1 Overview

1.1. Aim of the Handbook

This Handbook describes how to compile distributional estimates of household income, consumption and saving consistent with national accounts, in line with the methodology as developed by the OECD (/Eurostat) Expert Group on Disparities in a National Accounts framework (EG DNA). It aims to assist compilers in deriving good quality distributional results that are comprehensive, consistent, and comparable over time and across countries. Furthermore, it aims to provide users of these data with more insight into how these results have been derived, so that they can better assess the quality of the results and understand any differences that may exist with other distributional results.

The Handbook provides an overview of the conceptual framework underlying the distributional results and discusses various aspects in relation to the methodology to compile these data on the basis of underlying micro information. This includes the selection of the relevant micro data sources, imputation techniques for items for which micro data is lacking, guidance on how to deal with gaps between micro and national accounts totals, and on how to combine all this information to arrive at consistent and reliable results for various household groups. In addition to describing the methodology, the Handbook also includes guidance on the presentation of the distributional results, including the description of indicators that provide insight in the levels of inequality in a country.

1.2. Background

The past decade has seen an increased interest in household material well-being and its distribution across households. Whereas there has always been much focus on aggregates such as Gross Domestic Product (GDP) and Net National Income (NNI), the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen and Fitoussi, 2009[1]), also known as the Stiglitz report, and the G20 Data Gaps Initiative (IMF, 2023[2]) among others stressed the importance of indicators that are more directly related to households' economic well-being (such as household income, consumption and wealth), and on having more insight into how various household groups are faring. It is acknowledged that aggregates and average growth rates only provide a partial story which may conceal large discrepancies between household groups. Whereas average income of the household sector may increase, it may be the case that only a small portion is actually benefiting, while the majority hardly notices any income gain or even suffers from an income loss.

Information on the distribution of income is often available from micro data statistics, but their aggregated trends may often diverge from the national accounts data. Furthermore, due to the setup of the micro data statistics, which may often differ across countries, the results may not always be consistent over time and comparable across countries. For that reason, it was recommended to start looking into possibilities of deriving distributional results for the household sector in line with national accounts totals.

In response to the increased interest in household material well-being and its distribution, the OECD and Eurostat launched a joint Expert Group on Disparities in a National Accounts framework (EG DNA) in 2011

to investigate the possibility to develop methodology to compile distributional results in line with national accounts totals on the basis of micro data. Participants from 25 countries and two international organisations took part in this group and conducted an in-depth study of the main conceptual and practical differences between micro and macro statistics on household income, consumption and saving, discussed best ways to reconcile these differences, defined a conceptual framework, and developed a first methodology to compile internationally comparable distributional results. On the basis of this work, the expert group engaged in a first exercise to compile experimental results in 2012, the results of which were published in a working paper in 2013 (Fesseau and Mattonetti, 2013[3]).

In 2014, the work was continued by an OECD expert group, which focused on further improving the methodology by addressing specific issues, such as developing guidance on how to deal with gaps between micro and national accounts totals and on how to best link data across different data sources. On the basis of the improved methodology, this expert group conducted a second exercise in 2015, the results of which were published in a working paper early 2017 (Zwijnenburg, Bournot and Giovannelli, 2017[4]).

The work of the group continued in 2018 in the form of an OECD-Eurostat expert group, aiming to prepare the publication of the results, while also exploring possibilities to broaden the range of countries for which distributional data in line with national accounts totals would become available. This led to the inclusion of distributional results in line with national accounts totals as experimental results in the online databases of the OECD and Eurostat at the end of 2020. Several countries had also started to publish these results at the national level. A working paper was published in 2021, accompanying the results (Zwijnenburg et al., 2021[5]), highlighting the main results, as well as a final report on the work of the group in this third phase (Coli et al., 2022[6]).

The consecutive expert groups have built up a large amount of knowledge on how to compile distributional results on household income, consumption and saving in line with macroeconomic aggregates. This Handbook aims to combine this knowledge, covering results from the various questionnaires, presentations and discussions conducted as part of the work, to assist other countries to compile distributional results in accordance with the methodology as developed by the EG DNA and to help users in properly understanding the results.

