D121R)

Employers' social contributions are social contributions actually paid by employers to social security funds or other employment-related social insurance schemes to secure social benefits for their employees, former employees or dependants. As they are made in relation to employment for the benefit of these specific groups, their value is recorded as one of the components of compensation of employees. Subsequently, the contributions are recorded as being paid by the employees as current transfers into the social security schemes or other employment-related social insurance schemes (see also Section 10.7.1). By definition, these amounts received as part of compensation of employees and as paid into social insurance schemes are identical.

The contributions are divided into actual and imputed contributions. The *employers' actual social contributions* consist of the contributions actually paid by employers to both social security and other employment-related schemes. The *employers' imputed social contributions* relate to social benefits that are provided by employers directly to their employees, former employees or dependants without involving an insurance enterprise or autonomous pension fund and without creating a special fund or segregated reserve for the purpose (see Section 10.4.3). Further distinctions can be made into pension and non-pension contributions (see 2008 SNA, §7.56-7.70).

Information on employers' actual social contributions will usually be available from micro data sources and from administrative data sources. In case no information is available, a solution would be to use the distribution of wages and salaries as a proxy for the distribution of the employers' actual social contributions.

10.4.3. Employers' imputed social contributions (D122R)

In addition to the actual contributions, the SNA also distinguishes imputed social contributions, reflecting those contributions that are not directly recognisable as being paid by employers, but that are still benefiting households as they fund a social security scheme or accrue a social security entitlement for the employees. The SNA distinguishes two types of imputed employers' social contributions, i.e. imputed pension contributions and non-pension contributions.

When looking at employers' imputed social contributions related to pension schemes, a distinction should be made between defined contribution schemes and defined benefit schemes. In the case the employer runs the former scheme him-/herself, the value of the costs of operating the scheme should be treated as an imputed contribution payable to the employee as part of compensation of employees (with a counterpart recording as final consumption expenditure by households of financial services) (see 2008 SNA, §7.64). Although this is not an actual flow from the employer to the employee, it makes sure that the accounts properly reflect that the employees are benefiting from obtaining this service from their employer. All other contributions made to a defined contribution scheme will concern actual contributions that will be included under D121R, so they will not require any additional imputations.

In case of defined benefit schemes, the imputed social contributions are calculated such that the sum of the employer's actual contribution plus the sum of any contributions by the employee plus the imputed contribution by the employer is equal to the increase in benefit due to current period employment plus the costs of operating the scheme (see 2008 SNA, §7.65). This imputation ensures that the full increase in the pension entitlement due to the current period employment is accounted for in the accounts, with the employer normally being responsible for any shortfall between the accrual and the contributions received.

The employers' imputed non-pension contributions relate to the situations where social benefits are provided by employers directly to their employees, former employees or dependants without involving an insurance enterprise or autonomous pension fund and without creating a special fund or segregated reserve for the purpose. In this situation, the 2008 SNA (§7.68, 8.83 and 8.84) considers existing employees as being protected against various specified needs or circumstances, even though no reserves are built up to provide future entitlements. Remuneration is therefore imputed for such employees equal in value to the amount of social contributions that would be needed to secure the de facto entitlements to the social benefits they accumulate.

Although the amounts should in principle not only depend on the levels of the benefits currently payable, but also on how the future benefits are likely to evolve (as a result of factors such as expected changes in the number, age distribution and life expectancies of their present and previous employees), in practice, due to difficulty in deriving these actual amounts, the unfunded non-pension benefits payable by the enterprise during the same accounting period are often used as an estimate of the imputed remuneration that would be needed to cover the imputed contributions.

These imputed social contributions are specific to the national accounts framework and are usually missing from micro data sources (e.g. they are not part of the household income definition as defined by the Canberra Group Handbook). If no information is available, it is recommended to use the distribution of *wages and salaries* (D11) or of *employers' actual social contributions* (D121) as a proxy. Although the inclusion of these items does not affect disposable income (as the amount received as part of *compensation of employees* (D11) is equal to the amount paid as part of *social contributions* (D61)), the availability of breakdowns for these items is deemed valuable, as these affect the distribution of primary income and provide insight on how re-distributional transactions change the incomes of households.

10.5. Net property income (D4N)

Property income accrues when the owners of financial assets and natural resources put them at the disposal of other institutional units (see 2008 SNA, §7.107). It is usually broken down into underlying items that provide more information on the type of income or payments and on the related financial instrument. The focus in the DNA work is on *net property income* which is the result of property income received (D4R) and paid (D4P). The following sub-sections discuss the various components in detail.

10.5.1. Interest received (D41R) and paid (D41P)

Interest is a form of income that is receivable by the owners of certain kinds of financial assets (i.e. deposits, debt securities, loans and (possibly) other accounts receivable) for putting their financial assets at the disposal of another institutional unit (see 2008 SNA, §7.113-7.126). It may be a predetermined sum of money or a fixed or variable percentage of the principal outstanding. It is recorded on an accrual basis, i.e. continuously accruing over time. This may differ from actual amounts paid in a specific reference period which may often be what is included in micro data sources.

The amounts of interest on loans and deposits payable to and receivable from financial corporations include a margin that represents an implicit payment for the services provided by financial corporations in providing loans and accepting deposits (see 2008 SNA, §7.116). As these amounts constitute payments for the intermediation services provided by the financial corporations, the actual interest payments and receipts to or from financial corporations are corrected for these service charges to arrive at interest as defined in the SNA.

This service charge, which is known as *Financial Intermediation Services Indirectly Measured* (FISIM), is calculated on the basis of both the difference between the interest rate received on loans and a reference rate, and the difference between a reference rate and the interest rate paid on deposits (see 2008 SNA, §A3.24-A.3.27). The impact for the household is that if it receives interest on a deposit, the actual amount will be lower than the notional amount as recorded in the national accounts, as the bank deducts an amount related to the service it provides (i.e. a higher notional interest receipt for the household sector with an accompanying FISIM payment). If a household pays interest on a loan, the actual payment is higher than the notional amount recorded in the national accounts as the bank adds a service fee for their intermediary service (i.e. a lower notional interest payment by the household sector with an additional FISIM payment). Offsetting adjustments are applied to consumption, increasing intermediate consumption in the case of interest payments related to business deposits and to mortgage and business loans, and increasing final consumption in case of other deposits and loans (e.g. loans for purchasing final consumption goods).

As FISIM is a specific item in the SNA that has no specific counterpart in micro data sources, the template starts from the unadjusted “actual” interest flows, i.e. not adjusting for FISIM, and includes a specific item for the allocation of the FISIM correction, both on the uses and the resources side.

