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Measuring and monitoring absolute poverty (ABSPO)

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Executive summary

The fight against poverty and social exclusion remains at the top of the EU's social and political agenda – especially with the far-reaching consequences of the COVID-19 pandemic. The EU aims at a socially fair and inclusive transition towards sustainability, while the recovery plan for Europe makes investment in inclusive growth and social cohesion a top priority. The European Pillar of Social Rights (EPSR) calls for equal opportunities and access to the labour market, fair working conditions as well as social protection and inclusion. Through the implementation of the EPSR Action Plan, the EU aims to reach its 2030 headline targets in the area of employment, skills and poverty that have been endorsed by EU leaders at the Social Summit in Porto in May 2020. In this context, the EU strives to lift at least 15 million people out of poverty and social exclusion by 2030.

The implementation of this agenda requires sound statistical measurement and social monitoring. The EU's existing measurement framework and headline AROPE indicators, along with a wide range of auxiliary measures and targets, ensure comprehensive and multi-dimensional measurement and monitoring of poverty in Europe. However, given the large differences in living standards and socio-economic conditions across Member States, alternative concepts and definitions can offer valuable new insights and perspectives. An absolute monetary measure of poverty, in particular, that represents constant or comparable purchasing power over commodities across countries and time periods could complement existing indicators.

The development of an EU-wide absolute measure is a challenging task as it requires common definitions, sound methodologies and harmonised data sources. The joint pilot initiative between DG Employment, Social Affairs and Inclusion and the Joint Research Centre, called "Measuring and monitoring absolute poverty (ABSPO)", was launched in December 2018 to explore the technical, methodological, and data requirements of developing a cross-country comparable absolute poverty measure for EU-wide use. Such a new standard, along with the new data and methodological insights gained during its development, could help contextualise existing EU indicators and policies.

This Report is the third and final deliverable of the ABSPO project. It reviews the methodological feasibility of constructing a new monetary indicator of absolute poverty in the EU. The presented ABSPO poverty measures are robust to different modelling choices, aligned with most European citizens' subjective views on poverty, and consistent with the observed patterns of material and social deprivation. They yield a series of new and policy-relevant insights about the extent, distribution and dynamics of poverty between and within Member States. The Report also indicates how the derived ABSPO measures and related findings may complement the current European measurement framework.

For the calculation of ABSPO poverty measures, three different modelling strategies are employed. These represent the same targeted living standards and minimum needs, feature the same modelling tools and data sources, and yield comparable poverty estimates in a disaggregated manner. Their main difference stems from mixing reference budget and household survey data in different proportions, and using alternative means to identify households' minimum needs. ABSPO implementation covers all EU Member States (except for Austria due to lack of data), and produces multiple poverty lines in the pilot countries of Belgium, Finland, Hungary and Italy.

The resulting ABSPO poverty estimates can complement the picture of European poverty based on existing indicators. As of 2018, the overall incidence of absolute poverty is similar to the at-risk-of-poverty (AROP) rate at the EU level (15.2% vs. 16.8% in 2018), but considerably lower than the relevant composite AROPE indicator (21.6%). The difference between ABSPO and AROPE rates is even more pronounced at the national level: absolute poverty is visibly higher than the risk of poverty and social exclusion in most Central and Eastern European countries (23.9% vs. 22.2% on average), but substantially lower in most EU15 Member States (9.1% vs. 20.2% on average). The distribution of ABSPO poverty across countries is more similar to that of material and social deprivation indicators, albeit even more uneven. Estimated poverty trends are also divergent: in a typical EU country, the volatility of absolute poverty during the 2008-2018 period was considerably higher than the fluctuation of the corresponding AROP and AROPE rates. In particular, our estimates indicate a large cyclical increase of 13 million in the number of European ABSPO poor following the 2008 financial and economic crisis, and an even larger reduction of 18 million during the subsequent recovery period (2013-2018) – trends that are relatively similar to the ones observed for the agreed indicator of poverty anchored in time. ABSPO estimates exhibit more similarities with

AROPE indicators when considering geographic or socio-demographic dispersions within countries, and they are also broadly consistent with indicators of subjective poverty and monetary deprivation.

The Report also examines the methodological, technical and data-related requirements of scaling up the presented ABSPO methodologies for regular EU-wide measurement. The proposed modelling strategies and newly produced data outputs provide detailed guidance and practical tools for future development. The related investment needs depend on the chosen modelling strategy, with the more statistical approaches being ready for straightforward implementation using existing data sources. Future improvements in the European data infrastructure could increase the reliability and consistency of ABSPO-based poverty measures, especially through further harmonisation and integration of European household surveys (such as the EU-HBS and the EU-SILC), broader access to microdata, and targeted extensions in national and European survey data collection.

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Authors

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Abstract

This report is the third and final deliverable of the project "Measuring and monitoring absolute poverty (ABSPO)", a joint initiative of DG Employment, Social Affairs and Inclusion and the Joint Research Centre of the European Commission launched in December 2018. The main objective of this pilot project is to take stock of the existing EU framework for poverty measurement, and explore the development of a new cross-country comparable absolute poverty measure for potential EU-wide use. This Report contains a comprehensive analysis of all relevant measurement aspects, and presents three innovative methodologies based on reference budgets and survey-based statistical methods to calculate new absolute monetary poverty thresholds in a harmonised manner across the EU. The resulting ABSPO poverty estimates are broadly robust to different modelling choices, aligned with most European citizens' subjective views on poverty, and consistent with the observed patterns of material and social deprivation. They yield a series of new and policy-relevant insights about the extent, distribution and dynamics of poverty between and within Member States. The Report also considers how ABSPO methodologies may be scaled up for regular EU-wide regular measurement, and makes important contributions to a number of different thematic domains of poverty measurement and broader social policy analysis.

CHAPTER 1.
Introduction

This Report is the third and final deliverable of the project "Measuring and monitoring absolute poverty (ABSPO)", a joint initiative between DG Employment, Social Affairs and Inclusion and the Joint Research Centre of the European Commission launched in December 2018. The main objective of this pilot project is to explore the development of a new absolute poverty measure that is comparable across Member States and suitable for potential EU-wide use. Such a measure, together with new data and methodological insights, can open new lines of discussion, contextualise existing EU indicators of social inclusion, and improve our understanding of poverty and social exclusion in Europe. The current report is the result of 32 months of scientific analysis, data collection, expert consultations, and policy discussions dedicated to this purpose, and directly benefited from the ideas, contributions and goodwill of more than 100 persons within and outside of the European Commission. The ABSPO Inception and Interim reports (Cseres-Gergely, Menyhért, and Zec, 2020a; 2020b) already contained parts of this work, but the full scope and breadth of ABSPO analysis are presented here for the first time.

The main contribution of this Report is that it presents a methodology for constructing a cross-country comparable absolute measure of poverty in the EU. The presented ABSPO poverty measures are robust to different modelling choices, aligned with many European citizens' subjective views on poverty, and consistent with the observed patterns of material and social deprivation. The newly collected data and related empirical analysis yield a series of new and policy-relevant insights about the extent, distribution and dynamics of poverty between and within Member States. The Report also discusses how, on the basis of the ABSPO estimates and related findings, it may be possible to introduce a new complementary EU-wide measure of poverty.

While focusing mainly on the issue of practical measurement, the Report also covers the broader conceptual, theoretical and political aspects of poverty discourse. This is important for two reasons. First, many of the methodological choices involved in ABSPO modelling are based inevitably on value judgments. Poverty measurement is never simply a counting exercise but a social undertaking that reflects prevailing norms and political realities. Second, given the exploratory nature of the ABSPO project, the presented measurement strategies represent only one set of all potentially available solutions to EU-wide absolute poverty measurement. The broad outlook of the Report therefore serves the simultaneous aims of offering a general synthesis of measurement-related issues, providing rationale and motivation for ABSPO measurement choices, and inviting further critical analysis and future work along the same lines.

The current introductory Chapter provides a brief summary and a useful guide to the remaining substantive parts of the Report. It describes the European policy context of poverty and social exclusion, the existing EU framework for its measurement, the detailed methodology of ABSPO modelling, the most important patterns of the resulting new absolute poverty estimates, as well as the potential contribution of these latter for complementary EU-wide measurement and possible future monitoring. The Chapter also features a detailed summary of each subsequent Chapter of the Report, to orient the reader to the most relevant topics in line with his or her particular interests.

Poverty reduction as an EU policy priority

Poverty denotes a situation in which the income and resources of a person or household are "so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live" (European Council, 1975). Poverty and social exclusion harm lives, limit the opportunities of individuals and societies to achieve their full potential, and generates significant social costs in health, well-being, educational outcomes, and economic productivity – for the poor and the non-poor alike. Transmitted from one generation to the next, deprivation and distress can seriously hamper social cohesion, inclusive growth and sustainable development.

To prevent this downward spiral, the European Commission has made inclusive growth and poverty reduction one of its top policy priorities in the 2000s. The Lisbon Council of 2000 called for decisive steps and adequate social policy targets to eradicate poverty and social exclusion in Europe, while the 18 indicators adopted by the Laeken Council in 2001 established the basis for official measurement and monitoring at the EU level. The Europe

2020 strategy, adopted in 2010, put social concerns on an equal footing with economic objectives, and identified lifting 20 million people out of poverty by 2020 as one of the EU's five strategic headline targets. To support the related social policy objectives, the Social Investment Package of 2013 set forth an integrated framework for effective social spending, human capital investment and support for vulnerable groups.[1]

With more than 90 million EU citizens still at risk of poverty and social exclusion in 2020, anti-poverty efforts will remain at the top of the political agenda for the foreseeable future – especially with the far-reaching consequences of the COVID-19 pandemic. The European Sustainable Development Strategy ("Towards a Sustainable Europe by 2030") envisions a socially fair and inclusive transition towards sustainability during the current decade. With the 20 key principles and rights established by the European Pillar of Social Rights (ESPR) and the additional funds of the COVID-19 recovery plan for Europe ("NextGenerationEU"), as well as the European Social Fund Plus (ESF+), investment in inclusive growth and social cohesion has become an even higher priority. The headline target of the ESPR Action Plan aims at lifting at least 15 million EU citizens out of poverty or social exclusion by 2030.[2]

Broadening of the existing measurement framework

As a complex and multi-dimensional phenomenon, a good understanding and effective treatment of poverty requires appropriate and robust measurement. Existing indicator portfolios include the Social Protection Performance Monitor (SPPM), the Joint Assessment Framework (JAF) or the revised Social Scoreboard, among others. These provide a comprehensive and multi-dimensional measurement of most relevant aspects of the social situation at both national and EU levels.[3] Since 2010, the headline measure of poverty and social exclusion in the EU is so-called AROPE indicator. This identifies the share of people "at risk of poverty or social exclusion", and combines measures of relative monetary poverty (at-risk-of-poverty, AROP), non-monetary material and social deprivation, and very low work intensity of the household into a single composite indicator. While the AROPE indicators and the underlying thresholds do not represent a well-defined living standard, a number of other indicators of the EU monitoring framework relate to such minimum standards for poverty analysis.

One may use different concepts, methods or data to determine the level of acceptable minimum in a society. Alternative formulations can open new discussions and offer valuable insights about the extent and nature of poverty and social exclusion in the EU. A poverty indicator, in particular, that represents constant or comparable purchasing power across different Member States and time periods could meaningfully complement the existing EU measurement framework. If built directly on individuals' and households' basic material and social needs, this measure could paint a disaggregated view of poverty at the sub-national level. Provided that it combines common EU-wide foundations in terms of targeted standards and country-specific considerations in terms of minimum needs, the aforementioned indicator could simultaneously offer internationally comparable and locally valid measurement across the EU. The associated poverty lines, as minimum cost of living estimates, could then bring direct benefits in contextualising a range of social policy areas, from minimum income adequacy to benefit targeting.

The definition of absolute poverty

The above description is fit for a so-called absolute indicator of poverty. Absolute poverty refers to a situation where an individual or household falls below a fixed threshold of consumption or income that represents constant purchasing power over commodities (Ravallion, 2016). Whereas relative poverty describes a circumstance in which one cannot afford social participation or life experiences that most members of a society take for granted, absolute poverty threshold typically represent the cost of universal basic needs that are common to all individuals.

This does not mean that absolute poverty is synonymous with extreme poverty. This latter denotes an extreme level of material deprivation and social exclusion that permeate all areas of one's life (United Nations, 2018). While it is undoubtedly a universal absolute standard, most poverty thresholds represent considerably higher benchmarks.

[1] See Atkinson et al. (2002) and Hantrais (2017) for more details.
[2] For more details on these and related initiatives, visit the relevant EU websites at https://ec.europa.eu/info/strategy/recovery-plan-europe_en, https://ec.europa.eu/info/publications/reflection-paper-towards-sustainable-europe-2030_en, and https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/european-pillar-social-rights/european-pillar-social-rights-action-plan_en.
[3] For more information, see the relevant discussion in Section 2.1 of this Report.

One such criterion is the ability to afford consumption items that are deemed essential by most members of a target population. This is the basis for conceptualising material and social deprivation in EU or OECD countries, and absolute poverty lines are suitable expressions of the minimum monetary equivalent of acquiring or utilising the deprivation items in question (OECD, 2006; Guio et al., 2012).

In addition, absolute poverty lines are also liable to change across both time and space. Over time, regular adjustments are needed to maintain a constant living standard due to short-term variations in prices and purchasing standards. More fundamental periodic changes are required to deal with longer-term structural changes in minimum needs and essential consumption items. Eventually, differences in social norms, social circumstances and economic development may ensure that the level of acceptable minimum is very different from one country to the next. In fact, it is a long-standing empirical regularity (i.e. the so-called 'relativist gradient') that richer countries employ significantly higher absolute poverty lines than poorer ones.

As regards basic needs, these are typically defined as those that ensure the "full physical, mental, and social development of the human personality" (Streeten, 1981). Therefore, basic needs not only concern individuals' biological and physiological demands, but also incorporate the psychological and societal foundations of a decent life (United Nations, 2010; Atkinson, 2019). The influential theory of human needs by Doyal and Gough (1991) and the capability approach by Sen (2000) have provided useful conceptual foundations for the consideration and characterisation of minimum needs for absolute poverty measurement more recently. However, at the operational level of measurement, the challenge of the appropriate definition of basic needs remains as pertinent and context-specific as before.

The ABSPO project

The main aim of the ABSPO project is to explore the technical, methodological, and data-related requirements of developing a new absolute measure of poverty in the EU. This study specifically includes facilitating the preparation and use of new data for scalable measurement, implementing a pilot data collection, developing appropriate measurement methodologies, comparing the outcomes with existing EU indicators, and providing methodological guidance for an EU-wide roll-out of the method for potential future applications.

To meet these objectives, we started with a detailed analysis of the existing EU measurement framework and a comprehensive literature review of potential methods, existing indicators and available data sources that may be relevant for EU-wide absolute poverty measurement. We found that absolute needs-based measurement of poverty is rarely used in advanced economies, and certainly not in a cross-country comparable manner. We recognised the main conceptual challenge of ABSPO modelling consists in finding the right balance between the requirements of cross-country comparability and local validity, and propose the combined use of a common European living standard, country-specific definition of minimum needs, and disaggregated measurement of living costs as the preferred solution.

For the implementation of this strategy, we identified three main input sources for ABSPO modelling: the cross-country comparable reference budgets produced by previous Commission-funded projects for EU countries (Goedemé, Storms, Stockman, et al., 2015; Goedemé, Storms, Penne, et al., 2015), the applied methodology of the Italian Statistics Office (ISTAT) for the measurement of absolute poverty in Italy (Grassi and Panuzzi, 2009; Cutillo, Raitano, and Siciliani, 2020), and the theoretical literature on the statistical measurement of poverty in developing countries based on household budget survey data. To maximise the usefulness of these and other inputs for ABSPO modelling, we involved many of the relevant stakeholders as thematic experts to support our work. For access to relevant data sources and methodological support, we also co-operated with Eurostat, national statistics institutes, scientific experts, reference budget practitioners and private data providers.

During ABSPO modelling, we made conscious efforts to give due regard to the dual character of the project as both an explorative study and a pilot implementation of a possible future EU-wide measurement exercise. On the one hand, due to the experimental character of the study, we placed considerable emphasis on pursuing parallel modelling strategies and relying on a multitude of data sources. The aim of this was to assess the feasibility, robustness and adequacy of different approaches, and establish the relative advantage of different approaches in comparison with others. The Report therefore contains a detailed discussion and sensitivity analysis of various thematic areas of poverty measurement: households' consumption habits, food basket development, pricing analysis, equivalence scales and welfare indicators, among others. The pilot character of ABSPO analysis, on the

other hand, is evident in our preference for simpler and more transparent modelling algorithms, the use of readily available national and European survey data, and cost effective solutions that are easily scalable to implementation at the EU level. For these reasons, we also invested heavily in producing new data (such as comprehensive sets of nutritional food reference baskets) that can be used as direct inputs for future work.

ABSPO methodology

The ABSPO methodology aims primarily at the calculation of cross-country comparable absolute poverty lines. To this end, we employ three different measurement strategies. These all represent the same targeted standard of living, use the same notion and structure of minimum needs, and feature broadly similar modelling tools. As such, they yield comparable poverty estimates in the same disaggregated manner when utilised in combination with EU-SILC data. The main differences between the respective modelling strategies are twofold. First, they concern the different weights assigned to reference budget methods and survey-based statistical techniques during the modelling of households' minimum living costs in various expenditure categories. Second, they concern the different ways used to identify individuals' and households' minimum needs in a given socio-economic context. Through the related data availability constraints and resource requirements, the choice of the method has direct implications on the number of Member States covered in the course of ABSPO modelling.

The reference budget-based approach uses standard reference budget methodology whenever possible, and builds heavily on existing cross-country comparable reference budgets to derive absolute poverty lines in selected pilot countries (Belgium, Finland and Hungary). In particular, it produces a new set of representative minimum budgets for food and residual expenditures (including clothing, personal care, expenses related to children safety, maintaining social relationships, as well as rest and leisure) by extending the demographic and geographic scope of existing illustrative reference budgets. The main advantage of this approach consists in the piecemeal consideration of essential consumer needs, while its main disadvantage stems from its high implementation costs, labour intensive character and limited scope for algorithmisation.

The survey-based approach represents a more algorithmic approach to absolute poverty measurement, and is most closely aligned with the measurement practice of the Italian Statistics Office (ISTAT), the only national statistical institute in an EU Member State that conducts absolute poverty measurement in official capacity. This approach puts more emphasis on the use of European household survey data and represents, to our knowledge, the first attempt to derive absolute minimum thresholds for non-food needs using survey data alone. It relies on households' self-reported subjective views in relation to minimum needs by various thematic domains, and features stand-alone modelling of the associated minimum thresholds across five different expenditure categories (i.e. food, housing, health, transportation and residual expenditures). The main advantage of this approach is its straightforward implementation with readily available European household survey data, while its main disadvantage concerns the limited scope and lack of complete harmonisation of these data sources across Member States.

Finally, the food-based statistical approach follows standard international practices in absolute poverty measurement, and determines households' non-food minimum needs jointly and in direct relation to the food budget inputs using regression-based statistical techniques and budget survey data. Since these methods are used exclusively in developing countries characterised by high food expenditure shares, the main challenge of the food-based approach was to adapt the methodology to the needs of advanced economies. Our proposed simulation-based modification of the method delivers poverty lines comparable with other ABSPO estimates and external reference points, and covers all EU Member States simultaneously (except for Austria).[4]

Main ABSPO findings

Using the above measurement strategies, we derive absolute poverty estimates for all EU Member States (except for Austria). These estimates paint a somewhat differentiatd picture of European poverty than existing headline indicators. As of 2018, the overall incidence of absolute poverty is similar to the at-risk-of-poverty (AROP) rate at the EU level (15.2% vs. 16.8% in 2018), but considerably lower than the relevant composite AROPE indicator (21.6%). The difference between ABSPO and AROPE rates is even more pronounced at the national level: absolute poverty is visibly higher than the risk of poverty and social exclusion in most Central and Eastern European countries

[4] Note that Austria does not feature in the European Household Budget Survey and is therefore not modelled during ABSPO implementation.

(23.9% vs. 22.2% on average), but substantially lower in most EU15 Member States (9.1% vs. 20.2% on average). The distribution of ABSPO poverty across countries is more similar to that of material and social deprivation indicators, albeit even more uneven. This highlights that, according to ABSPO estimates, the gap between poorer and richer Member States in terms of the adequacy of individuals' social participation and their capacity for a decent life is even larger than in relation to material and social deprivation.

ABSPO estimates also provide new insights for the analysis of poverty trends in the EU. In particular, absolute poverty appears more cyclical than the share of people at risk of poverty or social exclusion: between 2008 and 2018, the EU level ABSPO poverty rate fluctuated between 15.2% and 19.8%, relative to the comparative stability of the AROPE indicator (21.6% - 24.9%) and its individual sub-components (16.8%-17.5% for AROP, and 7.1% - 9.7% for severe material and social deprivation). The fluctuation of absolute poverty was rather similar but somewhat higher than the change in the anchored at-risk-of-poverty indicator during the same period (15.1%-19.2%). These fluctuations in the ABSPO poverty rate correspond to a large increase of close to 13 million in the number of European poor following the financial and economic crisis of 2008-2013, and a reduction of around 18 million during the subsequent recovery period (2013-2018).

ABSPO and AROPE poverty rates are more similar as far as horizontal poverty profiles and within-country concentrations in poverty are concerned. Due to relatively limited spatial differences in minimum living costs in most Member States, regional and urban-rural gaps in poverty are driven mainly by geographical dispersion in households' income position and remain robust to measurement choice. The same applies to sub-national differences along socio-demographic lines, given the reasonably close alignment between the modelled structure of minimum needs underlying ABSPO indicators, and the equivalisation techniques used for the calculation of headline AROP and AROPE indicators.

Further comparative analysis reveals that, from a cross-country perspective, ABSPO poverty measures are broadly consistent with indicators of subjective poverty, hybrid poverty lines, a novel measure of monetary deprivation based on MSD indicators, as well as simplified Orshansky-type formulations of the poverty line. These suggest that, despite the potential data limitations associated with European household surveys, ABSPO estimates represent reasonable characterisation of households' minimum needs.

Conclusions and potential future use

The main conclusion of the ABSPO project is that constructing a new absolute poverty measure in the EU is methodologically and technically feasible on the basis of existing data sources. The measurement approaches presented in this Report and the newly produced ABSPO outputs provide various strategies, detailed methodological guidance and practical tools for the development of an EU-wide absolute poverty measure that could be suitable for regular social monitoring.

The financial costs, data requirements and resource needs of scaling up ABSPO measurement to the EU level depends on the choice of modelling strategy. The implementation of the survey-based and food-based modelling approaches require minimal extra investment and can be readily implemented using existing data. The implementation of the reference budget-based approach, on the other hand, necessitates extensive new data collection and harmonisation. Given the compatibility and modular character of the presented modelling approaches, the implementation of a hybrid or modified variant is also possible. Since different strategies have different measurement properties and implications, it is important to strategically consider both the modelling features and future expected use of various measures in advance of potential developments.

New data collection, refinements in methodology, and advances in data harmonisation could undoubtedly benefit all proposed ABSPO measurement approaches simultaneously, especially as far as the cross-country comparability and accuracy of the relevant indicators are concerned. For improved measurement, particular attention should be devoted to the continued harmonisation and integration of European household surveys (i.e. the European Household Budget Survey and the EU-SILC), as well as the accessibility of more granular and comprehensive microdata at the national level. Additional investment by national and European statistical authorities to collect and produce auxiliary data on households' minimum needs and expenditures and hard-to-reach population groups could further help to refine and verify the accuracy and robustness of ABSPO poverty measures.

A robust absolute measure of poverty developed on such foundations could meaningfully complement the EU's existing measurement framework. In particular, it could help contextualise various elements of the social protection system at the national and European levels.

Structure of the Report

This Report consists of nine stand-alone chapters and two annexes that present various thematic areas of absolute poverty measurement and ABSPO implementation. The individual chapters differ in terms of length, analytical focus and policy relevance, and may attract very different readerships. Taken together, they draw a full arch from the discussion of the policy context of poverty measurement to the methodological details of ABSPO modelling to the potential practical implications of this work for potential future policy use.

Chapter 2 starts with the presentation of the current EU framework of poverty measurement. In particular, we discuss the main measurement-related features of the headline AROPE indicators and consider how a needs-based absolute monetary poverty measure can provide meaningful complementary perspectives. The Chapter also contains an in-depth literature review of existing practices in absolute poverty measurement at the national and international level, and highlights the methodological possibilities and data related constraints facing EU-wide measurement.

Chapter 3 presents the principal common elements of the ABSPO measurement framework. It starts with the discussion of the conceptual background underlying main measurement choices, including the definition and operationalisation of targeted living standards, minimum needs and cross-country comparability. The main part of the Chapter is devoted to the ABSPO measurement strategy, and presents the three different modelling strategies proposed for ABSPO implementation. The relevant budget-based, survey-based and food-based approaches all combine reference budget practices and survey-based statistical techniques, but use them in different proportions for the identification and measurement of individuals' and households' minimum needs. The Chapter ends with the presentation of the ABSPO data universe, a system of various input and information sources used for ABSPO measurement. Among these, reference baskets, price statistics, national and European household surveys merit particular consideration.

Chapter 4 presents the methodology of the reference budget-based approach to ABSPO measurement. This builds directly on available cross-country comparable reference budgets produced by previous Commission-funded initiatives for the modelling of food and residual expenditures (Goedemé, Storms, Stockman, et al. 2015; Goedemé, Storms, Penne, et al., 2015). The main challenge of this strategy concerns how the reference basket inputs may be extended along demographic and geographic lines to ensure full population coverage, as required by poverty measurement. Given the associated costs and data needs, the implementation of this approach is limited to the pilot countries of Belgium, Finland, and Hungary.

Chapter 5 focuses on the survey-based approach to ABSPO measurement. This approach uses newly-developed nutritional food reference baskets, but uses exclusively survey-based statistical methods for the modelling of non-food minimum needs by expenditure category. The method is similar to measurement strategy applied by the Italian National Institute of Statistics (ISTAT) for absolute poverty measurement in Italy, but relies on households' subjective views on minimum needs and living conditions (rather than external national sources) for calculating the appropriate expenditure thresholds. The main methodological challenge for international measurement consists in identifying the relevant cross-country comparable information sources across available European household surveys.

Chapter 6 presents the food-based statistical approach as the most straightforward and resource-efficient ABSPO measurement strategy. It features the same nutritional food reference baskets as the survey-based approach, but – rather than calculating minimum thresholds individually by expenditure category – uses households' observed expenditure patterns to determine the non-food and overall poverty lines in direct relation to the food budget inputs. This is a well-known procedure of absolute poverty measurement in developing countries, but has not yet been used in high-income countries characterised by low food expenditure shares. We address the related methodological challenge by proposing a new inverse methodology that matches existing poverty estimates in Italy (Menyhert, 2022b).

Chapter 7 discusses the most important cross-cutting thematic issues related to ABSPO poverty measurement. The first section focuses on the development of food reference budgets as the central component of most absolute poverty measurement frameworks. In particular, it presents the new ABSPO nutritional food reference baskets, developed in co-operation with the ife Institute of Food Economics in Kiel, that are based on common European dietary reference values, aligned with national food consumption habits, and provide a cross-country comparable anchor for EU-wide absolute measurement. The following sections discuss important methodological or data-related aspects of food budget pricing, equivalence scales, the definition of welfare indicator, and the compatibility and congruence of European household surveys with one another. Our presentation of these issues highlights the multitude of different ways in which poverty measures may be developed, but also indicates strong common elements across various specifications.

The main ABSPO findings and poverty measures are presented in **Chapter 8**. The first section compares the poverty lines and associated poverty rates derived on the basis of different ABSPO measurement approaches. It shows that, notwithstanding the numerical differences in ABSPO poverty lines across various modelling strategies, the emerging cross-sectional and longitudinal patterns of poverty between and within Member States are broadly similar across all measurement approaches. In the following section, the Chapter gives a presentation of the resulting ABSPO poverty estimates in the context of existing AROPE indicators. This reveals that the level of ABSPO and AROPE poverty is different at the EU level, and that absolute poverty is considerably more uneven across countries and cyclical over time. The last section of the Chapter compares ABSPO indicators with alternative measures of subjective poverty and a novel concept monetary deprivation based on MSD indicators as a validation exercise.

Finally, **Chapter 9** discusses the possibility and related challenges of using the ABSPO methodology as a basis for a complementary EU-wide measure of poverty. It first discusses the main operational and data requirements of rolling out the ABSPO methodology to all EU Member States. The next section considers the requirements of using ABSPO-based indicators for the purposes of regular measurement and monitoring, and discusses various potential methodological issues related to the COVID-19 pandemic or insufficient data harmonisation. The last section closes with a set of detailed suggestions on how the existing European data infrastructure could be further improved to support the needs of comparable and consistent poverty measurement in the EU.

Figure 1.1. A schematic illustration of the structure of the ABSPO Final Report

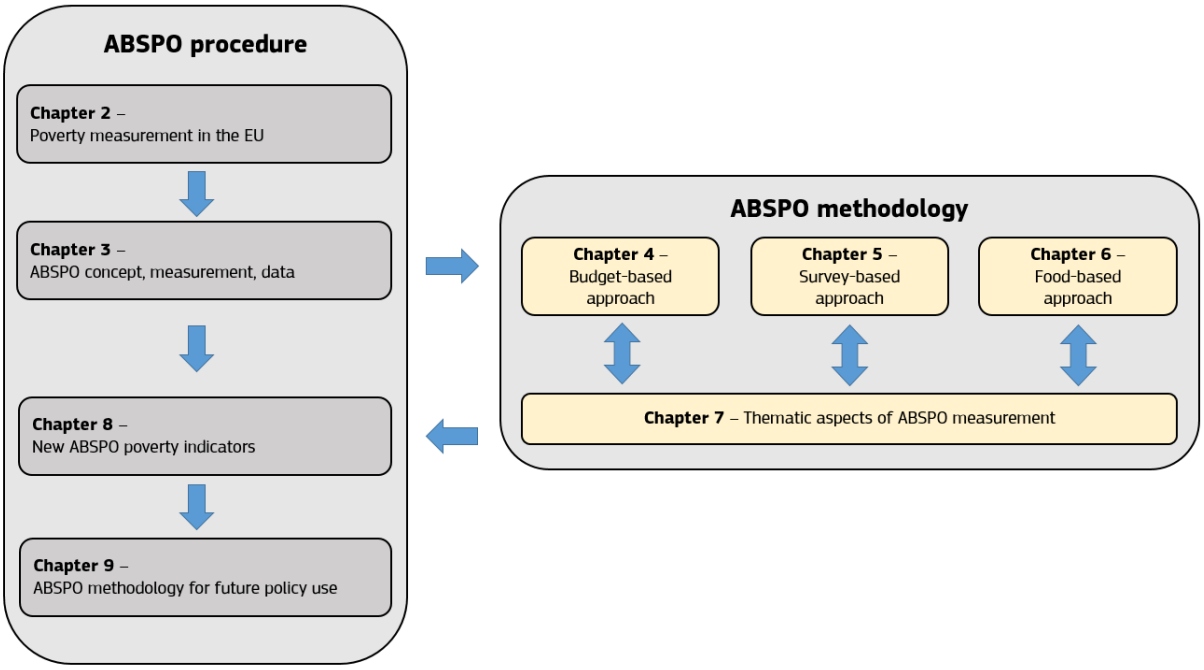


Figure 1.1 offers a schematic illustration of the structure of the ABSPO Final Report. It indicates the connections between the various parts and may serve as a useful guide on how best to read the remainder of the Report by different audiences. In particular, it highlights the dual character of the Report as both a non-technical policy document and an explorative analytical study. Policy makers may be more interested in Chapters 2, 3, 8 and 9 that present the more procedural elements of ABSPO implementation in a non-technical way. These segments discuss the EU's existing measurement framework and the concept of ABSPO measurement at the beginning of the Report, and present the new absolute poverty estimates and the requirements of future policy use towards the end. The more analytical parts of the Report, on the other hand, are contained in Chapters 4-7. These acquaint readers with the modelling details of the reference budget-based, survey-based and food-based statistical approaches to ABSPO measurement, as well as the relevant cross-cutting thematic aspects. These may be of particular interest to academics and poverty experts, reference budget practitioners, and statisticians or data experts in national and international agencies.

