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Article

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Eurostat Review on National Accounts and Macroeconomic Indicators (EURONA)

Provided in Cooperation with:

Eurostat, Luxembourg

Suggested Citation: Coughtrie, Duncan; Fuller, Andy; Passerini, Paolo; Peperoni, Corrado (2022) : Measuring beneficiaries in satellite accounts on social protection, Eurostat Review on National Accounts and Macroeconomic Indicators (EURONA), ISSN 1977-978X, Publications Office of the European Union, Luxembourg, pp. 109-141

This Version is available at:

<https://hdl.handle.net/10419/309848>

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Measuring beneficiaries in satellite accounts on social protection

DUNCAN COUGHTRIE, ANDY FULLER, PAOLO PASSERINI AND CORRADO PEPERONI ⁽¹⁾

Abstract: Satellite accounts on social protection combine monetary and non-monetary data on social protection interventions. In the EU, the European system of integrated social protection statistics (ESSPROS) has been developed progressively since the late 1970s. Demand for data on social benefit recipients is longstanding but has intensified with the emergence of efforts to examine the impact of ageing populations and, more recently, the COVID-19 pandemic. The collection of data on social benefit recipients is, however, beset with methodological obstacles. Consideration of possible approaches to the collection of recipient data, and their relevance when applied across benefits with different characteristics (for example, different durations), demonstrates that there is no 'one-size fits all' solution. Consequently, some flexibility is needed to establish an overarching approach to the collection of data on recipients across the full spectrum of social benefits. Accordingly, the most pragmatic option appears to be to pursue a modular approach whereby sub-sets of benefits to which a single approach can be applied are grouped into modules, and a limited variation in approach is permitted between modules.

JEL codes: H55 Social Security and Public Pensions

Keywords: ESSPROS, social protection, satellite accounts, pension beneficiaries, social benefit recipients

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1. Introduction

Satellite accounts on social protection are described in Chapter 22 of ESA 2010 (§22.110–§22.122). They provide a multidimensional overview of social protection, drawing on concepts defined by Eurostat's European system of integrated **social protection statistics** (ESSPROS) ⁽²⁾ and implemented in EU official statistics since 1990. The accounts describe the size and composition of social protection benefits, their financing and the administrative costs involved. Social protection benefits are classified by function (in other words, the purpose for which they are granted), by type (for example, in cash or in kind), and whether they are means tested. Eight functions of social protection intervention are considered: sickness/health care, disability, old age, survivors, family/children, unemployment, housing, and social exclusion not elsewhere classified. The main definitions and accounting principles applied in ESSPROS are consistent with those of national accounts, particularly as regards expenditure on social benefits and receipts from social contributions ⁽³⁾.

A distinguishing characteristic of many satellite accounts is the inclusion of **non-monetary data**, such as data on CO₂ emissions by industry in the environmental accounts or number of treatments by type of health care in the health accounts. The linkage of such non-monetary data with monetary data can provide key indicators, such as CO₂ emissions per value added or the costs per treatment, providing further insight complementing that already available from monetary variables. Table 22.7 of ESA 2010 provides several examples of non-monetary data and of potential key ratios with monetary variables.

In the case of satellite accounts on social protection, non-monetary data can readily provide information on the number of benefit payments received by protected persons. However, the same person may receive more than one benefit. Accordingly, analysis of social protection systems also requires knowledge of the number of persons receiving at least one benefit to inform on the extent to which persons in need are assisted. This leads, for example, to the ESSPROS collection on the number of pension beneficiaries ⁽⁴⁾, which takes account of persons receiving more than one pension, providing numbers that exclude double counting of pension beneficiaries ⁽⁵⁾.

The complexity (for analysis purposes) created by individuals (or households) receiving multiple benefits is not limited to pensions but is inherent across most national social protection systems. For example, a person receiving an unemployment benefit might also get a family allowance, a housing benefit, or both.

However, even in the most favourable case of no individual receiving more than one benefit, there are a number of **measurement issues** linked to the characteristics of benefits. For example, in ESSPROS the number of pensioners is measured as the number of pension

⁽²⁾ See <https://ec.europa.eu/eurostat/web/social-protection/methodology>. An overview of the ESSPROS system is provided in Section 2 of this paper.

⁽³⁾ Eurostat recently published a Statistical working paper comparing ESSPROS and national accounts methodologies, describing the correspondences and differences between the respective definitions and classifications and setting out a series of standardised bridge tables. See *Links and differences between social protection statistics (ESSPROS) and national accounts — Methodological aspects and conceptual bridge tables – 2021 edition*.

⁽⁴⁾ See data on pension beneficiaries: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=spr_pns_ben&lang.

⁽⁵⁾ See Appendix III of the ESSPROS manual and user guidelines: <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-gq-19-014>.

recipients at the end of a reference year. Such data provide a reasonable representation of the number of pensioners having received pensions during the reference year, although the two numbers generally differ. But what about, for example, the number of unemployment benefit recipients? Could one look at the number of recipients existing at the end of a reference year and consider it representative of the situation during the year? Common sense suggests not as the number of unemployed persons, and therefore of potential beneficiaries, tends to fluctuate over the year much more than the number of retired persons. A snapshot of their stock at the end of the year in this case may not be representative of the phenomenon the data seek to represent.

Other examples are the distinction between **individuals and households as benefit recipients** and statistical units, the measurement of their socio-demographic characteristics, and the measurement of the number of beneficiaries for certain benefits in kind. These examples, the considerable variability in the nature of social benefits across countries, and the purposes for which they are granted, indicate that measuring non-monetary variables in satellite accounts on social protection is not a straightforward undertaking and that a number of prominent issues have to be considered.

Nevertheless, the advantage of having this kind of data collected within the ESSPROS framework resides in their quality, which results from rigorous compilation and validation processes, and in their international comparability, ensured by the harmonised classifications and methodology covering all data of the domain (monetary and non-monetary). This results in a high degree of consistency between data on expenditure and data on recipients.

From an informative standpoint, policy makers need detailed and timely official statistics to monitor the state and perspectives of social protection systems, for example to assess potential needs to reallocate resources to fill emerging gaps in the social protection safety net. ESSPROS data on social benefit recipients complement those on expenditure and can offer insights as to the effectiveness and responsiveness of social policies and their capacity to sustain those most in need. ESSPROS data on pensioners and pension expenditure are already used as an input to the Organisation for Economic Co-operation and Development's (OECD) social benefit recipients (SOCR) database, included in the OECD *Pension at a glance report*, in the European Commission's *Ageing Report* and *Pension Adequacy Report*, and are regularly used by the Indicators sub-group of the EU's Social Protection Committee.

Data on unemployment benefit recipients (UBR, see Section 5.2) are particularly useful, for example, to assess the reactivity of social protection parachutes to negative phases of the economic cycle. Other Eurostat domains already collect relevant labour market data (for example through the EU labour force survey), and an analysis in combination with UBR data would increase the possibility to assess the coherence and adequacy of social safety nets to the changing conditions of national and European labour markets.

Finally, the combination of non-monetary and monetary data makes possible the calculation of average benefit amounts. In the case of ESSPROS data on pension beneficiaries and pension expenditure, figures on average amounts are already disseminated by Eurostat in dedicated *Statistics Explained* articles ⁽⁹⁾. More generally, average amounts could be calculated

⁽⁹⁾ See https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Social_protection_statistics_-_pension_expenditure_and_pension_beneficiaries.

for all the benefits for which both expenditure and recipients' data are available. Nevertheless, the results should be interpreted with caution for several reasons. First, the combinations of social protection schemes in each country will have considerable influence on the figures recorded at an aggregate level. In other words, if average amounts are calculated from aggregates of benefits granted under different circumstances and serving different purposes, the results might not have any real meaning in terms of comparability between countries. Whenever possible, therefore, average amounts should be calculated only for detailed benefit classifications. In addition, data based on gross expenditure do not take into account the effect of taxes and social contributions payable on the benefits received, which varies both between and within countries. For example, while in one country a specific benefit may be tax free, in another, taxes (and/or social contributions) may be applied. For all these reasons, data on social benefit expenditure per beneficiary do not necessarily reflect the level or adequacy of the benefits granted in different countries.

All this considered, this article analyses measurement issues related to non-monetary variables related to social protection. These relate to the various **characteristics of the underlying benefits and of the underlying population of potential beneficiaries**, as well as to the objectives of the analysis. Which are the options available in terms of measurement variables for the number of social benefit recipients? Are there characteristics of social protection interventions that are relevant to define an effective approach to measurement? How are the various approaches to be used in relation to the different possible purposes of the analysis, including calculation of key indicators or ratios? While work in this area has focused mainly on the case of pension beneficiaries, in this article we consider the measurement of social benefit recipients more generally, with some specific focus on unemployment benefit recipients.

After a brief overview of ESSPROS key concepts in Section 2, these and other related questions are addressed in Section 3. Section 4 then covers more detailed aspects of non-monetary measures in satellite accounts on social protection, including possible types of **double counting of beneficiaries**, ways to deal with them and their implications for producing aggregations of social benefit recipients. The case of pension beneficiaries is dealt with in more detail in Section 5, based on the actual experience of the EU data collection run by Eurostat since 2006, alongside the possible extension to other types of social benefit recipients, specifically those receiving periodic cash unemployment benefits.

2. Overview of ESSPROS concepts

While the concepts, definitions, accounting and classification rules used by ESSPROS are in general harmonised with those used in national accounts, it offers an accounting framework that provides a more detailed multidimensional overview of social protection describing the size and composition of social protection benefits, their financing and the administrative costs associated with them. There is therefore a significant overlap in the scope of social protection covered by national accounts and by ESSPROS.