Interest (not adjusted for FISIM) received (D41R') and paid (D41P')

As explained above, it is recommended to start from unadjusted “actual” interest flows at the macro level, as it will provide a better link to the data as recorded in the micro data sources, and to only then apply the correction for FISIM. This means that the national accounts items of interest received and paid have to be recalculated into the “actual” interest flows by removing the adjustments that were made to correct for the financial intermediate services (FISIM). On the receipt side, this will lead to a higher amount, whereas on the payment side, this will lead to a lower amount. As FISIM is specific to the SNA, it should be relatively easy to retrieve the unadjusted flows.

Micro information on interest payments and receipts by households is usually available from survey data as well as from administrative data. This may concern fiscal data obtained from tax files or data obtained from financial corporations directly. The definition in the micro data will usually be in line with the definition as used in the template for interest payments and receipts before the adjustment to correct for FISIM, except for a possible difference between the accrual recording and cash payments.

In case no separate information is available on interest payments and/or receipts, an alternative would be to derive estimates on the basis of micro information on financial assets and liabilities of households, provided that those are available. By linking interest rates to the amounts for the various financial instruments held and owed by households, interest payments and receipts can be derived. These

estimates may also be used to check the plausibility of the results, especially in case of large gaps between the micro and macro aggregates.

In the EG DNA collection rounds it became clear that micro-macro gaps for countries relying on survey data for interest receipts were often related to under-coverage of the very rich and/or underreporting for specific household groups. In case administrative data are available (especially in case these are provided by financial corporations) these caveats may be overcome.

Adjustments for FISIM (D41R_FISIM and D41P_FISIM)

The item *Financial Intermediation Services Indirectly Measured* (FISIM) reflects the indirect service charge for the service by banks of bringing together borrowers and lenders. This leads to a higher notional interest received for the household sector as recorded in the national accounts than the actual amount received (as it is assumed that the bank already deducted an amount related to the service it provides) and to a lower notional interest paid as recorded in the national accounts than the actual amount paid (as it is assumed that this payment also includes a service fee for the intermediary service provided by the bank).

To arrive at amounts in line with the national accounts concepts, it is proposed to compile the FISIM correction separately for both interest received and interest paid. When these corrections are combined with the “actual” interest receipts and payments, this will lead to the balance of the notional interest flows as recorded in the SNA. The correction regarding interest received should be recorded with a positive sign, reflecting that the notional amount is higher than the actual amount received. The correction regarding interest paid should be recorded with a negative sign, reflecting that the notional amount is lower than the actual amount paid. Table 10.1 provides a schematic overview of the related flows.

Table 10.1. Recording of SNA interest receipts and payments in the EG DNA template

Receipts (R)	D41R	SNA interest received
	D41R'	Actual amount received (not adjusted for FISIM)
	D41R_FISIM	+ Adjustment for FISIM
Payments (P)	D41P	SNA interest paid
	D41P'	Actual amount paid (not adjusted for FISIM)
	D41P_FISIM	- Adjustment for FISIM

Source: The Author.

As explained above, as FISIM is a specific national accounts concept, no counterpart variable will be available from micro data sources. To derive an appropriate distribution, compilers are recommended to make a link to the actual interest payments and receipts by households. If detailed information is available on the different actual interest rates for various types of deposits and loans and these can be linked to the various households groups, such information can be used to allocate FISIM at a very detailed level. However, if such information is lacking, one could also assume equal margins for all types of deposits and loans, allocating FISIM proportionally to the relevant amounts of interest payments and receipts by households or household groups.

When allocating FISIM to households, one should bear in mind that a corresponding correction should be made for the consumption of FISIM. Depending on the type of deposit or loan, it should be recorded as intermediate consumption or as final consumption. If FISIM relates to mortgage loans, it should be recorded as intermediate consumption in the production of housing services related to owner-occupied dwellings and the leasing of dwellings. This is reflected in a lower value of *operating surplus* (B2) (see also Section 10.2). If FISIM relates to business loans owed by households or deposits held by household businesses, it should also be recorded as intermediate consumption, but in this case reflected in a lower value of *mixed*

income (B3) (see also Section 10.3.3). For all other deposits and loans, the related FISIM should be recorded as part of final consumption (CP1261).

As there is a direct link between the consumption of FISIM and the correction items recorded in the property income block, one should make sure that in allocating FISIM to households (or household groups), this link is maintained. This means that the sum of FISIM recorded as final consumption (CP1261) and as intermediate consumption (reflected in lower values of B2 and B3) should equal the amount of FISIM recorded as correction items in property income (discussed above) at the level of the household (or household group). The breakdown into type of consumption should ideally be made on the basis of information on the types of deposits and loans or type of interest receipt and payments. If that type of information is not available, assumptions should be made to break it down into these three types of consumption.

10.5.2. Distributed income of corporations received (D42R)

Distributed income of corporations consists of two underlying items, i.e. dividends and withdrawals of income from quasi-corporations (see 2008 SNA, §7.127-7.135). *Dividends* are a form of investment income to which shareholders, i.e. the collective owners of corporations holding the shares in their equity, become entitled as a result of placing funds at the disposal of corporations. *Withdrawal of income from quasi-corporations* consists of that part of distributable income that the owner withdraws from the quasi-corporation. These are unincorporated enterprises that have sufficient information to compile a complete set of accounts and are operated as if they were separate corporations. The amount of income withdrawn from a quasi-corporation is decided by the owner and in that regard such a withdrawal is equivalent to the payment of dividends by corporations to their shareholder(s).

As was explained in Section 10.3.3, the distinction between unincorporated enterprises that should be treated as quasi-corporations and the ones that should be included in the household sector is not always straightforward. This may differ across countries and may also lead to different treatments in the national accounts and in micro data sources. This has to be borne in mind when comparing micro and macro data for both mixed income and distributed income of corporations. Harmonisation of the concepts used in micro data and in national accounts on how to treat unincorporated enterprises is very relevant in this regard. In combining the micro and macro data, it may also be useful to assess how specific entities are recorded in the business register, to check whether the way in which data are recorded in micro data sources indeed aligns with the business register which normally serves as the basis for the national accounts recording.

Furthermore, in combining the micro and macro data, it has to be borne in mind that withdrawal from quasi-corporations in the SNA also includes operating surplus related to ownership of dwellings abroad. As was explained in Section 10.2.1, this dwelling is treated as belonging to a notional resident unit in that country, with the legal owner having a financial claim towards this unit. The operating surplus from renting out the house is then treated as being withdrawn from the notional unit and fully remitted to the owner in the other country the form of property income.