CHAPTER 2.
Current EU indicators and the added value of an absolute measure

"People are said to be living in poverty if their income and resources are so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live. Because of their poverty, they may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalised from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted."

Joint Report on Social Inclusion 2004, European Commission[5]

Poverty and social exclusion harm lives and limit the opportunities for people to achieve their full potential by affecting their health and well-being and lowering educational outcomes. This, in turn, reduces their ability to lead a successful life and further increases the risk of poverty. Without effective educational, health, social, tax-benefit and employment systems, the risk of poverty is passed on from one generation to the next. Hence, the condition of poverty tends to persist, creating more inequality that can lead to the long-term loss of economic productivity for whole groups of society and hamper inclusive and sustainable economic growth.

The European Commission has made inclusive growth and poverty reduction one of the top policy priorities in the 2000s. The Lisbon Council of 2000 concluded that decisive steps need to be taken, and adequate targets set up, to eradicate poverty in the EU, while the 18 indicators adopted by the Laeken Council in 2001 created a sound basis for monitoring poverty and social exclusion in the EU. The Europe 2020 strategy, adopted in 2010, further identified lifting 20 million people out of poverty by 2020 as one of the EU's five strategic headline targets, and put social concerns on an equal footing with economic objectives. Moreover, with the Social Investment Package, the European Commission has set forth an integrated policy framework aimed at effective social spending, human capital investment and support for vulnerable groups (including children), with earmarked funds for combating poverty and social exclusion.

With more than 90 million EU citizens still at risk of poverty and social exclusion in 2019, anti-poverty efforts will remain at the top of the EU's political agenda for the foreseeable future – especially given the far-reaching consequences of the COVID-19 pandemic. The EU's sustainable development strategy ("Towards a Sustainable Europe by 2030") already aimed at a socially fair and inclusive transition towards sustainability during the current decade, but the post-pandemic recovery plan for Europe ("NextGenerationEU") makes investment in inclusive growth and social cohesion an even higher priority. These aim to deliver on the 20 key principles and rights set out by the European Pillar of Social Rights (ESPR) to ensure fair and well-functioning labour markets and social protection systems. The related ESPR Action Plan turns these principles into concrete policy actions, and sets the goal – as one of its three headline targets for 2030 – of reducing the number of people at risk of poverty or social exclusion by at least 15 million.[6]

The remainder of this Chapter focuses on the current measurement of poverty in the EU and assesses how an absolute poverty indicator may bring added value by introducing new complementary perspectives. The Chapter also reviews the existing concepts, methods and practices of absolute poverty measurement at the national and

[5] The quoted excerpt from Directorate-General for Employment and Social Affairs (2004) follows the definition of poverty established by the European Council in 1975 (and extended in 1985) stating the following: "For the purposes of this Decision 'the poor' shall be taken to mean persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member States in which they live." (Article 1 of the Council Decision [85/8/EEC] on specific Community action to combat poverty).

[6] For more details on these and related initiatives, visit the relevant EU websites at https://ec.europa.eu/info/strategy/recovery-plan-europe_en, https://ec.europa.eu/info/publications/reflection-paper-towards-sustainable-europe-2030_en, and https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/european-pillar-social-rights/european-pillar-social-rights-action-plan_en.

international levels in the EU and beyond, and lays the groundwork for ABSPO indicator development presented in subsequent parts of the Report.

2.1. Current measurement of poverty in the EU

Poverty and social exclusion are complex and multi-dimensional concepts, and are measured in a number of different ways by national and European authorities (Guio, Gordon, and Marlier, 2012; Förster et al., 2013; Atkinson, 2019). At the EU level, existing indicators used in the context of the Social Protection Performance Monitor (SPPM), the Joint Assessment Framework (JAF) or the revised Social Scoreboard provide a comprehensive coverage of various aspects of poverty, inequality and social exclusion (Social Protection Committee, 2015).[7] The different targets and indicators vary considerably in terms of measurement scope, operative function and policy relevance. The very challenge of social indicator development is to align a coherent set of indicators with sound measurement, direct policy linkages and adequate targets that can support social policy action at different levels of government (United Nations, 2018; OECD, 2019).

This section provides a brief overview of the current measurement of poverty in the EU by focusing on the relevant headline indicators. The most general and comprehensive of these is the share of people at risk of poverty and social exclusion (AROPE). The AROPE indicator and related broader framework play an important role among the EU's long term strategic objectives, as the relevant policy targets of the Europe 2020 strategy, the European Pillar of Social Rights Action Plan or the EU's SDG commitments are all formulated on AROPE grounds. The AROPE indicator combines measures of relative monetary poverty, material and social deprivation and low work intensity (Eurostat, 2017b). Since the main features, methodological details and data requirements of these sub-components are well documented (Eurostat, 2012; 2021; Atkinson, Guio, and Marlier, 2017; United Nations, 2018), our analysis concentrates on their most relevant aspects from the perspective of EU-wide absolute poverty measurement.

The at-risk-of-poverty (AROP) indicator

The first and largest AROPE component is the at-risk-of-poverty (AROP) rate. It represents the share of people living in households with an equivalised disposable income below 60% of the national median. AROP is therefore a relative monetary measure of poverty that focuses on household income as compared to prevailing national norm. The relevant AROP thresholds do not directly represent any pre-determined living standard or basic need, but define the acceptable minimum in a context-specific manner – in line with the definition of poverty agreed by the European Council in 1975 and used extensively in developed countries.[8] From a measurement perspective, the main advantage of AROP lies in its simple, transparent and easy-to-calculate structure that offers direct comparability across countries or time periods without the need for international price comparisons. As of 2019, 16.8% of the EU population is at-risk-of poverty, with relevant national figures ranging from 10.1% in the Czech Republic to 22.9% in Latvia.[9]

Given the context-specific character of AROP and the large variability of living standards between Member States, national poverty lines exhibit considerable cross-country differences in levels and purchasing power. **Figure 2.1** presents the (equivalised) AROP poverty thresholds across EU countries in 2019, and reveals more than a six-fold difference between the poorest and richest Member States (Romania and Luxembourg, respectively).

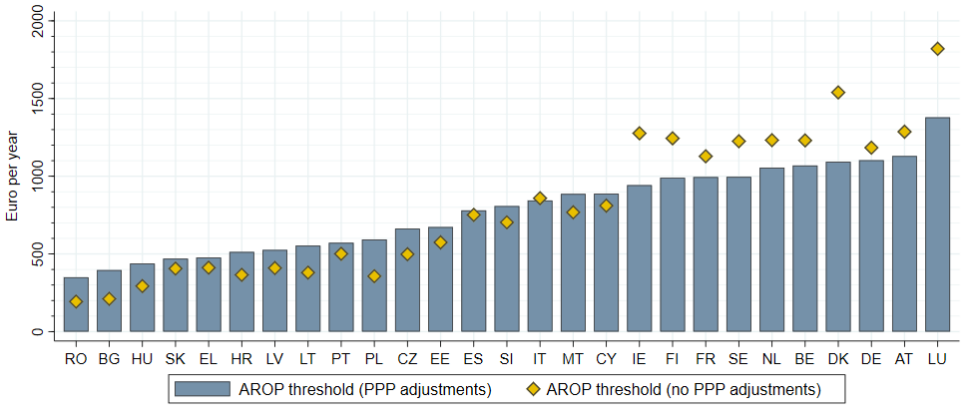
[7] For more information, see the Joint Assessment Framework developed by the DG Employment, Social Affairs Inclusion (https://ec.europa.eu/eurostat/web/employment-and-social-inclusion-indicators/employment-guidlines/indicators), the annual reports and thematic reviews of the Social Protection Committee (https://ec.europa.eu/social/main.jsp?catId=758), or the Social Scoreboard (presented by the 2018 Joint Employment Report) that monitors Member States' performance in relation to the European Pillar of Social Rights (https://ec.europa.eu/social/main.jsp?langId=en&catId=1196&newsId=9163&furtherNews=yes).

[8] The definition of poverty agreed by the European Council in 1975 states that '... people are said to be living in poverty if their income and resources are so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live. Because of their poverty they may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalised from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted'. For more information, see Eurostat (2010) or United Nations (2018).

[9] For more details, see the official data publicly available at the Eurostat website [series ilc_li02].

Accounting for differences in purchasing power reduces the cross-country dispersion significantly, but still retains more than a three-fold difference across the EU. The marked differences in living standards represented by national AROP poverty lines are also evident in the dissimilar living conditions of poor households across Member States: while only 6.3% of AROP households suffered from material and social deprivation in Luxembourg in 2019, the corresponding figure in Bulgaria and Romania are 52.1% and 34.1%, respectively.[10] This suggests that the relationship between relative poverty and absolute deprivation is rather changeable across the EU: while being at risk of poverty typically does not preclude access to basic goods and services in richer Member States, it often goes together with considerable deprivation in poorer Member States.

Figure 2.1. Purchasing power of the at-risk-of-poverty (AROP) thresholds by country



Notes: Own calculations based on EU-SILC data from 2018. Purchasing power parities are calculated based on comparative price level data from Eurostat (series tec00120).

Another important feature of AROP is that it represents a variable standard over time. Tied to 60% of the national (equivalised) median income, AROP poverty lines move in synch with the income position of the centremost household. This has strong implications for poverty measurement over longer periods of time, especially when compared with anchored poverty indicators that represent a fixed standard over time.[11] **Figure 2.2** shows the evolution of a set of standard and anchored AROP poverty lines and poverty rates over the 2004-2018 period in the EU. The relevant EU averages reveal that, due to considerable real increases in households' disposable income over the last 15 years, the standard AROP poverty line was 18% higher than the anchored poverty line by 2018 (i.e. 875 euro per month vs 742 euro per month) – and resulted in a wide gap between the corresponding EU-level poverty rates (i.e. 15.6% vs. 9.6%). **Figure 2.2** also reveals that the difference between various AROP indicators can be even larger at the country level. In Greece, for example, where the 2008 financial and economic crisis drastically reduced prevailing living standards, the standard AROP poverty line and rate, were, respectively, almost 30% and 20 percentage point lower in 2018 than their corresponding anchored variants. In contrast, steady income growth in Poland has meant that the standard AROP poverty line is now more than double the anchored one (i.e. 357 euro per month vs. 166 euro per month in 2018), while the difference between the corresponding poverty rates is even larger (i.e. 15.4% vs. 1.9%). This shows how the cyclical behaviour of the standard AROP poverty line during economic expansions and downturns reduces the variability of the poverty rate over time, and how applying a fixed standard may entail more significant changes.

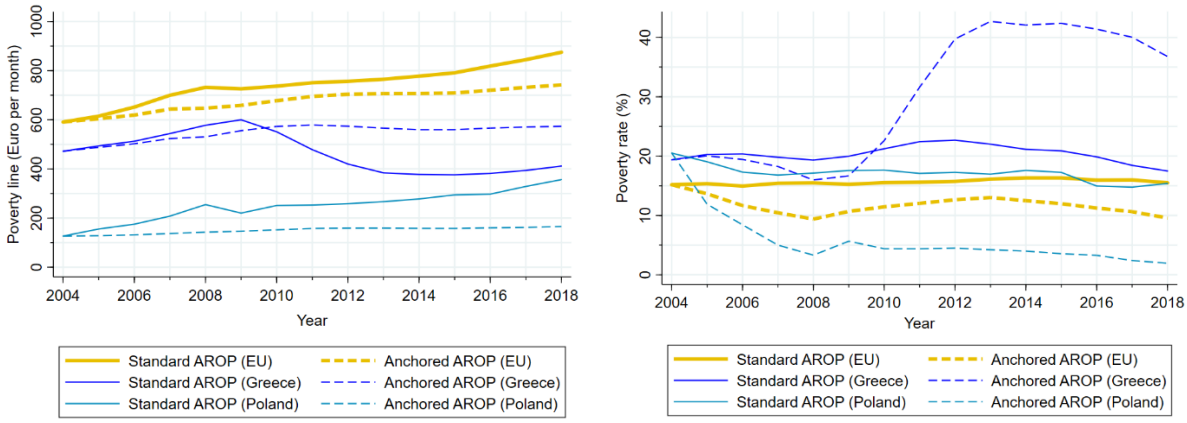
Another noteworthy aspect of AROP-based measurement relates to the underlying context-specific definition of poverty. As a relative indicator, the calculation of AROP presupposes an *a priori* definition of the reference population ("the society in which people live"). Since 1975, the appropriate context for poverty analysis in the EU is the national one, and similar relative indicators derived at either sub-national or EU-wide level are generally not

[10] Similar patterns emerge from regional analysis at the sub-national level: due to considerable spatial differences in living costs within certain Member States, the incidence of material and social deprivation among AROP households may vary by up to 20 percentage points across NUTS1 region. These findings can help understand why considerably research and policy attention have recently been devoted to the idea of using regional PPP-scalers for social and poverty analysis. For more details, see Biggeri et al. (2018) or Menon et al. (2021).

[11] This is the main reason why Eurostat also calculates the at-risk-of-poverty rate anchored at a fixed moment in time [ilc_li22b series], which also features in the EU's social indicator portfolio.

comparable with one another.[12] For these reasons, one may consider AROP as the national component of the AROP framework.

Figure 2.2. At-risk-of-poverty trends over time



Notes: Own calculations based on EU-SILC data. EU-level figures are calculated as the simple average of national statistics of Member States with continuous data coverage (excluding Bulgaria, Croatia, Malta and Romania). Anchored AROP poverty lines represent inflation-adjusted 2004 values based on official country-level HICP figures provided by Eurostat. The year highlighted refers to the relevant income reference period.

Indicators of material and social deprivation

The second AROPE component concerns the composite indicators of material and social deprivation (MSD). This portfolio was created in 2009 as part of the Europe 2020 strategy to monitoring progress towards the EU's social protection and inclusion objectives. MSD indicators focus on households' economic strain and enforced inability, and reflect the multi-dimensional character of poverty and social exclusion (Guio, 2009; Atkinson, Guio, and Marlière, 2017). The relevant dimensions capture those material aspects of households' living conditions that are directly related to one's basic physical, social and psychological needs. Recent revisions and extensions of MSD framework strengthened the importance of the social dimension, distinguished between individual and household-level needs, created a separate indicator for children, and increased the statistical robustness of the indicators (Guio, Gordon, and Marlier, 2012; Guio et al., 2017; Atkinson, Guio, and Marlier, 2017).[13]

The standard deprivation indicator, used for statistical and reporting purposes, is the material and social deprivation rate (MSD rate). This corresponds to the share of persons living in households that cannot afford at least 5 of the 13 deprivation items. According to official Eurostat data, the MSD rate for the EU in 2019 was 7.8%, with national figures varying between 1.8% (in the Netherlands) and 31.1% (in Romania). For AROPE calculations, the alternative indicator of severe material and social deprivation rate (SMSD rate) is used, which measures the incidence of enforced inability in at least 7 of the 13 deprivation dimensions. Calculated in a uniform manner across all Member States and representing the same set of material and social demands, the MSD and the SMSD rates provide a common, needs-based, absolute threshold for EU-wide poverty measurement and analysis.

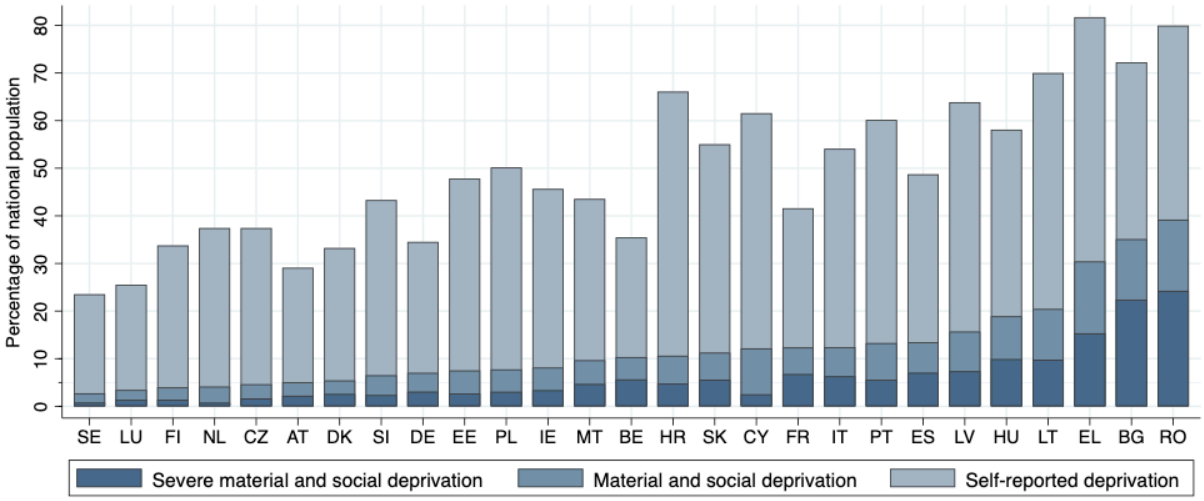
[12] In formal terms, AROP lacks the transitive property that would allow for a straightforward aggregation, disaggregation or scaling between local, regional, national and EU levels based on a functional relationship.

[13] Household-level deprivation items are as follows: 1) capacity to face unexpected expenses, 2) capacity to afford paying for one week annual holiday away from home, 3) capacity to being confronted with payment arrears, 4) capacity to afford a meal with meat, chicken, fish or vegetarian equivalent every second day, 5) ability to keep home adequately warm, 6) access to car/van for personal use, 7) ability to replace worn-out furniture.

List of items at the individual level: 1) having internet connection, 2) replace worn-out clothes by some new ones, 3) having two pairs of properly fitting shoes, 4) spending a small amount of money each week on him-/herself, 5) having regular leisure activities, 6) getting together with friends/family for a drink/meal at least once a month.

For more details, see the dedicated Eurostat website at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Severe_material_and_social_deprivation_rate_(SMSD)&stable=0&redirect=no. As these proposals are yet to be implemented in the Eurostat data collection routines, the current analysis in the Report focusses on the original set of nine indicators.

Figure 2.3. The incidence of material and social deprivation across EU Member States



Notes: Own calculations based on cross-sectional EU-SILC data from 2019. The categories "Severe material and social deprivation" and "Material and social deprivation" are based on the relevant official indicators (based on 13 items), while the "Self-reported deprivation" category includes all households that report enforced lack or inability in at least one deprivation area.

From a measurement perspective, the most important feature of the MSD indicators is their composite and multi-dimensional character. Based on the so-called counting approach, these indicators employ particular aggregation techniques and cut-offs to reduce the complex information content of the deprivation data into single indicators (see Alkire and Foster (2011a, 2011b) and Aaberge and Brandolini (2015) for detailed methodological discussions). These latter are useful measurement tools but highly selective when it comes to capturing the richness of deprivation patterns. One particular aspect that current MSD and SMSD indicators do not accentuate is the large share of households that suffer from some form of deprivation. As **Figure 2.3** shows, 47% of EU households report scarcity in at least one dimension, without being counted as materially and socially deprived by the headline MSD indicators. The incidence of self-reported deprivation varies considerably across the EU, and even between Member States that are characterised by similar levels of material and social deprivation (compare Belgium and Croatia, for example). Another less well-known aspect is that the incidence of material and social deprivation in a country is closely related to the intensity of deprivation among MSD and SMSD households. The analysis of EU-SILC microdata shows that most MSD households in rich Member States suffer deprivation in 5 or 6 dimensions, while their peers in poorer Member States often report deprivation in 10 or more domains.[14] A third noteworthy aspect relates to the large observed heterogeneity across countries in the relative frequency of individual deprivation items among MSD or SMSD households. These features together indicate that the detailed analysis of material and social deprivation in the EU requires a range of different indicators and statistics, and that an absolute monetary measure of absolute deprivations may provide new synthetic inputs and insights.

Low work intensity

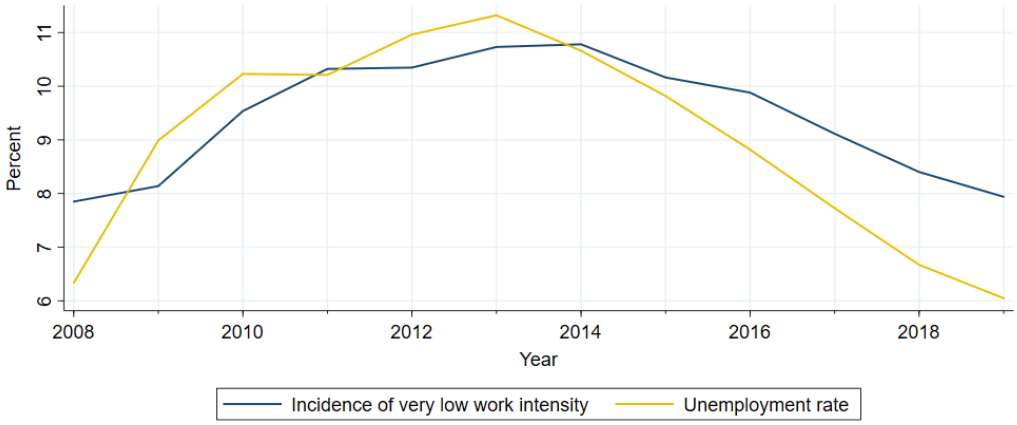
The third AROPE component focuses on the share of persons living in households with very low work intensity. A very low-work-intensity (LWI) household is defined as one where working-age members work less than 20% of their combined full-time working potential during the annual income reference period (Atkinson, Guio, and Marlier, 2017; United Nations, 2018). The LWI indicator is thus the most indirect AROPE sub-component that targets households' capacity for adequate social participation through their labour force status and participation. It is

[14] Note that this relationship also matters for the analysis of material and social indicators over time: cyclical or trend changes in the MSD or SMD rate in a country simultaneously affects deprivation intensity among concerned households. There are existing agreed complementary EU indicators of the depth of material deprivation that document these differences but do necessarily consider it as a structural feature of the current framework of deprivation measurement.

associated with considerable material and financial hardship for most households.[15] In 2019, the LWI rate at the EU level was 8.3%, while national values ranged from 4.2% (in the Czech Republic) to 13.8% (in Greece).

From the viewpoint of poverty measurement, the most pertinent feature of the LWI indicator is its sensitivity to the business cycle. Since the employment rate and average hours worked are highly cyclical macroeconomic indicators, the LWI rate tends to move in tandem with the unemployment rate over time (Arpaia, Kiss, and Turrini, 2014). **Figure 2.4** shows that, at the EU level, the correlation between these two indicators exceeds 90%, which attests to the mostly involuntary character of LWI and the primary role of individual employment-unemployment transitions in its development (Atkinson, Guio, and Marlier, 2017). The short-term variability of the LWI indicator therefore introduces a rather cyclical component into AROPE measurement framework that can have a considerable influence on whether social policy objectives and long-term poverty targets are successfully met.

Figure 2.4. Incidence of low work intensity in the EU over time



Notes: The figures represent the incidence of very low work intensity at the EU level based on EU-SILC microdata from the 2008-2019 period, calculated on the sample of individuals aged 59 or below. The unemployment rate is based on official Eurostat statistics and represents the simple average of the relevant national figure.

At-risk-of-poverty and social exclusion (AROPE)

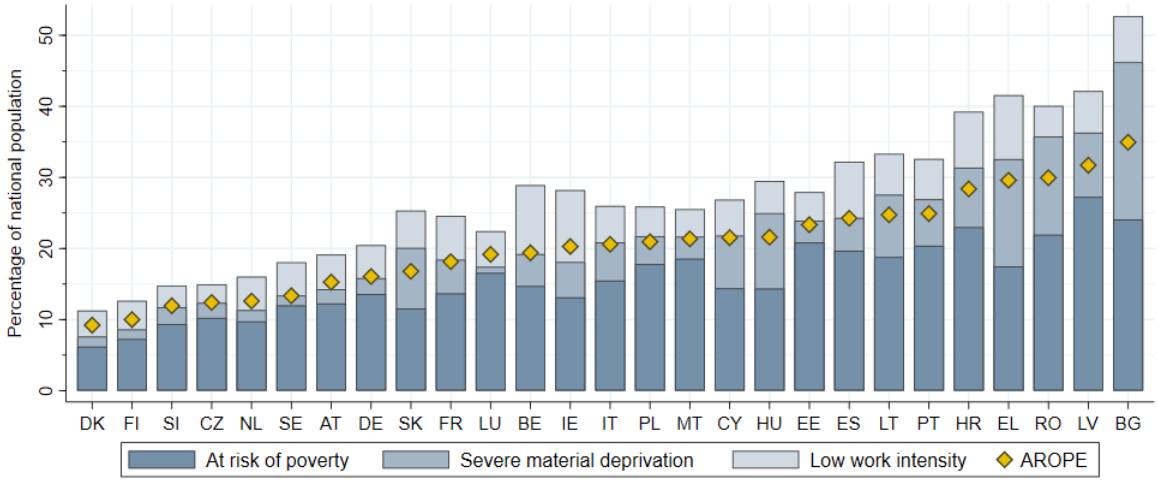
Individual AROPE components capture different dimensions of poverty and social exclusion. For a more complete picture, it is also important to consider the statistical relationship and the degree of overlap between these dimensions. **Figure 2.5** breaks down the AROPE rate by Member State for 2019, and indicates that the overall risk of poverty and social exclusion is considerably lower than the sum of the individual components. The overlap between these latter ranges from 15% (in Luxembourg) to 34% (in Bulgaria and Slovakia) in relative terms, which shows that the joint incidence of income poverty, material deprivation and labour market exclusion changes considerably from one EU country to the next.

Figure 2.6 presents a detailed decomposition of AROPE households in each Member State based on their poverty status in each aforementioned dimension. It shows that around two thirds of AROPE households in the EU suffer from a single form of poverty and social exclusion. The relevant national figures range from 57% (in Greece) to 83% (in Luxembourg), and are strongly correlated with both the AROPE rate (ρ = -62%), and the AROP threshold (ρ = 67%) across Member States. This suggests that monetary poverty is the dominant form of social exclusion in countries with relatively high level of household income: while only 19.4% of AROP households experience severe material deprivation or very low work intensity in Luxembourg, 75.8% of them do so in Bulgaria. **Figure 2.6** also reveals that, paradoxically, the relative share of those SMSD households that do not suffer from income poverty increases with the SMSD rate (ρ = 36%). This suggests that not only do poorer Member States register higher rates of material and social deprivation comparable (or even above) the national AROP rate (as is evident from **Figure**

[15] Our calculations based on EU-SILC microdata from 2019 show that the (equivalised) income position of LWI households relative to the national average ranges from 34% (in Bulgaria) to 66% (in Cyprus).

2.5), but that the incidence of severe material deprivation above the income threshold is also considerably higher there. This shows the complementary role of AROPE sub-components in capturing the various forms of poverty and social exclusion.

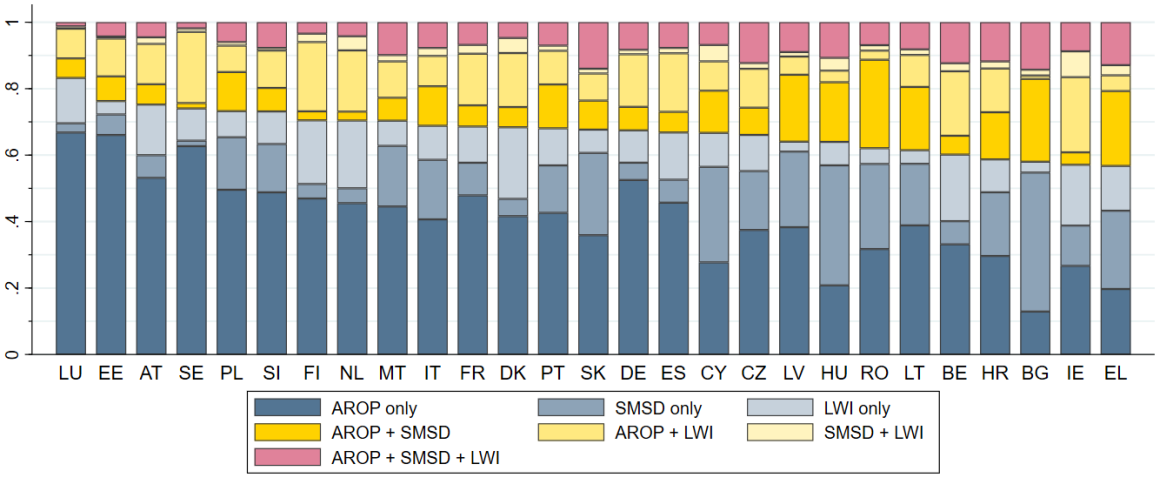
Figure 2.5. The share of population at risk of poverty and social exclusion by country



Notes: Figures are based on official Eurostat data from 2019.

The above analysis highlights the multi-dimensional character of the relevant EU measurement framework, and shows how the headline AROPE indicators and auxiliary social indicators across different portfolios (such as Social Protection Performance Monitor, the Social Scoreboard, or the Joint Assessment Framework) offer a broad view of poverty and social exclusion in the EU. The next section discusses how an additional absolute poverty measure can provide new complementary perspectives for further contextualisation and improved understanding.

Figure 2.6. *Composition of population at risk of poverty and social exclusion by country*



Notes: Own calculations based on EU-SILC microdata from 2019. The figures represent the relative share of AROPE sub-components (AROP – at risk of poverty, SMDS – severe material and social deprivation, LWI – very low work intensity) among households at risk of poverty and social exclusion by country.

2.2. Added value of a complementary absolute measure

Based on the previous analysis, this section assesses how the current EU measurement framework could benefit from the development of a new absolute measure of poverty. We consider the main features of a preferred EU-wide measure both from the theoretical perspective of poverty measurement and the particular contextualisation needs of the headline AROPE indicators. We argue that combining the relative monetary and absolute non-monetary AROPE components into a single needs-based monetary measure with an EU-wide perspective has the most potential for bringing direct measurement and policy benefits.

Needs-based absolute standpoint

Poverty is a dual concept and may refer simultaneously to relative inequalities and absolute deprivations (Ravallion, 2016; United Nations, 2018). While these two perspectives are often closely connected in practice (i.e. inequalities often leave people so far behind that they fail to meet even their most basic needs), they typically imply very different standards for measurement. Absolute indicators are based consistently on some conception of individuals' basic needs. The earliest analytical frameworks of the late 19th century operated with the notion of mere physical subsistence (Booth, 1892; Rowntree, 1901), while more recent measurement targets considerably higher living standards (International Labour Office , 1976; Lister, 1990).[16] Relative indicators, on the other hand, originate from the more recent concept of relative deprivation by Townsend (1987). This emphasises the importance of prevailing standards of material and social development for the measurement of poverty, as well as its time-varying and context-specific character (Berghman, 1995). This emphasis on the social exclusion process, combined with the better measurement and data quality, has contributed to the widespread use of relative indicators as headline poverty measures in the EU and many OECD countries from the 1990s onwards (Förster et al., 2013).[17]

There has been a convergence and growing compatibility between absolute and relative indicators as of late (Ravallion, 2016). This is fuelled by an increased appreciation of the context-specific character of absolute poverty indicators, based on the pioneering work by Sen (1983). His observation that an absolute approach in the space of capabilities often translates into a relative approach in the space of commodities has been the driving force behind the recent development of new country-group specific international poverty lines and various hybrid indicators (Jolliffe and Prydz, 2016; 2017; Fantom and Serajuddin, 2016; World Bank, 2018).