The scope of ESSPROS is delimited by its definition of social protection: *Social protection encompasses all interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a*

simultaneous reciprocal nor an individual arrangement involved. The list of risks or needs that may give rise to social protection is, by convention, as follows:

1. *Sickness/Health care*
2. *Disability*
3. *Old age*
4. *Survivors*
5. *Family/children*
6. *Unemployment*
7. *Housing*
8. *Social exclusion not elsewhere classified.*

The statistical unit used is the *social protection scheme* which is a distinct body of rules, supported by one or more institutional units, governing the provision of social protection benefits and their financing for which it is possible to draw up a separate account of receipts and expenditures. While this is not comparable with the statistical unit of national accounts – the institutional unit – it is usually possible to identify the sector of institutions operating schemes in ESSPROS to find some correspondence with the breakdown by institutional sector in national accounts.

ESSPROS is composed of a **core system**, collecting core information on the provision of social benefits and its financing, and a series of **modules** which collect supplementary information on specific aspects of social protection. More specifically, the core system collects quantitative data on social protection expenditure and the receipts of social protection schemes, accompanied by detailed qualitative information (see Section 5.2.3). Expenditure and receipts are broken down into a series of different sub-categories corresponding to the different types of transactions associated with these.

The key sub-category of expenditure is that on social benefits. These are transfers, in cash or kind, by resident schemes to households/individuals to relieve them of the burden of a defined set of risks/needs (the eight functions listed above). A unique feature of ESSPROS is that it implements a detailed classification system which categorises social benefits sequentially as follows.

1. **Characteristic:** social benefits are broken down by whether they are means-tested or not. Means-tested social benefits are those for which entitlement is explicitly or implicitly conditional on the beneficiary's income and/or wealth being below a specified level. This excludes benefits where the amount (but not the basic entitlement) is determined by income/wealth being below a specified level.
2. **Type:** social benefits are broken down by type according to how they are provided.
 - **Cash benefits** are benefits paid in cash with no evidence of actual expenditure required by beneficiaries. These are further sub-divided into periodic cash benefits paid at regular intervals (for example, weekly or monthly), and lump-sum cash benefits paid on a single occasion or as a lump-sum.
 - **Benefits in kind** are benefits granted in the form of goods and services. These may be provided directly by the social protection scheme or via reimbursement of certified expenditures.

3. **Function and detailed benefit classification:** social benefits are broken down by the function they serve – in other words the risk/need which they seek to address (listed in the definition of social protection given above) – and by detailed benefit type according to the specific purpose for which they are provided. ESSPROS defines a specific set of detailed benefit classifications for each function which broadly correspond to the most common benefits serving it.

This classification system is used in ESSPROS to produce detailed breakdowns of expenditure on social benefits that are unavailable in more aggregate data such as national accounts, and thus provide a platform for collecting other more detailed data – for example, data on recipients of social benefits.

3. Producing data on recipients of social benefits

The broad goal of producing data on social benefit recipients is to measure the **number of people** that are supported by all or part of the social protection system within a given reference period. Social benefits are designed to mitigate a wide range of social risks and are delivered in a variety of ways. Establishing processes for producing good quality and comparable data to meet the varying needs of users requires consideration of a number of key issues. Firstly, to define the concept of a recipient across diverse types of benefit, secondly to determine how these recipients should be measured, and, thirdly, how to aggregate data meaningfully when some recipients may receive more than one type of benefit.

Only once these are addressed can countries develop robust methods for deriving data on social benefit recipients from available national data sources. Indeed, in most cases, national sources are expected to include administrative microdata from national benefit registers, which typically include a raft of detailed information about each benefit recipient (for example, their characteristics) and each benefit they received (for example, type of benefit, amounts or dates of claims), structured in vastly different ways. The level of detail available in these sources goes well beyond that available from harmonised EU level micro-data such as from the European Union statistics on income and living conditions (EU-SILC) used in projects such as EUROMOD, a tax-benefit microsimulation model used to evaluate the effects of taxes and benefits in the EU ^(?). It is this level of detail and the fact that such registers cover all recipients of the benefits concerned, rather than a sample, which makes them a potent resource for deriving a range of data on benefit recipients at the level of individual benefits provided by individual social protection schemes. This cannot be achieved using existing harmonised EU level microdata. However, clear definitions are vital to enable consistent and comparable data on recipients to be derived from such complex data sources.

(?) See <https://euromod-web.jrc.ec.europa.eu/overview/what-is-euromod>.

This section considers options for the definition and measurement of recipients, how the resulting data can serve the needs of data analysts and policy makers, and the extent to which these approaches can be applied across the full range of social benefits covered by ESSPROS. The issue of how to aggregate data without double counting is treated in the next section.

3.1. Beneficiaries, recipient units and the concept of a recipient

A recipient can broadly be interpreted as a beneficiary of the social protection system. However, a more precise definition is required to ensure a harmonious interpretation of the concept and facilitate the production of comparable data.

Typically, social benefits provide support either to individuals (whether or not they belong to a larger household) or to households composed of one or more members ⁽⁸⁾. In the former case, the concept of a beneficiary clearly relates to the individuals in receipt of benefits. However, when benefits support households, eligibility and the amounts payable may be determined by the household composition and/or situation and the needs of all or only selected members of the household. In this case, multiple household members can be considered beneficiaries even though the direct recipient may be a single individual within the household. Key examples of this are child allowances and housing benefits which are often determined based on household composition (in other words, the number of children and/or adults) but paid to one individual within that household.

Accordingly, possible approaches to the collection of data on social benefit recipients covering benefits granted to both individuals and households include the following.

- Collect data on **grantees** – in other words the number of persons who are administratively registered as recipients of the benefits. For individual benefits this corresponds to individual claimants while for household benefits this corresponds to household members designated as lead claimant, usually the head of household.
- Collect data on individual **beneficiaries** – in other words the number of individuals benefiting from the benefits provided. For individual benefits this corresponds to individual claimants while for household benefits this corresponds to the number of members of claimant households.

The approach based on **grantees** results in data on recipients which include both persons who represent only themselves and persons who represent their households. In some ways their numbers are equivalent to collecting data using two observation units for recipients – individuals and households. However, the approach based on **beneficiaries** may be difficult to implement in practice because it requires, as a minimum, access to data on the number of household members and, ideally, data that describe these individuals (for example, by sex or age). Such data may not be readily available in cases where these details are not a key part of determining eligibility for benefits.

⁽⁸⁾ ESSPROS defines social protection in §16 of Part I of the ESSPROS manual and user guidelines as being 'intended to relieve households and individuals of the burden of a defined set of risks or needs'. For example, benefits in the family/children function include benefits to households for bringing up children and for supporting relatives other than children.

3.2. Benefit characteristics and measuring the number of recipients

The varying nature of social benefits and how they are delivered impacts on how recipients can be measured using different observations.

In principle, all social benefits can be separated into two groups depending on whether they have a duration or not. Duration in this respect refers to the duration of each individual claim or benefit spell. Benefits that have no duration start and end at the same point in time. This is the case, for example, when claiming a one-off lump sum cash benefit ⁽⁹⁾.

The classification system used by ESSPROS already supports a distinction between cash benefits with and without duration by having separate classifications for periodic and lump-sum benefits ⁽¹⁰⁾. A similar distinction is, in theory, possible for benefits in kind but is not part of the ESSPROS classification system. For example, the provision of a carer to help carry out daily tasks has duration, while the provision of specialised equipment (for example, custom vehicles) to disabled persons does not. Both are considered in ESSPROS simply as benefits in kind.

Social benefits with duration can be further broken down based on their **typical duration** relative to the reference period (the calendar year), resulting into three categories:

1. **Long duration:** Benefits typically lasting the whole year. For example, old age pensions and survivors' pensions.
2. **Medium duration:** Benefits typically lasting one or more months. For example, unemployment benefits.
3. **Short duration:** Benefits typically lasting at least a day but no more than a month. For example, paid sick leave benefits.

Benefit duration is connected to two other characteristics with implications for the measurement of recipients. First, benefit receipt is more likely to be continuous (a single spell during the reference year) in the case of benefits with longer duration and intermittent (split across several spells during a reference year) in the case of those with shorter or no duration. Second, the number of benefit recipients is more likely to demonstrate variation over the course of the reference year (seasonal or otherwise) in the case of benefits with medium, short or no duration. For example, paid sick leave is typically short in duration, with claims rising during the winter and reoccurring among individuals in poor health or susceptible to illness.

⁽⁹⁾ Note that the benefit spell does not necessarily correspond to the period for which a benefit is potentially payable, though these may in some circumstances be the same. For example, in the case of a monthly cash benefit, benefit spells can start or end at any point during the month, but the payments (full or partial) will always occur at the end of the month.

⁽¹⁰⁾ It can be argued that certain lump-sum payments are provided with the intent to provide support over a fixed period. For example, lump-sum benefits provided to the unemployed to help them start a company or become self-employed may be designed to support activity over a start-up period and, in some cases, be repayable if the business is not still active at the end of this period. However, for practical purposes, lump-sum benefits have to be treated as benefits without duration.

Based on the following definitions, four possible approaches are available for measuring the number of recipients.

- **Recipients over the year (ROY)** is the total number of different recipient units that receive a benefit at any point during the reference year.
- **One-off stock** is a single point-in-time observation of the number of recipient units in receipt of a benefit at a given moment, for example, start-year, end-year or on another specific date.
- **Annual average stock (AAS)** is an average of multiple point-in-time observations taken across the reference year. AAS describes the average number of recipient units in receipt of a benefit at any point during the reference year and can be interpreted as the volume of recipient-years – in other words the number of recipient-years completed during the reference year.

Average stocks serve to smooth out variations during the year to produce a more accurate estimate across the reference period. The observations used to derive the average can be of any frequency (for example, daily, weekly or monthly), and accuracy of the data will increase with the frequency of the underlying observations. The extent of accuracy gains deriving from higher frequency data depends, however, on the duration of the benefit concerned. For example, in the case of benefits with long duration (for example, pensions) recipient numbers tend to remain relatively stable during the year, thus reducing the need to smooth out fluctuations.