When looking at micro data sources on distributed income of corporations, most income surveys and fiscal data sources will include this type of information. The definition will also be more or less the same, except (as was explained above) for the delineation between unincorporated enterprises to be included in the household sector (for which the production surplus will be recorded under mixed income) and unincorporated enterprises that should be recorded as quasi-corporations (for which the distributed income will be recorded under distributed income of corporations). Furthermore, as explained in the ICW Framework (OECD, 2013^[4]), micro data sources may often not include income from family trusts. These are discretionary trusts set up to hold families' assets or to conduct family businesses. Generally, they are established for asset protection or tax purposes. While the income from these trusts is recorded as distributed income of corporations in the SNA, it is usually not covered in micro survey data.

Furthermore, the distributed income related to dwellings owned abroad may often not be covered in micro data sources either.

As was the case with interest, if no separate information is available on distributed income of corporations received, an alternative would be to derive estimates on the basis of micro information on financial assets and liabilities of households, provided that those are available. By assuming a certain rate of return in relation to equity held by households, distributed income of corporations as received by households can be derived. These estimates may also be used to check the plausibility of the results and be of help in allocating some of the amounts to underlying households in case of large gaps between the micro and macro aggregates. However, it must be borne in mind that in comparison with interest flows, dividends may show larger dispersions. Corporations usually show large differences in terms of profits and will also differ in dividend policies, with some corporations distributing all profits while others retaining all or part of it. These differences may perhaps partly cancel out when looking at results at more aggregated levels but may distort results when looking at more granular levels of detail.

In the DNA work it became clear that this specific item shows the largest gaps between the micro and macro data. Therefore, it is important to assess the main underlying reasons for these gaps and try to allocate these accordingly. First of all, gaps may relate to different treatment of unincorporated enterprises in the micro data and in the national accounts, as explained above. This will affect both mixed income and distributed income of corporations. If a profit-making unincorporated enterprise is recorded as a quasi-corporation in the national accounts whereas it is treated as part of the household sector in the micro data, this will lead to a higher mixed income and lower distributed income of corporations in the micro data in comparison with the national accounts. Therefore, it is important that both items are analysed in conjunction when analysing micro-macro gaps. Secondly, micro-macro gaps may often relate to under-coverage of the very rich and/or underreporting for specific household groups, mainly in relation to survey data. Pareto-tail adjustments may assist in overcoming this issue.

10.5.3. Reinvested earnings on foreign direct investment (D43R)

This item specifically relates to the retained earnings of (quasi-)corporations that are part of a foreign direct investment relation. Foreign direct investment is defined as a cross-border investment relation in which a resident in one country (the direct investor) has control or a significant degree of influence on the management of an enterprise (the direct investment enterprise) resident in another economy (see 2008 SNA, § 21.34). Any earnings that are not actually distributed to the direct investor are treated as being distributed implicitly and reinvested, as the decision to retain some of the earnings is seen as representing a deliberate investment decision on the part of the foreign direct investor (see 2008 SNA, §7.137 and 7.138).

Although foreign direct investment usually takes place between corporations or quasi-corporations, a couple of countries record reinvested earnings on foreign direct investment as being received by households. This would imply that the household is regarded as the direct investor in a foreign direct investment relation. As it is not very likely that this would normally be done in the form of an unincorporated enterprise for which it is not possible to set up separate accounts, the amounts recorded under this item are expected to only exist for a very small number of countries and for very small amounts.

In case a country records reinvested earnings received by the household sector, its allocation to the relevant households will depend on available underlying information. It is not expected that these amounts will be covered by income surveys, but perhaps information may be available on specific equity holdings of certain households that may give rise to these reinvested earnings. Alternative would be to link it to equity holdings in general, although it is assumed that this will be suboptimal, as the reinvested earnings will only concern very specific equity holdings.

10.5.4. Investment income disbursements (D44R)

Investment income disbursements concern property income flows that are not explicitly paid out, but that do accrue to the owners of the underlying assets, normally directly feeding into an increase in their wealth. For that reason, they are imputed in the SNA as part of property income.

The SNA recognizes three types of investment income disbursements: (1) investment income attributed to insurance policy holders (D441R), (2) investment income payable on pension entitlements (D442R) and (3) investment income attributed to investment fund shareholders (D443R). As these components concern rather different forms of income and may have very different distributions, it is recommended to compile the results for this item on the basis of these underlying components instead of directly targeting the aggregate. In that regard, it has also to be borne in mind that investment income disbursements are normally not recorded in micro data sources, as a consequence of which imputations will be needed to arrive at distributional results, for which different types of auxiliary data will be needed for the three components.

Another reason to focus on the underlying components is that parts of the investment income disbursements are treated as premium supplements that need to be recorded in the distribution of income account as part of *social contributions* in D61 (i.e. the investment income payable on pension entitlements) and *non-life insurance premiums* in D71 (i.e. the part of investment income attributed to insurance policy holders that relates to non-life insurance).¹ In that regard, one should make sure that the breakdown into household groups is identical for the corresponding parts. The calculation of distributional results for the various underlying components may help compilers in attributing the right amounts in the remainder of the accounts.

Investment income attributed to insurance policy holders (D441R)

For non-life insurance policies, the insurance corporation holds technical reserves that are seen as a liability towards the insurance policy holders. The investment income on these reserves is treated as income attributable to the policyholders (as it is assumed to feed into these technical reserves), which is distributed to policyholders in the allocation of primary income account (as part of D441R) and paid back to the insurance corporation as a premium supplement in the secondary distribution of income account (as part of D71P, i.e. *net non-life insurance premiums*). Net non-life insurance premiums comprise both the actual premiums payable by policyholders to obtain insurance coverage during the accounting period and the premium supplements payable out of the investment income attributed to insurance policyholders, less the service charges payable to the insurance corporation.

For life insurance policies and annuities, the insurance corporations have liabilities towards the policyholders and annuitants equal to the present value of expected claims. Bonuses declared in connection with life policies are treated as being distributed to policyholders and as premium supplements recorded in the financial account as payable by households and receivable by insurance corporations as changes in life insurance and annuities entitlements. As the recording of this item in the remainder of the accounts differs from the supplements on non-life policies, which are also treated as flowing back to policyholders but have a counterpart in the re-distribution account as premium supplements payable by households and receivable by insurance corporations (D71P), the template uses two codes to make a clear distinction between the two (D441A versus D441B).