The AROPE indicator may be considered as one such hybrid framework, where a relative monetary component (AROP) is combined with an absolute non-monetary deprivation indicator (SMSD). The broader EU social indicator framework also includes anchored AROP-variants that represent a fixed standard over time. A separate needs-based absolute measure could usefully complement this framework by providing a comparable reference point for EU-wide poverty analysis, assessing the alignment between AROPE thresholds and the demands of adequate social participation in a country, as well as exploring geographic and socio-demographic differences in households' minimum needs and living costs between and within Member States.

Unidimensional focus

Poverty is widely considered as a multidimensional phenomenon. Traditional measurement focused on income and/or consumption, but theoretical research on the different dimensions of poverty identified several lesser-known psychological, ideational and societal aspects already in the 1980s (Ellis, 1984). Since then, several attempts have been made to operationalise the multidimensional concept for measurement purposes (Alkire et al., 2015; Bourguignon and Chakravarty, 2019). This strategy gained official recognition when the UN's 2030 Agenda for Sustainable Development stipulated ending poverty in all its forms and dimensions as the first of the Sustainable

[16] The idea of basic needs is, therefore, not to be confused with mere physical subsistence or extreme poverty. It can equally encompass more comprehensive notions based on the "dignity of individuals and peoples and their freedom to chart their destiny without hindrance" (International Labour Office, 1976; Townsend, 1987) or "adequate social participation".

[17] In practice, relative poverty lines are almost always based on some central tendency measure (e.g. mean, median, mode) of household income or expenditure, and are defined as a given percentage of that. The poverty threshold therefore changes one-for-one with prevailing living standards.

Development Goals (SDGs) (United Nations, 2015).[18] The development of new international measurement and monitoring frameworks is currently ongoing in developing and developed countries alike.[19]

While poverty itself is multidimensional, it is debatable whether subsuming different measurement aspects into a composite indicator is better than considering them separately or focusing on a single dominant one (Aaberge and Brandolini, 2015; Atkinson, 2019). The main challenge associated with multidimensional poverty measures relates to the need for not only a well-defined notion of basic needs, but also a coherent theory as to how these jointly matter for one's well-being. The issue of aggregation is somewhat easier when the most essential biological needs are considered, as in the case of the Multidimensional Poverty Index (MPI) by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI).[20] In advanced economies, however, where acceptable living standards are much higher than subsistence-level considerations, it becomes harder to characterise and measure multi-dimensional poverty in a straightforward manner.[21] One may disagree over which relevant societal needs merit consideration, what their relative weight should be in a composite indicator, and how individuals' minimum needs may be measured in a representative manner, especially in a cross-country setting.

The AROPE framework already features a multidimensional composite indicator to measure material and social deprivation in the EU. Given the conceptual, technical and data-related difficulties associated with developing a suitable alternative multi-dimensional metric, it appears preferable to focus on possible unidimensional poverty measures as potential complementary pieces to existing EU measurement tools.

Monetary character

Poverty is most often measured in monetary terms based on household income or consumption. This typically presupposes a utilitarian approach that represents the chosen indicator in utility terms, as revealed by individuals either directly (through their answers to questions on subjective well-being or minimum income) or indirectly (through their consumption patterns or disposable income). The common practice of adjusting household income for household configurations can therefore be considered as a type of multidimensional analysis, where command over resources and variable individual needs are used as the two dimensions of welfare analysis (Maasoumi, 1986).

Since income or consumption are an imperfect proxy of individual well-being, monetary measures of poverty are always open to criticism (Ringen 1988; Boarini et al. 2012; Iceland 2013). At the same time, empirical evidence suggests that that the fulfilment of individual capabilities depends crucially on household income and wealth (Stevenson and Wolfers, 2013). Monetary resources are therefore best considered as a summary indicator of individuals' and households' command over economic resources and life opportunities, rather than as direct (or only) determinants of well-being (Bossert, Chakravarty, and D'Ambrosio, 2012; Ravallion, 2016). Seen from this perspective, monetary indicators of poverty may capture as broad domains of deprivation, exclusion or inequality as available multidimensional measures.

Further advantages to income-based (or consumption-based) poverty measurement may include less paternalism, direct links to policy, as well as a cost-effective way of measurement based on available survey or administrative data (United Nations, 2018). In the particular context of the EU measurement, the main advantage of a complementary monetary indicator would be the possibility to contextualise AROP poverty thresholds and exemplify a monetary equivalent to the (non-monetary) MSD and AROPE indicators.

[18] Note that the relevant SDGs uses the absolute measure of poverty as represented by the International Poverty Line. For more details, see Section 2.3 of this Report.

[19] These importantly include the research project "The dimensions of poverty and how to measure them" coordinated by ATD Fourth World and the University of Oxford (Bray et al., 2019), as well as the new EU Multidimensional Inequality Monitoring Framework (MIMF) developed by the JRC's Competence Centre on Composite Indicators and Scoreboards (see https://composite-indicators.jrc.ec.europa.eu/multidimensional-inequality for further details).

[20] The MPI has become the leading international multidimensional measure of acute poverty in the developing world, based on households' absolute deprivation in areas of nourishment, childcare, education or sanitation. For more information, see https://ophi.org.uk/multidimensional-poverty-index/.

[21] Existing attempts at multi-dimensional poverty analysis in rich countries include Alkire and Apablaza (2016) for the EU and Dhongde, Pattanaik, and Xu (2019) for the US. In both cases, the relevant indicators combine various metrics in the dimensions of monetary poverty, health, education, employment and economic security as well as social and physical environment.

EU-wide perspective

Most forms of poverty measurement require the prior definition of those population segments that make up the relevant society. This is an essential part of all relative approaches and most absolute approaches that target living standards over and above universal basic human needs. The right alignment between the target population and the prevailing public opinion on where societal boundaries lie is an important source of the validity and legitimacy of a poverty measure.

Regular survey data show that the majority of EU citizens empathise and associate not only with their co-nationals, but also with fellow Europeans (Smith, 1992; Kohli, 2000; Westle, 2016; Mendez and Bachtler, 2016). This does not automatically imply that basic needs for a decent living should or could be considered identical across the EU. Due to considerable divergence in living standards between Member States, it is preferable to develop the acceptable minimum for each household in a context-specific manner that places more emphasis on their immediate social environment (Fahey, 2007). The capabilities approach to absolute poverty measurement can provide a flexible framework to calculate minimum needs in a variable manner by focusing primarily on individuals' societal roles and capabilities rather than specific consumption goods and services (Sen, 1985; 1987; Nussbaum, 2000).

The capabilities approach, however, provides little operational guidance as to how these minimum needs may be determined. Households' subjective views can be helpful in this regard – either by employing participatory methods (e.g. focus group discussions) or using individuals' self-reported subjective answers to survey questions related to their living conditions and minimum needs. These methods form an integral part of the standard toolkit of (objective) absolute poverty measurement, and are also used also for the calculation of AROPE deprivation indicators. An alternative strategy is to rely on subjective poverty lines. These are based on the idea that measurement of poverty requires inherently subjective judgements about what the acceptable minimum is in a particular society, and these should be made individually by the persons concerned (Förster et al., 2013).[22]

In the context of EU measurement, the introduction of an absolute measure with a decidedly EU-wide perspective indicator would be a novelty. With AROP thresholds calculated on the basis of national income distributions, and alternative AROPE sub-components focussing on common individual and household needs, a complementary measurement tool that derives context-specific minimum needs from a common EU-wide notion of individual capabilities could open new avenues for the contextualisation of poverty and social exclusion across the EU and its Member States.

Policy relevance

Social indicators are important tools for evaluating a country's level of social development, analysing the impact of policy, supporting targeted interventions, and advancing the social dimension of sustainable development as a whole (Atkinson et al., 2002). This is particularly true of indicators that have a clear normative interpretation and are relevant for decision-making at different tiers of government.

In the context of EU poverty measurement, this implies that a needs-based monetary measure based on different thematic components and disaggregated data would have considerable potential to contextualise existing AROPE indicators in a policy-relevant manner. In particular, such a measure could provide complementary information on the concentration of poverty across demographic groups and geographic locations, as well as the heterogeneous and redistributive effects of economic cycles on the size and composition of poverty and social exclusion in the EU (Datt and Ravallion, 1992; Bourguignon, 2003; Mitrakos, 2013).

Progress towards the EU 2030 headline poverty target of the European Pillar of Social Rights (ESPR) Action Plan and the relevant UN Sustainable Development Goals (SDGs) are both monitored on the basis of the national AROPE

[22] In theory, subjective poverty lines can be both absolute and relative. In practice, they almost always represent an absolute standard and are calculated on the basis of households' self-reported minimum income needs or subjective well-being in standard household surveys. Poverty trends and comparisons between objective and subjective indicators often lead to divergent results, due partly to the sensitivity of subjective valuations to changes in households' disposable income (Kapteyn, Kooreman, and Willemse, 1988; Kangas and Ritakallio, 2007). For a more detailed discussion and analysis, see Section 8.3 of this Report.

indicators.[23] A complementary absolute indicator may also help contextualise relevant progress at the national level by accounting for spatial differences in living costs, customised needs of various household types and more comprehensive view of basic needs.

Another policy domain where an appropriate absolute measure can provide contextual information concerns the adequacy assessment of various elements of the welfare state and social protection systems. These may include minimum wages, childcare support, unemployment benefits, minimum incomes and pensions. In these areas, the relevant ESPR principles call for fair and equitable policies that reflect minimum living costs and ensure a decent standard of living.

A disaggregated and modular measure of minimum living costs can also help identify the most vulnerable segments of the population that require targeted interventions in certain social policy areas – such as good-quality housing (ESPR Principle #19), affordable childcare and education (ESPR Principle #11), or inclusion of people with disabilities or disadvantages (ESPR Principle #17). It can also support the assessment of horizontal differences in households' purchasing power across various regions and settlement types, as well as the effectiveness of social transfers and in-kind benefits in satisfying households' minimum needs.

2.3. Existing practices in absolute poverty measurement

This section contains a schematic review of the most widely-used practices in absolute poverty measurement on monetary grounds. We first discuss those common features of existing absolute measures that are directly relevant for the design, development and implementation of a suitable ABSPO measurement strategy. Subsequently, we review the existing measures and indicators at both the national and international level.

2.3.1. Common elements of absolute poverty measurement

Most existing monetary measures of absolute poverty share some common traits. These specifically include the joint use of absolute and relative considerations when designating a targeted living standard, the joint characterisation of individual and household-level minimum needs, and the combined use of reference budgets and survey-based statistical methods for the calculation of the poverty line. We review these in turn.

Absolute and relative considerations

Indicators of absolute poverty are meant to represent constant purchasing power over commodities (Ravallion, 2016). As different from relative poverty lines that are supposed to designate the affordability of social inclusion and active social participation relative to prevailing and constantly evolving standards, absolute thresholds are fixed across space, time and population groups. This does not mean that absolute poverty is synonymous with universal standards based exclusively on the most basic human needs – as is the case with extreme poverty (United Nations, 2018). Most existing absolute poverty indicators represent a considerably higher benchmark and denote the affordability of consumption items deemed necessary or desirable by members of a specific (national or international) target populations. Since the living standards and the broader social environment characterising these may be very different, the meaning of poverty tends to change from one social context to another, and absolute indicators based on the same concept may become relative in terms of minimum needs, basic commodities and income levels (Sen 1983; Callan and Nolan, 1991).

[23] The 20 principles and targets associated with the ESPR aim at delivering a strong social Europe that is fair, inclusive and full of opportunity (European Commission, 2021). Among the three headline targets, one foresees the reduction of the number of people at risk of poverty or social exclusion by at least 15 million until 2030. The UN Sustainable Development Goals (SDGs) represent a common global ambition to end extreme poverty, reduce inequality and protect the planet by 2030. Progress on poverty eradication (SDG1) is currently monitored on the basis of the World Bank's international poverty line of 1.90 $/day (SDG Target 1.1) and the respective national poverty lines (SDG Target 1.2). For more information see https://unstats.un.org/sdgs/files/report/2021/secretary-general-sdg-report-2021--EN.pdf and https://ec.europa.eu/eurostat/web/sdi/overview.

Existing absolute poverty lines are in fact very different from one another. It is a well-known empirical regularity that richer countries tend to draw absolute poverty lines at a higher level than poorer ones (Chen and Ravallion, 2013). This so-called 'relativist gradient' can be interpreted in different ways. One can think of a poverty line as the monetary equivalent of an underlying concept of human welfare in a specific setting – a social norm that can vary from one setting to another. Under this interpretation, individual welfare depends on a person's own consumption, and the relativist gradient stems from a tendency among richer countries to use higher welfare norms in deciding who is poor. However, there may be another reason why richer countries have higher poverty lines: If welfare is not solely dependent on individual consumption but encompasses certain social determinants, then living in a richer country may require a higher level of consumption to ensure adequate social inclusion and the attainment of a given level of welfare than in a poorer country. While this admittedly subtle theoretical distinction between social norms of welfare and social effects on welfare has dramatically different implications for cross-country comparable poverty measurement, existing evidence suggests that relative considerations represent an important element of absolute poverty measurement at the national and international level alike (Ravallion and Chen, 2011).

Moreover, relative considerations tend to permeate not only the conceptual but also the practical level of absolute poverty measurement. One instance includes the consideration of certain goods and services that are inherently relational in character (such as IT technology and digital communication tools). Their necessity or usefulness depends almost exclusively on their widespread use among members of the society one lives in. Another measurement aspect where relative considerations are hardly avoidable concerns the pricing of consumption items and reference baskets: the use of representative prices, regardless of their specific character and statistical properties, is bound to reflect prevailing purchasing patterns and standards.

It is nevertheless important to note that the degree, importance or centrality of relative considerations can be very different from one absolute poverty indicator to the next. For example, the proposal by Allen (2017) contains minimal relative features when drawing up necessity-centred poverty lines for a large number of developing and developed countries in a context-specific way. At the other end of the spectrum, the Minimum Income Standard (MIS) methodology developed by the Joseph Rowntree Foundation in the United Kingdom features reference budgets drawn up by members of the general public in a consensual and rather relative manner to ensure that minimum living standards are defined in the context of widely held social expectations (Bradshaw et al., 2008).

Individual and household-level minimum needs

The characterisation of absolute poverty typically involves an underlying conception of basic needs. These represent essential ingredients to the full physical, mental, and social development of the human personality, and can provide a useful anchor and foundation to drawing absolute poverty lines (Streeten, 1981; United Nations, 2010; Atkinson, 2019). The operational definition of basic needs is somewhat elusive, and the question of what minimum needs should be considered for poverty measurement remains open for discussion. Most existing indicators account for basic food and housing needs at the minimum, and many of them feature explicit modelling of auxiliary needs related to clothing, transportation or social participation, as well. Other measurement frameworks consider these among residual needs – a separate leftover category for non-explicitly modelled minimum needs of all kinds.

While poverty is customarily measured at the household level, the modelling of minimum needs often combines both an individual and a household-level focus. Most basic needs are individual in character, but the minimum monetary costs of satisfying them usually depends on one's household configuration. One reason is that many consumption items are non-rivalrous and non-excludable within households, and consumed jointly by their members (such as housing space, transportation equipment, digital communication tools, kitchenware and furniture, among others). Another reason is that scale economies and lower purchasing costs may be available to larger households with multiple individuals. To take these into account, most existing measurement frameworks include both elements that are calculated individually and elements that refer directly to the household level.

The balance between these two components vary greatly from one poverty measure to another. For example, Allen (2017) focuses exclusively on individual needs and calculates household-level poverty lines as a simple addition of these across household members. At the other end of the spectrum, many budget standards initiatives calculate customised minimum budgets for a large number of household configurations separately (see Warnaar (2009) for details). More widespread is the use of equivalence scales that allow for connecting these two spheres and comparing different household configurations by assigning them appropriate monetary values using simple

statistical weighting. Since the presumed needs of households typically grow in a non-linear manner with the addition of new household members, the most widely used equivalence scales (such as the OECD and modified OECD scales) account both for household size and composition.[24] The choice of a particular scale may depend equally on technical assumptions (about economies of scales, for example), value judgments (about the priority assigned to the needs of particular population groups, such as children or large families) or practical considerations (regarding pre-existing use). The related decisions can have a considerable impact on the estimated level of poverty in a given country, but typically leave cross-country rankings and over-time trends in poverty unaffected (Vos and Zaidi, 1997; Burniaux et al. 1998).

Reference budget techniques and survey-based statistical methods

Another common feature of most existing absolute poverty measurement frameworks is the simultaneous reliance on reference budget practices and survey-based statistical methods. The combination of these allows for the piecemeal modelling of minimum needs for selected individual and household types, as well as a subsequent extrapolation towards a broader set of needs and a wider population focus.

Reference budgets are illustrative priced baskets of goods and services associated with a pre-defined living standard (Goedemé, Storms, Penne, et al., 2015). They represent one of the oldest methods of analysing poverty and households' living standards, and an increasingly popular one since the early 2000s.[25] While the 2009 handbook of reference budgets lists only nine EU countries with established reference budget activities (Warnaar, 2009), the current number is much higher and includes all but a few Member States (Storms et al., 2014), and the interest in reference budgets is also on the rise at the global level.[26]

Reference budgets are typically developed with a particular application in mind and can serve different policy functions. The most common of these include the assessment of income or benefit adequacy, household budget planning or counselling, and poverty measurement (Bosch et al., 2015). Different applications often require different modelling and methodological choices: while budget planning may call for a wide demographic focus and comparability with household survey data, adequacy assessment of minimum incomes and living wages is often most feasible with a particular social context and participatory methods in mind (Bradshaw et al., 2008).[27] However, some methodologies are more flexible or accommodating than others, and can produce multi-functional tools, such reference budgets in Italy or Luxembourg (Grassi and Panuzzi, 2009; Allegrezza, 2016).

For poverty measurement, the benefits of reference budgets are numerous. First, they offer a great deal of autonomy and normative control as far as the definition of the targeted living standard (such as adequate social participation) is concerned. Second, they require practitioners to operationalise this concept and give serious consideration to individuals' and households' minimum needs, along with the consumer goods and services that may be necessary to satisfy these. Third, reference budgets offer much flexibility in specifying the scope, depth, structure of minimum needs and reference items, as well as the more general features of reference budget construction (such as time horizon, pricing source, modelling procedure). Fourth, their granular focus makes it possible to customise the resulting reference budgets for specific population segments or circumstances. Indeed, many existing initiatives feature either a high number of individual and household configurations (Grassi and Panuzzi, 2009), produce differentiated reference budgets for specific geographical areas and social groups

[24] For more details, see Nelson (1993) or visit the relevant Eurostat or OECD websites at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Equivalised_disposable_income and . https://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf.

[25] The earliest reference budgets, denoted by the term 'standard budgets', were developed in Britain and the United States in the late 19th century, and enjoyed widespread use from the 1920s onwards (Rowntree, 1901). The standard budget methodology fell into general disfavour during the 1960s but gained significant momentum in the 2000s. For a more detailed historical account, see Deeming (2010)

[26] Reference budgets have a long-standing tradition and policy role in English-speaking countries like Australia, Canada or the United States, but other developed countries such as Japan, New Zealand or Singapore have also engaged in reference budget construction over the recent years. New developments are also under way in several middle-income countries (like Mexico, South Africa or Thailand), but these represent more scholarly attempts with limited or no direct policy use. For more details, see O'Sullivan and Ashton (2012), Davis et al. (2014), Valadez-Martínez, Padley, and Penagos (2018) or Hoe et al. (2019), among others.

[27] The concept of world-wide available living wages is a compelling one, attracting the attention of both employees and employers all around the world. Several efforts have been made recently to further the analysis and methodology of living wages, and produce consistent estimates for a large number of countries. For more details on relevant pioneering work, see Guzi (2021) and the websites https://wageindicator.org/ and https://globallivingwage.org/, among others.

(Bradshaw et al., 2008), or address particular circumstances such as the COVID-19 pandemic (Cornelis, Penne, and Storms, 2021). For a comprehensive review of existing practices, see Storms et al. (2014).

Reference budgets therefore represent a piecemeal approach to absolute poverty measurement. They calculate individuals' and households' minimum financial needs in a customised and detailed manner, but are used in combination with household survey data and statistical analysis of the empirical regularities in household spending in most practical applications. The main reason being that representative national or international measurement of poverty typically requires full population coverage. Customised reference budgets are rarely able to cover the entire cross-section of the population in a sufficiently granular manner: beside the limited geographic and demographic focus of most existing initiatives, certain standard modelling assumptions (e.g. regarding the health status of individuals) can also be problematic for poverty measurement purposes.[28] It is for such reasons that Penne et al. (2016), when using illustrative reference budgets for poverty measurement, restrict their analysis to metropolitan areas only.

Another reason why reference budgets are combined with survey data inputs in most measurement frameworks is that poverty measurement typically favours simple and transparent modelling procedures, and straightforward updating tools. While some (expert-based) reference budgets employ well-defined inputs and data-driven methods (such as national guidelines, legal regulations, scientific evidence) to determine individuals' and households' minimum needs, other (consensus-based or mixed-method) reference budgets rely heavily on individuals' subjective views and less algorithmic procedures (such as focus group discussions) and may result in more opaque solutions .[29] The statistical analysis of survey microdata on household expenditures often provides a transparent and powerful tool for robust measurement and regular updating of absolute poverty indicators.

2.3.2. Absolute poverty measurement at the national level

Poverty measurement at the national level displays a marked duality: low- and middle-income countries rely almost exclusively on absolute measures, while advanced economies predominantly use relative indicators (Ravallion, 2016). This divergence likely stems from the increased importance attached to societal factors as determinants of individual welfare in developed countries, and the related technical and methodological challenges of reliably accounting for these from a needs-based perspective (Cruz et al., 2015). Absolute poverty indicators are nevertheless present in sufficiently high numbers across countries of all income groups so that one may single out the main similarities and most obvious differences between them.

Developing countries

Poverty measurement at the national level has been ongoing in much of the developing world for more than three decades. Since the 1990s, the large majority of low- and middle-income countries have introduced, and regularly conduct, a variety of nationally representative household surveys which greatly improved the measurement of household consumption, living conditions, and poverty. Since the reliability of official social indicators often limited due to various political, economic and administrative considerations, international policy comparisons tend to focus on relatively straightforward metrics of basic material and social deprivation - such as undernourishment, school attendance or access to drinking water (Sonne-Schmidt, Tarp, and Østerdal, 2008). The Multidimensional Poverty

[28] Most reference budgets do not employ a comprehensive geographic or demographic perspective. Many apply to metropolitan areas only (Goedemé, Storms, Stockman, et al., 2015; Storms, Goedemé, and van den Bosch, 2015) while others focus specifically on rural areas with low population density (N. Smith, Davis, and Hirsch, 2010; Collins et al., 2012). In addition, existing reference budgets often target specific population groups, most notably the elderly or households with small children (Padley and Shepherd, 2019). Often, the particular focus on a given household types or social environment allows practitioners to use simplifying modelling assumptions (e.g. regarding car use, for example) that might be misplaced in the context of national poverty measurement.

[29] The degree to which reference budgets rely on algorithmic solutions and representative survey data varies greatly. At one end of the spectrum, Goedemé, Storms, Stockman, et al. (2015) use rather discretionary methods and small-scale procedures for basket construction and price collection, respectively. The MIS reference budgets in the United Kingdom and STATEC reference budgets in Luxembourg simultaneously combine discretionary, participatory and analytical methods based on representative data for budget development (Bradshaw et al., 2008; Smith, Davis, and Hirsch, 2010; Allegrezza, 2016). Other reference budgets, used primarily for household counselling and budget planning, are entirely data-driven and reflect empirical regularities in household spending (Preuße , 2012). For a more comprehensive discussion, see Warnaar (2009).

Index (MPI) launched in 2010 by the United Nations Development Programme, for example, features exclusively such non-monetary indicators to characterise poverty in developing countries (Alkire et al., 2019).

Monetary indicators of poverty, if available, are based on absolute thresholds in nearly all cases. In developing countries, the focus invariably remains on the universal basic needs, with a particular emphasis on minimum food expenditures. There are two commonly used traditional approaches. The 'cost of basic needs' (CBN) method relies more heavily on reference budget practices, features nutritionally adequate and appropriately priced food baskets for at least adult individuals, and determines the minimum cost of other essential goods and services (such as clothing and shelter) in direct relation to these (Ravallion and Bidani, 1994; Wodon, 1997). The alternative 'food energy intake' (FEI) method foregoes the piecemeal modelling of food reference baskets, and focuses directly on the observed level of (total per capita) household expenditure or income that is associated with adequate food consumption (as defined in caloric terms) using survey data (Haughton and Khandker, 2009). The practical implementation of these two approaches are not that different from one another, as CBN method also rely household survey data to calculate food/non-food expenditure ratios and potentially food unit prices to monetise the relevant minimum budgets.

More recently, the convergence of existing measurement strategies has gained further momentum. This process is driven by the ongoing harmonisation of national household expenditure surveys as well as the ready-made methodological guidance and technical assistance provided to low- and middle-income countries by the World Bank (Azevedo, 2013). The prevailing approach starts with the construction of nutrition-based food reference budgets, and uses national household budget survey data to identify the income or consumption range where households' typical food or total expenditure equals the pre-determined budget standard in equivalised terms. The overall poverty line is then calculated as the observed total spending of the reference population segment, implying that the non-food minimum threshold corresponds to a typical non-food expenditure of those households that are at (or very close to) the food poverty line (Ravallion, 2016).[30] The underlying idea behind this approach is that food and non-food are equally important normal goods, and non-essential consumption of either of them is liable to being displaced by essential consumption in the other until the pre-defined minimum standard is satisfied. As long as households' minimum food needs are superior to their non-food needs, this relatively simple strategy offers a rather accurate and robust way to measure absolute poverty in developing countries.

Developed countries

The food-centred approach is powerful enough to have markedly influenced the way absolute poverty is measured in developed countries, too. The main modelling challenges in this context are twofold. The first stems from the fact that food expenditures represent a considerably lower (minority) share of total household spending than in low- and middle-income countries. This tends to make the non-food component of the poverty threshold more sensitive to potential changes or variability in the minimum food budgets, and may produce overly cyclical overall poverty lines.[31] The second modelling challenge originates from the idea that, in advanced economies, socially acceptable living standards presuppose a broader set of (secondary) basic needs than elsewhere. This typically requires that individuals' and households' minimum non-food needs are given equal consideration as their food needs, which is often more complicated and can compromise international comparability due to material, socio-cultural and institutional differences across countries.

The simplest solution to these challenges was offered by the so-called Orshansky poverty lines used as the official poverty indicator in the United States for more than 50 years (Orshansky, 1965). These feature a food reference budget based on regular dietary considerations and a non-food component derived from observed spending patterns of low-income households, adjusted for household composition and geographical factors (Orshansky, 1969). Importantly, the overall poverty lines were fixed at three times the cost of the relevant minimum food budget, to produce a set of robust, reasonable and easy-to-monitor thresholds acceptable to both policy-makers and the general public. The simplicity of the Orshansky poverty lines proved an inspiration to the development of similar standards in a number of Eastern European countries during the 1970s and 1980s (Atkinson, Micklewright, and Micklewright, 1992).

[30] See Chapter 6 of this Report for a more detailed presentation of the relevant statistical methods and procedures.

[31] This can be illustrated by the evolution of the U.S. poverty line: the poverty rate, as measured by the food-centred Orshansky method (see discussion below) has fluctuated much more closely with the business cycle than potential alternative poverty measures (Förster, 1994).

The exclusive focus on minimum food needs as an anchor has rendered the Orshansky-type indicators increasingly outdated and problematic (Citro and Michael, 1995; Besharov and Couch, 2009). Their main perceived shortcoming concerns the inability to reflect major economic, societal and cultural trends, and in particular the soaring costs of housing, education, health and childcare.[32] To address these issues, more recent measurement initiatives tend to employ two different strategies. One is to apply a variable food budget multiplier that is re-calculated from year to year based on observed consumption patterns – as in the case of the official Turkish poverty lines (Şeker and Jenkins, 2015). Another strategy is to model minimum non-food needs explicitly through the use of relative and distributional considerations. For instance, the so-called Supplemental Poverty Measure (SPM) in the US accounts for households' basic needs in relation to food, clothing and housing, but calculates the corresponding poverty thresholds as the 33rd percentile of the observed expenditure distribution (Short, 2011).[33] Similar hybrid solutions have been used in Canada, too: the so-called Low-Income Cut-Off (LICO) indicator counts the share of those that spend at least 20 percentage points more of their disposable income on food housing and clothing than the typical household (Giles, 2004; Lammam and MacIntyre, 2016). Both of these approaches consider basic needs from an indirect perspective, based on the idea that spending a high proportion of one's income on essential goods and services indicates a considerable risk of poverty.[34]

Another common direction is to make more prominent use of reference budget practices and model non-food expenditure categories in terms of selected representative goods and prevailing market prices. Canada's new official poverty line, the so-called Market Basket Measure (MBM), for example, targets a modest standard of living and focuses on the basic food, housing, clothing, transportation and residual needs of a typical Canadian family of four (Michaud, Cotton, and Bishop 2004).[35] It uses simplified (exponential) equivalence scales as well as regional and location-specific prices (collected by the Statistics Canada) to appropriately cover the entire national population. Some elements of the Orshansky method remain (i.e. the residual component is set at a fixed proportion of the food and clothing budgets) but are considerably reduced in scope and importance.

The European Union

In the European Union, poverty measurement relies mainly on the AROPE indicators at the national level. Most Member State uses the national AROP poverty line for official statistics and reporting purposes, but alternative or modified versions of this are also in circulation. The national definition in Denmark, for example, focuses on persistent relative poverty and uses 50% (rather than 60%) of the median equivalised income as the relevant threshold.

Italy is the only Member State that uses an absolute indicator as the headline official poverty measure at the national level. Since 2005, the Italian National Institute of Statistics (ISTAT) calculates monetary thresholds representing an "acceptable minimum" for a wide range of household types and geographical areas (Grassi and Panuzzi, 2009). The ISTAT methodology follows the standard techniques employed in other developing or developed countries: it models food expenditure on the basis of nutritional needs using reference budget methods, but calculates minimum housing and residual needs in accordance with observed expenditure patterns derived from national budget survey data. The Italian approach nevertheless represents a significant added value over existing methods in many respects. First, it uses specific absolute criteria (i.e. legal requirements for minimum housing size, energy use standards) to calculate minimum financial thresholds for non-foods needs using expenditure data. Second, instead of focusing on a few selected household types and relying on standard equivalence scales, ISTAT simultaneously considers a wide range of individual types and household arrangements when deriving absolute

[32] Since the introduction of the Orshansky poverty thresholds in 1965, the food expenditure share of a typical household in the US has more than halved (i.e. from 33% to less than 15% by the 2010s). Note, however, that a periodic re-calculation of the food budget multiplier would require little investment, and could address the main source of criticism levelled against the Orshansky indicators. Other issues, such as the geographical polarisation of living costs or variations in social assistance provision, would persist. For a more comprehensive review, see Blank (2008).

[33] Only a single reference family of four (two adults and two children) are considered, but adjustments are made for different household types using equivalence scales and geographical scalers (Short, 2012). Available household resources are defined net of necessary expenditures (such as medical care, health insurance payments, childcare and work-related expenditures), and a small extra amount dedicated non-basic needs is also considered.