- **Flows** include **inflows** and **outflows**. Inflows refer to the number of benefit spells starting during the reference year and outflows to the number of ending spells ⁽¹⁾.

A single recipient unit can potentially experience multiple distinct benefit spells within the reference period in association with a single type of benefit and thus contribute multiple inflows/outflows to the flow data for the benefit. Conceptually, therefore, it can be considered a measure of the initiation and termination of recipient units within the process of claiming benefits rather than a measure of recipients.

Not all these approaches can be applied to all benefits (see Table 1). Stock (both one-off and annual average) can only be calculated for benefits with duration because benefits with no duration are essentially instantaneous: at any point in time there is effectively a stock of zero. Further, one-off stock may not be reliable for benefits which have a variable number of recipients over the course of the year. For this reason, this approach can only be reliably applied to benefits of long duration unaffected by such factors – for example, pensions and long-term care benefits. For benefits potentially subject to periodic variation, accurate representation of recipient numbers requires the use of AAS to smooth out peaks and troughs.

⁽¹⁾ Inflows are alternatively referred to as successful claims, caseloads or entrants while outflows are sometimes referred to as exits. Note that flows can also be measured as unique recipients that started/ended at least one successful claim during the reference year. However, flows based on benefit spells are typically preferred to those based on unique recipients for three reasons: (1) coherence with annual average stock data (both account for all spells of receipt), (2) the data are more informative when trying to understand changes in the demand for benefits and (3) they enable a more straightforward breakdown by characteristics of recipients (in other words, based on characteristics at the start/end of the benefit spell).

Both ROY and flows are applicable to all benefits, with or without duration. This is because their calculation does not consider the time and duration of a benefit claim but only if a claim took place or started/ended during the reference year ⁽¹²⁾.

Table 1: Applicability of measurement approaches to benefits of different durations

Approach	Duration of benefit			
	Long	Medium	Short	None
One-off stock	✓	✗	✗	✗
Annual average stock (AAS)	✓	✓	✓	✗
Recipients over the year (ROY)	✓	✓	✓	✓
Flows (inflows/outflows)	✓	✓	✓	✓

3.3. Implication for use in data analysis and policy making

The extent to which a particular measurement approach is applicable is not the only significant consideration, it is equally important that the resulting data are relevant for users. Indeed, relevance is one of the guiding principles of the quality assurance framework of the European Statistical System ⁽¹³⁾. In this respect, it is important to consider the potential uses of data on social benefit recipients and how these can be fulfilled by the different approaches to measurement.

There are three main policy related needs:

1. **Trends:** time-series data on the number of recipients provide policy makers with an indication of relative changes through time in the demand for benefits and these, in conjunction with relevant contextual data, can be used to make projections of anticipated demand and corresponding funding needs.
2. **Adequacy:** combining data on the number of recipients with the related expenditure can provide indications of the adequacy of the level of support provided in relation to relevant socio-economic indicators (for example, poverty thresholds or level of previous income from work). This requires coherence between data on recipients and corresponding data on expenditure (in other words, data should be collected using common statistical principles).
3. **Coverage:** comparing data on the number of recipients with the size of a corresponding target population can provide policy makers with an indication of coverage and whether a benefit is effective in reaching its intended target population. This requires coherence between data on recipients and data for the relevant target population(s).

⁽¹²⁾ Note that in the case of benefits without duration, there is no distinction between inflows and outflows because both will count the number of benefit claims during the year.

⁽¹³⁾ See <https://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646>.

3.3.1. TRENDS

All approaches to the concept of a recipient and to measurement can be used to provide information on trends in the number of recipients (of benefits to which they can be applied). The key issue is the extent to which they are consistent with trends in expenditure.

Table 2: Ability to assess trends by measurement approach and duration of benefit

Approach	Duration of benefit			
	Long	Medium	Short	None
One-off stock	✓	✗	✗	✗
Annual average stock (AAS)	✓	✓	✓	✗
Recipients over the year (ROY)	✓	✓	✓	✓
Flows (inflows/outflows)	✗	✗	✓	✓

The extent to which different measurement approaches can produce data on trends in the number of recipients that are consistent with those of expenditure varies for benefits with or without duration (see Table 2):

- **One-off stock** is a reliable measure of recipients only for benefits with long duration and this follows through to the analysis of trends. For relevant benefits (for example, pensions), one-off stock can serve as a proxy for AAS and be interpreted in the same way.
- **AAS** accounts for the volume of recipient-years (in other words, accounts for both the number of recipients and the duration of their benefit spells within the reference year) and, as such, is an approach (for benefits with duration) that is fully consistent with expenditure recorded on an accrual basis. In a stable situation, trends in AAS should be directly in line with trends in expenditure and any divergences will reflect factors such as changes in the structure/characteristics of recipients or rates of benefit payable.
- **ROY** and **flows** are the only approaches that can be used to measure recipients of benefits without duration and, therefore, trends in their numbers. In such cases, both provide a useful but different perspective, but trends in flows will more closely align with those in expenditure. However, in the case of benefits with duration, trends for ROY and for flows can deviate dramatically from trends in expenditure when the average duration of benefit spells changes over time. This may occur, for example, in the case of unemployment benefits in response to changing labour market conditions. This can lead to counterintuitive and potentially confusing results for data users (for example, trends in recipients and in expenditure moving in opposite directions).

3.3.2. ADEQUACY

Assessment of adequacy requires a combination of data on expenditure and recipients to produce indicators that make it possible for the value of social benefits received to be compared with baseline indicators such as poverty thresholds, the level of the minimum or average wage, and so on. Ideally, such data would also support comparison across different benefits and across countries.

Comparable expenditure data are readily available from the ESSPROS core system. These data are reported on an accrual basis for each reference year – in other words expenditure for a given reference year is an aggregation of all expenditures deriving from claims and liabilities created in relation to events taking place during the reference year. To illustrate this, consider the situation where a person is granted a benefit in relation to circumstances in November of year t but the benefit is not disbursed until January of year $t+1$. In this case, the amounts disbursed will be reported in the expenditure for year t and not $t+1$. Accordingly, combining this with data on recipients to measure adequacy requires the data of recipients to represent an aggregation of all individuals in receipt of benefits during the reference year.

It is important to recognise that the concept of adequacy has a different meaning (at least in terms of the amounts needed) when considering social benefits that support individuals and households. In general (but certainly not exclusively), the interest in adequacy will be at the same level as the recipient unit of a benefit – for example, the adequacy of a housing benefit would normally be considered in relation to the needs of the household. However, the overall needs of a household are not necessarily a simple linear function of the number of its members (in other words, the characteristics of different members and overall composition matter). Consequently, the concept of individual beneficiaries may not be sufficient to assess reliably the adequacy of benefits providing support to households. However, data on grantees (for benefits delivered to the respective units) should always be relevant, provided the nature of the benefit is considered.

Table 3: Ability to assess adequacy by measurement approach and duration of benefit

Approach	Duration of benefit			
	Long	Medium	Short	None
One-off stock	✓	✗	✗	✗
Annual average stock (AAS)	✓	✓	✓	✗
Recipients over the year (ROY)	✗	✗	✗	✓
Flows (inflows/outflows)	✗	✗	✓	✓

The extent to which different measurements of recipients can produce meaningful indicators on adequacy when combined with data on expenditure varies (see Table 3):

- **Expenditure / one-off stock:** as mentioned above, one-off stock is applicable only for benefits with long durations, for which it can serve as a proxy for AAS and be interpreted in the same way. For this reason, the ratio expenditure / one-off stock may represent a reliable estimation only for the average amount granted to those receiving this kind of benefit (for example, pensioners).
- **Expenditure / AAS** represents the average expenditure per recipient-year – in other words the average cost of a benefit paid to one recipient for a whole year. This approach – by

definition – removes the impact of benefit duration, so results can always be compared in a meaningful way between benefits of different durations. However, this approach can only be used for benefits with duration. Moreover, there is a risk that users of the data interpret results to be expenditure per recipient and not expenditure per recipient-year. In the case of an unemployment benefit payable for a maximum of six months, for example, the observation of expenditure / AAS would show the average amount paid to one recipient if the benefit was received for a whole year, a figure that could potentially be up to twice the maximum that can legally be received in a single spell. Expenditure / AAS is undoubtedly a valuable tool for comparison of the relative costs of different benefits, but users need to be appropriately informed of how the values should be interpreted.

- **Expenditure / ROY** represents the average amount of benefit received per recipient within the year. Since ROY takes no account of the duration of benefits, the value of the ratio will be affected by changes in the average duration of benefit receipt during the year and may vary without any change in the value of the benefits paid out per recipient/period. For example, an unemployment benefit payable for up to a maximum of six months is liable to show a lower value than an unemployment benefit payable for a year, even if the level of the monthly payment is equal. This can therefore convey a misleading message to users in the case of benefits with duration. However, it can provide a useful measure of adequacy in the case of benefits without duration as the source of non-comparability does not apply.
- **Expenditure / inflow** of recipients may give an indication of the cost incurred within the reference year per new successful claim (in other words, claims started during the reference period). The expenditure in the numerator will, however, include amounts related to spells that started prior to the reference year but continued within it, which will not be considered in the denominator. This indicator is thus liable to be unreliable for benefits with medium or long duration and, especially those for which flows are not reasonably constant over time. The observation can provide a useful measure of adequacy only for benefits of short or no duration.

3.3.3. COVERAGE

Assessment of coverage requires the combination of data on recipients and data on a corresponding target population to produce indicators that provide information on the extent to which social benefits are provided to those potentially in need. To provide meaningful results, both sets of data need to be measured in the same way.