Investment income attributed to insurance policyholders is usually not covered in micro data sources, as a consequence of which the distribution across households should be derived on the basis of alternative information.² Because of the link with the insurance technical reserves (that are at the basis of the investments of the insurance corporation on which it receives the investment income that has to be attributed to the policyholders), it would make more sense to use the distribution of these reserves as a proxy for the distribution of the investment income. However, this would require reliable information at the

micro level on both life insurance and non-life insurance technical reserves. An alternative would be to take the premium payments for both life and non-life insurance as a proxy for the income attributed to insurance policyholders. This information may be available from survey data. A last resort would be to derive the distribution for this item on the basis of one of the aggregates in a way that the inclusion or exclusion of the component does not affect the distribution of the main aggregates. In that sense, it would be best to link it to the distribution of disposable or adjusted disposable income. However, this should only be done as a last resort.

Investment income payable on pension entitlements (D442R)

The second category concerns investment income payable on pension entitlements. The exact calculation of this item depends on the underlying type of pension scheme. For defined contribution pension schemes, contributions are invested on behalf of the employees as future pensioners and the investment income receivable by the pension funds is therefore recorded as property income for the households. The investment income payable on defined contribution entitlements is equal to the investment income on the funds plus any net operating surplus earned by renting land or buildings owned by the fund. For defined benefit schemes the increase in the present value of the entitlements due to the unwinding of the discount rate represents the investment income distributed to the employees and should be recorded under this specific item.

For both types of schemes, the investment income is attributed to the policyholders which are then treated as paying an equal amount back to the funds as premium or contribution supplements in the secondary distribution of income accounts (as part of D61P, i.e. social contributions paid). It also forms part of the adjustment item for the change in pension entitlements (D8), which will be explained in more detail in Section 11.16.

Investment income payable on pension entitlements is usually not covered in micro data sources, which means that its distribution should be based on alternative information. As the calculation of investment income differs between defined benefit and defined contribution pension schemes, ideally information is available on which households accrue pension entitlements according to what type of scheme. The investment income can then be derived for both types of schemes on the basis of the accrued entitlements (from the balance sheet) in combination with a rate of return. For defined benefit schemes this rate of return will be determined by the discount rate, whereas for defined contribution pension schemes the rate of return can be derived by dividing the actual property income of the relevant pension funds by its pension liabilities.

If no micro information is available on the pension entitlements accrued by households, an alternative may be to estimate these entitlements on the basis of auxiliary information, such as the pension premium payments (also taking into account that retired persons will no longer contribute but still need to be assigned investment income on their pension entitlement accrued on previous pension contributions), the number of years that households have contributed to a scheme (which may also be estimated on the basis of age information), and/or the benefit formula of the relevant pension schemes.

It is clear that arriving at accurate estimates of the pension entitlement for the various households is a very complex and time-consuming task which requires a lot of actuarial assumptions. However, as the related amounts may be significant, compilers are encouraged to try to come up with distributional estimates that at least take into account age groups to arrive at an appropriate distribution of the investment income payable on pension entitlements. In that regard, it has to be borne in mind that older persons (up to retirement) will have accrued more pension entitlements and therefore may benefit to a larger extent from investment income payable on these entitlements. Furthermore, it may also be expected that entitlements of retired people will decline over time (the decline depending on longevity tables) which also needs to be taken into account when deriving the results. Simply applying an equal distribution or linking it to one of the aggregates is deemed to lead to suboptimal results.

Investment income attributable to collective investment funds shareholders (D443R)

A third category of investment disbursements is the investment income attributed to investment fund shareholders. Also for these funds, it is reasoned that the shareholders are actually the owners of the investments and therefore should receive all the earnings on the investments. As only part of the earnings of investment funds is actually distributed to the shareholders in the form of dividends, the remainder of the earnings is also recorded in the SNA as being distributed to the shareholders (leaving the investment funds with no saving) and being reinvested into the funds via a transaction recorded in the financial accounts.

As is the case with the other two investment income disbursements, micro information will usually be lacking for this item. In that case, it is recommended to derive the distribution on the basis of information on holdings of investment fund shares by households. If that information is not available, an alternative would be to use the distribution of distributed income of corporations as a proxy. A last resort would be to derive the distribution for this item on the basis of one of the aggregates in a way that the inclusion or exclusion of the component does not affect the distribution of the main aggregates. In that sense, it would be best to link it to the distribution of primary, disposable or adjusted disposable income. However, this should only be done as a last resort.

10.5.5. Rent received (D45R) and paid (D45P)

Rent is the income receivable by the owner of a natural resource (the lessor or landlord) for putting natural resources such as land or subsoil assets at the disposal of another institutional unit (a lessee or tenant) for use in production (see 2008 SNA, §7.109). The terms under which rent on a natural resource is payable are expressed in a resource lease. Rents differ from rentals, which are payments under an operating lease to use fixed assets such as dwellings or machines belonging to another unit which remains responsible for maintenance and replacement of the asset if necessary. These payments are treated as sales or purchase of services. This means that not only the type of underlying asset is different between rent and rentals, but also the nature of the lease.

Information on rent received and paid may be available from survey data and from administrative data sources. However, when linking the micro data to the national accounts totals, it has to be borne in mind that the concepts may not perfectly match. For example, it may be the case that the micro data source combines the income from renting natural resources and fixed assets in one category, whereas according to the SNA they should be broken down into a part that feeds into *operating surplus* (B2) (i.e. the rental from leasing fixed assets) and a part that is recorded as *rent* (i.e. the rent from leasing natural resources). In that case, a reclassification should be performed in order to align micro data to national accounts totals, by reclassifying income received from renting fixed assets.

10.6. Current taxes on income and wealth

This category includes all current taxes on income and wealth. Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units regularly every tax period (see 2008 SNA, §8.15 and §8.52-8.64). They are recorded on an accrual basis, i.e. when the activities, transactions or events occur that create the liabilities to pay taxes. Taxes on income consist of taxes on incomes, profits and capital gains, whereas current taxes on capital consist of taxes that are payable periodically, usually annually, on the property or net wealth of institutional units (with the exception of taxes on land or other assets that are used in production which are treated as other taxes on production (lowering operating surplus and mixed income). Furthermore, this category includes miscellaneous current taxes such as poll taxes, payments by households to obtain certain licences, and taxes on international transactions.

Information on taxes on income and wealth are usually available from income surveys and administrative data. It will depend on the exact definitions whether the coverage is similar to that of the national accounts. In that regard, micro surveys may exclude taxes on holding gains and/or taxes on wealth which may lead to a gap with the national accounts totals. This should then be allocated to the relevant households, preferably on the basis of underlying information on the distribution of the holding gains and/or the wealth underlying these taxes. Furthermore, the time of recording in micro surveys may be different from the accrual recording in the national accounts. This should also be borne in mind when linking micro data to the national accounts totals.