[34] For more details about the potential concerns associated with such hybrid indicators in general, and the Low-Income Cut-Off (LICO) in particular, see Wolfson and Evans (1989) or Murphy, Zhang, and Dionne (2012).

[35] The corresponding budgets for other household types are obtained through simplified exponential equivalence scales. See Michaud, Cotton, and Bishop (2004) for more details.

poverty lines. Third, it uses nationally representative and regionally disaggregated retail price statistics, rather than individual price collections, to monetise reference baskets (Cutillo, Raitano, and Siciliani, 2020).

Other Member States also use various absolute thresholds to measure poverty on a supplementary basis. These are typically developed by national statistical institutes or government agencies with the objective of contextualising the official headline indicators. In the Netherlands, for example, both Statistics Netherlands (CBS) and the Netherlands Institute for Social Research (SCP) calculate needs-based low-income thresholds for poverty measurement and monitoring since 1979 (Vrooman and Hoff (eds.), 2004).[36] Statistical institutes in Estonia, Hungary and Poland follow (or used to follow) similar practices (Poder and Sahk, 2014; Atkinson, 2019), as do some regional authorities in countries like Denmark (Bradshaw and Mayhew, 2011). The common feature across these absolute thresholds is that they are tied to the level of either the basic subsistence level or the relevant statutory minimum income.

A higher number of absolute monetary thresholds are developed with income adequacy assessment, rather than poverty measurement, in mind. These are typically calculated on needs-based absolute foundations by government agencies, NGOs or academic institutions, and often contribute directly to the specification of income support schemes – as in the case of Cyprus, the Czech Republic, Finland, Malta, Poland, Sweden or Slovenia (Frazer and Marlier, 2016). The scope, generosity and modelling strategy of these indicators show large variations across Member States. Minimum living costs are often considered in a comprehensive manner based on detailed reference budgets in Nordic Member States, but are modelled in more simplified and frugal ways in Central and Eastern European countries. For more details on existing national practices, see Bradshaw and Mayhew (2011), Frazer and Marlier (2016) and Atkinson (2019).

2.3.3. Absolute poverty measurement at the international level

While poverty is predominantly measured at the national level, the issue of international measurement has been on the forefront of global political agenda since the 1990s. Spurred by the awareness of extreme poverty in the developing world, the World Bank, in particular, has taken the lead on international cooperation and developed a global framework for absolute poverty measurement and monitoring (World Bank, 2018). We briefly review the main features of this framework, and also present the recent development of cross-country comparable reference budgets as an important step towards internationally harmonised absolute poverty measurement in the EU.

The International Poverty Line

The central element of the World Bank's global measurement framework is the International Poverty Line (IPL). This represents a cross-country comparable absolute threshold that has enabled the calculation, assessment and regular monitoring of global poverty since 1990 (Ferreira et al., 2016). The IPL is based on a subsistence-level definition of poverty: originally set at 1 US dollar per day in PPP terms, it corresponds to the average of the national poverty lines among the poorest developing countries (Chen and Ravallion, 2010).[37,38] Due to its simple methodology, the IPL has become the main standard of international poverty measurement and the UN's Sustainable Development agenda, and has seen the reduction of global poverty in recent times (i.e. the number of people living in extreme poverty decreased from 1.9 to 0.7 billion between 1990 and 2015).

As an international measurement tool, the IPL has certain limitations. One of these concerns its inadequacy for an increasingly large segment of the global population in high- and middle-income countries (Solheim, 2014). This

[36] The low-income threshold is essentially an anchored version of the social minimum and the statutory minimum income. Poverty estimates are also presented on the basis of the latter two, even though comparisons of these over time are not possible. Additional indicators are also in use to capture alternative dimensions of poverty (e.g. persistence, wealth position, subjective perceptions). For more information, see Vrooman and Hoff (eds.) (2004).

[37] To maintain the purchasing power parity over time, the United Nations and the World Bank set up the International Comparison Program. Its most recent round took place in 2011, and considerably revised both the underlying PPP ratios and the level of the IPL. The current value amounts to 1.90 US dollar per day (in PPP-adjusted terms). For more information, see World Bank (2018).

[38] The calculation of the IPL based on the average of national poverty lines in poor countries is aided by the observed similarity of these latter below a certain level of per capita consumption (Ravallion and Chen 2011). For national measurement based on the IPL, this latter is translated back into national currencies using the relevant PPP exchange rate, and adjusted continually for inflation to represent a constant living standard over time.

is the reason why the World Bank has recently increased the role of relative and context-specific elements in international poverty measurement. First, it has started to calculate country-group specific variants of the IPL as complementary indicators: these correspond to USD 3.20 and USD 5.50 per person per day (in 2011 PPP terms) in lower-middle-income and upper-middle-income countries, respectively.[39] Second, the World Bank also introduced the societal poverty line (SPL) as a new hybrid indicator in 2018. The SPL is a combination of an absolute and relative threshold (i.e. the IPL and 50% of the national median equivalised income, respectively) and uses the greater of the two (Jolliffe and Prydz, 2017).[40] These modifications formalise the relative and context-specific character of basic needs at the international level.

Another limitation of the IPL stems from its derivative character, and the limited comparability of the national thresholds used for its calculation. These often target divergent living standards, use different methods and rely on alternative data sources (Atkinson, 2017). This can drive a considerable wedge between countries' own national poverty lines and the relevant (group-specific) IPL, and compromise the validity and legitimacy of poverty measurement based on either threshold (especially in middle- and high-income countries). This calls for the international harmonisation of poverty measurement through co-ordinated methods, procedures and data protocols (Reddy, 2008). An alternative strategy is to strengthen the normative character of the IPL directly, and underpin it with some needs-based foundations that enables the country-specific calculation of poverty thresholds. Allen (2017) produces a new absolute international poverty measure along these lines, and manages to replicate the overall structure of existing international thresholds reasonably well.[41]

A further limitation of the IPL is related to the idiosyncrasies of international price comparisons. The PPP ratios used for cross-country harmonisation reflect spending pattern of typical (non-poor) households, and are based on spending patterns that change substantially from one country to the next (Deaton, 2010; Deaton and Dupriez, 2011; Klasen, 2013). International exchange rate movements and the periodic updating of the PPP ratios introduce further temporal variation in the poverty thresholds, and has prompted some experts to consider the calculation of the IPL on the basis of national currencies (Chen and Ravallion, 2010; Solheim, 2014; Klasen et al., 2016). These debates highlight the potential benefits of common currency denomination for cross-country comparable measurement, and the likely broader complications surrounding the use of poverty lines denominated in foreign currencies.

Cross-country comparable reference budgets in the EU

While the IPL is used globally for the purposes of poverty analysis and international development as part of the UN Sustainable Development Agenda, no separate cross-country comparable absolute monetary indicator exists for poverty measurement in the EU. International cooperation in the EU in this regard has been limited mostly to reference budget construction but produced useful inputs for EU-wide absolute poverty measurement in general.

In 2008, the increased need for harmonised measurement led to the launch of the 'Standard Budgets' project.[42] Its aim was to promote the EU-wide construction and use of reference budgets as instruments of social policy analysis in the domains of household welfare, indebtedness and financial exclusion (Warnaar, 2009). However, as representative patterns of household expenditures and indicators of minimum financial needs associated with a designated standard of living, reference budgets also constitute important building blocks for the measurement of poverty and social exclusion.

Subsequent Commission-funded projects in the early 2010s were launched with the specific aim of producing cross-country comparable reference budgets. The first of these was called "Poverty Reduction in Europe: Social Policy and Innovation" (henceforth ImPRovE) and coordinated by the Herman Deleeck Centre for Social Policy at the

[39] Naturally, these complementary poverty lines portray a less encouraging picture of global poverty than the headline indicator (Jolliffe and Prydz, 2016; Fantom and Serajuddin, 2016).

[40] This effectively retains the IPL as the main indicator for the poorest countries, while the relative component becomes the headline poverty threshold for middle- and high-income countries. The idea for such a 'weakly relative' poverty lines was originally proposed by Ravallion and Chen (2011) and Chen and Ravallion (2013).

[41] The targeted living standard employed by Allen (2017) is decidedly basic, and the corresponding budgets (based on food, housing, clothing and basic hygiene needs) are frugal. They vary between USD 45 (per person per month, in 2011 PPP terms) in the poorest developing countries to USD 125 in advanced economies, and are therefore sufficiently similar to the group-specific formulation of the IPL in aggregate terms.

[42] The 'Standard Budgets' project was funded by PROGRESS, the EU's employment and solidarity programme, and implemented by NIBUD, the National Institute for Budget Education in the Netherlands.

University of Antwerp. Its main objective was to examine the feasibility of developing cross-country comparable reference budgets based on a common theoretical and methodological framework in the EU. The project developed comprehensive reference budgets for six EU Member States (Belgium, Finland, Greece, Hungary, Italy, and Spain) and demonstrated the viability and usefulness of taking an EU-wide perspective when characterising households' minimum needs and living costs (Goedemé, Storms, Stockman, et al., 2015). Importantly, the project also showed that while constructing cross-country comparable reference budgets requires substantial resources and intensive coordination, they have strong potential as a basis for absolute poverty measurement across the EU (Penne et al., 2016). The follow-up project, called the "Pilot Project for developing a common methodology for Reference Budgets in Europe" (henceforth EURB), employed the same methodology and aimed at creating comparable reference budgets for all Member States. It produced a set of new food reference budgets for 26 EU countries (except for Ireland) and useful methodological guidance for future work (Storms et al., 2014; Bosch et al., 2015; Storms, Goedemé, and van den Bosch, 2015).[43]

From the standpoint of EU-wide absolute poverty measurement, the main contribution of these projects is both methodological and practical. As far as the methodology is concerned, they demonstrate the operational feasibility of balancing the needs of absolute standards, local validity and cross-country comparability. In particular, by targeting a common European living standard defined in terms of capabilities and social participation, they offer a formula for deriving households' minimum needs in a comparable yet context-specific manner. The practical relevance of the ImPRovE and EURB reference budgets consists in their usefulness as direct inputs for the construction of EU-wide absolute poverty measures.

[43] For more technical and methodological details, see Chapter 4 of this Report.

CHAPTER 3.
ABSPO concept, measurement and data

This chapter presents the common conceptual, methodological and data-related elements of the ABSPO approach to absolute poverty measurement. For sound poverty analysis, these three dimensions need to be closely aligned to ensure that the resulting indicators are robust, internally consistent and correspond to some well-defined notion of material and social deprivation. In the context of ABSPO measurement, the main related challenges are threefold. First, to define an appropriate targeted living standard that can be operationalised and translated into locally valid and cross-country comparable sets of basic needs. Second, to develop modelling strategies and methodologies that allow for a simple yet sufficiently granular measurement of households' associated minimum cost of living under various socio-economic circumstances. And third, to identify harmonised and nationally representative data sources that are available for all EU Member states.

When presenting the aforementioned measurement aspects, we focus primarily on the development and derivation of new absolute poverty lines for EU Member States. The issue of poverty measurement itself (i.e. the aggregation of information about the observed relationship between households' disposable income and the relevant poverty line) takes second stage. Throughout the Report, we refer only to poverty lines and poverty rates when discussing measurement outcomes, and disregard alternative empirical concepts and metrics (such as poverty gap-based measures).[44] This one-sided focus on the poverty line is consistent with the main methodological challenge and novelty of ABSPO measurement that consist in the derivation of appropriate needs-based and cross-country comparable poverty lines.

It is also worth noting that many of the technical decisions about concepts, measures and data sources involve value judgments. Absolute poverty measurement involves making explicit or implicit choices on a number of contentious issues: from the definition of basic needs to the differentiation of household types to the appropriateness of retail prices. The inherent arbitrariness embedded in these choices always renders poverty measurement open to discussion and criticism. It is therefore important to recognise that, while many of these choices influence the level of poverty thresholds as minimum cost of living estimates, they do not necessarily modify the capacity of these latter to provide a fixed and cross-country comparable standard for poverty analysis and social monitoring.[45]

The remainder of this chapter starts with the discussion of conceptual elements of ABSPO measurement, such as the definition of a targeted living standards and minimum needs, and well as the potentially conflicting requirements of local validity and cross-country comparability. The next section discusses the main common methodological aspects of ABSPO measurement, and presents the three different modelling strategies proposed. The last section considers the data requirements associated with absolute monetary poverty measurement, and presents the specific input sources and rich data architecture used for ABSPO implementation in particular.

3.1. ABSPO conceptual background

This section deals with the conceptual elements of ABSPO measurement and methodology. It discusses the issue of targeted living standards, the definition of individuals' and households' minimum needs, as well as the appropriate modelling focus that simultaneously ensures locally valid and cross-country comparable measurement.

[44] See Ravallion (2016) for a structured and detailed review of the various poverty measures in existence.

[45] The World Bank's International Poverty Line (IPL), for example, is calculated as the average of respective national poverty lines across a large number of developing countries, and this does not diminish its standing as a functional absolute threshold. See the related discussion of Section 2.3 for more details.

Adequate social participation as the common targeted living standard

The conceptualisation and measurement of poverty typically requires a prior definition of the targeted living standard. This may take very different forms and features, but needs to be clear and operational enough to anchor all measurement-related choices. In addition, the measurement of absolute poverty also requires that the definition of the targeted living standard be based on some notion of individual basic needs that are commonly shared across the target population.

For the purposes of ABSPO measurement, we define the targeted living standard as adequate participation in society. There are both conceptual and practical reasons behind this choice. First, this definition is consistent with the widespread view of social participation as a summary indicator of both individual well-being and the fulfilment of one's social rights (Kahneman, Diener, and Schwarz, 1999; Lister, 1990; 2013). Second, it is consistent with the capability approach to poverty measurement that focuses on individuals' effective freedom, agency and attainable societal roles in explaining material and social deprivation (Sen, 1987; Nussbaum, 2000). Third, the concept of adequate social participation is generic and flexible enough for the needs of international measurement where countries of different socio-economic backgrounds are compared. Finally, most existing minimum budget standards and poverty measures in advanced economies, including the ImPRovE/EURB reference budgets used for ABSPO implementation, also rely on the same definition.[46]

The concept of adequate social participation is somewhat elusive and needs to be made operational through a series of practical measurement choices. These should clarify what social participation means, how adequacy is defined, and where the boundaries of the relevant society are drawn in each particular context. There is no agreement on these topics in the theoretical literature: many alternative concepts of social integration and participation are used simultaneously, while the study of social adequacy and societal boundaries provides little effective guidance for practical measurement (Lamont and Molnár, 2002; Piškur et al., 2014; Mau and Verwiebe, 2010; Storms, Goedemé, and van den Bosch, 2015; Rao and Min, 2018).

During ABSPO implementation, we take a pragmatic approach and rely on European citizens' subjective views, prevailing judgments and revealed preferences to determine the practical meaning and contents of adequate social participation in any given social environment. While individuals' value judgments tend to be heterogeneous and hard to elicit, there are established methods and procedures that can help aggregate them for the particular purposes of absolute poverty measurement. These include direct participatory techniques used for reference budgets construction (whereby citizen representatives are asked to develop consensual views), survey-based techniques to measure adequacy in various thematic domains of material well-being, and statistical techniques to analyse the structure and variability of households' spending patterns. We employ all of these methods during ABSPO measurement, and put particular emphasis on contextualising the resulting ABSPO poverty thresholds with household's self-reported subjective views on poverty and their ability to make ends meet.

Individuals' and households' basic needs and minimum living costs

Drawing a poverty line and fixing the adequate level of the acceptable minimum in a given social environment is an inherently normative exercise. For more structured analysis and less subjective measurement, absolute poverty thresholds are often based on individuals' and households' basic needs. A prominent characterisation of these is offered by Doyal and Gough (1991), who differentiate between basic universal human needs (such as physical health and autonomy) and a broader list of essential intermediate needs (such as food, housing or social relationships, among others).[47] In line with this classification, and similar to most existing absolute poverty measurement frameworks, we consider individuals' basic needs in relation to food, housing, mobility, health and social relations for ABSPO measurement..

The stand-alone modelling of individuals' basic needs does not eliminate the need for normative and subjective considerations, but helps to make these more transparent and limited in scope. In particular, the adequacy of certain minimum needs is well approximated through the use of external reference points (e.g. nutrition-based scientific

[46] For further details, see Section 2.3 of this Report.

[47] Importantly, Doyal and Gough (1991) also consider relational and societal aspects of human needs, as well as the procedural and material preconditions needed for their fulfilment. Their theory allows adequate social participation to be recognised in relation to the intermediate needs, which makes it easier to operationalise them for the purposes of poverty measurement and reference budget development.

evidence for minimum food needs, legal regulations for housing) that may exhibit a relatively high degree of objectivity or legitimacy. In other domains where no such reference points exist, the adequacy of minimum needs may be elicited by direct reference to citizens' prevailing subjective views. ABSPO measurement features both of these techniques.

One important (and often overlooked) aspect of needs-based modelling is the heterogeneity of individual situations across the population. Given the large variety of essential needs, no common definition of adequacy in terms of consumption or income will be appropriate for everyone. This calls for the differentiation of minimum needs based on a relatively high number of observable individual characteristics. For ABSPO measurement, these potentially include the age, gender, health status, household configuration and location of residence. Regarding unobserved heterogeneity, the more prescriptive solution is to focus one's attention on certain (more common) types of needs while openly disregard others.[48] The alternative strategy is to model minimum needs not in terms of consumption goods but directly through households' observed expenditures associated with specific social roles, functions or capabilities. This also necessitates a normative decision on the legitimate level of minimum expenditures, but can allow for the consideration of a more diverse and variable set of needs. We employ both of these strategies for the calculation of ABSPO poverty lines.

Another important measurement aspect concerns the distinction between individual's and households' basic needs and minimum living costs. While ABSPO modelling is based on the former, the resulting monetary poverty lines are ultimately related to the latter. Due to spatial differences in retail prices and living costs, the affordability of one's basic needs may change considerably from one geographical area to the next. Moreover, differential access to goods and services, varying purchasing habits and the dispersion of retail prices can introduce further changes into households' minimum living costs. During ABSPO measurement, we make a concerted effort to use spatially disaggregated data to account for observable geographical differences in living costs, but address the issue of their unobserved heterogeneity only indirectly – by using modelling assumptions (such as below-average prices) that ensure the affordability of underlying needs for the large majority of households.[49]

Local validity and international comparability

For ABSPO measurement, the main benefit of using adequate social participation as the targeted living standard is to ensure common EU-wide reference point in terms of individual capabilities, while allowing for the context-specific derivation of minimum needs across a culturally, economically and socially diverse EU. This is consistent with the appeal of Sen (1983) to "take note of inter-social variations in the relation between income and capabilities" for the purposes of international poverty measurement. The particular methodological challenge for ABSPO implementation consists in defining what collectives should be considered as the relevant societies for individual participation. Taking a disaggregated view and focusing on small communities increases the role of relative considerations in measurement, while applying an EU-wide perspective may produce inadequate poverty lines for large segments of the European population.

To balance the requirements of local validity and international comparability, we select national societies as the relevant social environment. This choice is supported by both theoretical and practical arguments. First, observable differences in material and social conditions, living standards, regulatory norms, consumption habits and cultural preferences are considerably higher across Member States than at the local or regional level (Eurostat, 2009a). Second, as indicated by regular Eurobarometer data, most EU citizens identify themselves primarily through their affiliation with national collectives rather than local, regional or European ones. Finally, existing measures of EU poverty (such as the AROPE indicators) are defined at the national level, and several ABSPO measurement tools (such as household budget survey microdata or consumer price statistics) are also available mainly at the national level or in a nationally representative form.

[48] Reference budgets based on a fixed list of reference items typically employ this technique, and decide whether any particular need (such as car or pet ownership) should be considered as essential for a representative member of society. In many cases, the target population is also limited to particular individual types or population groups. For more details, see Sections 2.3 and 4.1 of this Report.

[49] An interesting theoretical possibility would be to use randomisation techniques to calculate variable, rather than fixed, minimum thresholds and poverty lines based on the statistical moments of the underlying price or expenditure distributions. One can show that, under plausible assumptions, these have the potential to deliver more accurate poverty estimates than traditional (fixed) poverty thresholds. The exposition of this idea goes beyond ABSPO implementation and is not pursued further in this Report.

ABSPO measurement therefore combines three different layers of modelling. First, targeted living standards and the procedural elements of modelling are defined in a common manner at the EU level. Second, individuals' and households' minimum needs are defined at the national level in a customised way. Third, the resulting poverty lines themselves are defined at the sub-national level to account for spatial differences in living costs within Member States. This three-pronged approach aims to ensure that ABSPO poverty lines constitute an appropriate, cross-country comparable and locally valid absolute standard for a decent life. Detailed empirical analysis shows that, despite the prominence of relative and context-specific components in ABSPO modelling, the resulting poverty thresholds correspond to the same basic needs and represent rather similar levels of purchasing power across the EU (see Chapter 8 of this Report for details).

3.2. ABSPO measurement strategy

This section presents the ASBPO measurement strategy and its most important features in detail. It shows how the conceptual elements of measurement presented previously are translated into operational modelling strategies and choices – and what the implications of these are on the scope, robustness and comparability of the resulting absolute poverty estimates.

Income-based monetary measurement

ABSPO modelling aims at producing an income- or expenditure-based measure of poverty. ABSPO poverty lines are expressed in monetary terms and represent the minimum out-of-pocket cost of satisfying individuals and households' basic needs in their place of residence. They are directly comparable to households' disposable income (or an appropriate welfare aggregate) as reported in national and European household surveys for poverty measurement purposes. The advantages of using a monetary perspective are numerous. First, income is a powerful proxy of individuals' well-being and command over resources and life opportunities (Ferrer-i-Carbonell, 2005; Sacks, Stevenson, and Wolfers, 2012; Boarini et al., 2012; Noll and Weick, 2015). Second, an income-based ABSPO measure is the most complementary to the current EU measurement framework, as a contextualisation tool for monetary and non-monetary AROPE indicators. Third, monetary absolute measures have the highest potential for effective policy use and relevance.[50]

Income-based measurement also has its limitations. One of these concerns the relatively narrow view of households' economic resources. A broader consideration of household finances (e.g. income, expenditures and wealth) could represent an improvement in this regard, but existing measurement attempts are at an explorative stage and hampered by lack of integrated survey microdata at the EU level (Brandolini, Magri, and Smeeding, 2010; Lamarche, 2017).[51] The second issue concerns the difficulty of consistently accounting for certain expenditure types (such as home ownership consumption of durables) when calculating absolute monetary poverty lines. These components represent a considerable share of households' budget, but their statistical treatment is not fully harmonised across the EU (see Section 7.4 of this Report for more information). Finally, available survey-based data on households' self-perceived minimum financial needs and monetary deprivation is rather scarce, especially in comparison to the non-monetary aspects of material deprivation and living conditions.

It is worth noting that some of these limitations are not unique to ABSPO measurement and are common to all existing income-based indicators. In order to limit the potential measurement bias associated with ABSPO-specific shortcomings, we place particular emphasis on using complementary measurement strategies, alternative modelling assumptions and different data sources.

[50] For a more detailed discussion, see Section 2.2 of this Report.

[51] See also the experimental statistics by Eurostat on the joint distribution of income, consumption and wealth at https://ec.europa.eu/eurostat/web/experimental-statistics/income-consumption-and-wealth. For a more detailed discussion of integrated measurement and household survey data at the EU level, see Sections 7.5 and 9.3 of this Report.

Structure of minimum expenditures

The calculation of ABSPO poverty lines starts with the modelling of individuals' and households' minimum financial needs along the pre-determined structure of basic needs (see the previous section for more details). Following standard measurement practice, we focus exclusively on households' out-of-pocket expenditures and disregard non-market transactions (e.g. in-kind transfers, home production, the use of public services). This is consistent with the use of disposable income as the basis for subsequent poverty measurement, and ensures that institutional differences across Member States in social policy and public services affect only the level but not the purchasing power of the relevant absolute poverty lines. While certain non-monetary channels of exchange (such as gifts, alms, or complimentary use of certain facilities) may fulfil important needs among poorer households, it is not feasible to take these into account due to both ethical and data-related concerns.[52]

The modelled structure of household expenditures directly follows the underlying set of basic needs, and is also aligned with the (2-digit) ECOICOP classification used for the statistical analysis and classification of household consumption by purpose. Specifically, we calculate households' minimum living costs in relation to their food, housing, transportation, health and residual (social) needs. This structure is slightly richer than the one used by ISTAT for absolute poverty measurement in Italy (see Section 2.3 of this Report for more details), due to the stand-alone ABSPO modelling of transportation and health-related expenditures. The particular focus on these components is motivated by their reasonably high share among household expenditures (13.1% and 4.4%, respectively, at the EU level in 2019), their large heterogeneity across households, as well as the observed strong empirical links between individuals' health, transport poverty and social disadvantage (Bloom and Canning, 2003; Marmot, 2013; Schwanen et al., 2015; Lucas et al., 2018).

ABSPO poverty lines are then calculated as the sum of the relevant thematic minimum budgets and expenditure thresholds in modular fashion for each individual or household. This implies that, as a rule, ABSPO poverty lines do not consider potential compounding effects or substitution patterns between expenditure categories.[53] Specific dietary needs of unhealthy persons, or trade-offs between one's housing or transportation needs associated with different residential location choices, for example, remain therefore unaccounted for. Given the potentially limited impact of these on the resulting poverty estimates, ABSPO measurement follows the standard practice of separate modelling of expenditure categories.

Different modelling approaches to ABSPO measurement

Given the pilot nature of the ABSPO project, we explore three different modelling strategies to measure absolute poverty in the EU. These all represent the same targeted living standard, use the same structure of basic needs, and feature broadly similar modelling tools and assumptions – and therefore yield comparable estimates of absolute poverty. The main difference between the proposed modelling approaches consists in the different mixture of reference budget techniques and survey-based statistical methods they employ to derive the appropriate poverty thresholds.

The first modelling approach is based on the extensive use of minimum budget standards, and relies primarily on existing cross-country comparable reference budgets produced by previous Commission-funded initiatives. Specifically, it produces new customised sets of reference budgets for food and residual expenditures by extending the demographic and geographic scope of existing inputs. The strength of this approach lies in the detailed consideration of essential consumption goods and services that individuals and households require for a decent life, as well as the direct involvement and representation of citizens' related views through participatory techniques and methods. The main shortcoming of this approach stems from its procedural character and non-formalised methods, heavy resource requirements, and limited ability to account for individual heterogeneity in minimum needs. For these

[52] One potential type of non-market transactions that may feasibly be included in absolute poverty measurement is home production. This information is available in many household budget surveys across the EU, and represents a non-negligible share of up to 5% of total household expenditures in poorer Member States. However, consistent and accurate measurement at the EU-wide level is not possible, due to missing or insufficiently granular data in several national HBS files. Empirical analysis in selected EU countries shows that accounting for home production during ABSPO modelling has no qualitative effect on the resulting poverty estimates.

[53] This is not necessarily true of the ABSPO food-based measurement approach that models non-food expenditure thresholds in direct relation to the relevant food reference budgets. For more details, see Chapter 6 of this Report.

reasons, ABSPO implementation is limited to selected pilot countries (i.e. Belgium, Finland and Hungary) and expenditure categories (i.e. food and residual expenditures).

The second measurement strategy uses reference budget techniques for the modelling of food expenditures only, and relies on household survey data to determine appropriate minimum thresholds for all other expenditure categories. This survey-based approach is more similar to the ISTAT practice of absolute poverty measurement in Italy (see Sections 2.3 and 5.1 of this Report for further details), but relies more heavily on households' self-reported subjective views in EU surveys in deriving minimum expenditure thresholds and absolute poverty lines for housing, transportation, health and residual expenditures. The comparative advantage of this approach lies with its detailed consideration of all relevant needs and poverty dimensions (e.g. housing poverty, transportation poverty), as well as its straightforward and cost-effective implementation using microdata from available national and European surveys. Its main limitation stems from the scarcity of available information on households' minimum needs at the EU level, as well as the limited comparability, integration and cross-country harmonisation of the required data inputs.

The third modelling approach follows the standard practice of absolute poverty measurement in developing countries, and determines households' minimum non-food needs jointly and in direct relation their respective minimum food budgets. It exploits observable patterns of households' food and non-food expenditures as recorded in European household budgets survey, and uses regression-based statistical techniques to identify the relevant population segments whose actual food expenditure can reasonably be considered as the acceptable minimum. The main advantage of the food-based approach is its simple and straightforward character, relatively scarce data needs, and direct applicability for EU-wide measurement across all Member States. Its potential shortcomings include a rather complex statistical methodology, indirect links to the targeted living standard and basic needs, as well as its exclusive reliance on households' observed expenditure structure to derive absolute poverty thresholds.

Table 3.1. Strengths, weaknesses and challenges of each ABSPO measurement approach

	BUDGET-BASED APPROACH	**SURVEY-BASED APPROACH**	**FOOD-BASED APPROACH**
Main strengths	- detailed consideration of essential consumption items - direct citizen representation	- broad view of minimum needs - straightforward measurement using survey microdata	- simplicity of measurement - scarce data needs - direct EU-wide applicability
Relative weaknesses	- non-formalised methods - heavy resource requirements - decentralised implementation and limited comparability	- scarcity of survey information on minimum needs - limitations in data comparability and integration	- complex methodology - indirect links to living standards - exclusive reliance on observed household expenditures
Main methodological challenge	- ensure full population coverage of reference budgets	- identify available EU-wide information on basic needs	- adapt statistical methodology for use in advanced economies

It is important to note that the above modelling approaches are not selected by chance but are the result of strategic choice. The reference budget-based approach represents an attempt to build on existing internationally harmonised reference budget inputs for the detailed consideration of individuals' and households' minimum living costs and basic material needs. The main related methodological challenge consists in ensuring full and representative population coverage at both the national and European level. In contrast, the food-based statistical approach focuses primarily on the alternative function of international absolute poverty lines, namely to provide fixed and comparable absolute standards for consistent poverty measurement across countries, over time, and in a transparent and algorithmic manner. The survey-based approach represents an intermediate solution that accounts for individuals' and households' basic needs by focusing directly on the minimum level of household expenditures needed to avoid deprivation or enforced inability in various consumption domains based on survey data alone.

Table 3.1 provides a schematic overview of the main strengths, weaknesses and methodological challenges associated with ABSPO measurement approaches. It shows that each approach represents a markedly different but equally valid (and equally imperfect) strategy for the modelling of absolute poverty lines across the EU. In particular, it makes clear that statistical approaches to modelling are not simplifications or shortcuts to piecemeal reference

budgets techniques, but represent equally deserving alternative methods that may be preferable (or even uniquely feasible) under certain conditions or circumstances.