In the meantime, the work of the EG DNA is continuing in the form of an OECD expert group,[1] aiming to improve the timeliness, frequency, and granularity of the results, addressing specific user demands. In this regard, the new G20 Data Gaps Initiative (IMF, 2023[2]) that was launched in 2022 includes two specific recommendations in the area of household distributional results, with the aim of G20 economies publishing annual distributional results at decile level within 18 months after the reference year by the end of 2026. In view of these recommendations, the group will work on further improving the methodology and exploring nowcasting techniques to arrive at more timely estimates, among others. It is expected that this follow-up work will feed into a future update of the Handbook.

1.3. The importance of distributional results in line with national accounts totals

In most countries, distributional results are already available from micro statistics. These provide the possibility to look at very granular levels of detail and to derive inequality results directly on the basis of the underlying data. This raises the question why there is a need for distributional results consistent with national accounts totals. The principal relevance of these data comes from the way in which they complement existing indicators on economic inequality.

First of all, they provide a more comprehensive picture of economic inequality. In that regard, the estimates include elements of income and consumption that are often not covered in micro data, but which may be very relevant in analysing inequality. An example concerns *social transfers in kind*, i.e. goods and services

provided to households by government and non-profit institutions, either free of charge or at prices that are not economically significant. As in-kind provision of these services, which often include health care and education, is a direct alternative to providing households with a cash benefit with which they may purchase these services themselves, its inclusion in distributional measures leads to a more comparable and more comprehensive measure of income. Another important example concerns the non-observed economy, which is usually absent from micro data sources, but which is accounted for in the national accounts.[2]

Secondly, the work broadens the analyses from income to consumption and saving, and eventually wealth, each with its own analytical advantages. Furthermore, the methodology ensures that these dimensions are linked in a consistent way, thus allowing for an integrated overview of economic inequality across income, consumption, saving and wealth. This provides, among others, the opportunity to derive consistent estimates on, for example, saving rates for various household groups and to analyse the joint distribution of income and wealth, e.g. assessing whether some groups may be "income poor" but "asset rich". This is usually not possible on the basis of micro data, as the results on income, consumption and wealth are often based on different underlying concepts and may suffer from specific measurement and estimation errors dependent on the underlying sources, as a consequence of which the results are seldom coherent, often leading to incorrect or even conflicting results.

Furthermore, the estimates aligned to national accounts totals provide measures on inequality consistent with macroeconomic aggregates. By construction, the results are fully consistent with economy-wide totals. This permits linking them to relevant macro-economic indicators, such as gross domestic product, total or average household income, consumption and saving figures, thereby broadening the scope for analyses. It may also assist in analysing how different household groups may be affected by specific macroeconomic trends or by specific policies.

Additionally, distributional results in line with national accounts totals ensure a high degree of international comparability. In this regard, national accounts are compiled according to internationally agreed standards. While the compilation of distributional estimates requires a number of statistical choices, assumptions and reliance on different data sources, a common methodology, developed in close collaboration with member states, helps to minimise the impact of such choices and maximise cross-country comparability of the results.

The compilation of the relevant results also has a positive impact on the quality of statistics. Increasing pressures to reduce the response burden as well as declining response rates make it more difficult to compile high quality micro statistics. Attanasio et al. (2006[7]), Garner et al. (2006[8]) and Pinkovskiy et al. (2014[9]) among others have shown an increasing gap between micro aggregates and national accounts totals over the last decades which may point to increasing measurement and estimations errors in the underlying micro data. Alignment to national accounts totals, which are the result of a process where various data sources are confronted and balanced, provides a vehicle to capture households and transactions that are typically underrepresented in micro data, while also improving comparability of results over time. Conversely, confronting national accounts totals with micro data for distributional information creates positive feedback loops for national accounts leading to improved estimates for macroeconomic aggregates.

The different underlying concepts and the alignment to national accounts totals leads to differences in inequality results. In general, the inclusion of imputed items such as *social transfers in kind* has a mitigating effect on income inequality. On the other hand, the alignment of available micro data to the relevant macro aggregates tends to increase income inequality, as the largest adjustments for the gaps between micro data and national accounts often concern items that are concentrated in higher income groups (such as property income). The overall impact on the distributional results depends on the size of the various adjustments. It is important that compilers are transparent on the main reasons for any differences. Meta data providing insight in the size of gaps between the micro and national accounts data and how they have been dealt with, as well as on the impact of the inclusion of specific items that are missing from the

micro data are very relevant. The Handbook provides guidance on the publication of this type of additional information.