Data on reference populations typically derive from demographic statistics, which can provide information on total population by age/sex/nationality, or surveys such as the EU labour force survey (EU-LFS) and EU statistics on income and living conditions (EU-SILC), which can provide information on potential target populations such as the number of unemployed (EU-LFS) or the number of people at risk of poverty or social exclusion (EU-SILC). Such sources generally provide data based on point-in-time observations – either one-off stock or AAS depending on the methodology. For the EU-LFS, for example, Eurostat publishes both quarterly (one-off stock) and annual data (AAS, based on the average of four quarters). Accordingly, only recipient data based on stocks can be used to support a meaningful assessment of coverage using such sources. For example, stock data on the number of recipients of full unemployment benefits can be combined with EU-LFS data on the number of unemployed

according to the International Labour Organization's definition ⁽¹⁴⁾ to derive coverage rates for full unemployment benefits. Indeed, such rates have already been produced and published by the OECD using data from their SOCR database ⁽¹⁵⁾.

Indeed, to use data on ROY, the reference population would theoretically have to be the number of different individuals who were part of the target population at any point during the year. For example, to assess coverage of unemployment benefits the observation of ROY would have to be compared to the total number of people who were unemployed at any point during the reference year. Typically, such data are not readily available. However, in cases where the composition of the underlying target population changes very slowly over the reference year, an average stock of the reference population could be used as a proxy denominator (see Table 4).

Table 4: Ability to assess coverage by measurement approach and duration of benefit

Approach	Duration of benefit			
	Long	Medium	Short	None
One-off stock	✓	✗	✗	✗
Annual average stock (AAS)	✓	✓	✓	✗
Recipients over the year (ROY) ⁽¹⁾	✗	✗	✗	✗
Flows (inflows/outflows)	✗	✗	✓	✓

⁽¹⁾ This approach can be applied only in cases where the composition of the reference population is stable over the year.

To use data on flows, the reference population would have to be the flows into the target population during the year. Such data are also not readily available but there are a few exceptions. For example, data on the number of births and deaths each year are readily available and could be used to assess coverage of birth grants and death grants.

The limited availability of reliable observations of target populations that are compatible with observations of ROY or flows means that these approaches are generally not suitable for the assessment of coverage, although there can be exceptions.

3.4. Measurement of the characteristics of benefit recipients

While the primary aim of developing a collection of data on social benefit recipients is to quantify the total number of recipients of social benefits, a further important objective is to provide information on their characteristics, providing an additional layer of information for data analysts and policy makers. In this regard there are two key concerns – what characteristics to measure and how to measure them.

The different concepts of a recipient give rise to issues in selecting characteristics to measure. Both concepts of a recipient imply the measurement of individual characteristics. However, household characteristics are likely more pertinent for understanding the recipients of household benefits. Indeed, certain important characteristics cannot be applied to both individuals and households. This could include, for example, total household size or the number of dependants. Further, the relevance of different breakdowns varies across benefits.

⁽¹⁴⁾ Persons who are without work, currently available for work and seeking work. See <https://stats.oecd.org/glossary/detail.asp?ID=2791>.

⁽¹⁵⁾ See <https://www.oecd.org/els/soc/recipients-socr-by-country.htm#coverage>.

For example, an appropriate set of age groups for benefits targeted at persons of working-age (for example, 15–24, 25–54 and 55–64 years) is not appropriate for benefits targeted at retirees.

Accordingly, two possible approaches may be considered. The first is to collect a limited set of harmonised breakdowns across all benefits. This ensures that breakdowns can be aggregated across different types of benefits, even if some are not applicable for some benefits. The number of breakdowns must be constrained to avoid excessive burden being placed on data production (Principle 9 of the European Statistical System's quality assurance framework). The second is to collect different breakdowns for different types of benefits. This would maximise the relevance of data for analysis of specific types of benefit but restrict possibilities to aggregate and conduct analysis spanning different types of benefit.

The fact that the characteristics of specific recipients may change during the reference period (for example, age) gives rise to complications when using certain approaches to the measurement of recipients related to when characteristics should be measured. Generally, there are three possible methods.

1. **Point of observation:** this can be applied to all measurement approaches except ROY. One-off stock is an observation at a point in time and inflows and outflows occur at a point in time so that the characteristics of the recipients can be recorded at this point. AAS is simply an average of multiple one-off observations. In this case, for example, if age is measured at each of the observation points contributing to the average, an individual recipient may contribute to the stock in two age breakdowns within a single reference year (as proportionate parts of a recipient-year). By contrast, observations of ROY are not connected to a specific point in time.
2. **Single point in time during the reference year** (for example, start/middle/end of the year): theoretically, this can be applied to all measurement approaches, but there will be cases where the characteristics at the single point in time do not reflect the characteristics at the time of benefit receipt. For example, some recipients whose benefit spell did not encompass the selected point of observation may have been one year younger/older at the time they actually received the benefit, resulting in a minor loss of accuracy.
3. **Start of the benefit spell for benefits with duration and the time of receipt for benefits without duration.** Theoretically, this can be applied to all measurement approaches, but is liable to significant accuracy issues for both stock (one-off or annual average) and ROY in the case of benefits with medium/long duration (in other words, in the case that benefit spells started a long time before the start of the reference year). This can, however, be used for flow data which refer only to the start/end of benefit spells during the reference year. In the case of ROY there is the additional risk that one recipient claims multiple times in the reference year thereby requiring a choice to be made in terms of which spell to use for observing their characteristics.

3.5. A single common approach or a modular approach

There are clearly advantages and disadvantages to each of the available approaches to both key building blocks:

1. **Concept of a recipient:** collecting data on individual beneficiaries may be impractical. Accordingly, the only viable approach is to simply collect data on grantees – in other words individual claimants for individual benefits and lead claimants for household benefits. This, however, does not provide a full picture of those who benefit from social benefits and limits the relevance of any information on the characteristics of recipients in the case of benefits provided to households.
2. **Measurement of the number of recipients:** no single approach is applicable to all ESSPROS benefits or provides data meeting all user needs. Annual average stock (including, as a proxy, end-year stock for benefits with long duration) is the best option for providing useful data on benefits with duration but cannot be used for benefits without duration. Recipients over the year and flows can be used for benefits with and without duration but are less relevant in the case of the former. Accordingly, a combination of approaches is needed to provide useful data for all forms of social benefits.

Given that there is no ‘one-size fits all’ solution, some flexibility is needed in the design of an overarching approach to the collection of data on social benefit recipients. The most pragmatic option is to pursue a modular approach whereby sub-sets of benefits to which a single approach can be applied are grouped into modules, and a limited variation in approach is permitted for different modules (in other words, allowing the use of different, possibly multiple, measurement approaches). In such an approach, the flexibility available in the design of specific modules should be clearly defined with clear restrictions on what elements are allowed to vary and to what extent these may vary, to ensure harmonisation where possible. It is equally important that the impact of such flexibility is made clear in terms of the use of resulting data (for example, aggregation of data of different modules).

4. Aggregating data on recipients of social benefits and treatment of double counting

Establishing a process for the production of data on social benefit recipients is not limited to setting out how to quantify recipients at the level of individual benefits. It is also important to determine how data on recipients of individual benefits can be combined to produce aggregates that provide information on the number of recipients for groups of benefits.

To provide meaningful results, any data on social benefit recipients that are to be aggregated need to not only be measured in the same way but also treated for potential double counting. In this section, the issue of double counting and its implications for producing aggregates are explained.

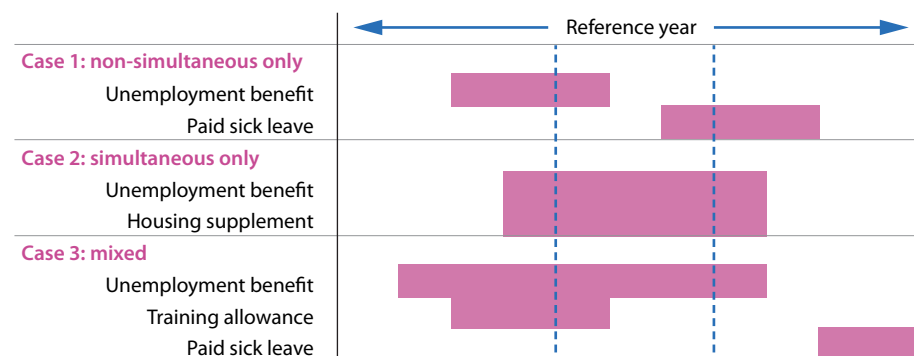
4.1. Double counting of social benefit recipients

Social protection systems address a wide range of risks and needs. As a result, an individual or household may claim multiple social benefits within a reference year. Quantifying the number of **unique recipients** of a group of benefits thus entails a risk of double counting when one recipient receives more than one of the benefits covered in the relevant reference period. In this regard, two scenarios need to be distinguished:

1. **Non-simultaneous receipt:** a recipient receives only one benefit at a given point in time, or over a given part of the reference period. For example, in one year, an individual might receive unemployment benefit for some months and then later, once in work, receive paid sick leave but is only ever in receipt of one of the benefits at any given point in time.
2. **Simultaneous receipt:** a recipient receives multiple benefits at a given point in time, or over a given part of the reference period. For example, an individual might receive both an unemployment benefit and a housing supplement at the same time.

These situations are further illustrated through example cases presented in Figure 1.

Figure 1: Simultaneous and non-simultaneous receipt of benefits



Magenta: spells of benefit receipt. Dashed blue lines: example point-in-time observations.

This figure presents three example cases.

Case 1: individual receives unemployment benefit and paid sick leave non-simultaneously.

Case 2: individual receives unemployment benefit and a housing supplement simultaneously.