Figure 3.1. Modelling overview of ABSPO measurement strategies

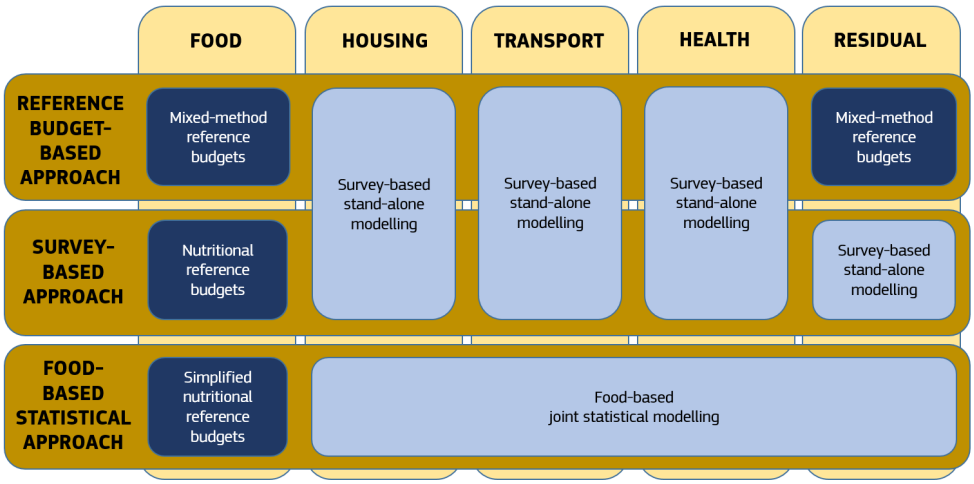


Figure 3.1 focuses on the more technical aspects of ABSPO measurement, and presents the particular combination of reference budgets and survey-based statistical techniques each modelling strategy uses by expenditure category. It shows, among others, that minimum food needs are modelled by some type of reference budgets in all measurement approaches, that minimum expenditure thresholds for housing, transportation and health are used simultaneously for multiple approaches, and that all non-food needs are modelled jointly as part of the food-based statistical approach. **Figure 3.1** also highlights that the proposed modelling approaches are not monolithic entities, but rather modular structures that share many similar or identical components, and may be combined in various ways for poverty measurement. This potential for customisation allows future practitioners and potential users to select measurement variants in accordance with their strategic objectives, available resources and modelling preferences (e.g. broader country coverage, increased citizen participation, thematic focus on particular expenditure types).

Geographical scope of ABSPO measurement

Given the extensive organisational, logistical and data related needs of selected modelling strategies, we do not implement comprehensive EU-wide poverty measurement with all three approaches for all Member States within the ABSPO project. In particular, the piecemeal and resource intensive character of the budget-based approach and the extensive data requirements of the (pure) survey-based approach calls for a pilot implementation on a smaller scale. For these reasons, we only implement these modelling strategies in a small number of Member States. These include Belgium, Finland, Hungary and Italy.

The selection of these countries is the result of careful consideration. First, each of them belongs to a different geo-political area of the EU, and represents a markedly different institutional and socio-economic profiles. Second, the selected Member States all have ample past experience with reference budget development and/or absolute poverty measurement, and can provide valuable inputs and useful reference points to ABSPO modelling (see Sections 2.3 and 4.1 of this Report for more details). Third, the national statistical institutes (NSIs) of pilot countries have provided generous access to national survey data (i.e. consumer price statistics, household budget surveys) at the micro level that helped calculate or contextualise ABSPO poverty outcomes in various measurement domains.

Since the food-based approach offers comprehensive EU-wide measurement of poverty based on available European survey data, it follows that ABSPO modelling strategies deliver different combinations of measurement precision and scope. The trade-off between these two aspects (i.e. the depth and breadth of measurement) is evident during ABSPO implementation, where simplified measurement choices and the use of less granular data

can allow for a broader country coverage. This is evident in the potential use of the (modified) survey-based approach for comprehensive EU-wide measurement, or the availability of multiple ABSPO poverty estimates in pilot countries. Note, however, that this is not an inherent feature of ABSPO-based measurement: with sufficient amount of resources, all ABSPO modelling strategies are capable of producing sufficiently robust poverty lines for all Member States (see detailed discussion in Section 9.1 of this Report for more details).

Figure 3.2. Country coverage of ABSPO implementation across the European Union

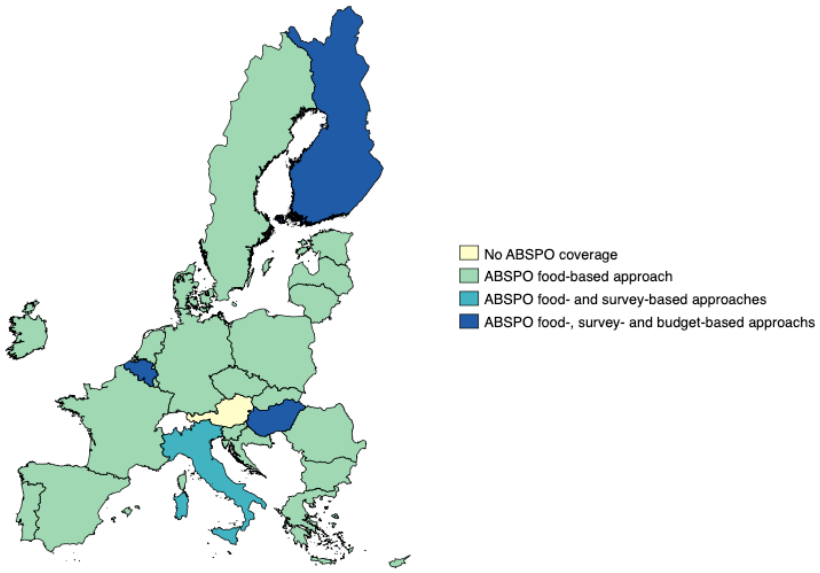


Figure 3.2 illustrates the country coverage associated with each modelling approach used for ABSPO implementation. It shows that ABSPO measurement extends to (virtually) all EU countries through the food-based approach, while multiple poverty estimates are available for the pilot countries of Belgium, Finland, Hungary and Italy. The figure also highlights Austria as the only Member States without an ABSPO poverty estimate, due to its absence from the main ABSPO modelling dataset of the European Household Budget Survey (EU-HBS).[54]

Common elements of ABSPO modelling

Beside the similarities in the targeted living standards, the definition of basic needs and the structure of minimum expenditures, there are also other technical elements of modelling that are common across different ABSPO measurement approaches. Importantly, these include the differentiation of individual types across 5 age brackets (0-6 years, 7-12 years, 13-18 years, 19-64 years, 65 or more years) for the calculation of minimum needs, the abstention from gender-based differentiation in the poverty thresholds, and the use of below-average reference prices for their monetisation of reference baskets.

Other common elements include the use of the modified OECD equivalence scale to determine minimum financial needs of various household types in certain expenditure categories, and the identical definition of the ABSPO welfare aggregate. The importance of these elements varies considerably across different modelling strategies, but they play a central role in ensuring the comparability of ABSPO poverty estimates at the technical level of measurement. For a detailed discussion and comparative analysis of the aforementioned modelling aspects, see Chapter 7 of this Report.

[54] Note that this does not preclude the possibility of calculating absolute poverty estimates for Austria. This could proceed either by using imputations based on the combination of ABSPO outcomes and/or alternative indicators, or relying on EU-SILC or national HBS microdata (as opposed to EU-HBS data) for direct statistical modelling. As part of the ABSPO project, we do not explore any of these alternative strategies.

3.3. ABSPO data universe and modelling procedure

This section focuses on the various types of data generally required for absolute poverty measurement in general, as well as the particular data and information sources used for ABSPO implementation. Methodological differences notwithstanding, all proposed modelling approaches rely on the same basic data inputs: reference baskets, retail price information, and representative household survey data. Each of them has a particular role to play during the modelling procedure, and sound absolute poverty measurement is crucially dependent on the adequacy, granularity and compatibility of these sources. Below, we review their particular features in detail.

Reference baskets

Budget standards or reference budgets are one of the longest standing tools to define income-based absolute poverty thresholds. They feature illustrative baskets of goods and services associated with a certain standard of living, and represent a bottom-up approach to needs-based modelling of individuals' and households' minimum financial resources. Reference baskets come in many different shapes and forms, and their development is often a resource intensive procedure that involves different methods, data sources and participant groups.[55]

From the perspective of absolute poverty measurement, the most relevant common features of reference baskets and budgets are as follows. First, they are often illustrative in character and focus exclusively on selected population groups, household types, or expenditure categories. Full population coverage required for poverty analysis is usually attained in those expenditure categories where minimum needs are modelled primarily on an individual basis. Food reference baskets and budgets typically represent one such category, and are therefore featured prominently in most absolute poverty measurement frameworks. Second, most available reference budgets are developed at the national or sub-national level, and allow for limited international compatibility. The cross-country comparable reference budgets developed by the ImPRovE/EURB projects for EU countries are a notable exception, and represent the only set of reference basket inputs that may be utilised directly for the purposes of EU-wide poverty measurement. Third, the construction of reference budgets often involves rather complex modelling procedures whereby normative considerations, expert views and citizens' subjective views can play an important role. As a result, the adequacy and legitimacy or budget standards is intimately tied to the thoroughness and consistency of the modelling process itself.

For ABSPO measurement, we rely on reference baskets and budgets for all three modelling approaches. Our default choice are the mixed-method cross-country comparable reference budgets produced by the ImPRovE/EURB projects that include minimum food budgets for all EU countries (except for Ireland) and minimum residual budgets for selected Member States.[56] Given their illustrative character and limited population coverage, the direct use of these reference budgets for ABSPO measurement is not possible. In the budget-based modelling approach, we therefore update and extend the ImPRovE/EURB baskets to ensure comprehensive demographic focus. For the food-based and survey-based approaches that use referenced budgets for minimum food needs only, we develop innovative and completely new sets of reference baskets on nutritional grounds.[57] The new ABSPO food reference baskets are consistent with common EU-wide dietary reference values, aligned with national food consumption habits, available for a wide range of individual types, and compatible in structure with available price statistics. Importantly, the availability of two different sets of ABSPO food budgets can help refine and contextualise ABSPO poverty estimates and existing national and European budget standards.

Detailed price information

The monetisation of reference baskets requires appropriate reference prices at the level of individual basket items. These are typically different from the aggregate price levels and indices used for standard macroeconomic or inflation analysis, and their collection often requires particular data sources or procedures. Three main pricing

[55] For more details on these and related aspects, see Sections 2.3 and 4.1 of this Report and the references therein.
[56] For more details, see Goedemé, Storms, Stockman, et al. (2015) and Goedemé, Storms, Penne, et al. (2015), or the relevant parts of this Report.
[57] This choice is motivated by both methodological concerns regarding the cross-country comparability of the ImPRovE/EURB reference baskets, and legal considerations related to intellectual property rights associated with the relevant budgets.

sources merit particular attention: hand-collected pricing, consumer price statistics, and internationally harmonised aggregate prices. These have markedly different characteristics as far as thematic scope, granularity, accessibility or cross-country comparability are concerned, and can substantially influence the resulting minimum budgets.[58]

The use of hand-collected local prices represents an established practice of reference budget development (Concialdi et al., 2014; Goedemé, Storms, Penne, et al., 2015; Cussó-Parcerisas, Carrillo Álvarez, and Riera-Romaní, 2018). It is a relatively cheap and highly customisable pricing method for illustrative budget standard calculations, but its usefulness for national or international poverty measurement (that may necessitate a high number of repeated price collections) is much more limited.[59] Consumer price statistics collected by NSIs for inflation statistics tend to represent a more convenient tool for absolute poverty measurement (OECD and Eurostat, 2012; Eurostat, 2018). They typically feature nationally representative data as well as a large variety of reference items and prices, but often come with restricted access or no cross-country harmonisation. Transaction-level scanner price data collected by commercial providers represent a suitable alternative that can offer unparalleled detail and granularity. Scanner data are generally available in relatively standardised from for most EU countries and are increasingly used for CPI calculations by Member States' NSIs (Eurostat, 2017a). Their limitations include rather high user costs, massive computational need for data processing, and uneven coverage across different good types and expenditure domains.

For the particular purpose of EU-wide poverty measurement, harmonised international price aggregates published by Eurostat represent a particularly useful additional source. The Detailed average price project, in particular, aimed at providing harmonised and comparable price levels for up to 190 consumption items across EU Member States. Despite the discontinuation of the project in 2015, Eurostat still regularly produces comparable national average prices across more than 63 5-digit ECOICOP categories. The lack of geographical disaggregation is an apparent limitation, but this is likely to affect poverty measurement qualitatively only in a small number of Member States where spatial differences in living costs are considerable.

During ABSPO measurement, we employ all three pricing source types to monetise food reference budgets. This allows us to ensure internal methodological consistency within different modelling approaches, pilot the use of national and international price statistics for regular measurement, and carry out a detailed comparative analysis of different pricing methods for the modelling of absolute poverty lines. Specifically, we employ local price collections in the budget-based approach, national price statistics or transaction-level household price scanner data from ABSPO pilot countries for the survey-based approach, and harmonised national average price data produced by Eurostat for the food-based approach. We also calculate reference prices using quantity and expenditure information contained in national HBS data (i.e. the 2016 wave of the Belgian HBS) on a complementary basis.[60]

Household survey data

Representative micro-level information on households' expenditure patterns, income and living conditions are available through standard household surveys. These represent essential inputs to absolute poverty measurement, both for the modelling of poverty lines and the subsequent assessment of households' poverty status.[61] The two main types of household surveys are budget surveys and income surveys. These are typically conducted by Member States' national statistical institutes (NSI) at annual or bi-annual frequencies, feature different population samples and serve largely different purposes.

Household budget surveys (HBSs) are national surveys focusing mainly on consumption expenditure. Their primary aim is to calculate weights for the consumer price index (CPI), and therefore contain detailed information on households' expenses and purchases at a high level of disaggregation. Given the richness of the relevant consumption data, household budget surveys serve as optimal tools for the detailed analysis of household expenditure and the modelling of absolute poverty thresholds. However, since they traditionally contain limited

[58] See Section 7.2 for a more detailed discussion.

[59] Note that the centralised pricing strategies employed by large retailers and the possibility of web scraping has alleviated some of these concerns in recent years.

[60] For a more detailed discussion of the reference pricing sources and the methodological aspects of ABSPO reference budget pricing, see Section 7.2 of this Report.

[61] Administrative data on individuals' tax and social security contributions represent a potential alternative to household surveys, but are not used for measurement purposes in practice due to limited information content (i.e. missing information on household configuration, non-taxable income sources, living conditions).

information on households' savings, living conditions and income sources, HBS data are often a poorly favoured source for poverty measurement itself. The EU-wide harmonised version of the national HBSs (EU-HBS) has been compiled by Eurostat based on a 'gentlemen's agreement' in five-year intervals since 1989, and retains considerable differences across national files (Eurostat, 2009). After 2025, a new legal framework will apply to all European household surveys (i.e. Regulation 2019/1700 of the European Parliament and the Council) that will contribute to improving the timeliness and cross-country comparability of the EU-HBS in the future.[62]

Income surveys, on the other hand, are designed with the aim of measuring the distribution and divergence of living standards across national populations. For this reason, the scope of collected socio-economic information is considerably broader (e.g. education, well-being or labour market activity), and the underlying sampling techniques are more varied (e.g. recall questions, add-on modules and repeated interviews) – see Eurostat (2021) for more details. There are a number of income surveys in several Member States, but official social statistics typically rely on the one conducted by the respective NSI. These latter form the base for the European Union Statistics on Income and Living Conditions (EU-SILC), the premier source of harmonised and legally binding multi-dimensional microdata on income, poverty, social exclusion and living conditions in the EU.

From the standpoint of poverty measurement, a potential limitation of standard household surveys stems from their nationally representative character and potential under-representation of poor households. Potential improvements or extensions include a broader coverage of households' financial position and material needs, and the strengthening of the longitudinal dimension (Scott, 1992; United Nations, 2005). More ambitious plans call for the modification of sampling procedures to ensure that those living outside of private households (such as the homeless, travelling populations, or residents in public facilities) are also surveyed. Existing estimates about the size of excluded or hard-to-reach populations are rather unreliable, but tend to imply considerable under-reporting of poverty based on official statistics (Bradshaw and Mayhew, 2011; Baptista and Marlier, 2019).

During ABSPO implementation, the main data source used for poverty modelling is the 2015 wave of the EU-HBS. We rely on these microdata to analyse households' spending patterns, document national food consumption habits, calculate appropriate needs-based minimum expenditure thresholds, or verify the robustness of ABSPO poverty outcomes to different technical assumptions. The EU-HBS therefore is an integral part of ABSPO measurement and features in all three modelling approaches. As contextualisation tools, we also use national HBS data from Belgium, Hungary and Italy to explore various thematic aspects of absolute poverty measurement (such as scale economies in food spending, the benefits of integrated HBS-SILC data, or the adequacy of the proposed food/non-food mapping strategy).

The main data source for the actual poverty analysis – that is, the comparison of households' resources with their respective poverty lines and the calculation of headline poverty indicators – is the European Statistics of Income and Living Conditions (EU-SILC) survey. Beyond providing a rich set of demographic information, it also offers the possibility to calculate ABSPO poverty indicators on the same source as the current AROPE indicators for contextualisation. The availability of EU-SILC data at yearly frequencies enables to calculate ABSPO poverty indicators annually, with appropriate national CPI-based updating. The most recent poverty estimates used as reference for the empirical analysis are based on 2019 data, with income information referring to the previous calendar year.

The ABSPO data universe and modelling procedure

An illustrative overview of the ABSPO data universe is presented in **Figure 3.3** below. It shows the specific datasets used in each ABSPO measurement approach at various stages of modelling by type and country source. It also highlights (in dark blue) those new data inputs that are produced specifically for ABSPO measurement and potential future applications. These specifically include mixed-method food and residual reference baskets and budgets for ABSPO pilot countries (courtesy of the Belgian, Finnish and Hungarian national expert teams), nutritional food baskets for all EU countries (courtesy of the ife Institute of Food Economics in Kiel), and price aggregates derived from household scanner data for Belgium and Italy (courtesy of GfK and the AiMark Foundation). Other relevant data sources (highlighted in light blue) include national and European retail price statistics, budget survey data as well as the cross-sectional microdata from the EU-SILC.

[62] See https://ec.europa.eu/eurostat/web/household-budget-surveys/legislation for more details.

Figure 3.3. Data sources used for ABSPO implementation

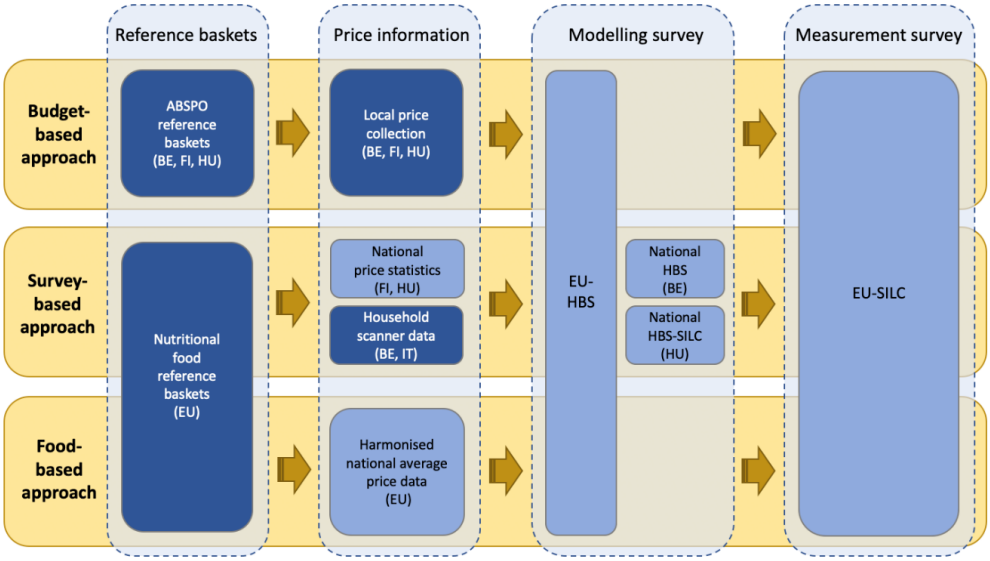


Figure 3.3 also indicates the sequential use of these sources during ABSPO measurement. Reference basket development represents the starting point of the modelling procedure, as this produces direct inputs for pricing and also determine the manner in which the minimum needs of individuals' and households' are differentiated. The pricing of reference baskets is the next modelling phase that aims at selecting or deriving optimal sets of representative prices that adequately reflect minimum living costs in a given environment. Statistical modelling based on household budget survey data represents the next modelling step that often builds directly on the derived reference budgets (as in the food-based statistical approach) or follows the structure of reference budgets (in terms of demographic or geographic customisation) to calculate minimum thresholds for certain expenditure categories. Finally, the actual measurement of poverty (i.e. the comparison of the relevant poverty thresholds with households' available financial resources and welfare indicator) based on income survey microdata rounds out the modelling procedure. While it is also possible to use budget survey data for this purpose, the comparative advantages of relying on income surveys such as the EU-SILC are numerous (e.g. comparability with existing EU indicators, detailed breakdown of poverty outcomes by households' socio-demographic characteristics, joint analysis of monetary poverty, material deprivation, living conditions and subjective well-being.).

CHAPTER 4.
Reference budget-based approach to ABSPO measurement

The budget-based approach makes the most prominent use of reference budgets to derive absolute poverty lines. Reference budgets are illustrative priced baskets of goods and services that are meant to indicate households' minimum financial needs in association with a chosen standard of living (Goedemé, Storms, Penne, et al., 2015). They represent a piecemeal and bottom-up approach to calculating households' minimum living costs in a customised and differentiated manner and with a particular focus on individuals' basic needs. Since expressing these latter in terms of a reference set of consumption goods and services is a rather complex procedure, the development of budget standards is often a collective effort by various experts, practitioners and even representatives of the broader public.

In most applications, reference budgets can be used directly as poverty thresholds for the relevant segment of the population segment. Their comparative advantage relative to other modelling approaches stems from the detailed consideration of individuals' minimum needs, and the normative control it offers to the practitioner. This is evident in the way reference budget development starts with the definition of the targeted living standards, operationalises these in terms of minimum needs, and carefully assesses the various consumption items through which these latter can be expressed (Goedemé, Storms, Penne, et al., 2015). This "structural" approach, however, is also one of the biggest limitations of budget standards: given the complexities surrounding the translation of minimum needs into actual reference baskets, and the central role of subjective, non-algorithmic and procedural elements in particular, many different reference baskets and budgets may be consistent with any given targeted living standard.

This aspect becomes even more important in the context of international poverty measurement, for two reasons. First, representative poverty analysis at the national level requires reference budgets that are comprehensive, cover the full cross-section of the population, and consider all potential household configurations. In practice, this means that the markedly different basic needs of urban and rural households, younger and older individuals, small and large households, among others, need to be taken into account in a simultaneous, comparable and coherent manner. Second, cross-country consistency demands that harmonised concepts, procedures and data sources are used everywhere for this purpose. Given that national circumstances often differ in considerable way from one country to the next, one of the main practical challenges of international initiatives is to identify the appropriate information sources and modelling procedures that may ensure the development of locally valid and cross-country comparable reference budgets.

Numerous reference budgets of local, regional or national character are in existence across the EU (see Section 2.3 of this Report for more details). Most of these were not designed to measure poverty, and hence remain illustrative in character and exhibit limited comparability across countries. To our knowledge, only two sets of internationally harmonised reference budgets for EU Member States exist. These were produced as part of an EU-funded explorative research projects named "Poverty Reduction in Europe: Social Policy and Innovation" (ImPRovE) and "Pilot Project for developing a common methodology for Reference Budgets in Europe" (EURB). The main objective of these projects was to establish a European network of reference budget experts, assess the feasibility of an international approach to reference budget construction, and eventually produce a set of cross-country comparable budget standards (Goedemé, Storms, Penne, et al., 2015). The ImPRovE/EURB projects produced similarly structured food reference budgets for capital cities in all EU countries (except for Ireland), and comprehensive budgets for large metropolitan areas in 8 Member States. These are based on national inputs and produced by national expert teams, while their cross-country comparability stems from the applied common modelling procedures prescribed by respective project core teams.

The main objective of the ABSPO budget-based approach is to explore the use of reference budgets as a central modelling tool for the purposes of EU-wide poverty measurement. Since the development of completely new sets of cross-country comparable reference budgets would have excessive resource needs, we build on existing initiatives and use the IPRovE/EURB reference baskets as foundations and direct inputs for ABSPO modelling. In line with the aforementioned requirements of poverty measurement, the main challenge of the budget-based approach

is to extend the modelling focus of ImPRovE/EURB reference baskets towards full population coverage. Given the relatively high implementation cost of reference budget construction, we only focus on the pilot countries of Belgium, Finland and Hungary for ABSPO execution. Moreover, due to the methodological difficulty of adequately determining the minimum needs of very heterogeneous household types in relation to certain types of expenditures (such as housing, transportation and healthcare), we also limit the use of reference budgets to selected expenditure categories (such as food and residual expenditures).

This Chapter first introduces the existing cross-country comparable reference budgets of the ImPRovE/EURB projects, and gives a conceptual overview of how these baskets are utilised for the purposes of ABSPO measurement. Section 4.2 contains the technical details of updating, extending and re-pricing of input reference baskets. The final section of the Chapter presents the resulting ABSPO reference budgets, and assesses their validity and internal consistency in light of existing empirical evidence.

4.1. Conceptual background and modelling procedure

The reference baskets used for ABSPO measurement are the product of two previous Commission-funded scientific projects aimed at the development of cross-country comparable budget standards. Both of these projects were coordinated by the Herman Deleeck Centre for Social Policy at the University of Antwerp in the early 2010s, and form an integral whole. The first project was called "Poverty Reduction in Europe: Social Policy and Innovation" (henceforth ImPRovE) and had the objective of examining the feasibility of developing cross-country comparable reference budgets on common theoretical and methodological foundations in the EU. The project produced fully-specified comprehensive reference budgets for metropolitan areas in six EU Member States (Belgium, Finland, Greece, Hungary, Italy, and Spain) and revealed that the structure European citizens' basic needs and reference budgets can be modelled in comparable manner across Member States ((Storms et al., 2013; Goedemé et al., 2015). Indirectly, the project also demonstrated that the construction of cross-country comparable reference budgets requires extensive coordination among a large number of different stakeholders, and that the resulting outputs may be used as poverty lines in regional analysis (Penne et al., 2016).

The follow-up project, called "Pilot Project for developing a common methodology for Reference Budgets in Europe" (henceforth EURB) was launched with the aim of implementing the ImPRovE modelling strategy at the EU level and creating comparable budget standards for all European capitals. The EURB project ended up producing detailed, consensus-based food budgets for all EU Member States (except for Ireland).[63] A set of valuable lessons and practical recommendations for future work also emerged, highlighting the importance of harmonised price collection and the limitations associated with participative methods (Storms et al., 2014; Bosch et al., 2015; Goedemé et al., 2015).

Given the similarities and overlaps between the ImPRovE and EURB projects, we henceforth treat them as a single input source and methodology for ABSPO modelling. This section takes a structured view of the most important methodological aspects of these projects, and discusses how ABSPO builds on them for the purposes of poverty measurement.

Conceptual background and modelling procedure

As far as the main conceptual and procedural aspects of reference budget modelling are concerned, ABSPO implementation directly follows the ImPRovE/EURB projects. In particular, we use the same concept of adequate participation in society as the targeted living standard to determine individuals' and households' minimum needs. This standard assumes that all individuals have the ability to take on various social roles in society, in line with the commonly held social expectations and institutional practices (see Section 3.1 of this Report for more details).[64] In the current context, the main benefit of defining the targeted living standard this way is that it incorporates both

[63] Based on the previously available ImPRovE reference budgets, the healthcare, personal care and housing baskets were also made available in a slightly revised form for selected Member States.

[64] Note that adequate social participation also presupposes one's ability to re-define or individualise existing social roles according to their own capabilities (Sen, 1983).

a common EU-wide modelling component (in terms of targeted individual capabilities and societal roles) and a local-level or national component (in terms of minimum needs and the level of economic resources needed to satisfy them). The theoretical link between these two spheres is provided by the widely-used conception of human needs proposed by Doyal and Gough (1991). These authors differentiate between fundamental universal human needs (i.e. physical well-being, personal autonomy) and context-specific intermediate needs as their constituent parts. Their theory allows adequate social participation to be operationalised in relation to these intermediate needs, and provides a useful structure fort reference budget development.[65]

The international comparability of ImPRovE/EURB reference budgets is ensured primarily by the modelling procedure itself. This concerns the combined use of various information sources, methods and techniques during the identification and modelling of individuals' and households' minimum needs. The ImPRovE/EURB budgets are based on a mixed-method strategy that uses a wide range of information sources (such as national guidelines and regulations, scientific evidence, survey information and expert opinion) for modelling. Importantly, this strategy also features participatory methods (such as focus group discussions) to ensure that poor and non-poor persons' subjective views are directly considered for the specification of reference baskets and budgets. ABSPO implementation features the exact same sources and modelling techniques, with the sole exception of focus group discussions. These were omitted due to social distancing requirements brought on by the COVID-19 pandemic. Given that ABSPO work are mostly focused on the demographic and geographic extensions of already "validated" inputs, this departure from the original modelling procedure likely represents a less consequential modification.

The second important procedural aspect of modelling concerns the international harmonisation of the methodology. The distinctive feature of the ImPRovE/EURB approach is the extensive and in-depth collaboration between the central project core team (PCT) and the respective national expert teams (NETs). The main responsibilities of the PCT were the preparation of detailed methodological guidance and harmonised templates for data collection, as well as the iterative posterior harmonisation of submitted reference budgets. The primary role of the NETs, on the other hand, was to adapt the central methodologies to the particular local context, implement the budget construction procedure, and engage with the PCT during the harmonisation process.[66] This setup is meant to ensure the cross-country comparability of the ImPRovE/EURB reference budgets, despite the variability of consumption habits, minimum regulations and cultural norms across Member States.

To ensure full congruence with ImPRovE/EURB outputs, we followed the same implementation strategy and organisational structure during ABSPO measurement. Moreover, we also involved the same reference budget practitioners and national experts that participated in the previous projects. In particular, the ABSPO core team took on the coordinating duties under the supervision and guidance of reference budget experts from the Herman Deleeck Centre for Social Policy (University of Antwerp).[67] At the national level, the required ABSPO revisions and extensions were undertaken by the same country teams as those participating in the original exercise.[68] This institutional continuity ensured that the ABSPO budget-based approach qualifies as a pilot extension of the ImPRovE/EURB projects in both formal and substantive terms.

Figure 4.1 offers a schematic representation of the main similarities and differences between the ImPRovE/EURB modelling procedures (in grey) and the subsequent ABSPO extensions (in yellow). It highlights the central role of the national expert teams in specifying and calculating the reference budgets based on information and methodological guidance received from the project core team. The main difference between the two approaches stems from the posterior and derivative character of ABSPO calculations whereby the ImPRovE/EURB outputs represent an additional input source. In particular, NETs involved in ABSPO implementation were required to rely both on primary inputs (i.e. standard sources used for ImPRovE/EURB modelling) and existing reference

[65] It is worth noting that neither the concept of adequate social participation nor the theory of human needs involves any distinctively European feature, and reference budget construction may proceed on similar foundations for non-European countries as well. Another noteworthy aspect is that the concept of intermediate needs by Doyal and Gough (1991) only provides a structure, rather than a clear benchmark, for reference budget modelling: their classification may help define budget categories, but provide little or no indication about the contents and practical meaning of intermediate needs in a given socio-economic context.