1.4. Relation to other work

The work of the Expert Group on Disparities in National Accounts is closely related to other initiatives in the field of the compilation of distributional results.

First of all, together with the launch of the EG DNA, another expert group was initiated in response to the recommendations of the Stiglitz Report. The OECD Expert Group on Micro Statistics on Income, Consumption and Wealth (EG ICW) developed international guidelines for measuring the distribution of household wealth in micro statistics (OECD, 2013[10]), and a framework for the integrated analysis of micro data on household income, consumption and wealth (OECD, 2013[11]). The framework and these guidelines are at the basis of the OECD collection for the Income Distribution Database (IDD) which provides a comparable set of data on income distribution of households across OECD countries relying on micro sources, mainly household surveys. The work of this expert group has benefited the work of the EG DNA significantly, as it has led to more accurate, more complete, and more internationally comparable micro data sets on income, consumption and on wealth across countries. The work of the EG ICW was followed up in 2017 by a joint Eurostat-OECD expert group that worked on the construction of micro data sets containing consistent micro data across income, consumption and wealth (Balestra and Oehler, 2023[12]). This provides further impetus to the work on compiling distributional results in line with national accounts totals.

Another important initiative concerns the work by the ECB Expert Group on Distributional Financial Accounts (EG DFA). This group is developing distributional estimates of household (financial and non-financial) wealth for the euro area and EU economies. The work started in 2016[3] by comparing and bridging information from the financial accounts and the Household Finance and Consumption Survey (HFCS), both from a conceptual and a practical point of view. In a second stage, the group explored possibilities to further improve the coverage ratios between the micro and macro data, also assessing the possible use of administrative data. Furthermore, it started to define distributional indicators on the basis of user priorities. In response, it was decided to include non-financial assets in the work, because housing wealth and related mortgages turned out to be major components of household wealth. Their inclusion will provide for a more comprehensive overview of household distributional results and may help in cross-checking the distributional information on (the change in) wealth with the information as obtained from non-financial accounts as developed in the EG DNA. The EG DFA is currently developing methodology to compile distributional wealth estimates for the euro area and EU economies, with experimental results expected to be published by early 2024, and for this purpose, there is a close cooperation between the EG DNA and the EG DFA. This is important to harmonise the methodology across income, consumption and wealth, particularly as both work streams are likely to face similar conceptual and methodological challenges in the compilation of distributional results.

At the same time, in view of the new G20 Data Gaps Initiative (IMF, 2023[2]), the OECD launched an Expert Group on Distribution of Household Wealth early 2023, that will develop internationally harmonised templates and methodology to compile distributional results on wealth in line with national accounts totals. This work will benefit from the work of the ECB EG DFA and broaden the work to also include non-EU countries. The group will closely collaborate with both the EG DFA and the EG DNA in order to develop templates and guidelines for compiling the relevant results and to assist countries in their compilation efforts, with the aim of having regular annual distributional wealth results at the decile level within 18 months after the reference period by 2026.

The work is also closely related to the work by the WID.world team which develops so-called Distributional National Accounts (DINA). The main aim of this project is to compile annual estimates of the

distribution of income and wealth using concepts that are consistent with national accounts and using income, inheritance and wealth tax data, household income and wealth surveys, and wealth rankings provided by "rich lists" as their main inputs (see Blanchet et al. (Blanchet et al., 2021[13])). Whereas their aim is similar to that of the DNA work, both work streams differ in scope, concepts and methodology. Zwijnenburg (2017[14]) provides a detailed analysis of the differences between the two streams of work. The main differences relate to the fact that the income concept used by DINA is much broader than the one that is used in the DNA work. In DINA the focus is on national income instead of household income, thus also allocating income from other domestic sectors (e.g. primary income of financial and non-financial corporations as well as of government units) to households. Due to this and some other differences both work streams may lead to different distributional results. Therefore, it is important for both projects to be transparent on their concepts and methodologies used, so that users can understand the main reasons for possible differences in the results.