Case 3: individual receives unemployment benefit and a training allowance simultaneously and paid sick leave non-simultaneously.

4.2. Risk of double counting and approach to measurement

The risk of double counting when quantifying the number of unique recipients of a group of benefits depends on the measurement approach and, more specifically, the type of observation used.

- **ROY** is based on observations over the reference period. A recipient is counted as one unit irrespective of when, or for how long, they receive the benefit during the year. Measurement of ROY across a group of benefits can thus be affected by double counting arising from both simultaneous and non-simultaneous receipt.
- **One-off stock** and **AAS** are based on point-in-time observations. In the case of non-simultaneous receipt, a point-in-time observation can only ever count a recipient in relation to one of the group of benefits (see Figure 1). This means that double counting can occur only in case of simultaneous receipt.
- **Flows (inflows and outflows)** are based on observations of benefit spells starting or ending during the reference year and are largely unaffected by double counting ⁽¹⁶⁾. Indeed, a recipient with multiple spells starting/ending during the year is expected to contribute more than once to the number of inflows/outflows.

The potential for double counting associated with each measurement approach is summarised in Table 5. In general, the risk of double counting is reduced when using approaches based on point-in-time observations (in other words, AAS or one-off stock) compared with those that use observations over the reference period (in other words, ROY) because they remove the risk arising from benefits received non-simultaneously.

Table 5: Potential for double counting by measurement approach

Approach	Benefits received simultaneously during the year	Benefits received non-simultaneously during the year
One-off stock	✓	✗
Annual average stock (AAS)	✓	✗
Recipients over the year (ROY)	✓	✓
Flows (inflows/outflows)	✗	✗

4.3. Implications of double counting for data production

A key preparatory step in measuring the total number of unique recipients for a group of benefits is to assess the risk of double counting between each possible pair of social benefits within the group to identify where it can arise in practice. In a group covering n benefits there are $n!/(2*(n-2)!)$ possible combinations. For example, if 4 benefits are covered, 6 pairs of benefits need to be assessed, while if 8 benefits are covered, the number rises to 28 pairs, and so on. This underlines the importance of the issue of double counting in selecting aggregates to be produced and the potential scope of its impact on data production.

⁽¹⁶⁾ Note that there is an exception to this in ESSPROS. A risk of double counting can arise due to reporting conventions related to the treatment of multifunction benefits. If a multifunction benefit is split into components which are reported separately, then the same inflow/outflow for that recipient will be recorded in the data for each component and double-counted if these are aggregated.

The extent of this issue for each country depends not only on the aggregates requested (universal to all countries) but also on the characteristics of their national social protection systems (country specific).

National systems will differ in terms of the number of benefits made available in association with a chosen aggregate. Indeed, social protection addressing a particular risk or need may be delivered via a relatively small number of benefits in some systems, while in others it may be provided through a wider range of separate benefits (for example, separate benefits for specific target groups.). The number of pairs of social benefits to be assessed for double counting will thus vary from country to country.

Another key aspect is the rules governing access to social benefits (in other words, eligibility rules/criteria), which are the main source of information for assessing the potential for double counting. While such rules are unlikely to rule out non-simultaneous receipt of different benefits within a reference year (though there could be some exceptions), they can often rule out the simultaneous receipt of certain combinations of benefits. This is achieved via two types of rules.

- **Rules explicitly preventing simultaneous receipt:** the eligibility criteria for a benefit explicitly exclude persons in receipt of another benefit (or group of benefits). This is the case, for example, when unemployment insurance is granted to the unemployed with a sufficient social contribution record for a temporary period whereas unemployment assistance is granted to the unemployed not eligible for unemployment insurance or whose entitlement has expired.
- **Rules implicitly preventing simultaneous receipt:** the eligibility criteria do not specifically mention other benefits in the group of interest but effectively create two mutually exclusive groups of recipients. This is the case, for example, when paid sick leave is only available to people in employment while full unemployment benefit is only available to people who are full-time unemployed (in other words, without work but available for and actively seeking work).

Furthermore, the broad organisation of the social protection system and its applicable rules may sometimes exclude the possibility of simultaneous receipt between large groups of benefits. This applies, for example, when there is a clear split between benefits provided to distinct segments of the population, such as between benefits for people of working age and non-working age, between benefits for people with and without work, or between benefits for people with and without disabilities.

Simultaneous receipt is, therefore, typically much less of an issue in practice than non-simultaneous receipt. This further underlines the advantage of using measurement approaches based on point-in-time observations (in other words, AAS or one-off stock) which are only affected by double counting arising from simultaneous receipt. Consequently, the extent of the need to treat double counting during the production of aggregates is anticipated to be vastly reduced for such approaches relative to those affected also by non-simultaneous receipt (in other words, ROY).

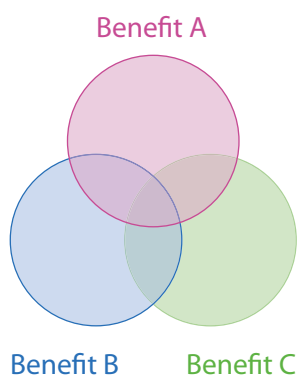
4.4. Aggregation and treatment of double counting

In practice, there are two methods for treating double counting when deriving the total number of unique recipients of a group of benefits. The first is to calculate the extent of double counting between all benefits covered and deduct it from the sum of the recipients of each constituent benefit (in other words, calculate and apply an adjustment for double counting). The second is to directly calculate the total number of unique recipients without double counting. The most desirable method will depend on the data collection requirements (in other words, whether the extent of double counting needs to be identified) and on the nature of the source data used.

It is important to recognise an important pitfall to be avoided. Quantifying double counting for a group of benefits is not as simple as quantifying the number of shared recipients for every pair of benefits within the group and then summing these together. This may overstate the extent of double counting because recipients may receive more than two benefits within the group (see Figure 2).

This further implies that a separate quantification of double counting, or of the unique number of recipients, is required for each aggregate compiled even when a high-level aggregate is based on aggregations at a lower-level (see Section 5.1.3, Figure 3). For example, in the case of ESSPROS, when producing a function level aggregate, the aggregates for means-tested and non means tested benefits within the function could be used but a specific calculation of the double counting between the two groups of benefits would still be needed. The only exception to this is if it is already known that double counting of recipients of the groups of benefits covered by the two lower-level aggregates is not possible. Nevertheless, this underlines the need for careful selection of aggregates to avoid an excessive work burden for data producers.

Figure 2: Overlaps in recipients of three benefits and quantifying double counting and unique recipients



Benefit(s)	Total unique recipients
A	A
B	B
C	C
A & B	$A + B - A \cap B$
A & C	$A + C - A \cap C$
B & C	$B + C - B \cap C$
A & B & C	$A + B + C - A \cap B - A \cap C - B \cap C - A \cap B \cap C$

Note: adjustment for double counting is shown in red.

Accordingly, the availability of suitable source data is a key constraint in practice. To make possible the identification of the unique recipients of a selected group of benefits, source data need to (i) cover the sub-set of benefits within that group that are potentially affected by double counting (in other words, those for which overlaps in recipients cannot be ruled out based on the eligibility rules) and (ii) provide information on the claims of each recipient of each benefit in a way that makes possible the construction of the observations used in the measurement approach adopted. A consequence of this is that deriving broader aggregates requires source data covering a larger selection of benefits.

In practice, the different parts of a country's social protection system are often spread across different institutions and providers, each maintaining their own monitoring systems with tailored approaches to measurement and observation and thus potentially limiting possibilities to combine data. In recent years, however, significant progress has been made in terms of initiatives to combine multiple sources of data for different benefits using personal identifiers (for example, personal ID number, or social insurance number) – in other words to construct linked benefit registers. The presence of compatible personal identifiers in datasets covering recipients of different benefits is key to the identification of individuals appearing in more than one dataset and the treatment of any double counting that arises.

5. Approach in ESSPROS modules on pension beneficiaries and unemployment benefit recipients

The considerations presented in the previous sections have been tested empirically in the longstanding ESSPROS module on pension beneficiaries (PB) and, more recently, in the experimental module on unemployment benefit recipients (UBR). These modules collect data on different sub-sets of social benefits and present different methodological issues related to the concept of a recipient, the measurement of the number of recipients, and the treatment of double counting ⁽¹⁷⁾.

5.1. Pension beneficiaries module

The aim of the module on pension beneficiaries ⁽¹⁸⁾, is to calculate the total number of unique beneficiaries (in other words, without double counting) in each of seven categories of pensions and then in each of the four functions to which they belong, in one inter-function aggregate (old age and survivors pension beneficiaries) and an overall aggregate covering all pensions. Table 6 illustrates the structure of the ESSPROS pension beneficiaries module.

⁽¹⁷⁾ The double counting described in this section stems directly from the organisation of the ESSPROS classification system and associated questionnaires, notably the types of aggregates which are requested, which were originally formulated to collect data on expenditure (for which there is no issue of double counting).

⁽¹⁸⁾ See Annex II of Regulation (EC) No 458/2007 of the European Parliament and of the Council on the European system of integrated social protection statistics (ESSPROS), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32007R0458>.

Table 6: Categories of pension and aggregates thereof

Category of pension	Aggregates		
	Function	Inter-function aggregation	Total
Disability pension	Disability		All pensions
Early retirement in case of reduced ability to work			
Old age pension	Old age	Old age and survivors	
Anticipated old age pension			
Partial retirement pension			
Survivors' pension	Survivors		
Early retirement for labour market reasons	Unemployment		

Note: at the most detailed level, ESSPROS also includes separate classifications for means-tested and non means-tested variants of each category of pension.

Data on beneficiaries are collected only for pensions for which non-zero expenditure has been reported in the ESSPROS core system. These data are collected at both the level of individual schemes and the level of all schemes. Breakdowns by sex are required at the level of all schemes but are optional for individual schemes.