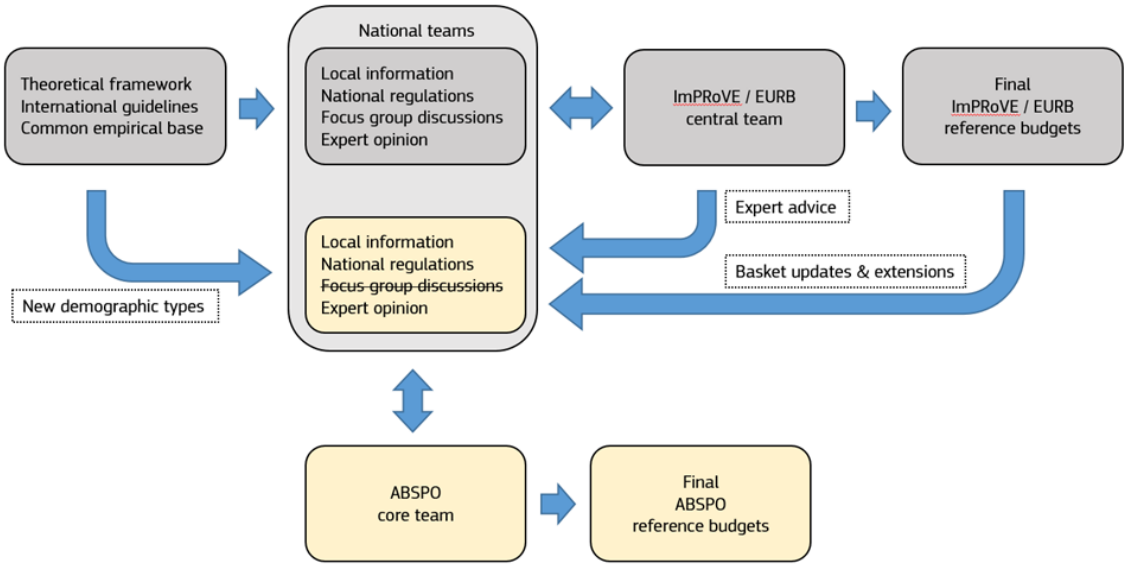
[66] For more details, see Chapter 3 of Goedemé et al. (2015).

[67] Participating experts include Tim Goedemé, Tess Penne, Bérénice Storms and Karel Van den Bosch. We are grateful for their contributions and advice.

[68] We are grateful for the following experts participating in the work of the national teams: Bérénice Storms, Tess Penne, Marieke Fredrickx, Ilse Cornelis, Nele Peeters and Leen Van Thielen at CEBUD in Belgium; Péter Szivos and Aniko Bernàt at TARKI Zrt in Hungary; Lauri Akinen, Anna-Riitta Lehtinen and Mari Anttila at the University of Turku in Finland.

budget inputs simultaneously. Another important procedural difference concerns the absence of focus groups discussions in ABSPO implementation due to the COVID-19 pandemic. These differences notwithstanding, the ABSPO modelling strategy represents a rather direct continuation of ImPRovE/EURB exercise towards the purposes of EU-wide poverty measurement.

Figure 4.1. The modelling strategy of the reference budget-based approach to ABSPO measurement



Modelling scope and modelling focus

An important aspect of reference budget development concerns modelling scope and modelling focus. These determine the scope and structure of underlying minimum needs, as well as the relevant unit of observation considered for the calculation of minimum reference budgets. In these areas, ABSPO modelling largely follows the ImPRovE/EURB approach, but departs from them in important ways.

Concerning modelling scope, the ImPRovE/EURB projects produced comprehensive reference baskets only for selected Member States. Among these, Belgium, Finland and Hungary feature as pilot countries for ABSPO implementation.[69] The ImPRovE/EURB reference budgets in these Member States cover individuals' and households' basic needs in a comprehensive manner across nine expenditure categories: food, clothing, housing, rest and leisure, personal care, healthcare, maintaining social relations, safe childhood, and transportation.[70] This structure is consistent both with the proposed system of intermediate needs by Doyal and Gough (1991) and the European classification of household consumption for statistical purposes (ECOICOP), and therefore provides a sound basis for ABSPO implementation.

For methodological reasons, we nevertheless differentiate between only six expenditure categories during ABSPO calculations as part of the budget-based approach. These include expenditures for food, clothing, personal care, rest and leisure, safe childhood and social relations. **Figure 4.2** provides a schematic illustration of the scope and contents of the respective thematic reference budgets, while Annex A of this Report contains a more detailed account. The remaining expenditure categories of housing, transportation, and healthcare are modelled using alternative, statistical methods by the survey-based modelling strategy (see Section 3.2 and Chapter 5 of this

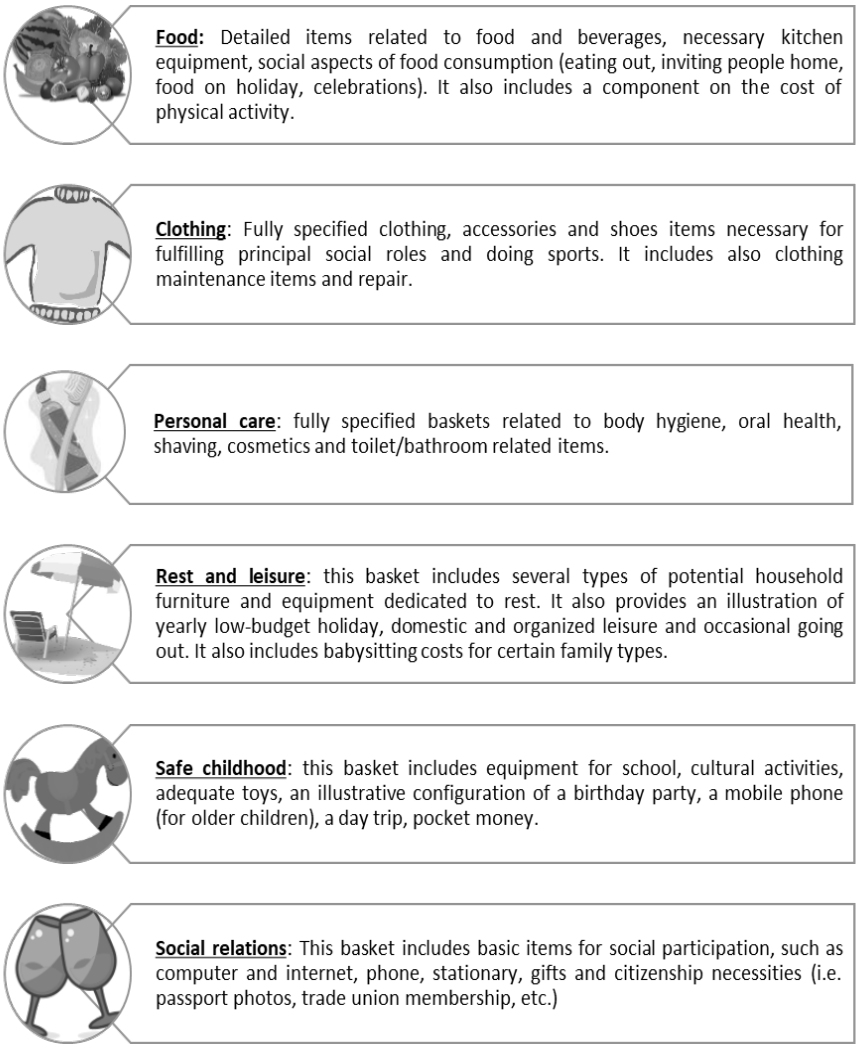
[69] The selection of these countries reflects their different geo-political position within the EU, their long-standing expertise in reference budget development, and the high-quality outputs they delivered as part of the ImPRovE/EURB initiatives. For more details, see Section 3.2 of this Report.

[70] As is common practice in the literature, the related reference budgets represent minimum financial needs in terms of out-of-pocket expenditures and are expected to account for geographic and demographic differences in the provision and cost of public services (such as healthcare, childcare or education), and the availability of subsidises private goods and services (such as price discounts and subsidised rents). During ABSPO implementation, we naturally follow this approach.

Report for more details). The main reason for this is twofold. First, the large individual variation in households' minimum needs in these domains makes it very difficult to determine appropriate minimum thresholds by reference budget techniques for the full cross-section of the national population.[71] Another reason is that the ultimate scope of ABSPO modelling is somewhat broader than that of ImPRovE/EURB reference budgets: while these focus exclusively on healthy individuals, we calculate minimum healthcare needs for individuals' of good and bad health alike.

For presentational reasons, we also depart from ImPRovE/EURB reference budgets in that we consider all five non-food reference baskets (i.e. clothing, personal care, rest and leisure, safe childhood and maintaining social relations) jointly as part of a pooled "residual basket". This does not affect the piecemeal, modular modelling of the constituent sub-baskets, but helps us to compare the resulting reference budgets with the corresponding expenditure thresholds derived by the survey-based and food-based ABSPO modelling strategies (see Section 3.2 and Chapters 5 and 6 of this Report for more details).

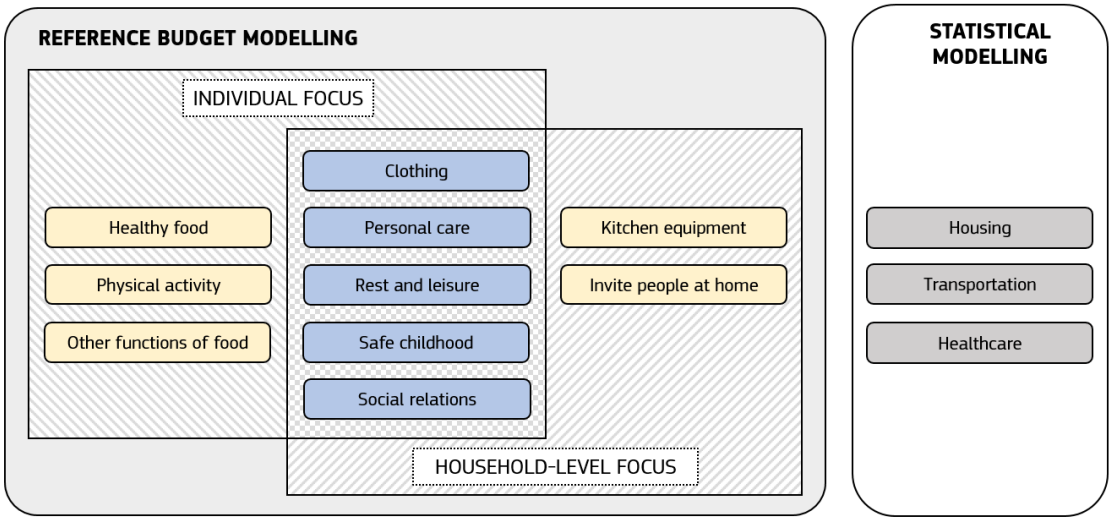
Figure 4.2. The structure and contents of the reference budgets used for ABSPO implementation



[71] This heterogeneity is particularly large in relation to healthcare costs, transportation needs, and housing prices. By focusing on well-defined population segments only, illustrative reference budgets are often able to employ useful categorical assumptions to determine related minimum financial needs (e.g. no car is needed for mobility in urban areas). These techniques are not available in the context of nationally representative poverty measurement.

When it comes to modelling focus, reference budgets can take either individuals or households as the basis of needs-based modelling (see Section 2.3 of this Report for more details). The individual perspective is more appropriate for expenditure categories where consumption needs are largely personal in character and independent of one's household arrangement (e.g. minimum food, clothing or healthcare needs). A household-level focus, on the other hand, is more useful in expenditure categories where needs are inherently social, satisfied through joint use of consumption items, or affected by strong economies of scale (e.g. furniture, home appliances, family holiday). The ImPRovE/EURB modelling strategy mixes these two perspectives in relation to all expenditure types. The large majority of minimum needs are modelled from an individual perspective in all cases, but household-level budget components are more relevant in certain residual categories (such as the "rest and leisure" and "social relations" sub-budgets) and selected sub-components of the food budget (such as expenses on "kitchen equipment" and "inviting people at home").[72] We retain the same modelling focus for ABSPO implementation. The schematic overview of ABSPO modelling focus by expenditure category is presented in **Figure 4.3**. It shows the separate use of individual-level and household-level modelling in relation to various sub-components of the food basket (in yellow), the dual focus employed in relation to the residual basket categories (in blue), as well as the expenditure categories modelled by survey-based statistical means (in grey).

Figure 4.3. *Expenditure categories and modelling focus in the ABSPO budget-based approach*



Despite the similarities in modelling focus, it must be noted that practical consideration of household-level needs is somewhat different during ABSPO implementation. The main reason for this is that households' collective needs in the ImPRovE/EURB projects are determined with a small number of reference households in mind (see the next section for more details). By contrast, poverty analysis requires a modular approach that ensures full population coverage and the calculation of appropriate reference baskets for any hypothetical household configurations. Our proposed solution is to separate household-level items across two different categories: fixed components (or "base household needs") represent invariant basket items that are uniformly needed by all households, while the variable components denote those consumption items that vary with the size and composition of households. Minimum needs associated with the variable components may change with household size (e.g. the number of beds), the presence of specific individual types in the household (e.g. babysitting needs for children), or in more convoluted ways based on multiple factors simultaneously (e.g. vacation needs of elderly couples).[73] Households' total needs are calculated additively as the sum of the relevant individual components, the

[72] Decisions regarding the appropriate modelling focus in each expenditure category and sub-category are made by the project core team. Given the dominance of individual consumption items, the practical relevance of household-level modelling of needs in ImPRove/EURB and ABSPO reference budgets is rather modest. See Figure 4.7 and the related discussion for more details.

[73] While conceptually important, this does not represent a significant departure from ImPRovE/EURB modelling in practical terms. Its implementation requires only that national expert teams assess the fixed or variable character of each basket item that represent household-level needs. In case of the variable ones among these, they NETs were also asked to explicitly determine how these change across different

fixed household-level component and the appropriate variable (household-level) component. This procedure does not change the reference basket of the reference household types used by the ImPRovE/EURB projects, it enables the simultaneous calculation of reference baskets for all hypothetical household types in the population.

Population coverage

The population coverage is the modelling aspect where the ABSPO reference baskets deviate the most from the ImPRovE/EURB ones. These latter are illustrative in character and refer specifically to urban populations of good health that live in capital cities and metropolitan areas. The four modelled individual types (i.e. 40-year old man, 40-year old woman, 10-year old boy in primary education and 14-year old girl in secondary education) and four household configurations (i.e. single man, single woman, couple, couple with two children) represent only around 16% and 6.7%, respectively, of national populations in the EU based on EU-SILC microdata from 2019. To ensure full population coverage as required by poverty measurement, one needs to find a way to assign appropriate reference baskets and budgets to all remaining population segments. To this end, we extend reference budget modelling along both demographic and geographic lines during ABSPO implementation.

Demographic extensions involve adjustments of different types and forms. First, we take the modelled individual types as representatives of broader age and gender categories. In particular, we consider adult men and women as representing the entire working-age population (aged 19-65), and 10-year old boys and 14-year old girls as representing all primary-school students (aged 7-12) and high-school students (aged 13-18), respectively. Based on existing evidence and the reference budget literature, minimum needs are fairly homogenous within the above age brackets in question.[74] Second, to model the particular needs of remaining non-modelled age groups, we also introduce two new individual types: pre-school children (aged 0-6) and elderly persons (aged 65 or more). Evidence suggests that their needs are markedly different from those of school-aged children and working-age adults, which calls for customised modelling. Third, the characterisation of household-level needs in modular fashion and thereby covering all potential household configurations (i.e. individual needs, fixed household needs, variable household needs) may also be taken as a demographic extension.

Regarding geographical extensions, our main concern is to develop appropriate reference budgets for residents of non-capital regions and non-urban areas. This requires spatial differentiation of either minimum needs or minimum living costs (or both) relative to metropolitan households. For ABSPO implementation, we assume that individuals' and households' underlying minimum needs (conditional on their demographic types), are invariant across regions and urban/rural areas within the same country. This is a simplified but rational solution: expenditure categories with considerable spatial heterogeneity (such as transportation or housing) are modelled with alternative survey-based statistical techniques, while minimum food and residual needs are found to be reasonably similar across the national territory (Bradshaw et al., 2008; Grassi and Panuzzi, 2009).

Geographical extensions are therefore based exclusively on price differentiation across regions and settlement types. Since the comprehensive implementation of this would necessitate a very high number of separate price collections, we impose a simple modular structure for price extensions along two independent margins. One concerns regional differentiation between capital and non-capital regions, while the other involves differentiation between various settlement types (i.e. urban, intermediate, rural areas). This ensures that, using the ImPRovE/EURB budgets as the reference category for urban areas in capital regions, we can span the entire geographical space with only three additional price collections – in urban, intermediate and rural locations in a non-capital region. The separability of the regional and settlement-type specific dimensions is a strong simplification, but the relative stability of ABSPO reference budgets, together with evidence from price survey data from pilot countries, suggests that retail prices of most food and residual consumption items are rather similar within most Member States.

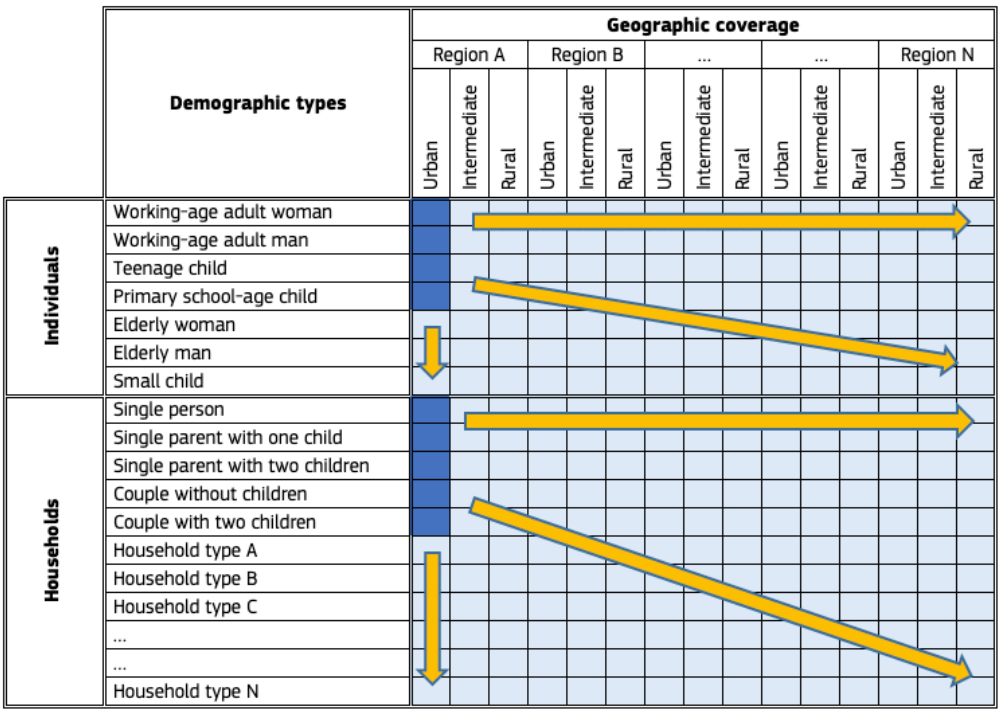
Table 4.1 offers a schematic illustration of the partial population focus of ImPRovE/EURB reference budgets, as well as the demographic and geographical extensions undertaken by ABSPO implementation to ensure full population coverage. In particular, it shows the independence of the two relevant dimensions from one another (i.e.

household configurations. Since most household-level items are relatively scarce, mostly fixed and tend to vary in simple single-dimensional ways (e.g. small table for 1-2 person households, large table for households with at least 3 members), ABSPO reference baskets are highly robust to the related modelling extensions.

[74] Note that we also assume, in line with existing evidence, that boys' and girls' minimum needs are similar below the age of 18. This is also the strategy used by Penne et al. (2016) to measure regional poverty using EU-SILC data based on ImPRovE/EURB reference budgets.

demographic extensions involve new individual types and modular household-level needs, geographic extensions are based on price differentiation), and how this enables the calculation of customised reference budgets for all individual types and household configurations in a modular way. It is worth noting that, beside its methodological convenience, the proposed solution of nationally-defined minimum needs and locally-defined reference prices is also in line with existing reference budget and poverty measurement frameworks (Bradshaw et al., 2008; Grassi and Panuzzi, 2009; Smith, Davis, and Hirsch, 2010; Penne et al., 2016; Cutillo, Raitano, and Siciliani, 2020). The resulting ABSPO reference budgets indicate furthermore that less algorithmic piece-by-piece modelling would likely produce very similar outcomes (see detailed analysis in the next section).

Table 4.1. Demographic and geographic extensions undertaken as part of the ABSPO project



4.2. ABSPO updates, extensions and harmonisation

This section presents the ABSPO methodology of updating, extending and re-pricing the ImPRovE/EURB reference baskets. The relevant modelling procedure involves both simple statistical extrapolations and substantive mixed-method reference budget practices, and ensure representative and up-to-date measurement of poverty in ABSPO pilot countries.

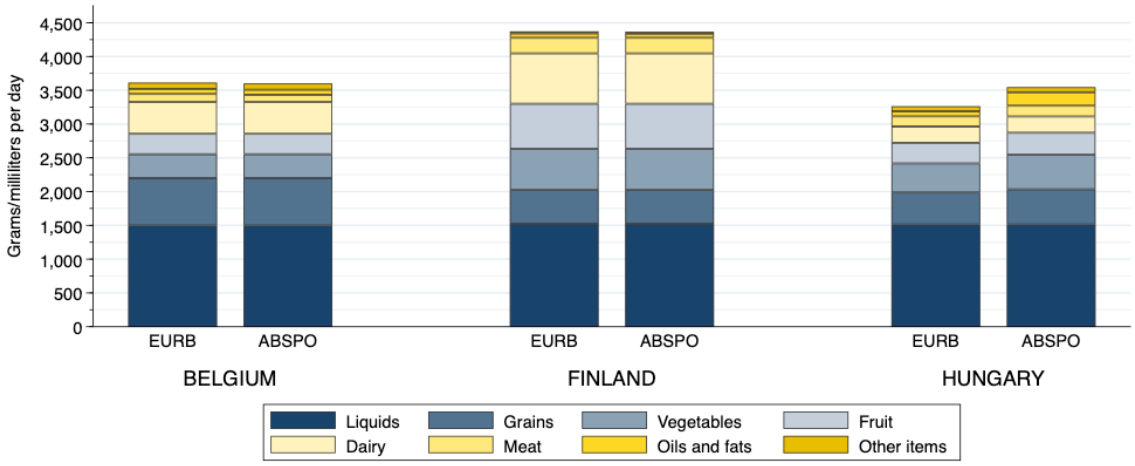
Updating the ImPRovE/EURB reference baskets

The first step of ABSPO modifications concerns the updating of ImPRovE/EURB reference baskets for existing individual and household types. The original baskets were created in 2014 and reflect minimum needs defined on the basis of contemporary guidelines and information sources. To reflect possible changes in these latter and ensure the continued validity of ABSPO reference budget inputs, the NETs were requested to update the baskets in line with the acceptable social minimum as defined by today's standards. In the absence of focus group discussions, ABSPO revisions targeted mostly changes in national guidelines and expert opinion regarding the contents, item quantities and lifespan of the relevant minimum baskets. Concerning minimum food baskets, most ABSPO adjustments were driven by slight modifications to existing dietary guidelines and appear in the form of newly introduced basket items (such as meat substitutes and nuts in Belgium, or whole grain bread and fruit puree in

Hungary). ABSPO updates are more substantial in relation to certain residual sub-components such as clothing or home IT appliances, where expert opinion has shifted more considerably. Overall, ABSPO modifications are rather limited in scope, and have produced rather similar reference baskets to the ImPRovE/EURB inputs in all relevant dimensions.

Figure 4.4 illustrates this and shows the structure and composition of the ImPRovE/EURB and updated ABSPO food baskets for single adult men in pilot countries. It reveals that substantial adjustments were implemented only in relation to the Hungarian basket, through the addition of selected new reference items (see Annex A of this Report for further details). The figure also highlights that the ImPRovE/EURB and updated ABSPO reference baskets are considerably different in size and composition across Member States. These differences are likely due to an array of factors, but there exists no international standard based on which these could be reliably identified, unequivocally separated – and the relevant national baskets evaluated, challenged or further harmonised.

Figure 4.4. The structure of original ImPRovE/EURB and updated ABSPO food reference baskets



Notes: Own calculations based on ImPRovE/EURB and ABSPO food reference baskets. The figures presented represent daily quantities by food category for single working-age men.

Extending the ImPRovE/EURB reference baskets

Extending the ImPRovE/EURB reference baskets along demographic lines towards full population coverage represents the second operational step of ABSPO modelling. This work stream involves two distinct modelling components: the development of new food and residual reference baskets for previously non-modelled individual types (such as small children and elderly adults), and the modular consideration of the related household-level needs. We review these in turn.

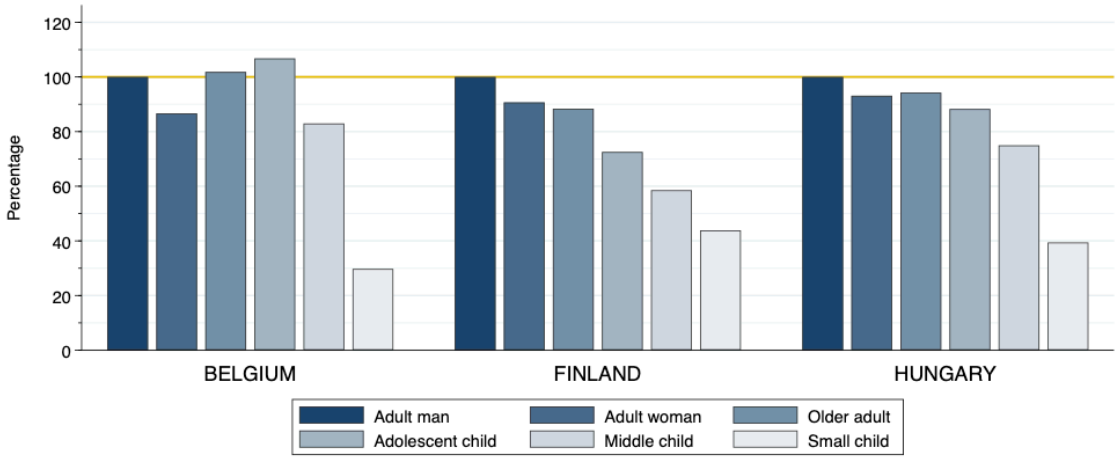
The separate modelling of new individual types is motivated by their minimum needs being different from those of previously modelled types (i.e. working-age adults, school-age and teen-age children). In particular, small children (aged 0-6) have particular demands in relation to nutrition, personal care and safe childhood that are not directly comparable with, or inferable from, the relevant reference baskets of school-age children or adult types (Bradbury, 2008; Hirsch, 2018). NETs were therefore required to consult nutritionists, thematic experts and relevant national guidelines to develop adequate reference baskets for small children using the standard ImPRovE/EURB procedure and methodology (with the exception of focus group discussions). The resulting ABSPO reference baskets are considerably different from the relevant ABSPO baskets for other types. Small children's food basket in Belgium equally deviates in terms of structure, variety and quantity from those of other types, while the one in Finland and Hungary features substantially different reference quantities. The modifications in the clothing baskets mainly concern shorter lifespan assumptions (due to faster growth of smaller children), the adjustments in the personal

care basket focus mainly on oral hygiene, while the relevant "rest and leisure" and "safe childhood" baskets differ from those of primary-school children with respect to information technology and education related items.[75]

The stand-alone modelling of elderly individuals (aged 65 or more) is also motivated by the particular minimum needs of this population segment.[76] Using working-age adults as the reference category, the relevant ABSPO extensions aimed at identifying the changing nutritional and social needs of the elderly that are widely documented in the related reference budget literature (Grassi and Panuzzi, 2009; Levasseur et al., 2010; Van Thielen et al., 2011; Hartfree, Hirsch, and Sutton, 2013). In particular, the new ABSPO food baskets of the elderly reflect the reduced caloric needs as well as fiber- and calcium-rich diet associated with healthy eating in old age, while the adjustments in the residual baskets attest to the more restrained leisure and social life of a typical elderly person in terms of increased comfort and convenience (e.g. holiday needs), and decreased activity and mobility (e.g. lifespan assumptions for clothing items).

Figure 4.5 shows the statistical relationship between the respective food reference budgets of adult men and other individual types in ABSPO pilot countries. It reveals that cross-country differences are not limited to the level and composition of adults' baskets, but also concern the horizontal structure of reference baskets across individual types. In general, food budgets are typically the highest for adult men, somewhat lower and comparable among adult women and elderly persons, and steadily decreasing for adolescent, school-aged and small children. However, these patterns do not apply to Belgium (where adolescents' and older persons' food budget is higher than that of prime-aged persons), and show considerable variations across countries.[77] For example, the minimum food budget of primary-school children (aged 7-12) ranges from 59% (in Finland) to 81% (in Belgium) relative to adult men's budget in the same country, while the relevant budget ratios for small children vary between 30% and 43% across ABSPO pilot countries.

Figure 4.5. Relative structure of ABSO food reference budgets across individual types



Note: Own calculations based on the ABSPO reference budgets representing minimum living costs in capital cities. Figures are expressed in percentage terms, using the budget level of working-age adult men in each country as the reference point. Since the same reference prices are used to monetise all reference baskets in a country, the presented differences are driven exclusively by changes in the size and composition of underlying reference baskets.

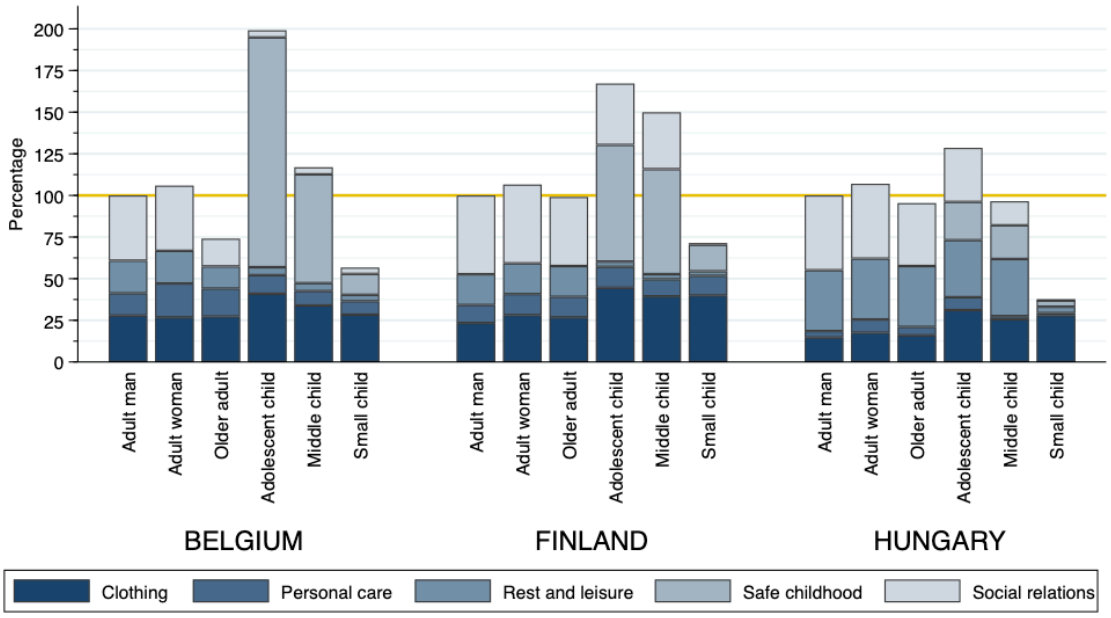
A similar breakdown of ABSPO residual budgets by individual type and expenditure sub-category are presented in **Figure 4.6**. This shows the relative stability of clothing and "personal care" budget components across individual types, as well as the systematic variation in the "rest and leisure" and "social relations" budget categories that focus attention on the comparatively high minimum needs of adult persons with respect to children in these domains. The relative weight of the aforementioned budget components varies markedly between countries: the

[75] See Annex A of this Report for further details on the contents and structure of ABSPO reference budgets.
[76] According to official Eurostat data, one fifth (20.6%) of the EU population was aged 65 and over in 2020.
[77] Part of the reason for the markedly different budget patterns in Belgium is that national dietary guidelines include specific recommendations for children, youth and the elderly. In contrast, national dietary guidelines in Finland and Hungary aim at the adult population in general, without specific age-related recommendations. See Carrillo-Álvarez et al. (2019) for more details.

financial needs of rest, leisure and social relations jointly account for around half of all residual needs of adult persons in Belgium, but make up more than 80% of these in Hungary. Moreover, while the elderly have very similar residual needs as working-age adults in Finland and Hungary, their budget is considerably lower in Belgium.