As there is a link between taxes on income and the primary income as recorded in the SNA, their distributions may be compared to check the plausibility of the results. As various items may be liable to different tax rates and as some items may be exempted or subject to a threshold, the distributions will probably not be identical, but some correlation may be expected. The same goes for taxes on holding gains and taxes on wealth. If these could be linked to distributional information on holding gains and wealth, this would provide more insight into the plausibility of the related tax results. Furthermore, these techniques may be used to estimate the distribution of taxes on income and wealth in case micro data is missing.

10.7. Net social contributions paid (D61P)

Social contributions are actual or imputed payments to social insurance schemes to provide for the payments of social insurance benefits. A social insurance scheme is a specific type of insurance scheme where the following two conditions are satisfied: (a) the benefits received are conditional on participation in the scheme and constitute social benefits as defined in the SNA (see Section 10.9); and (b) at least one of the three conditions following is met: (i) participation in the scheme is obligatory either by law or under the terms and conditions of employment of an employee, or group of employees; (ii) the scheme is a collective one operated for the benefit of a designated group of workers, whether employed or non-employed, participation being restricted to members of that group; (iii) an employer makes a contribution (actual or imputed) to the scheme on behalf of an employee, whether or not the employee also makes a contribution (see 2008 SNA, §8.65).

In the SNA, all contributions to social insurance schemes are shown as made by households. They consist of employers' and households' social contributions. The former comprise *employers' actual social contributions* (D611P) and *employers' imputed social contributions* (D612P). Both items are exactly the same as those recorded in the primary income account as part of compensation of employees, respectively D121R and D122R. Households' contributions consist of *households' actual social contributions* (D613P) and *households' social contribution supplements* (D614P). The actual contributions reflect the contributions payable by employees on their own behalf, by self-employed and by non-employed persons. The contribution supplements consist of the property income earned during the accounting period on the stock of pension and non-pension entitlements, as recorded in the primary income account respectively under items D442R and D441R. Set against these contributions is the service fee charged by the unit administering the social security scheme which should be deducted to arrive at the net social contributions paid.

As some of the underlying components link to specific income items and as the components may have different underlying distributions, the template distinguishes them separately. Ideally information is compiled at this detailed level as it is expected to lead to more accurate results than simply focusing on the aggregate.

10.7.1. Employers' actual social contributions paid (D611P)

This item reflects the actual contributions made by employers to social insurance schemes. The item is exactly the same as the one recorded under item D121R and compilers should make sure that the reported amounts match. Please see Section 10.4.2 for more information on this item.

10.7.2. Employers' imputed social contributions paid (D612P)

This item reflects the imputed social contributions by employers related to the unpaid part of the accrual of pension entitlements related to the current service period and to non-pension social benefits provided by employers directly to their employees, former employees or dependants. It is exactly the same as that recorded in the allocation of primary income account under item D122R and compilers should make sure that the reported amounts match. Please see Section 10.4.3 for more information on this item.

10.7.3. Households' actual social contribution paid (D613P)

This category records all contributions to social insurance schemes payable on their own behalf by employees, self-employed or non-employed persons. The amounts are recorded on an accrual basis, which for those in work implies the times when the work that gives rise to the liability to pay the contributions is carried out.

Micro data will often be available from income surveys or administrative data, although it has to be checked whether the concepts match those as used in the national accounts. It may be the case that the micro data also include some of the other components reported as social contributions. In that case, it is recommended to correct for the part that does not relate to households' actual social contributions.

10.7.4. Households' social contribution supplements paid (D614P)

This category consists of the property income earned during the accounting period on the stock of pension and non-pension entitlements. The former amount is equal to the property income item D442R, i.e. *investment income payable on pension entitlements*, whereas the second item is part of D441R, i.e. *investment income attributable to insurance policy holders*. However, this last item also includes income on life insurance policies which should not be recorded as part of households' social contribution supplements (as it is fully reflected in the financial accounts). In compiling the distribution for this item, compilers should be aware of these links, trying to derive the distribution on the basis of the relevant matching items.

10.7.5. Social insurance scheme service charges paid

Set against the social contributions is the service fee charged by the unit administering the social security scheme. This may be an explicit or an implicit charge (e.g. equal to the sum of costs incurred by the employer administering the scheme) and this amount should be deducted to arrive at the net social contributions. It is presented as a separate item in the template, although some countries may already reflect the service charge in a lower amount of imputed social contributions or premium supplements in which case no additional correction is needed.

In case the unit administering the social security scheme applies an explicit charge, micro information may be available that can be used to derive its distribution. Otherwise, the allocation to the relevant households should be done on the basis of other information. As the service charge will likely depend on the premium payments, the distribution of the premiums can be used as a proxy for the distribution of the service charge. If information is available that the service charge is equal across participants and information is available on who is participating, this can also be used to allocate the service charge equally across participants.

10.8. Net social contributions received (D61R)

Social contributions may be received by dedicated units running social insurance schemes or by employers in case they provide a social insurance scheme to their employees directly. The latter may also concern households in their role as unincorporated enterprises included in the household sector (see 2008 SNA, §8.16).

When an unincorporated enterprise operates its own employer-related social insurance scheme, any actual social contributions (as paid by the unincorporated enterprise to its employees and then paid back by the employees into the social insurance schemes as operated by the enterprise) is recorded under category D611R. When it provides social insurance benefits directly to its employees a social contribution is imputed under category D612R, equal to the amount of social contributions that would be needed to secure for the same social benefits. In theory, it may also involve *households' actual social contributions* (D613R), although the related amounts are expected to be small. Furthermore, *households' social contributions supplements received* (D614R) are deemed to be irrelevant for the household sector.

10.8.1. Employers' actual social contributions (D611R)

In case of an unincorporated enterprise running its own social insurance scheme for its employees, actual social contributions may be received by the household sector.

It will depend on the set up of income surveys whether specific information is collected on households in their role as unincorporated enterprise. In that case, it may provide insight which households run their own social insurance scheme and it may contain information on the related amounts. It may also be the case that this kind of information is available from business surveys. Furthermore, administrative data sources may provide relevant information.

Ideally, information is available on social contributions, but if that is not the case, information on social benefits paid may be used as a proxy to derive the distribution of actual social contributions received. An alternative would be to look at wages and salaries paid by households in their role as unincorporated enterprise or at mixed income. However, it has to be borne in mind that this will also include unincorporated enterprises that do not operate their own social insurance scheme. Furthermore, it is not expected that there will be a perfect correlation between mixed income and social contributions.

10.8.2. Employers' imputed social contributions (D612R)

In case of unincorporated enterprises providing social benefits directly to their employees, social contributions should be imputed, equal to the amount of social contributions that would be needed to secure for the same social benefits.