5.1.1. THE CONCEPT OF A RECIPIENT AND MEASURE USED

Pensions are benefits typically targeted to individuals, mainly to protect them from risks related to old age, disability, early retirement for labour market reasons or loss of a spouse (or family member). Accordingly, associated eligibility criteria tend to be limited to conditions to be met by the individual recipient (for example, age and contribution history for old age pensions) ⁽¹⁹⁾. With this in mind, the concept of recipient adopted by the pension beneficiaries module is **the beneficiary**, as defined above in Section 3.1. However, it could equally be interpreted as **the grantee**, as they are interchangeable in the case of benefits provided to individuals.

Pensions are periodic cash benefits that are granted for extended periods, usually spanning several years. For example, old age and survivors' pensions are lifelong benefits, typically paid until death. Accordingly, the volatility in the number of recipients during the reference year is expected to be minimal. This characteristic differentiates pensions from other social benefits covered by ESSPROS and enables the use of **end-year stock** as a reliable low-cost solution to collecting data on the number of pensioners (in other words, minimises the work burden placed on data producers). This approach does not account for persons who received a pension during part of the year but not at the end of it and is therefore liable to understate the total number of beneficiaries during the reference year (ROY). However, such a situation is only likely to arise for pensions characterised by relatively higher turnover (for example, early

⁽¹⁹⁾ One exception is survivors' pensions which may include conditions to be met by a departed person (for example, contribution history) in addition to conditions to be met by the survivor (for example, degree of kinship, personal income). Furthermore, multiple survivors may derive rights to a survivors' pension from a single departed person, albeit the amounts granted may be affected by such a situation. For example, a surviving spouse, divorced spouse, and children may derive a right from a single departed person. Regardless, even in the case of survivors' pensions, the benefits are granted to and intended to assist individuals.

retirement for labour market reason) and 89 % of EU pension beneficiaries in 2018 received old age and/or survivors' pensions, for which this does not tend to be the case. Accordingly, the marginal gains in data accuracy that would be obtained from using other approaches (AAS or ROY) would be limited and therefore would not justify the additional costs (in terms of data production complexity) of their adoption.

5.1.2. DOUBLE COUNTING: TYPES AND TREATMENT

In this point, some more detailed aspects of double counting in pension beneficiaries statistics are illustrated with the example of the results of the 2020 data collection (reference year 2018). These demonstrate that pensioners may receive more than one pension in almost all countries (32 out of 35 taking part). The extent of this varies depending on national rules.

The methodology for pension beneficiaries describes six different types of potential double counting (pensioners receiving more than one pension) requiring consideration during the production of data.

- **Type 1. At detailed benefit classification level inside a single scheme:** beneficiaries may receive multiple pensions belonging to the same category of pension (in other words, the same detailed benefit classification) from a single scheme. This type of double counting is recorded in several countries where, according to the national legislation, an individual may receive two or more pensions of the same category, paid by the same scheme. Those involved are generally, but not exclusively, schemes paying old age pensions.
- **Type 2. At detailed benefit classification level between schemes:** beneficiaries may receive multiple pensions belonging to the same category of pension (the same detailed benefit classification) from different schemes. This double counting must be removed when reporting beneficiaries at the level of all schemes, so that those pensioners who receive a specific category of pension from two or more schemes are only counted once. This is the case, for example, in Denmark, where different subsets of retirees receive old age pensions from three different, mutually exclusive, schemes, but all receive a supplementary pension belonging to the same category, paid by a separate pension scheme (Arbejdsmarkedets Tillægspension, ATP).
- **Type 3. At detailed benefit classification level between non means-tested and means-tested sub-categories:** beneficiaries may receive both non means-tested and means-tested variants of the same category of pension. This double counting must be removed when reporting the aggregation of non means-tested and means-tested pensions at the level of all schemes. This is the case, for example, in Austria, where those receiving basic old age, disability and survivors' pensions, also receive, subject to a means-test, a supplementary pension.
- **Type 4. At intra-function level:** beneficiaries may receive pensions belonging to different detailed benefit classifications within a single function. This type of double counting may arise in either the disability function (type 4.1) or the old age function (type 4.2).
 - **Type 4.1:** beneficiaries may receive multiple pensions belonging to different pension categories within the disability function. Such beneficiaries should only be counted once in the total beneficiaries reported for the function as a whole.

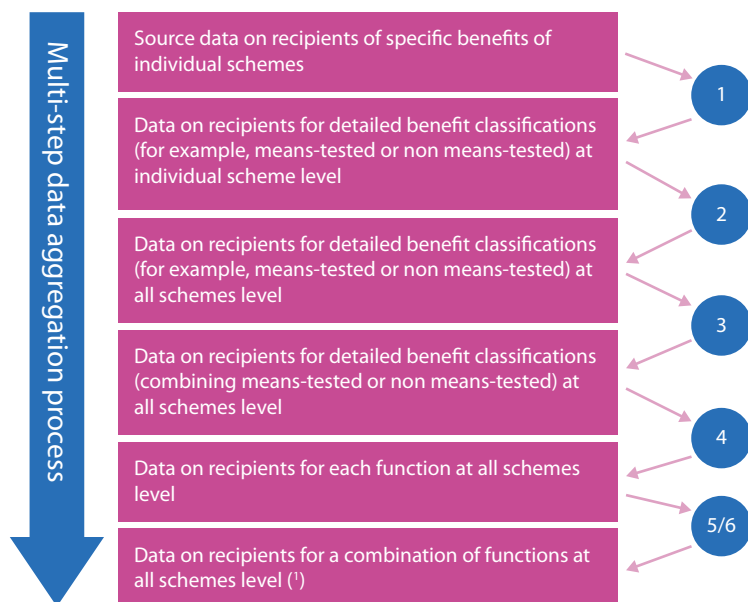
- **Type 4.2:** beneficiaries may receive multiple pensions belonging to different pension categories within the old age function. Such beneficiaries should only be counted once in the total beneficiaries reported for the function as a whole.

This type of double counting is reported, for example, in Denmark, for pensions recorded in the disability function. More specifically, according to national legislation and eligibility criteria applied, it is estimated that 50 % of the beneficiaries of a private disability pension also receive an early retirement pension due to a reduced capacity to work.

- **Type 5. At inter-function level:** the total number of beneficiaries receiving at least one pension belonging to either the old age function or the survivors function has to be reported (total beneficiaries in old age and survivors functions). Beneficiaries who simultaneously receive pensions belonging to both functions should only be counted once.
- **Type 6. At total level:** the total number of beneficiaries receiving at least one pension belonging to any function has to be reported. Beneficiaries who simultaneously receive pensions belonging to different functions should only be counted once.

Calculating the number of beneficiaries for the different aggregates while accounting for the double counting described above entails a gradual, step by step, aggregation process. The different double counting types are thus numbered and ordered according to the step in this process at which they are treated (as summarised in Figure 3). This starts with the elimination of the double counting at detailed benefit level inside a single scheme (in other words, type 1), and ends with the elimination of double counting associated with deriving the total number of beneficiaries at the level of all schemes (in other words, type 6).

Figure 3: Multi-step aggregation process and adjustment for double counting



(¹) This refers to the treatment of double counting when aggregating data on recipients of two or more functions. In the case of the PB data collection, it refers both to the aggregation of old age and survivors functions (double counting type 5) and to the aggregation of old age, survivors, disability and unemployment functions (double counting type 6). Theoretically, the combination of functions might also refer to the aggregation of all eight functions covered by the ESSPROS domain if a data collection covering recipients associated with all functions is ever implemented.

Table 7 illustrates how the six types of double counting are treated in the questionnaire used to collect data on pension beneficiaries.

Table 7: Pension beneficiaries module questionnaire and the treatment of double counting

		All schemes			Scheme 1			Scheme 2 ... N		
		F+M	F	M	F+M	F	M	F+M	F	M
	Total pension beneficiaries	=A+B+C+D (DC type 6)			DC type 1			DC type 1		
A	Total pension beneficiaries in disability function	=A.1+A.2 (DC type 4)			DC type 1			DC type 1		
A.1	Disability pension beneficiaries	=A.1.1+A.1.2 (DC type 3)								
A.1.1	<i>Disability pension beneficiaries, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
A.1.2	<i>Disability pension beneficiaries, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
A.2	Beneficiaries receiving early retirement benefits due to reduced capacity to work	=A.2.1+A.2.2 (DC type 3)								
A.2.1	<i>Beneficiaries receiving early retirement benefits due to reduced capacity to work, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
A.2.2	<i>Beneficiaries receiving early retirement benefits due to reduced capacity to work, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B	Total pension beneficiaries in old age function	=B.1+B.2+B.3 (DC type 4)						DC type 1		
B.1	Old-age pension beneficiaries	=B.1.1+B.1.2 (DC type 3)								
B.1.1	<i>Old-age pension beneficiaries, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B.1.2	<i>Old-age pension beneficiaries, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B.2	Anticipated old age pension beneficiaries	=B.2.1+B.2.2 (DC type 3)								
B.2.1	<i>Anticipated old age pension beneficiaries, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B.2.1	<i>Anticipated old age pension beneficiaries, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B.3	Partial pension beneficiaries	=B.3.1+B.3.2 (DC type 3)								
B.3.1	<i>Partial pension beneficiaries, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
B.3.2	<i>Partial pension beneficiaries, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		

Note: NMT = non means-tested; MT = means-tested; F = female; M = male; DC = double counting.