The main structural difference between ABSPO pilot countries stems from the modelling of the "safe childhood" component of residual expenditures. These represent the largest share in school-aged children's residual budget in Belgium and Finland, but only account for a small fraction of the relevant Hungarian budgets. The "safe childhood" basket tends to feature a wide range of items related to children's education and social activities (such as school materials, pocket money, sports and leisure activities, birthday presents), all of which are highly context-specific and potentially divergent across Member States. Yet, the extent of cross-country difference in the resulting budgets presented in **Figure 4.6** seems to indicate the fundamental difficulty of consistently accounting for individuals' (and in particular children's) minimum social needs across the EU based on expert deliberation, subjective judgment and participatory methods alone. In particular, in absence of clear international guidelines, and without drawing on an in-depth analysis of households' prevailing expenditure patterns (as is done by the survey-based and food-based ABSPO modelling approaches), it is hard to challenge the validity and adequacy of the resulting reference budgets in any given local context. Whether adolescent children's residual needs in Belgium or Finland are truly 170-200% of those of working-age adults is therefore a question that can only be answered tentatively, using alternative measurement tools and modelling procedures (see Chapter 5 of this Report for more details).

Figure 4.6. Relative structure of ABSPO residual budgets across individual types

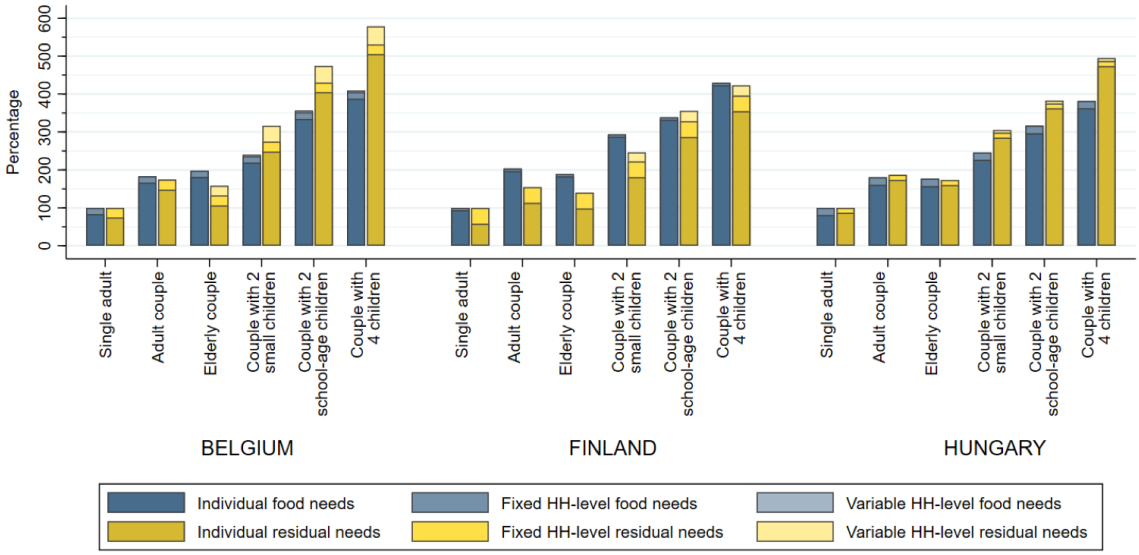


Note: Own calculations based on the ABSPO reference budgets representing minimum living costs in capital cities. Figures are expressed in percentage terms, using the budget level of working-age adult men in each country as the reference point.

The second kind of demographic extension implemented for ABSPO measurement relates to household types. While the ImPRovE/EURB reference budgets are specific to a limited number of illustrative households, ABSPO modelling aims at all possible household configurations simultaneously. This requires that, beside the standard differentiation between individual and household-level needs, one also accounts for the way households' basic needs change as a function of their size and composition. We therefore propose to distinguish fixed from variable household-level needs. The fixed part contains those items, quantities and expenditures that are equally required in all households, regardless of the number and type of household members. The variable part, on the other hand, is liable to change along both of these dimensions, either in a separable or non-separable manner. This separation between fixed and variable household-level items allows us to adequately model any type of household configuration.

Fixed household-level needs correspond to those reference items that are usually shared (or shareable) among multiple household members, and whose lifespan or purchasing cost do not (considerably) vary with one's living arrangement (such as certain maintenance tools or home appliances). Most variable household-level needs vary only with the number of household members (such as waste bins or shoe racks), while some of them change with the composition of the household, and the presence of certain individual type(s) in particular (such as babysitting).[78] Given that single households are assumed to have no variable household-level needs, the relative structure of individual and household-level needs are bound to differ from one household type to the next. While the relevant food reference baskets contain only individual and fixed household-level items, the residual baskets invariably feature all three types of basic needs. **Figure 4.7** presents the structure of ABSPO food and residual baskets along these lines for selected household types, and shows that the overwhelming part of the relevant budgets are made up of individual items. As a result, the ABSPO reference budgets exhibit very limited economies of scale, and grow in almost direct proportion to the size of the household: adult couples have minimum needs of 170-200% of those by single adults, while large families with 4 children need to spend 4 to 6 times as much as these latter.[79] Household-level components are particularly negligible in food budgets and are more substantial in relation to residual needs – especially as far as children-related needs in Belgium and Finland are concerned.

Figure 4.7. Structure of ABSPO reference budgets across different illustrative household types



Note: Own calculations based on the ABSPO reference budgets representing minimum living costs in capital cities. Figures are expressed in percentage terms, using the budget level of single working-age adult men in each country as the reference point.

Pricing of ABSPO reference budgets

The pricing of the extended reference baskets represents the final step of ABSPO modelling in the budget-based approach. The pricing procedure is an integral part of all reference budget frameworks, with a multitude of modelling possibilities in terms of information source and selection algorithm. Existing reference budgets rely equally on small-scale price collections and detailed national price statistics (Bradshaw et al., 2008; Warnaar, 2009; Goedemé et al., 2015; Allegrezza, 2016), but a systematic analysis of budgetary effects of pricing-related choices has not previously been available (see the comprehensive discussion and related empirical analysis in Section 7.2 of this Report).

For ABSPO implementation, we retain the small-scale price collection format employed by the ImPRovE/EURB projects. This ensures comparability with existing reference baskets and creates an opportunity for in-depth price

[78] In a few isolated cases, household-level minimum needs are assumed to change both with household size and household composition (e.g. holiday needs of elderly persons). For more details, see Annex A of this Report.
[79] See Section 7.3 of this Report for a more detailed discussion of the implications of these on the modelling of equivalence scales.

comparisons across different modelling approaches. Importantly, we use small-scale price collections repeatedly in different geographical locations to account for territorial differences in living costs within countries, and ensure full population coverage for the purposes of poverty measurement. Since the ImPRovE/EURB reference budgets are specific to urban metropolitan areas in capital regions, the geographical extensions of ABSPO measurement focus primarily on non-capital regions and rural or intermediate areas characterised by relatively low population density.

A separate price collection implemented in each possible combination of region and settlement type would be infeasible. For this reason, we follow a modular strategy that builds on four different pricing locations. The first location, similarly to the one chosen for the ImPRovE/EURB reference budgets, is the capital city in each ABSPO pilot country. The second location is a large metropolitan area in another (non-capital) region with a total population of at least 100,000 persons. The third location is a smaller, less densely populated area in the same non-capital NUTS1 or NUTS2 region with a population density above 100 inhabitants per square kilometer and a total population of at least 50,000 persons. The fourth and final location is a rural, thinly populated area that does not qualify for any of above categories. Using prices collected in these locations, we are able to span the entire geographical space as defined by household survey data for measurement purposes: the financial needs of households in capital regions are determined on the basis of the first pricing location, while those needs of households in non-capital regions are determined in relation to settlement type (i.e. urban, intermediate, rural). This rudimentary strategy is clearly sub-optimal in the face of extensive spatial variations in the cost of living, but has the benefit of effectively capturing the most pertinent margins of territorial price dispersion in most EU Member States – including the ones featured among the ABSPO pilot countries. In countries with substantial and varied geographical variations in retail prices (such as France or Italy), more systematic and comprehensive price collection strategies may become necessary for sound budget calculations and absolute poverty measurement (for more details regarding the EU-wide scaling up of the ABSPO methodology, see Section 9.1 of this Report).

Table 4.2. Location types by country

Region	Settlement type	Main retailer type	ABSPO pricing locations		
			BELGIUM	FINLAND	HUNGARY
Capital region	Capital city	Large retailers	Brussels	Helsinki	Non-specified location
Non-capital region	Large urban area	Large retailers	Antwerp	Turku	Non-specified location
Non-capital region	Intermediate area	Discount stores	Brugge	Pori	Non-specified location
Non-capital region	Rural area	Local shop or market	Hooglede	Loimaa	Non-specified location

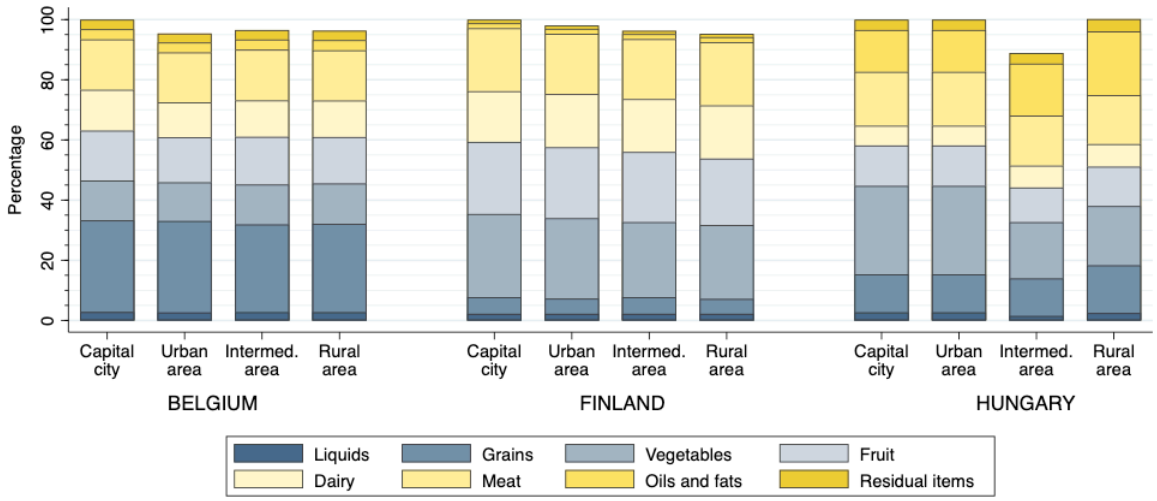
In addition to the sampling of different locations, ABSPO price collections also differ in terms of retailer characteristics. Three different retailer types were chosen to represent the most common purchasing source in each given location type: large retailers or hypermarkets in metropolitan areas, discount stores in intermediate areas and local shops or markets in rural areas.[80] In each of these categories, the selection of particular shops was made to ensure that they all offer a wide variety of items of acceptable quality at low prices, and are well-spread over the country and accessible by public transport. Due to the COVID-19 pandemic, ABSPO price collections took place online. Due to the strong online presence of popular retailers, this imposed very little constraints on the location, shop and product selection used for reference budget pricing in Belgium and Finland. In Hungary, however, the online pricing strategy effectively limited the selection of both potential retailers and particular shop locations, and produced reference prices that are only differentiated by shop type.[81] **Table 4.2** presents the main structure of ABSPO price collections as detailed above, and lists the particular locations selected for implementation by country.

[80] Note that this applies primarily for food basket pricing. In case of residual expenditures, the most representative and widespread national retailers were selected by expenditure sub-category (such as HM, IKAE, DM), without considering alternative purchasing options. Since many of these employ identical prices throughout the country, the spatial variation in residual baskets is extremely limited.

[81] The selected retailers in Hungary offer the same unique prices across all regions and settlement types. Therefore, the collected online prices are considered relevant for all potential locations associated with the particular retailer type. This naturally implies that reference prices and budgets for urban areas in Hungary are the same in both capital and non-capital regions.

Another important modelling aspect concerns the pricing algorithm.[82] In the context of reference budget development, this refers simultaneously to the choice of reference products and product types, the selection of the representative price or prices, as well as the potential aggregation of these latter into the headline price indicator used for budget calculations. For ABSPO measurement, we closely follow the pricing algorithm employed by the ImPRovE/EURB project. In particular, we retain its diversified approach to food budget pricing that differentiates between elementary or pre-packaged items (such as salt or spices) for which the lowest available price is used, and fresh or non-pre-packaged items (such as bread, fruit or meat) where the weighted average price of different varieties is considered (see Goedemé, Storms, Penne, et al. (2015) for more details).[83] The ABSPO pricing of residual baskets is slightly different from the relevant ImPRovE/EURB strategy, in that we selected the lowest (rather than the third lowest) price for clothing items, in order to adequately reflect the widespread availability of convenience shopping at reduced prices in this category, either through temporary discounts or during sales period (neither of which is explicitly recognised in the relevant calculations).[84]

Figure 4.8. Structure of ABSPO food reference budgets across different pricing locations



Note: Own calculations based on the ABSPO reference budgets for single working-age adults. Figures are expressed in percentage terms, using the budget level associated with the capital city in each country as the reference point, as of 2020.

Figure 4.8 presents the relationship between the resulting ABSPO food budgets in various pricing locations by country. It shows that the purchasing cost of food reference baskets is highest in capital cities, but the relative difference between regions and settlement types is rather insubstantial (i.e. below 5%).[85] It also shows that not only the overall level of reference budgets, but also their structure across food categories are robust across locations. Among the ABSPO pilot countries considered, only Hungary display sizeable differences, as discount shops in intermediate areas appear to allow for savings of more than 10% in relative terms (due mostly to lower vegetables prices). This hints at the possibility of considerable spatial and variations in selected EU Member States, and highlights the need for in-depth price analysis and comprehensive price collection for robust EU-wide measurement of poverty based on the reference budget method.

[82] See the related analysis in Section 7.2 of this Report on the sensitivity of reference budgets and pricing assumptions on the resulting reference budgets and poverty thresholds.

[83] ABSPO calculations, however, do not feature the 10% top-up used on the overall ImPRovE/EURB food budgets to enable a somewhat larger degree of choice. This is due to the widespread availability of temporary discounts (as verified during the data collection) and the consideration of social functions of food (eating out, take-away food, food on holidays) elsewhere in the reference budgets.

[84] The choice of applying the lowest price for clothing items reduces the respective minimum budgets by 27%, 38 and 29% on average in Belgium, Finland and Hungary. For more details, see Goedemé, Storms, Penne, et al. (2015) and Annex A of this Report.

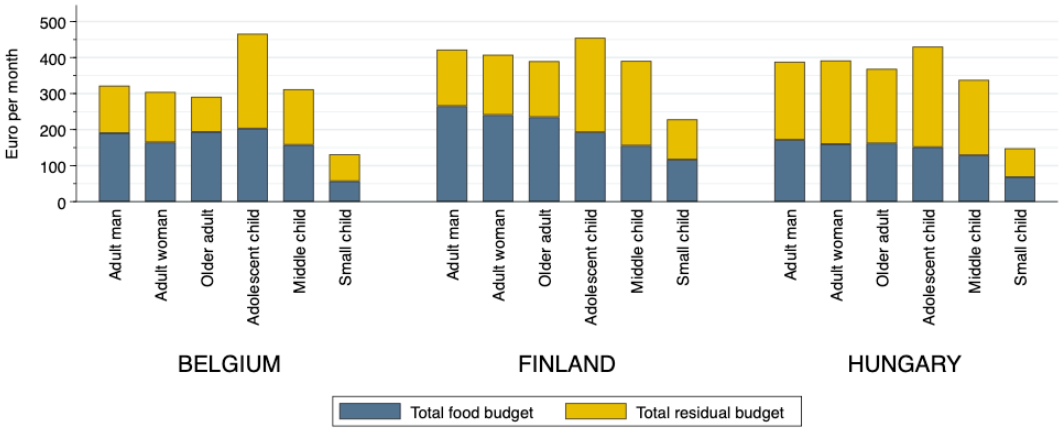
[85] It also shows that potential effects of assigning either capital-region metropolitan budgets or non-capital-region intermediate/rural budgets to households living in low-density areas in the capital region on the resulting reference budgets and poverty thresholds are rather limited.

4.3. ABSPO poverty thresholds of the budget-based approach

This section presents the ABSPO reference budgets and poverty thresholds derived on the basis of the reference budget-based approach. **Figure 4.9** presents the food and residual components of the resulting monthly reference values for 2020 by individual type in ABSPO pilot countries. First, it shows that adult men's food reference budget amount to 171, 190 and 265 euro per month in the respective capital cities of Hungary, Belgium and Finland. Somewhat surprisingly, the cross-country ranking of residual budgets is rather different: adult men's budget is highest in Hungary (217 euro per month) and considerably lower in Belgium or Finland (132 and 157 euro per month, respectively). This difference is driven mainly by the relatively high budget components calculated for rest, leisure and social participation expenditures in Hungary, which further highlights the difficulty of consistently accounting for minimum social needs using subjective information alone.

Besides the level of ABSPO food and residual budgets, their horizontal structure across various individual types also differs substantially between countries. On the whole, the combined food and residual budgets of most individual types (other than small children) tends to be rather similar to those of adult men: the lower food needs of women, elderly and school-aged children are typically coupled with somewhat higher residual budgets that produce broadly comparable individual budgets for a large majority of the national population. As discussed in the previous section, adolescent children in Belgium are a notable exception: their residual budget is twice as high as those of adults', due to substantial allowances for school materials (69 euro per month), pocket money (34 euro per month), sports or leisure activities (30 euro per month), among others. Small children represent another outlier category, both as far as the lower level and large cross-country variation of their respective minimum needs are concerned. While the presented ABSPO budgets are valid from a reasonableness standpoint, they nevertheless raise doubts about the cross-country consistency and comparability of mixed-method reference budget development based on national sources and subjective views.[86]

Figure 4.9. Individual ABSPO food and residual reference budgets by type across countries



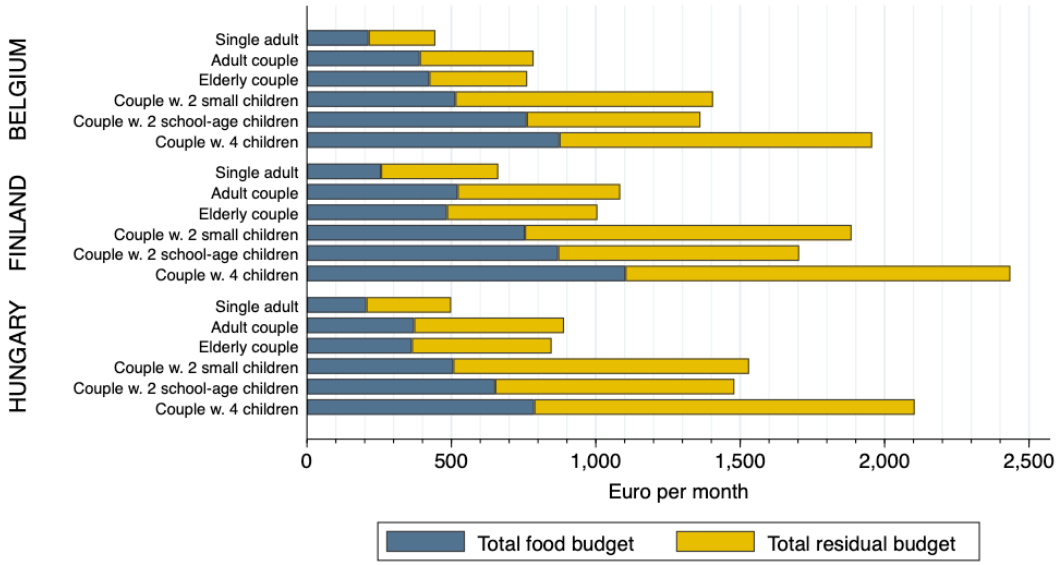
Note: Own calculations based on ABSPO reference budgets as of 2020, representing minimum living costs in capital cities.

When adding up the relevant reference budgets to the household level for poverty measurement purposes, one needs to consider both the individual and collective minimum needs of households in line with their size, composition and living arrangement. For each household configuration, the corresponding reference budgets are therefore calculated in a modular fashion as the sum of the relevant individual, fixed household-level and variable household-level components. To allow for scale economies and potential savings among larger households, we also apply household size-specific proportionate scaling parameters in line with observed expenditure patterns and the modified OECD equivalence scale (see the detailed discussion in Section 5.2 of this Report). Finally, household-

[86] For example, the estimated cost of safe childhood in Belgium is established and documented in the national bulletin (Circulaire #7136, Mise en oeuvre de la gratuité scolaire au niveau secondaire, 17/05/2019). Existing research by Havermans, De Norre, and Groenez (2019) comes to similar conclusions as the relevant ABSPO reference budgets.

level budgets are gender neutral that consider the mean of adult men's and women's values for each relevant budget sub-component. The combined effect of this aggregation on the resulting household-level reference budgets is presented in **Figure 4.10** for six illustrative household types. It shows that the total budgets of single households are considerably larger than the individual ones presented in Figure 4.9, and amount respectively to 445, 662 and 499 euro per month in Belgium, Finland and Hungary as of 2020. The relevant budget levels increase rather elastically with the number of household members: the total food and residual budget of a couple with 2 small children increase to 1406, 1885 and 1530 euro per month in ABSPO pilot countries – or roughly three times (284-316%) of single households' budget. The minimum financial needs of couples with 4 differently aged children are even higher, and amount to 1957-2435 euro per month even without transportation, housing and healthcare expenditures.

Figure 4.10. Total ABSPO food and residual reference budgets by household configuration



Note: Own calculations based on ABSPO reference budgets as of 2020, representing minimum living costs in capital cities.

To assess the adequacy and generosity of the ABSPO reference budgets, one may rely on a limited number of external sources. **Table 4.3** compares the presented ABSPO outputs with the relevant ImPRovE/EURB calculations, national reference budgets and cost of living estimates from the Numbeo global database for two illustrative household types.[87] The figures indicate that, on the whole, ABSPO reference budgets are broadly comparable with existing estimates, at least in the case of capital cities and selected reference households. The alignment between the different estimates is closest in Finland, while the respective ABSPO budgets appear rather frugal for Belgium and generous for Hungary in comparison with the existing reference points. Overall, the relative stability of the different minimum budgets within Member States seems to suggest that the particular choice of reference items (which exhibits much larger cross-country variation) may not be of primary importance to sound reference budget development. This discovery may open the door for a harmonisation process towards simpler, more transparent and more comparable reference baskets and budgets that can directly benefit poverty measurement and living cost calculations in the future.

[87] Numbeo is the world's largest crowd-sourced global database on the cost of living. It does not differentiate children from other household members. All the budgets presented in the table are harmonised across the expenditure categories and corrected for inflation using Eurostat CPI statistics to match 2020 ABSPO budgets.

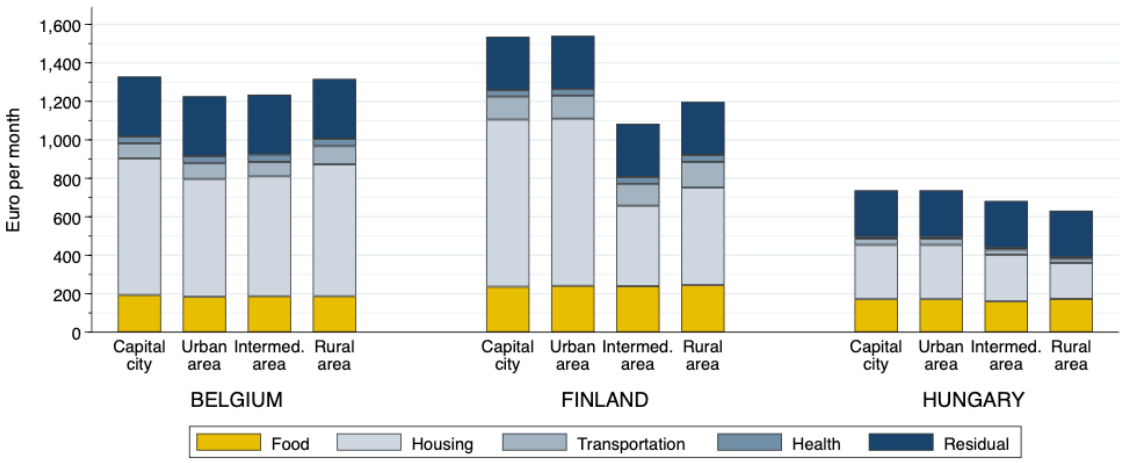
Table 4.3. ABSPO reference budgets in comparison with existing national and international estimates

	Belgium		Finland		Hungary	
	Single adult	Couple with two children	Single adult	Couple with two children	Single adult	Couple with two children
ABSPO reference budget	445	1406	662	1885	499	1530
Numbeo cost of living estimate	566	2136	579	2203	355	1332
ImPRovE/EURB reference budget	522	1754	604	1747	344	1128
National reference budget	679	1845	700	1796		

Notes: Own calculations based on different data sources, including Lehtinen et al. (2011), Goedemé et al. (2015) and Storms et al. (2013). The Numbeo cost estimates were obtained online (https://www.numbeo.com/cost-of-living/) while the national reference budget for Belgium was calculated using CEBUD calculator (https://remipro.be/remi/calculator/index.php) All reference values are broadly aligned with the relevant combined ABSPO reference budgets for food and residual expenditures, expressed in 2020 euros.

The ABSPO poverty thresholds associated with the reference budget-based approach also include additional components that are not modelled via piecemeal reference budget methods. In particular, these concern minimum expenditure thresholds for transportation, housing and healthcare that are derived with the help of statistical techniques as part of the survey-based approach (see the next Chapter for detailed presentation). The budget components in question are disaggregated by individual, household and geographic characteristics, and added modularly on top of the food and residual budgets. **Figure 4.11** presents the resulting overall poverty thresholds for single adult households by country and geographical area. It shows that housing is the largest budget component, and that spatial differences in ABSPO reference budgets between and within countries are driven primarily by variations in minimum housing needs. This helps contextualising the observed variability of ABSPO reference budgets, and further underscores the limited practical relevance of piecemeal reference budget construction for sound poverty measurement. The ABSPO budget-based approach nevertheless demonstrates that poverty measurement based on existing national reference budgets is feasible, and that the quality and applicability of such reference budgets for international poverty measurement largely depends on the continued harmonisation of the relevant national information sources and reference budget practices.

Figure 4.11. ABSPO poverty thresholds associated with the budget-based approach by location type



Note: Own calculations based on ABSPO reference budgets and statistical analysis of EU-SILC and EU-HBS microdata. The relevant values refer to single adult persons and representing minimum living costs as of 2020.

CHAPTER 5.
Survey-based approach to ABSPO measurement

The ABSPO survey-based approach represents an intermediate solution to absolute poverty measurement between the reference budget-based and statistical food-based approaches discussed in Chapter 4 and Chapter 6 of this Report. It models households' minimum financial needs by expenditure category using mainly household budget survey data. As compared to the piecemeal bottom-up methods of reference budget techniques, this strategy focuses directly on households' minimum financial needs in non-food expenditure categories, and identifies the relevant minimum thresholds by relying on individuals' self-reported living conditions and subjective views on their ability to adequately meet their basic needs.

There are several advantages to using survey-based statistical techniques for the modelling of minimum non-food needs. First, these latter tend to differ more substantially across individuals and households in a country than food-related needs. For instance, one's basic transportation or health needs depend on a large set of idiosyncratic factors, which makes it difficult to fix any given consumption bundle or reference basket in a sufficiently representative manner.[88] Second, pricing non-food reference baskets is considerably harder using available pricing sources. National price statistics contain significantly fewer observations on non-food items, scanner data are typically limited to the fast-moving consumer good (FMCG) segment, and harmonised international price data are available for food and beverage items only. In addition, many non-food goods and services are characterised by substantial price variations (e.g. variable utility costs, location-dependent public transport fares, personalised care). Households' related minimum needs are often better addressed by focusing on the typical level of household spending in certain expenditure domains, rather than the particular set of goods and services purchased in each individual case.

While this approach lacks the analysis of what particular consumption bundles are potentially capable of satisfying one's minimum needs in a given expenditure domain, it offers straightforward implementation using readily available household survey data. The main associated challenge consists in credibly identifying the subset of sampled households that are just barely able to meet their minimum needs, and whose observed level of spending may reasonably qualify as the relevant minimum threshold in a given expenditure domain. Since budget survey data typically contain very limited information on households' needs, subjective view and living conditions, the assessment of whether they consume more or less than their presumed minimum needs requires the use of exogenous information sources.

These are more readily available at the national level, where appropriate minimum regulations or guidelines may provide useful reference points for practical modelling. For example, the methodology of the Italian Statistical Office (ISTAT) relies on nationally binding dwelling requirements to identify minimum acceptable housing size, and exploits households' self-reported housing size information in the Italian HBS to calculate minimum housing costs. Unfortunately, this is not a feasible strategy for EU-wide measurement: European regulations or guidelines on basic needs or essential services are very thin, and the EU-HBS contains no information on households' living conditions or subjective views.[89] ABSPO implementation therefore uses information from alternative European household surveys (such as the EU-SILC or the Eurobarometer) to estimate the (conditional) share of population that is able to meet their minimum needs in a given expenditure category. We then use these conditional shares to determine the relevant quantile of households' observed expenditure distribution in the EU-HBS that may represent the minimum financial need by consumption domain.

This is new approach and represents the first attempt to model households' minimum non-food needs in housing, transportation, health and social relations based on household survey data alone. The methodology employs strong underlying assumptions, especially as far as the reliability and consistency of self-reported subjective information

[88] This is part of the reason why most reference budget initiatives consider a well-defined target population when constructing minimum budgets. For more details, see Sections 2.3 and 4.1. of this Report.

[89] Note that Principle 20 of the European Pillar of Social Rights is devoted to essential services and states that "everyone has the right to access essential services of good quality, including water, sanitation, energy, transport, financial services and digital communications" and that "support for access to such services shall be available for those in need". The comprehensive review of relevant nation policies by Baptista and Marlier (2020) nevertheless highlights the lack of common definitions and operational targets across Member States.

and the posited strong monotonic relationship between needs and expenditures are concerned. To empirically verify the operational feasibility of the method, we rely on merged national SILC-HBS microdata from Hungary – the only EU country alongside the Czech Republic where national SILC and HBS data are collected simultaneously from the same population sample. Using these data, we are able to test whether the underlying modelling assumptions hold in practice, and assess the validity and robustness of the resulting monetary thresholds. The use of integrated household survey data also shows the potential benefits that the further harmonisation of European household surveys would bring to EU-wide absolute poverty measurement.

In this chapter, we first summarise the official ISTAT practice for absolute poverty measurement in Italy as the reference method, and discuss the required modifications for internationally comparable measurement. Subsequent sections present the proposed methodology to calculating minimum thresholds for food, housing, transportation, health and residual expenditures by individual and household characteristics. While we focus on ASBPO pilot countries of Belgium, Finland, Hungary and Italy for full implementation, the featured survey-based methods are all scalable to the EU level (available data permitting). Section 5.7 presents the resulting survey-based ABSPO poverty lines and discusses their most relevant features.