The distribution of this item should ideally be based on underlying micro information. As it concerns an imputed item, no information will be available in micro data sources, but it may be the case that information is available on the social benefits paid by households in their role as unincorporated enterprise. This may be available from household or business surveys or from administrative data. This information can be used as a proxy for the distribution of the imputed social contributions. An alternative would be to look at wages and salaries paid by households in their role as unincorporated enterprise or at mixed income. However, as explained above, this will also include unincorporated enterprises that do not operate their own social insurance scheme, and mixed income and imputed social contributions will not be perfectly correlated.

10.8.3. Households' actual social contributions (D613R)

Households may in theory receive actual social contributions in their role as owner of an unincorporated enterprise running its own social insurance scheme for its employees. However, the amounts will usually

be relatively small. The distribution should ideally be based on underlying micro information which may be available from household or business surveys or from administrative data, but if such information is not available the allocation could be based on the distributions of the employers' actual and imputed social contributions received (D611R and D612R) or on the basis of wages and salaries paid by households in their role as unincorporated enterprise or on the basis of mixed income (B3), bearing in mind the caveats as expressed in Sections 10.8.1 and 10.8.2.

10.8.4. Households' social contribution supplements (D614R)

As this item relates to property income earned during the accounting period on the stock of pension and non-pension entitlements, this generally does not appear as part of social contributions received by the household sector in their role as owners of unincorporated enterprises.

10.9. Social benefits other than STiK received (D62R)

Social benefits are current transfers received by households which are intended to provide for the needs that arise from certain events or circumstances, such as sickness, unemployment, retirement, housing, education or family circumstances. This will often be in the form of regular payments but may also be in the form of a lump sum (see 2008 SNA, §8.68).³ The main social benefits in cash concern pension provision for retirees or widows and permanently disabled. Social benefits may be provided under social insurance schemes or via social assistance. Whereas social insurance schemes require formal participation by the beneficiaries, often linked to employment and usually evidenced by the payment of contributions, this is not the case for social assistance schemes. Eligibility to receive social assistance benefits is not dependent on those kinds of criteria and they are often paid for via general funds such as taxes. Social insurance benefits in kind provided by employers are treated as if they were paid in cash. However, if they are provided under general social security schemes or social assistance, they are recorded under item D63, i.e. *social transfers in kind*.

Due to the increasing importance of pension benefits in the income distribution, also in view of ageing societies as experienced by a lot of countries, the template distinguishes between pension benefits and other social benefits in cash. Compilers are encouraged to compile results according to this breakdown, particularly when there is a lot of user interest for this type of information in the country.

Micro information on social benefits may be available from household surveys and from administrative data. However, with regard to household surveys it has to be borne in mind that the underlying items sometimes suffer from unit or item non-response and from underreporting (see for example Meyer et al. (2009_[8])). In that regard, the availability of administrative information on what types of social benefits are received by which households may assist in checking in the plausibility of the underlying micro data and in correcting for any missing information or underreporting of benefits. Although information may not always be available on the exact amounts received by households, register information may indeed be available with information on who is benefiting from what types of benefits.

10.10. Social benefits other than STiK paid (D62P)

As the household sector may include unincorporated enterprises with paid employees, social benefits may also appear as a use for the household sector. This is the case when an unincorporated enterprise operates an employer-related social insurance scheme itself or provides social insurance benefits directly to its employees.

Information for the allocation of this item may be available from household or business surveys or from administrative data. If micro information is lacking, wages and salaries paid by households in their role as

unincorporated enterprise or *mixed income* (B3) could be used as proxy. However, it has to be borne in mind that this will also include unincorporated enterprises that do not operate their own social insurance scheme. Furthermore, it is not expected that there will be a perfect correlation between mixed income and social contributions.

10.11. Net other current transfers (D7N)

Other current transfers are provisions of goods or services from one unit to another without receiving any goods, services or assets in return, other than *current taxes on income and wealth* (covered under D51) and *social contributions and benefits* (covered under D61 and D62). Current transfers are different from capital transfers in the sense that the latter are linked to the acquisition or disposal of a financial or non-financial asset. As they involve a transfer of assets, they are assumed not to directly affect disposable income. In practice, capital transfers tend to be large, infrequent and irregular, whereas current transfers tend to be relatively small and are often made frequently, on a regular basis.

It is not always possible to clearly distinguish between current and capital transfers, and it may be the case that some cash transfers are regarded as a capital transfer by one party involved in the transaction and as a current transfer by the other party. As in the SNA only one recording can be applied to ensure consistency within the framework, this sometimes implies that transfers that may be large and irregular from the viewpoint of a household are still recorded as current transfers, as they are regarded as regular and frequent from the viewpoint of the other party involved. This for example relates to specific insurance benefits that may be received by households. This also gives rise to differences between micro statistics and the national accounts. Whereas the SNA treats all transfers as current as long as it does not involve the disposal or acquisition of an asset, the ICW Framework treats transfers of cash as capital if they are large and irregular, regardless of whether they involve the sale or purchase of an asset (2013^[4]). This has to be borne in mind when linking micro data to national accounts results.

In the template *net other current transfers* are further broken down into non-life insurance transactions and miscellaneous current transfers, because of the different nature of these transactions, the fact that the data availability may differ, and due to the fact that their distribution across households may be quite different.

10.11.1. Net non-life insurance claims minus premiums (D72R-D71P)

Non-life insurance policies provide cover against various events or accidents resulting in damage of goods or property, harm to persons, or against financial losses resulting from events such as sickness, unemployment, accidents, etc. (see 2008 SNA, §8.117). For the household sector, this item covers policies taken out by households on their own initiative and for their own benefit, independently of their employers or government and outside any social insurance scheme.

At the aggregated level, e.g. for the household sector as a whole, premiums and claims often cancel out. However, this will normally not be the case at the individual household level and will most likely also not hold for less aggregated groups of households. Therefore, it is important to separately derive distributional results on the premiums and claims to arrive at the net result of non-life insurance transactions. Only if information on the underlying flows is missing, one may directly target the net impact of claims minus premiums, but it has to be carefully checked whether this leads to plausible results. Otherwise, it may be opted to set the benefits equal to the premiums, cancelling out the impact of this transaction on disposable and adjusted disposable income. Alternative is to derive the distribution on the basis of the distribution of disposable income, as a last resort.