Table 7 (cont.): Pension beneficiaries module questionnaire and the treatment of double counting

		All schemes			Scheme 1			Scheme 2 ... N		
		F+M	F	M	F+M	F	M	F+M	F	M
C	Total pension beneficiaries in survivors function									
C.1	Survivors' pension beneficiaries	=C.1.1+C.1.2 (DC type 3)								
C.1.1	<i>Survivors' pension beneficiaries, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
C.1.2	<i>Survivors' pension beneficiaries, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
D	Total pension beneficiaries in unemployment function									
D.1	Beneficiaries receiving early retirement benefits for labour market reasons	=D.1.1+D.1.2 (DC type 3)								
D.1.1	<i>Beneficiaries receiving early retirement benefits for labour market reasons, NMT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
D.1.2	<i>Beneficiaries receiving early retirement benefits for labour market reasons, MT</i>	=Σ scheme 1 ... n (DC type 2)			DC type 1			DC type 1		
E	Total beneficiaries in old-age and survivors functions	=B+C (DC type 5)								

Note: NMT = non means-tested; MT = means-tested; F = female; M = male; DC = double counting.

Table 8 summarises the occurrence of the six types of double counting in the data reported by the 35 countries participating in the 2020 data collection according to the information provided in quality reports submitted alongside the data ⁽²⁰⁾.

Table 8: Number of countries reporting double counting by type and treatment adopted, 2018

	Type of double counting					
	1	2	3	4	5	6
Countries with cases of double counting	17	28	14	6	22	22
Treatment based on qualitative information	9	19	5	3	13	13
Treatment based on PIN	8	9	9	3	9	9

Note: PIN = personal identification number.

The most common type of double counting (arising in 28 out of 35 countries) is type 2 double counting, involving beneficiaries receiving two (or more) pensions belonging to the same category (for example, two old-age pensions) paid by different schemes. This can be explained by pensioners having accumulated contributions with different schemes during different phases of their professional life.

However, the most common type of double counting, in terms of the number of beneficiaries affected, is type 5 double counting, involving beneficiaries receiving a pension serving the old age function and a pension serving the survivors function. This can be explained by three key factors. First, beneficiaries of old age pensions represent by far the highest share of pensioners (79 %), followed by those of survivors' pensions (22 %). Second, persons eligible for survivors' pensions tend to be elderly persons and are thus likely to receive an old age pension

⁽²⁰⁾ Such reports are crucial to correct interpretation of the data and understanding the data sources and method used to treat double counting. Available at: <https://ec.europa.eu/eurostat/web/social-protection/quality>.

already. Third, most national pension systems do not rule out simultaneous receipt of old age and survivors' pensions. On this basis, double counting of pension beneficiaries is not just a methodological issue but also a characteristic of the phenomenon being analysed. The total number of persons receiving old age and/or survivors' pension (without double counting) is specifically requested and can be used to derive the number of those receiving both categories of pension, which can be quite significant in some countries. For example, these represented 16.2 % of pensioners in Italy (2.5 million pensioners), 16.8 % in France (3.3 million) and 18.5 % in Germany (4.3 million).

A more general approximation of the share of pensioners receiving two or more of the seven categories of pension covered by the module (in other words, double counting types 4, 5 or 6) is shown in Table 9. According to national quality reports, there are no such cases in 13 countries. By contrast, more than 15 % of pensioners receive two or more different categories of pensions in 11 countries.

Table 9: Share of pension beneficiaries receiving more than on category of pension, 2018 (%)

	Countries
0 (no double counting at all)	Estonia, Ireland, Croatia, the Netherlands (¹), Poland, Romania, Iceland, Norway, the United Kingdom (¹), Montenegro, North Macedonia (¹), Serbia, and Bosnia and Herzegovina
>0 to <5	Bulgaria, Denmark, Latvia and Turkey
5 to <10	Greece, Spain, Luxembourg, Slovenia and Sweden
10 to <15	Cyprus and Austria
15 to <20	Belgium, Germany (¹), France, Italy, Portugal, Finland and Switzerland
20 to <25	Czechia, Lithuania and Slovakia
≥25	Hungary

Note: the table considers only double counting between the seven categories of pension identified in ESSPROS (types 4, 5 or 6) but does not account for double counting that may occur within a pension category (types 1, 2 or 3).

(¹) 2017.

In practice, treatment of double counting may not be straightforward. The methods applied (see Table 8) to detect and eliminate double counting can be roughly classified into two groups: (i) **methods based on qualitative information**, making possible the deduction and/or estimation of the extent of double counting, and (ii) **methods based on personal identification numbers (PINs) and processing of administrative data**.

A typical example of the first group is the above-mentioned type 3 double counting in Austria. According to Austrian legislation, recipients of basic non means-tested old age, survivors and disability pensions are granted, subject to a means-test, a supplementary pension of the same category. In other words, each pensioner receiving a means-tested supplementary pension is also in receipt of a basic pension of the same category. Consequently, the total number of pensioners for each category of pension (covering both means-tested and non means-tested variants) without double counting is simply the number of pensioners receiving the basic pension. No additional data processing is therefore needed to treat double counting.

An example of the second group is that of Italy, one of several countries adopting PIN based methods (see Table 8). Italian ESSPROS data on pension beneficiaries are based on administrative data. The source dataset includes microdata on each pension paid by national

pension schemes at the end of the reference year. In other words, each record in the dataset represents a pension and includes a PIN identifying the beneficiary. PINs appearing in multiple records enable the identification of pensioners in receipt of multiple pensions.

A schematic representation of the process adopted by the Italian national statistical office is shown in Figure 4. The source dataset where each record represents a pension is shown on the left-hand side of this figure. Data that are transmitted for the module refer to pensioners so this dataset has to be treated to eliminate recurrences of the same PIN by combining the corresponding records into a single record corresponding to that PIN. As part of this process a derived variable is added to identify the pensions received by each person represented by a PIN. The resulting output dataset is shown on the right-hand side of Figure 4. In this figure, the derived variable is labelled 'pensions received' and is composed of seven characters, each referring to a specific category of pension with the characters 'Y' and 'N' indicating that the person in question did or did not receive the given category of pension at the end of the year. This facilitates the quantification of persons in receipt of specific combinations of pensions. For example, counting those receiving both an old-age and a survivors' pension (irrespective of any other pension category received), simply requires the number of records where the first and fourth characters of the derived variable are set to 'Y'.

Where applicable, methods based on qualitative information may lead to satisfactory results in uncomplicated cases, but PIN based methods are likely to be necessary in most situations,

Figure 4: Double counting treatment based on PIN — simplified schematic of the method adopted by Italy

Input dataset = pensions			Output dataset = pensioners		
PIN	Type of pension	Amount	PIN	Pensions received	Cumulated amount
DMTMRC24111965	2	1 150	DMTMRC24111965	NYNNNNN	1 150
DTNGMR29011946	1	1 450	DTNGMR29011946	YNNYNNN	2 100
DTNGMR29011946	4	650	GRSLRA09231951	NNNYNNN	1 350
GRSLRA09231951	4	1 350	MRCMNL26041966	NNNNYNN	1 250
MRCMNL26041966	5	1 250	NNNMCL15091948	YNNNNNN	1 250
NNNMCL15091948	1	1 250	NNNRCD09011949	YNNNNNN	1 650
NNNRCD09011949	1	1 650	ONTBND09011950	NNNYNNN	1 250
ONTBND09011950	4	1 250	PPRCRD06121945	YNNYNNN	1 950
PPRCRD06121945	1	1 250	PPRSTF11181949	NNNYNYN	1 650
PPRCRD06121945	4	700	ZNLCRD12031947	YNNNNNN	1 250
PPRSTF11181949	4	1 150			
PPRSTF11181949	6	500			
ZNLCRD12031947	1	1250			

Type of pension

1 = old age
2 = anticipated old age
3 = partial retirement
4 = survivors
5 = early retirement for labour market reasons
6 = disability
7 = early retirement in case of reduced ability to work

being the only way to accurately eliminate all types of double counting. Despite this, methods based on qualitative information tend to be used the most frequently (see Table 8).

This situation possibly arises from the nature of data sources used at national level. While administrative data sources are the most common, the data needed to elaborate statistics on beneficiaries of different pensions are often split across different datasets, owned by different institutions (other than the national statistical office). For example, Belgium produces its data using 13 diverse administrative data sources. Further, the data sources available are not necessarily of the same type. For example, Switzerland uses five different types of data source: administrative data (four sources), register based data (two sources), censuses (two sources), surveys (two sources) and national accounts statistics.

Overall, 30 of the 35 countries participating in the 2020 data collection used two or more data sources, nine of which used data sources of different types.

5.2. Unemployment benefit recipients module

The module on UBR is a relatively recent development. It represents a first effort to extend the data collected on benefit recipients in ESSPROS, arising from a need to balance user needs with the feasibility of collecting data. It focuses specifically on recipients of **periodic cash benefits** serving the unemployment function ⁽²¹⁾.

The UBR data collection is still in an initial phase. Participation is currently voluntary, and six countries (Czechia, Denmark, Ireland, Latvia, Lithuania and Malta) took part in the data collection covering reference years 2018 and 2019. This somewhat limits the findings available from the work completed so far. However, several distinctive aspects related to the national implementation of the UBR data collection have already been identified and can be discussed. Combined data of the PB and UBR modules would provide data on recipients of benefits accounting for about 50 % of total expenditure on social benefits (of which about 90 % by the PB module and 10 % by the UBR module).

The aim of the module on unemployment benefit recipients is to calculate the total number of unique recipients (in other words, without double counting) of benefits associated with five detailed benefit classifications belonging to the unemployment function and an overall function level aggregate covering these (see Table 10).

Table 10: Detailed benefit classifications and aggregates thereof

Detailed benefit classifications	Aggregates		
	Function	Inter-function aggregation	Total
Full unemployment benefit	Unemployment		
Partial unemployment benefit			
Early retirement benefit for labour market reasons			
Vocational training allowance			
Other cash periodic benefits			

Note: at the most detailed level, ESSPROS includes separate classifications for means-tested and non means-tested variants of detailed benefit classifications.