Finally, it is important to mention the launch of a new Eurostat Task Force on Household Distributional Accounts (TF HDA) in 2022 which will focus on the technical aspects of producing national distributional estimates on income and consumption in line with national accounts totals for EU countries. It will provide a forum to share experiences and knowledge across European countries which will help countries to start estimating their own distributional accounts or, for those countries who already do so, to further improve the quality of the estimates. Furthermore, it will work on further improving the quality of the experimental statistics produced through the Eurostat centralised exercise for those European countries that are not in the position to produce their own results. Because of the close links between the work of the EG DNA and the TF HDA, there will be a close collaboration between the two groups.

1.5. Overview of the Handbook

The Handbook is structured as follows. Chapter 2 presents the conceptual framework for compiling distributional results in line with national accounts totals for income, consumption and saving according to the methodology as developed by the EG DNA. It shows the link to the system of national accounts and provides an overview of the main income and consumption items that are distinguished in the process. Furthermore, it discusses the unit of analysis used in the compilation process and the main breakdowns in household groups targeted in the work. It also presents the template used by countries in compiling their distributional results.

Chapter 3 then provides a brief overview of the methodology to compile distributional results in line with this conceptual framework on the basis of the step-by-step methodology developed by the expert group. This methodology consists of five main steps which are discussed in more detailed in Chapters 4 to 9 and Chapter 13.

Chapter 4 focuses on the adjustment of the national accounts totals to exclude the amounts that do not relate to private households. As the coverage of the national accounts data is usually broader than the scope of the population included in distributional analyses, this requires some specific adjustments to arrive at the appropriate starting point for the compilation of distributional results. Subsequently, Chapter 5 discusses the micro data sources that may be used as input to derive the underlying distributions. This chapter provides a generic overview of micro data sources that may be available and discusses some of their main pros and cons. It also includes an overview of data sources that are currently used by countries in compiling their distributional results in line with the methodology as developed by the expert group.

As not all items will have a counterpart in the micro data, Chapter 6 discusses how to impute distributions for missing items, whereas Chapter 7 focuses on how to deal with gaps between micro and macro data. Both chapters provide generic discussions of these issues, whereas more detailed guidance in relation to specific underlying items is provided in separate chapters.

As multiple data sources may be used as input for the calculation of the distributional results, Chapter 8 discusses methods to link data across data sources to arrive at consistent data at the household level or at the level of household groups. After these steps, households can be clustered into household groups on the basis of the results aligned to national accounts totals. This is explained in Chapter 9.

Whereas Chapters 4 to 9 provide an overview of the basic methodological steps, Chapters 10 and 11 discuss the various income and consumption items in more detail. They provide the underlying definition for the various components, explain main common differences with items included in micro data sources, and discuss specific methodological issues that need to be considered when deriving distributional results.

As the methodology to derive distributional results in line with national accounts data will often require assumptions regarding the correct allocation of gaps between micro and macro data, and to allocate items for which micro data is lacking, Chapter 12. discusses how compilers may check the consistency and plausibility of the results. This includes analysis of the impact of the various steps in the compilation process on the overall results, the assessment of the internal consistency of the results, and analysis of the results over time.

Subsequently, Chapter 13 presents ways to publish the distributional results, also including indicators to obtain more insight in the levels of inequality in a country. The Handbook finishes with an overview of specific areas for further research in Chapter 14.

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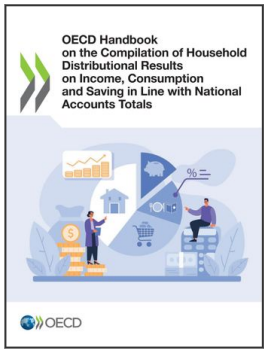
Notes

[1] In 2022, Eurostat also created a dedicated Task Force on Household Distributional Accounts (TF HDA) that will focus on technical aspects of producing national distributional estimates for income and consumption for EU countries.

[2] Whereas distributional results consistent with national accounts are based on a more comprehensive income concept, it has to be borne in mind that different users will have different needs and that some concepts may better suit some users than others. Micro-analysts may for example be more interested in a cash-based concept that may come closer to a household's perception of its income. In that regard, users should be aware of the conceptual differences between the various income measures used in distributional analyses, and compilers should properly explain the underlying concepts used in their compilation process, focusing on specific items that may be included or excluded in comparison with other distributional analyses.

[3] At that time, the group was called the Expert Group on Linking Micro and Macro statistics (EG LMM).



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