As mentioned above, the inclusion of net non-life insurance claims minus premiums as part of disposable income differs from the approach applied by the ICW Framework (OECD, 2013^[4]) and by the Canberra Handbook (United Nations Economic Commission for Europe, 2011^[9]). They treat premiums

to insure dwellings as intermediate consumption and related claims as capital transfers offsetting the capital loss in the stock of wealth, whereas premiums paid for other types of insurance (e.g. protecting against unemployment, illness, disruption of travel) are recorded as consumption expenditure with claims being treated as negative consumption expenditure affecting the relevant expenditure components in relation to the risk covered (e.g. for housing, health, transport). This means that on the micro side, the information collected corresponds to household expenditure net of private insurance claims. The main reason is that whereas non-life insurance benefits can be regarded as regular flows from the perspective of the insurance company, this is not the case from the viewpoint of individual policy holders. When matching micro and macro variables, adjustments to address the above differences should be considered.

Net non-life insurance premiums

Net non-life insurance premiums comprise both actual premiums and premium supplements payable out of the *investment income attributed to insurance policyholders* (D441). They are recorded on a net basis, thus already deducting the service charge related to the insurance services provided by the insurance company.

Micro information on actual premium payments may be available from household income or budget surveys or from administrative data from insurance companies. This can be used to derive the allocation of the actual premiums across households. If information on premiums is lacking, but information is available on non-life insurance benefits, this may be used as a proxy. The distribution of the premium supplements should be equal to the part of *investment income attributed to insurance policy holders* that relates to non-life insurance policyholders (D441R). See Section 10.5.4 for more information on this specific item.

Net non-life insurance claims

Non-life insurance claims are the amounts payable in settlement of damages that result from an event covered by a non-life insurance policy during the current accounting period. They normally become due at the moment when the eventuality occurs that gives rise to a valid claim under the terms of the policy. Claims are usually treated as current transfers, even when large sums may be involved as a result of the accidental destruction of a fixed asset or serious personal injury to an individual (see 2008 SNA, §8.115-8.121).

Micro information on non-life insurance claims may be available from household income surveys or from administrative data from insurance companies. This can be used to derive the allocation of the benefits across households. If information on benefits is lacking, but information on actual premiums is available, this could be used as a proxy.

10.11.2. Net miscellaneous current transfers (D75N)

Miscellaneous current transfers consist of all other current transfers than recorded under D5, D6, D71 and D72. This may concern current transfers paid to and received from other sectors, both in cash and in kind, such as membership fees, subscriptions, voluntary donations to non-profit institutions serving households, and fines and penalties, as well as current transfers between households. Examples of the latter include regular remittances between members of the same family that do not belong to the same household (e.g. parents supporting children no longer living at home) and transactions related to lotteries and gambling. With regard to the latter, the amounts paid for lottery tickets or placed bets (minus the service charge)⁴ and the related winnings are in the SNA regarded as taking place directly between those participating in the lottery or gambling (see 2008 SNA, §8.136).

Whereas current transfers vis-à-vis other sectors will usually be reflected in the national accounts totals, this may not be the case for transfers between households. When focusing on results for the household

sector as a whole this may not be problematic as the related amounts will cancel out. However, this need not be the case when breaking down the household sector into more granular household groups, as the payments and receipts may be expected to concern different types of households. Some household groups may turn out to be net contributors, while other household groups may turn out to be net receivers. In that regard, the DNA results show that the impact of transfers within the household sector may significantly affect income results for specific household groups in some countries. For that reason, it is important that, in case transfers between households are not reflected in the national accounts totals, compilers try to come up with estimates for the purposes of compiling distributional results. The template includes a separate row for other current transfers between households to encourage compilers to explicitly look into this issue.

When looking at underlying data sources for the allocation of the relevant amounts across households, several components are probably well-covered in household surveys. Before matching the micro data with the national accounts totals, it is important to check which specific items are covered in the micro data sources and which items are likely to be missing. This may assist compilers in distributing specific underlying amounts and to impute for specific items that may be missing. This is particularly important if auxiliary information may be available to distribute (some of) the missing items.

Information on other current transfers between households may also be (partly) available from household surveys. If information is missing, it would be important to assess what items are most likely covered under these specific transfers and who are the most likely households or household groups to benefit and the ones most likely to pay. For example, if it concerns transfers from parents to their children that no longer live at their parents' home, the related amounts may be assigned on the basis of socio-demographic information. If it concerns other types of transfers, it may also be possible to allocate the payments and receipts to specific households on the basis of specific socio-demographic information, depending on the type of transfer.

A specific case concerns the transactions related to betting and gambling. As explained above, the related transactions are assumed to take place directly between those participating, except for the service charge which is paid to the unit organising the lottery or gambling. This differs from the treatment in micro statistics where placed bets and purchases of lottery tickets are recorded as consumption expenditure and minor lottery prizes and other winnings are recorded as negative consumption expenditure, whereas large winnings are treated as capital transfers received. Despite the different recording, micro information on the purchase of lottery tickets and placed bets, as well as on the winnings, will usually be covered in micro data sources, with the exception of the part that relates to the service charge. An adjustment is therefore needed when linking micro and macro data on betting and gambling, but the underlying micro data will provide a good proxy for distributing the corresponding amounts from national accounts.

10.12. Social Transfers in Kind (D63R)

Social transfers in kind are goods and services that are provided to households by government and non-profit institutions⁵ either free of charge or at subsidised rates (see 2008 SNA, §8.141). Health care and education are the most well-known examples of social transfers in kind, but in-kind goods and services also cover housing, childcare and elderly care. As social transfers in kind can be regarded as a direct alternative to providing households with a cash benefit to purchase associated goods and services themselves, their inclusion in income measures leads to a more comprehensive measure and fairer comparison across countries and over time. In that regard, Tonkin et al. (2014_[10]) explain that if in a country A certain services are largely provided by the state, whereas in country B households need to pay for those services directly, all other factors being equal, someone with the same disposable income in country A would have a higher standard of living than in country B. For this reason, social transfers in kind are included in adjusted disposable income as defined in the SNA. The inclusion of social transfer in kind also

leads to a better assessment of income inequality and of the impact of re-distributional policies. For that reason, the DNA work covers both disposable and adjusted disposable income.

Direct information for the distribution of social transfers in kind is usually not available from micro data sources. Therefore, estimates are often based on secondary information. As the distributions and underlying auxiliary data sources may differ across the various types of social transfers in kind, the template distinguishes three categories, i.e. social transfers in kind on health, on education, and other social transfers in kind.