⁽²¹⁾ The unemployment function also includes cash lump-sum social benefits and social benefits in kind.

Annual ⁽²²⁾ data on recipients are collected only for benefit classifications for which non-zero expenditure has been reported in the ESSPROS core system. These data are collected at both the level of individual schemes and the level of all schemes. Breakdowns by sex and age group (15–24, 25–54, 55–64, 65+ years) are required in both cases ⁽²³⁾.

5.2.1. THE CONCEPT OF A RECIPIENT AND MEASURE USED

All five periodic cash benefits covered by the UBR data collection serve to protect individuals from risks related to unemployment. Accordingly, associated eligibility criteria tend to be limited to conditions to be met by the individual recipient (for example, registration as unemployed, risk of losing occupation, contribution history or age). With this in mind, the concept of recipient adopted by the UBR module is **the grantee**, as defined above in Section 3.1. However, it could also equally be interpreted as the beneficiary, as is used in the PB module, as they are interchangeable in the case of benefits provided to individuals benefits.

There are several crucial differences between benefits covered in the UBR module and those covered by the PB module. Firstly, they tend to be granted for relatively shorter durations. For example, full unemployment benefits are intended to be provided for relatively limited periods of time, which can be measured in months, and often have time limits fixed in national legislation ⁽²⁴⁾; by contrast, vocational training allowances may be granted for very short periods – in other words less than a month. Further, some countries, provide benefits lasting only a few days. Secondly, a single individual can often receive a particular benefit during multiple distinct spells within the same reference year. For example, unemployment benefit being granted during several separate short spells of unemployment. Lastly, unemployment can be seasonal and cyclical which results in variance in the use of unemployment related benefits during the year. For example, higher unemployment may be expected in touristic maritime areas during winter periods. Further, there is considerable variability in the benefits covered in the UBR module with respect to their duration, the possibility for multiple spells of receipt during the year and the extent to which they are affected by seasonal and cyclical patterns in unemployment ⁽²⁵⁾.

All this considered, the number of recipients recorded by the UBR data collection is likely to vary significantly during the year. UBR data, therefore, cannot be derived using one-off stock, such as that used in the PB module, as this is liable to yield unreliable results. **Annual average stock** (AAS, based on monthly data) and **recipients over the year** (ROY), as described in Section 3.2, are more appropriate for measuring recipients of benefits of varying durations (long, medium or short).

⁽²²⁾ The collection of quarterly data for indicators on unemployment benefit recipients could be conceived and would respond to some identified user needs. However, this would go beyond the scope of ESSPROS as a satellite account on social protection and, in addition, would be inconsistent with the periodicity (annual) of the other data covered by the domain, and can thus be seen as a further potential development in a broader context.

⁽²³⁾ The breakdown by age group is not requested at the most detailed level for means-tested and non means-tested variants of detailed benefit classifications.

⁽²⁴⁾ For example, in Latvia unemployment benefits are paid for a maximum of 9 months, while in Ireland the maximum duration may vary (from 9 to 12 months) on the basis of the recipient's contribution history.

⁽²⁵⁾ For all these reasons, the aggregate number of recipients of unemployment related periodic cash benefits refers to a range of benefits with diverse characteristics in terms of duration, volatility in recipients during the reference year and amounts granted. This diversity impacts the interpretation and significance of aggregate data and should always be accounted for when disseminating data, giving priority, whenever possible, to the dissemination of data related to specific benefits.

An additional advantage of using both AAS and ROY is that, during data validation, data deriving from the two approaches can be compared to evaluate consistency – in other words to check that ROY exceeds AAS for all benefits and that the magnitude of the difference between them is consistent with the nature of the benefit. As a general principle, based on their definitions, it is expected that the difference between ROY and AAS should increase as the duration of the benefit decreases and this is confirmed in the preliminary results of the UBR collection. For example, in Latvia the data show a large difference between ROY and AAS (with $ROY/AAS \approx 100$) for recipients of other cash benefits. This derives from the inclusion of the above-mentioned services for the long-term unemployed, which mostly cover interventions with very short duration, resulting in a very low value for AAS relative to ROY. More generally, for all countries, the ratio between ROY and AAS is lower (in other words, the difference is smaller) for recipients of full unemployment benefits than for vocational training allowance or other periodic cash benefits, which tend to be paid for shorter periods.

Data on recipients of benefits related to early retirement for labour market reasons are collected in both the UBR and PB modules using different approaches. This makes it possible for the data of the two modules to be compared to further evaluate consistency in two ways. Firstly, that ROY (UBR module) is greater or equal to end-year stock (PB module). Secondly, that AAS (UBR module) is more or less equal to end-year stock (PB module). This second check will provide confirmation of whether end-year stock serves as a good proxy for AAS – in other words that end-year stock is not adversely affected by any volatility in recipients of the benefit during the reference year.

5.2.2. DOUBLE COUNTING: TYPES AND TREATMENT

Four of the six types of double counting that apply in the PB module also apply in the UBR module.

- Type 1. At detailed benefit classification level inside a single scheme
- Type 2. At detailed benefit classification level between schemes
- Type 3. At detailed benefit classification level between non means-tested and means-tested sub-categories
- Type 4. At intra-function level

As explained in Section 4.1, the use of ROY complicates the treatment of double counting by making it (theoretically) possible to have double counting of recipients between all benefits. This arises because persons may be in receipt of the different benefits during different periods of the reference year (in other words, non-simultaneous receipt). This additional difficulty has been confirmed to arise in practice in two countries (Denmark and Ireland).

While all six countries participating in the latest data collection used administrative data sources, four used multiple data sources (Denmark, Latvia and Lithuania used two while Malta used three), introducing, where relevant, an additional layer of complexity to the treatment of double counting. Indeed, both Latvia and Malta detected and treated multiple types of double counting using PIN based methods, all types of double counting in the case of Malta and just types 2 and 4 in the case of Latvia.

A key characteristic of the UBR data compared with that of the PB module is that the benefits covered are less dispersed across schemes. In 22 countries unemployment related expenditure is associated with three schemes or less ⁽²⁶⁾ and in most cases the different schemes pay different types of unemployment benefits and/or protect different subsets of the active population. This leads to a lower risk of type 2 double counting – in other words between schemes.

Finally, the UBR module collects data broken down by sex and by age group (15–24, 25–54, 55–64, 65+ years). Five countries calculated breakdowns by age using method 2 – in other words based on single point in time during the reference year (see Section 3.4). Only Latvia used three different methods for different variables/benefits. Theoretically this could result in recipients receiving multiple benefits contributing to different age groups in the data for different variables/benefits.

5.2.3. RELEVANCE OF QUALITATIVE INFORMATION

Qualitative Information (QI) is collected annually to accompany the quantitative data collected within the ESSPROS framework, primarily that of the core system. This QI describes national social protection systems, providing detailed information on the schemes and the detailed benefits they provide in each country. The specifications for this are set out in Appendix II of the ESSPROS manual, which describes the purpose of the QI as providing:

1. in-depth information on social protection schemes;
2. the means to evaluate the classification of schemes and benefits applied;
3. a clear basis for footnotes in publications and for the ESSPROS database;
4. a means to respond to questions from users on the data by scheme;
5. a support for the validation of ESSPROS data.

Work undertaken during the initial phase of the implementation of the UBR data collection has re-emphasised the central role of the QI for ensuring effective validation of ESSPROS quantitative data and their correct use and interpretation. The benefit descriptions reported in the QI are fundamental to understanding the UBR data, including how they vary over time and the distribution of recipients by sex and age. The rules/criteria defining the amounts disbursed, usually reported in the QI, help to better understand the possible causes of changes in both the number of recipients and expenditure between years. The QI also facilitates the detection of double counting, particularly type 1 double counting arising from non-mutually exclusive benefits being recorded (and thus described) under the same detailed benefit classification of a single scheme. Furthermore, the QI is also fundamental to a better understanding of the content of other periodic unemployment related cash benefits, which often include benefits that vary considerably in nature, complicating the interpretation of the data.

⁽²⁶⁾ In the PB module, recipients are dispersed across five or more schemes in the majority of participating countries. For example, they are dispersed across 22 schemes in Belgium, 20 in the Netherlands, 19 in Italy, 16 in France, 14 in Poland, 11 in Spain and 10 in Germany.

6. Conclusions

There is a longstanding demand from institutional and other users of Eurostat statistics for data on social benefit recipients. This has grown stronger over time with the emergence of efforts to examine issues associated with aging populations (for example, provision of pensions and long-term care) and, more recently, the need to assess the impact of and response of social protection systems to the COVID-19 pandemic. It is thus realistic to expect an expansion in the coverage of data on recipients in the ESSPROS framework in the coming years to provide such data for more benefits.

Clarifying the methodological obstacles to the collection of data on recipients of different types of benefits is thus a vital starting point for understanding the challenges that will need to be overcome. With this in mind, this article has outlined possible approaches to the key building blocks of a collection of data on social benefit recipients – the concept of a recipient, the method for measuring this and the indicators that can be derived – and examined their relevance when applied across benefits with different characteristics, in particular in terms of time-profile and duration.

The main conclusion is that **there is no 'one-size fits all' solution** and some flexibility is needed in the design of an overarching approach to the collection of data on social benefit recipients across the full spectrum of social benefits. The most pragmatic option is therefore to pursue a **modular approach** whereby sub-sets of benefits to which a single approach can be applied are grouped into modules, and a limited variation in approach is permitted between modules (in other words, allowing the use of different, possibly multiple, measurement approaches). The flexibility available in the design of specific modules should, however, be clearly defined, setting out which elements are allowed to vary and to what extent, to ensure that harmonisation is achieved where possible. It is equally important that the impact of such flexibility is made clear to users of the resulting data (in particular for aggregation of data from different modules).