10.12.1. STiK on Health (D63R1)

The first category that is distinguished concerns *social transfers in kind on health*. As direct micro information will usually be lacking, it is recommended to distribute the amounts on the basis of the insurance value approach, according to which an insurance premium equivalence is allocated to the households.⁶ In the absence of further information, the latter approach basically comes down to allocating the average per capita STiK for health to each individual. However, it can be refined by segmenting the population based on socio-demographic information and allocating STiK in line with the various needs/provision costs related to each population segment. For example, it is demonstrated that health related spending is highly age dependent, therefore by allocating to each individual health STiK proportionally to the STiK spending by age, the results would be closer to the actual value approach. In that respect, it is recommended to implement a basic scenario following the insurance value approach by relying on as much socio-demographic information as possible to refine individual allocations.

To implement the basic scenario following the insurance value approach, it is suggested to apply the following (minimum) procedure:

- Step 1: Adjust the national accounts total for the part received by institutional households.
- Step 2: Try to find a source providing an estimate of average public health spending by age, and perhaps other categories (e.g. gender).
- Step 3: Impute to each individual the average health care cost of a person with the corresponding age. Each individual is thus assumed to receive a public benefit determined by the average public spending of his/her group, irrespective of whether or not actual use of health care services has been made.
- Step 4: Scale up or down the imputations so that they match the adjusted national accounts totals (as determined in step 1 above).

10.12.2. STiK on Education (D63R2)

The second category concerns social transfers in kind on education. An actual value approach or a modelled approach using socio-demographic information can be used to allocate spending on education to individuals and households. For example, if socio-demographic information is available on age or schooling status/level of education (and whether or not the relevant students are in public education), and STiK spending per capita for all these sub-groups is available, then education related STiK allocations can be made fairly close to the actual value.

10.12.3. Other STiK and other allocation approaches (D63R3)

The remaining category includes all other social transfers in kind such as housing, childcare and elderly care. Although the related amounts will usually be smaller than social transfers in kind on health and education, it is still important that compilers try to find the best auxiliary information to allocate the amounts to the relevant households. As was the case with the other two categories, this could be done on the basis of the actual value approach and the insurance value approach, depending on the available information.

It would be ideal to work on a finer decomposition of other STiK, such as for housing, early childhood education and childcare services, or long-term elderly services, and make imputations separately for each STiK category using all the available socio-demographic information. If for some categories no information is available, it could be opted to allocate the related amounts flatly to all households or individuals. This is to be preferred over a proportional allocation in proportion to (adjusted) disposable income as these transfers in kind do not seem related to income.

References

- Coli, A. and F. Tartamella (2010), “Micro-macro integration: survey data on household income for the estimate of the Italian GDP”, <http://www.ec.unipi.it/documents/Ricerca/papers/dsm/2010/Report-335.pdf> (accessed on 24 October 2017). [3]
- European Commission et al. (2009), *System of National Accounts 2008*, <https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf> (accessed on 29 September 2017). [1]
- Johns, A. and J. Slemrod (2008), “The Distribution of Income Tax Noncompliance”, <http://www.bus.umich.edu/OTPR/DITN%20091308.pdf> (accessed on 30 October 2017). [6]
- Meyer, B., W. Mok and J. Sullivan (2009), “The under-reporting of transfers in household surveys: Its nature and consequences”, *NBER Working Paper Series*, No. 15181, <http://www.nber.org/papers/w15181> (accessed on 27 October 2017). [8]
- Neri, A. and R. Zizza (2010), “Income reporting behaviour in sample surveys”, No. 777, Banca d’Italia, https://www.bancaditalia.it/pubblicazioni/temi-discussione/2010/2010-0777/en_tema_777.pdf?language_id=1 (accessed on 11 October 2017). [7]
- OECD (2013), *OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264194830-en>. [4]
- Pionnier, P. and E. Guidetti (2015), “Comparing profit shares in value-added in four OECD countries: Towards more harmonised national accounts”, *OECD Statistics Working Papers*, No. 2015/3, OECD Publishing, Paris, <https://doi.org/10.1787/5js0bsm2g0lt-en>. [5]
- Tonkin, R. et al. (2014), “Social Transfers in Kind in the United Kingdom and Finland: Micro-level measurement and distributional impact Social transfers in-kind in the United Kingdom and Finland: Micro-level measurement and distributional impact 1”, <http://www.iariw.org/papers/2014/tonkinPaper.pdf> (accessed on 29 September 2017). [10]
- Tsakoglou, P. et al. (2010), “Distributional effects of non-cash incomes in seven European countries”, <http://www.iariw.org/papers/2010/7dTsakoglou.pdf> (accessed on 29 September 2017). [2]
- United Nations Economic Commission for Europe (2011), *Canberra Group Handbook on Household Income Statistics*, https://www.unece.org/fileadmin/DAM/stats/groups/cgh/Canbera_Handbook_2011_WEB.pdf (accessed on 27 September 2017). [9]

Notes

¹ The other elements of investment income disbursements (i.e. the part of investment income attributed to insurance policyholders that relates to life insurance and the investment income attributed to investment

fund shareholders) are also flowing back to the insurance corporation and the investment funds, but these flows are recorded entirely in the financial accounts.

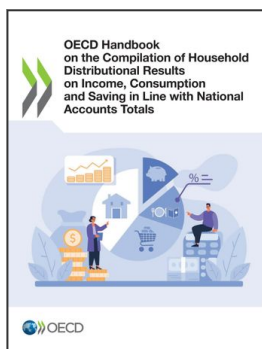
² Please note that in the ICW Framework (OECD, 2013^[4]) investment earnings received on invested life insurance funds but not immediately distributed to life insurance and pension scheme participants are included in element K03, i.e. *Adjustments to life insurance, annuity and private pension entitlements*.

³ In case of pension benefits in the form of a lump sum, it depends on the specific requirements of the scheme how this should be treated in the national accounts. If there is a requirement to immediately convert these funds to an annuity, the lump sum should not be recorded as pension benefits receivable immediately upon retirement but as annuity benefits receipts in the relevant recording periods (see 2008 SNA, §17.138).

⁴ The service charge is recorded as final consumption expenditure under category CP090. It is defined as the difference between the amount paid for lottery tickets or placed in bets and the amounts paid out to winners.

⁵ Social insurance benefits in kind provided by employers are treated as if they were paid in cash.

⁶ The actual value approach, according to which the actual values of health benefits are allocated to the various households, is not recommended, although the results at more aggregated levels of detail will come close to the results according to the insurance value approach.



From:

OECD Handbook on the Compilation of Household Distributional Results on Income, Consumption and Saving in Line with National Accounts Totals

Access the complete publication at:

<https://doi.org/10.1787/5a3b9119-en>

Please cite this chapter as:

OECD (2024), "Overview of the income items", in *OECD Handbook on the Compilation of Household Distributional Results on Income, Consumption and Saving in Line with National Accounts Totals*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/ed8f2f6a-en>

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.