5.1. The reference method by ISTAT and its ABSPO modifications

This section briefly summarises the methodology developed by the Italian National Statistical Institute (ISTAT) for poverty measurement in Italy. Since Italy is the only EU Member State (and one of the very few developed countries) that partakes in official measurement of poverty from an absolute standpoint, the ISTAT approach is of particular relevance for ABSPO purposes. Its reliance on survey-based statistical measurement and detailed accounting for each of the main expenditure categories serves as a direct inspiration and reference point for ABSPO development and implementation.

Detailed descriptions of the ISTAT methodology are available in Grassi and Panuzzi (2009) and Cutillo, Raitano, and Siciliani (2020), while the annual Italian poverty reports are accessible through the dedicated ISTAT website.[90] Our presentation in the current section therefore focuses on the conceptual and practical challenges associated with the relevant modelling strategy, as well as the answers ISTAT has provided to these. In the latter part of the section, we show that some of these answers are not appropriate or feasible in the context of EU-wide measurement, and present the outline for a slightly modified alternative strategy that we propose for ABSPO implementation.

The ISTAT approach to absolute poverty measurement

ISTAT started calculating absolute poverty estimates as early as 1997, and produces official absolute poverty indicators on an annual basis with a revised methodology since 2009. These indicators provide detailed information to policy-makers, institutional stakeholders and the broader public on poverty, social exclusion and the welfare of Italian households. The main microdata source ISTAT relies on for measurement is the Italian Household Budget Survey ("Indagine sulle spese delle famiglie"), a nationally representative cross-sectional survey on consumption expenditures and household finances of approximately 15.000 Italian households (Istat, 2021).[91]

For the calculation of absolute poverty lines, ISTAT differentiates between three main expenditure categories: food, housing, and residual expenditures. In the first place, broad need areas were identified (nutrition, housing, mobility, education…), then the institution assessed that the explicit analytical definition of minimum needs was only feasible for food and housing. Hence, the other need areas were merged in a residual component, in name and in fact. For each of the modelled expenditure categories, ISTAT employs customised measurement techniques to determine the level of minimum needs for a wide range of household configurations. The overall poverty line is then computed as the simple sum of the relevant thematic expenditure thresholds.

[90] https://www.istat.it/en/archive/poverty

[91] From 2014, the Italian Household Budget Survey ("Indagine sulle spese delle famiglie") replaced the Italian Consumption Survey ("Indagine sui consumi"). The switch made it necessary to rebuild time series of poverty indicators starting from 1997 to ensure inter-temporal comparability of the estimates (see https://www.istat.it/it/archivio/164869)

Minimum food expenditures, in particular, are modelled on an individual basis using standard reference budget practices. ISTAT uses expert inputs from the Italian national nutritional institute ("Società italiana di nutrizione umana") to specify the underlying food reference baskets on nutritional grounds so that they reflect the dietary needs of healthy individuals across 10 age and 2 gender categories. The basket structure and components are formally defined at the level of NUTS1 regions, but are virtually identical across the whole country. Basket items are priced individually using data from the ISTAT consumer price survey in regionally disaggregated manner. For constructing household-level food budgets, ISTAT takes the sums up members' respective individual budgets, but adjusts these proportionately based on household size to reflect potential economies of scales. The relevant scaling factors are estimated from observed food consumption patterns and imply substantial savings among larger households.[92]

Minimum housing expenditures represent the largest component of the ISTAT absolute poverty lines, and include both the availability of accommodation (i.e. the rental sub-component) and the operating costs of maintaining a functioning households (i.e. utilities and durable goods). The rental sub-component is the dominant of the two, and is determined with reference to the minimum size requirements of Italian dwellings imposed by the relevant national legislation (Ministerial Decree 5/7/1975).[93] ISTAT calculates the minimum monthly rental expenditure using per-square-meter estimated rents from market survey data, differentiated by NUTS1 region and municipality type. As for the non-rental housing component, ISTAT differentiates between energy-related, heating-related and durable goods-related needs. The energy sub-budget is calculated using reference electricity consumption values provided by the relevant Italian authority (Enea, 2002), and reference prices per kilowatt-hour of electricity use based on the applicable energy tariffs in force.[94] The heating sub-component is estimated directly from HBS data using a regression specification that accounts for differences in geographical area, dwelling size and household structure (the linear regression is estimated on a subsample of households with autonomous heating). The parameters are then applied to minimum dwelling size requirements and demographic variables to obtain the heating budget. The minimum expenditure threshold for a fixed list of durable goods purchases (i.e. refrigerator, cooker, washing machine, TV) are calculated with the user cost approach based on consumer price data and depreciation quotas.

Minimum residual expenditures cover minimum needs associated with clothing, information technology and communication, transportation, education, health- and personal care. ISTAT calculates the relevant expenditure thresholds in direct relation to minimum food expenditures using the inverse of the estimated food expenditure share among households' total expenditure net of housing. This strategy makes use of the long-standing and widely-used assumption in welfare analysis that uses the relative share of food expenditures as the main proxy of households' material well-being (Engel, 1895).

In a nutshell, the ISTAT measurement approach amounts to employing expert-based reference budget methods to estimate minimum food and housing needs, and using budget survey microdata to support the refinement (e.g. economies of scale), the completion (e.g. heating costs) or the horizontal extension (e.g. residual budget) of existing reference budget components. This framework uses very limited subjective inputs and a small number of modelling parameters, and therefore offers a robust platform to producing time-consistent poverty indicators on a regular basis.[95]

Modifications for ABSPO implementation

The ABSPO implementation of the survey-based approach differs from the ISTAT methodology in several important ways. The fundamental reason is the unfeasibility of estimating minimum housing needs with reference budget techniques in a cross-country comparable manner, due to the lack of harmonised dwelling requirements or price

[92] The additional cost of an adult implied by ISTAT equivalence scales goes from 0.9 for the second adult to 0.64 for the seventh member, see Grassi and Panuzzi (2009) These coefficients are only applied to food budgets. For a more general discussion of equivalence scales, see Section 7.3 of this Report.

[93] The minimum acceptable apartment size changes with the number of household members, and varies from 32.5 square meters for a single person to 68 square meters for a 5-person household in a largely linear manner. For more details, see Grassi and Panuzzi (2009).

[94] The relevant consumption values range from 1,144 kWh for a single person household to 2,362 kWh for 5-person households, respectively. For more details, see Grassi and Panuzzi (2009).

[95] From 2005 ISTAT yearly updates the poverty rates using the latest available Household Budget Survey. The poverty line update is carried out considering possible differences in inflation dynamics across regions and across individual goods and services. For this purpose, the institution uses specific price indices from the Italian Consumer Price Survey by basket item (50+) and geographic breakdown.

data (see Section 5.3 for a more detailed discussion). Faced with this scenario, the ABSPO food-based and survey-based approaches may be considered as two different solutions to the problem. The food-based approach proceeds by including housing-related consumption among the residual non-food needs, and estimates these latter in direct relation to the food budgets (see Chapter 6 for more details). The survey-based approach, on the other hand, explores the possibility of using purely survey-based statistical methods to quantifying minimum housing budgets.

As part of this strategy, it is preferable to take a somewhat more disaggregated view of non-food expenditures. The first reason is that it becomes easier to identify relevant input or information sources that can effectively help determine minimum needs in relation to well-defined expenditure categories. For example, thematic information on individuals' health or housing conditions that can strongly predict observed household expenditures are more useful for modelling than broad indicators of subjective well-being or overall living standards. Second, taking a more disaggregated view should also lead to more accurate measurement, especially if it helps to better understand the right modelling focus, the appropriate horizontal structuring of minimum needs, or the potential non-linearities and substitution patterns between different expenditure categories. For these reasons, we propose to model non-food needs in relation to four separate expenditure categories: housing, transportation, healthcare and residual expenditures – while retaining the reference budget-based approach to minimum food needs.

In all of the aforementioned non-food categories, we use exogenous micro-level statistics and survey information to calculate the share of households in any given population segment that can be reasonably assumed to meet their basic needs. We then use these conditional shares to identify the relevant quantile of households' observed expenditure distribution in the EU-HBS that determines the minimum level of financial needs in any particular consumption domain. Through the analysis of joint SILC-HBS microdata from Hungary, we can test the reliability and accuracy of resulting thematic poverty lines, and demonstrate the adequacy of these for the large majority of sampled households. This way, we present a novel and simpler method to calculating thematic minimum reference budgets in a self-contained, representative and cross-country comparable way, without relying on pre-existing (food) reference budgets, or an extensive list of input sources.

Table 5.1. Overview of modelling in the ABSPO survey-based approach

	FOOD	HOUSING	TRANSPORTATION	HEALTH	RESIDUAL
Modelling focus	Individual	Household	Individual / Household	Individual	Household
Modelling method	Reference budget method	Statistical method	Statistical method	Statistical method	Statistical method
Definition of minimum needs	Nutritional requirements	Dwelling adequacy overcrowded housing	Incidence & frequency of transportation use	Self-reported health status	Self-reported ability to make ends meet
Required data sources	ABSPO food baskets National consumer prices	EU-SILC EU-HBS	EU-SILC EU-HBS	Eurobarometer EU-HBS	EU-SILC EU-HBS
Margin of need differentiation	Age & gender Region of residence	Household size Region & settlement type	Age & HH composition Transportation mode Region & settlement type	Age health status	HH size & composition Region of residence

Table 5.1 below provides an overview of the main modelling features in the ABSPO survey-based approach. Specifically, it highlights the similarities and differences between the five separately modelled expenditure categories in terms of modelling focus, modelling method or the information basis used for the definition of minimum needs. Importantly, it also shows that national data inputs (in the form of consumer price statistics) are required only in relation to food expenditures, while the modelling of all non-food expenditures relies on cross-country comparable EU-wide survey data. Concerning the differentiation of minimum needs across population segments, the table reveals that modelling goes significantly beyond the use of equivalence scales and involves a wide range of additional geographic or demographic characteristics for this purpose. In the following sections, we present the relevant measurement strategy and resulting minimum expenditure thresholds in each expenditure category in detail.

5.2. Food expenditures

Food expenditures represent the expenditure category where ABSPO implementation is most closely aligned with the ISTAT methodology. Both feature nutrition-based healthy food reference budgets for a wide range of individual types based on age and gender that are subject to regional price differentiation. The three main modelling components are the specification of the reference baskets, their pricing and the eventual economies of scale adjustment for their household-level use. We review these in turn.

Specification of food reference baskets

ISTAT uses expert-based nutritional considerations to determine the structure, composition and item quantities associated with healthy eating across 20 different age and gender types (see Grassi and Panuzzi (2009) or Cutillo, Raitano, and Siciliani (2020) for more details). The resulting baskets have very similar structure across individual types, include 33 reference items of popular Italian food items (e.g. pecorino cheese, mortadella), and are only minimally differentiated across main Italian macro-regions (North, Central, South). As compared to the ImPRovE/EURB and ABSPO food reference budgets discussed in Chapter 4, they offer a rather parsimonious representation of a varied healthy reference diet.

While following the same concept for ABSPO implementation, we slightly deviate from the ISTAT approach at the level of technical modelling. The relevant differences stem from the international focus of the ABSPO exercise, and ensure a more algorithmic and cross-country consistent solution to the same problem. The first modification consists in specifying the underlying set of nutritional targets (i.e. the EFSA dietary reference values), the initial reference diets (i.e. observed food consumption patterns at the national level), and the basket construction procedure (i.e. linear optimisation model) in an exact and transparent manner. The second departure from the ISTAT strategy concerns the structure of reference baskets: instead of focusing on selected individual food items, we define ABSPO food reference baskets in terms of generic food product categories based on the ECOICOP classification in a comprehensive manner. These methodological choices ensure the consistency and international comparability of resulting food baskets, as well as their compatibility with existing national and European data sources (such as the EU-HBS on observed consumption patterns or national and ESTAT price statistics). More details about the newly developed ABSPO nutritional food baskets are presented in Section 7.1 of this Report.

The pricing of food reference baskets

The pricing of food reference baskets represents an equally important aspect of minimum budget construction. For this purpose, ISTAT uses retail price scanner data and considers the weighted average of minimum prices collected in supermarkets, discount stores and local retailers for each basket item at the province (NUTS3) level. Using population weights, it then aggregates these minimum prices to the level of smaller (NUTS2) and larger (NUTS1), and then subsequently to three large macro areas. This leads to a statistically robust and geographically differentiated minimum budgets. It is noteworthy, however, that the lowest input prices collected by ISTAT refer to the popular product variants featured in the reference baskets rather than the absolute cheapest items available in any given product category.

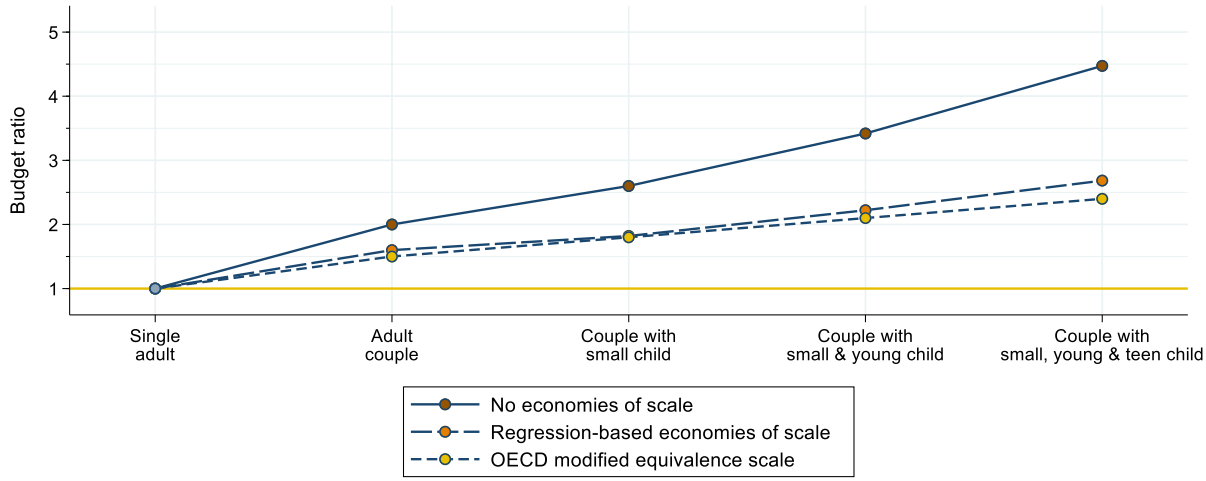
The corresponding ABSPO approach is similar in concept but somewhat different as far as the technical implementation is concerned. Regarding the data source, we use analogous national consumer price statistics based on traditional consumer price surveys (where available, such as in Finland and Hungary) or household scanner data (for Belgium and Italy). However, since the ABSPO nutritional baskets are defined at the level of generic product types, identifying the lowest price associated with specific reference items is generally not possible. Instead, we consider the totality of price observations within each ECOICOP product category at the 5-digit level, and apply the 25th percentile of the (per-quantity) price distribution by NUTS1 region. The lowest distribution quartile is meant to represent a sufficiently low price point in the universe of all sampled items, retailers and price periods that still allows for a certain degree of consumer choice and autonomy – in line with the ISTAT perspective.[96]

[96] See Section 7.2 of this Report for a detailed analysis of pricing sources and the sensitivity of resulting ABSPO reference budgets to different pricing assumptions.

Adjustments for economies of scale

Third important modelling component is the manner individual minimum budgets are aggregated to the household level. Rather than simply adding these up across household members, most measurement frameworks account for potential economies of scale – either through household-specific collective items in reference budgets or through statistical scaling factors. The ISTAT strategy relies on these latter, and uses empirical regularities in the food consumption patterns among adult households of different sizes to calculate the relevant scaling parameters (Grassi and Panuzzi, 2009). The underlying assumption is that, conditional on comparing households at similar standards of living, the observed lower per-capita food spending among larger households reflects the scale economies they are able to realise by buying in larger quantities and/or at lower unit prices. The saving coefficients ISTAT derived from Italian budget survey data are highly robust across various population segments, and imply considerable economies of scale among multi-person households.[97]

Figure 5.1. Economies of scale adjustments and their effect on household-level food budgets



Notes: Own calculations based on ABSPO nutritional food reference budgets and statistical analysis of the 2015 wave of EU-HBS microdata. The presented budget ratios express the food reference budget of a given household configuration relative to that of the single adult person. Small, young and teen children are aged 0-6, 7-12 and 13-18, respectively.

ABSPO analysis of EU-HBS data from 2015 confirms the presence of considerable scale economies in European households' food spending. Per capita food expenditure declines strongly with household size among both financially constrained and unconstrained households: the EU average of national scaling parameters amount to 0.86 / 0.71 / 0.62 / 0.58 for households with 2 / 3 / 4 / 5 members on the full population sample.[98] Since the observed expenditure patterns may be driven by multiple factors that are independent of scale economies (such as different dietary habits and behavioural patterns among larger households), it is prudent practice not to consider the totality of these as potential savings. For this reason, we use the slightly more conservative scaling factors of 0.85 / 0.75 / 0.65 / 0.60 to calculate household-level food budgets for households with 2, 3, 4, and 5+ members in all EU countries. This framework is broadly aligned with observed experience patterns in most Member States and comparable to the OECD modified equivalence scale used elsewhere in ABSPO modelling. **Figure 5.1** shows the respective food budget ratios in terms of single person's budget for various household configurations, and documents the substantial scale economies larger households are assumed to be able to realise under the proposed scheme.

[97] ISTAT uses normalised scaling coefficients of 0.85 / 0.77 / 0.72 / 0.68 for households with 2 / 3 / 4 / 5 members, respectively. For more details, see Grassi and Panuzzi (2009).

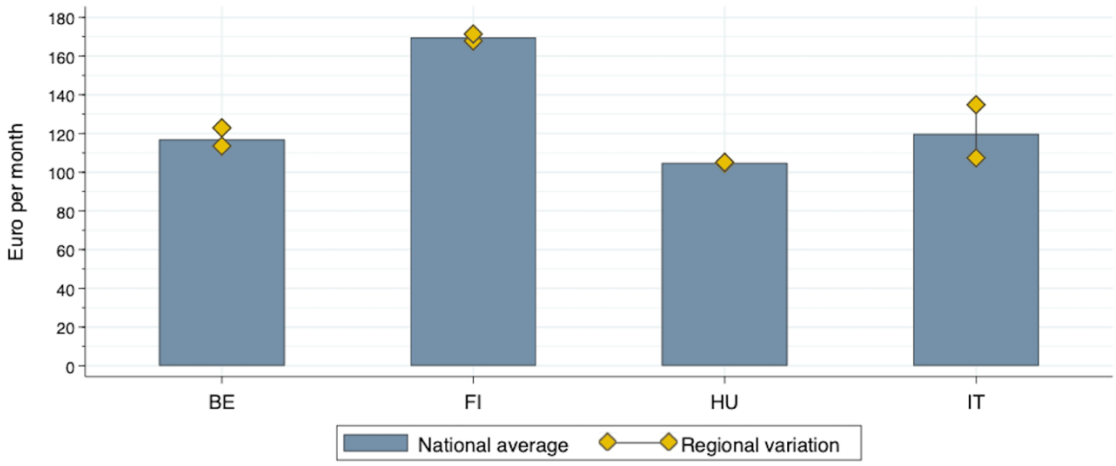
[98] The corresponding EU-level saving parameters are much lower (0.60 / 0.45 / 0.38 / 0.27) among households with equivalised income below the national median. The difference between the two sets of scaling coefficients is likely driven by larger incidence of poverty among larger households, and the limitations associated with the Engel-method of using the food expenditure share as the indicator of living standards for these types of household comparisons (López-Laborda, González, and Onrubia, 2017).

Resulting food reference budgets

The resulting ABSPO food reference budgets are a combination of 20 different age- and gender-specific individual baskets that are priced regionally at NUTS1 level and combined in modular fashion for each different household configuration. The number of possible household-level budgets may therefore extend to several hundred in a given country. For practical purposes, it makes sense to streamline the structure of reference budgets and reduce the number of different combinations. Following the practice of ISTAT, we specifically employ two types of simplifications that greatly reduce the number of budget arrangements. First, for equity reasons, we disregard the gender gap in minimum budgets and use the arithmetic mean of men's and women's budget as the relevant poverty threshold. Second, we reduce the number of different age categories by pooling together cohorts with very similar nutritional needs and reference baskets. The remaining five broad age categories correspond to the ones used as part of the ABSPO extended approach: small children (aged 0-6), young children (aged 7-12), teen children (aged 13-18), working-age adults (aged 19-64), and elderly persons (aged 65 or more).[99]

The resulting food reference budgets used for ABSPO measurement are presented in **Figure 5.2**. It shows that minimum budgets can vary substantially between Member States: national mean values for single working-age adults in 2020 among ABSPO pilot countries range between 105 euro per month in Hungary and 170 euro per month in Finland. Within-country differences are much more limited: regional variation in food budgets is negligible in Finland and Hungary, moderate in Belgium and substantial only in Italy (where the wedge between Northern and Southern regions amounts to 26%). The regional patterns of retail prices are broadly consistent with the results of the local price collections undertaken as part of the budget-based approach to ABSPO measurement, and highlights that the importance of spatially disaggregated pricing for accurate poverty measurement can change significantly from one Member State to the next.

Figure 5.2. ABSPO food reference budgets for single working-age adults by country

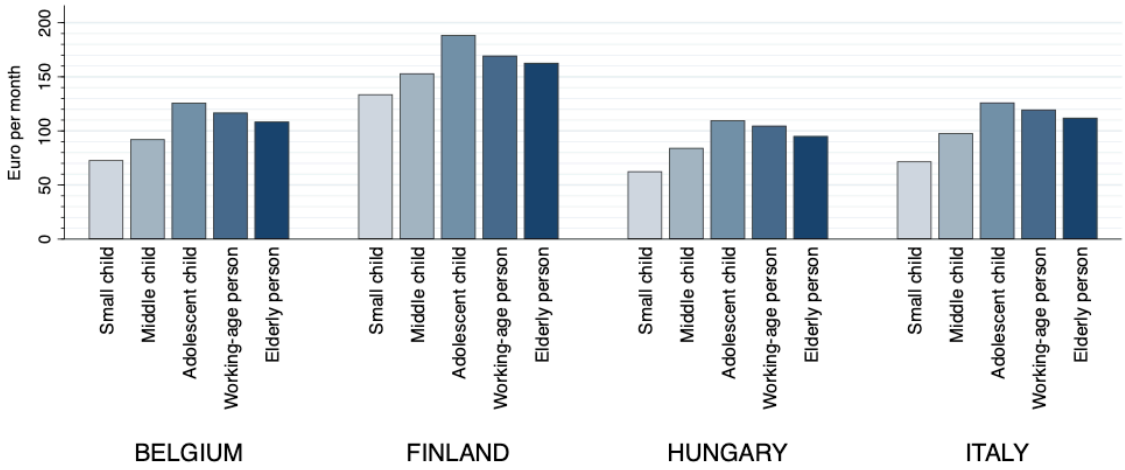


Notes: The bars represent (non-population-weighted) the average value of all NUTS1 region-specific budgets in a country, derived on the basis of the survey-based modelling approach. The markers for regional variation denote the range of region-specific values. All figures refer to 2020.

The respective budgets of each individual type by ABSPO pilot country are plotted in **Figure 5.3**. It shows a rather uniform statistical relationship between the minimum food needs of children and elderly persons relative to those of the working-age person in a country. In accordance with their nutritional needs, small, the respective monthly food budgets of small, young and adolescent children represent 65%, 83% and 107% of working-age budgets on average, while the corresponding figure for elderly persons is 93%. The relevant cross-country variation is very small, with substantial deviations observed only in relation to small and young Finnish children (whose budget ratios exceed 79% and 90%, respectively). This highlights the stable structure and comparability of ABSPO food reference budgets across EU countries.

[99] The practical implications and distributive effects of these simplifications on the resulting poverty estimates is minimal: ABSPO poverty rates change less than 0.5 percentage point for any of the age and gender categories concerned.

Figure 5.3. ABSPO food reference budgets by individual type and country



Notes: The bars represent (non-population-weighted) the average value of all NUTS1 region-specific budgets in a country, derived on the basis of the survey-based modelling approach. All figures refer to 2020. Small, young and teen child are aged 0-6, 7-12 and 13-18, respectively. Elderly persons are those aged 65 or above.

The adequacy of the ABSPO food budgets is harder to assess. Comparisons with the official estimates for Italy reveal that the ISTAT food reference budgets are 24% higher on average, but very closely aligned in terms of regional variations and variations across individual types. However, when compared with subsistence-level minimum estimates from Hungary, the relevant ABSPO food budgets turn out to be 20% higher.

The ABSPO food reference budgets are also significantly lower than the mixed-method food reference budgets developed as part of the reference budget-based measurement approach. For the pilot countries of Belgium, Finland and Hungary, the nutrition-based ABSPO budgets presented above are less generous both in absolute sense (i.e. the minimum budgets of working-age persons are 32% lower on average) and in terms of the relative ratios associated with children and elderly persons.[100] Compared to these, the nutrition-based ABSPO food reference budgets represent a more frugal characterisation of minimum needs that does not account for the social dimensions of food.

5.3. Housing expenditures

Housing-related expenditures represent 23.5% of European households' total spending as of 2019, making it the largest expenditure category of all. Since affordable housing is scarce and housing costs can make up as much as one third of poorer households' spending, the reliable calculation of the minimum housing thresholds is a pre-requisite for sound absolute poverty measurement. What makes the modelling of housing needs particularly challenging is the heterogeneity of housing conditions and dwelling characteristics, the large variation in housing prices and rental possibilities, and the difficulty of defining minimum housing needs in operational and measurable terms. The current sub-section presents a workable solution to dealing with these questions and calculating reasonable and robust minimum expenditure thresholds for housing.

Definition of minimum housing needs

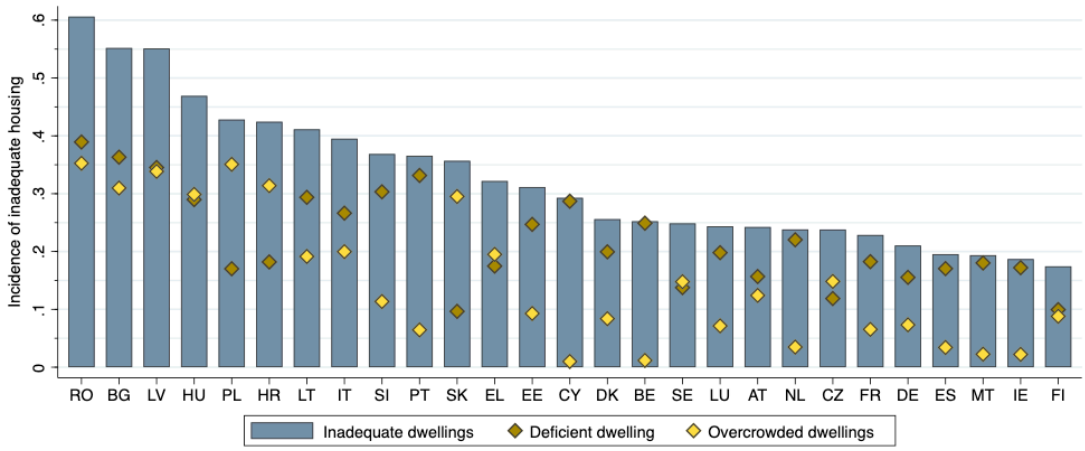
The modelling of minimum housing expenditures requires a set of minimum criteria for dwelling characteristics that adequately reflect households' basic needs. These latter are likely multi-dimensional and difficult to define or measure in exact terms. For absolute poverty measurement in Italy, ISTAT uses minimum dwelling size

[100] For more details, see Figures 4.5 and 4.7 in Chapter 4 of this Report.

requirements as stipulated by national legislation as an admittedly partial summary indicator. Unfortunately, this is not a feasible strategy for ABSPO implementation: there is no common European regulation on minimum dwelling size, existing national requirements are scarce and non-harmonised, and dwelling size information is typically not part of household survey data at the national or EU level.[101,102]

Our proposed measurement strategy is therefore based on an alternative approach that focuses on housing deprivation and overcrowding. These concepts feature prominently among the EU social indicators and monitoring tools (see Sections 2.1 and 9.2 for more details), and are also available as cross-country comparable indicators of households' living condition in the EU-SILC microdata. To assess the extent of housing deprivation, we specifically calculate the share of population living in dwellings that are either overcrowded or exhibit at least one of the four standard SILC-based deprivation signs (i.e. leaking roof, no bath/shower, no indoor toilet, dwelling considered too dark).[103] Using this information helps us to identify the relevant quantile of households' housing expenditure distribution that may reasonably be associated with acceptable housing conditions. This strategy also has the added benefit of taking a broader perspective of housing adequacy and accounting for further important housing characteristics beyond dwelling size (such as the use of habitable space, build quality, sanitary facilities).

Figure 5.4. Incidence of inadequate housing by country



Notes: Own calculations based on 2015 EU-SILC data. Figures represent the share of households living in inadequate housing, measured as the union of those living in either deficient (i.e. poor amenities) or overcrowded dwellings according to Eurostat definitions.

The incidence of inadequate housing is presented in **Figure 5.4** by country. It reveals that, on average, about one third of all European households live in either deficient or overcrowded dwellings – with relevant national figures ranging between 18% in Finland and 61% in Romania. The figure also shows that relative significance of either deprivation component changes markedly from one Member State to the next: housing inadequacy is driven

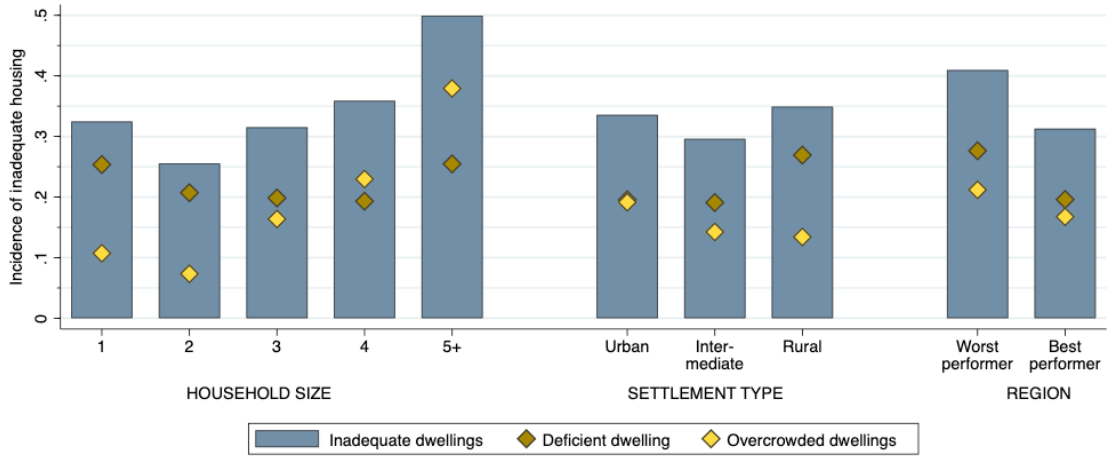
[101] The relationship among European directives, national legislation and local standards is rather complicated (Rigolon, 2009). Some Member States (such as France or the Netherlands) have adopted national regulations and/or standards, while others (such as Germany) employ a wide array of regional or local directives. Existing regulations tend to vary with respect to orientation (e.g. market standards vs. minimum standards), regulatory focus (e.g. dimensional or functional requirements), and the qualitative or quantitative character of the relevant prescriptions. Minimum living space requirements, when present, further differ across countries, in terms of both overall living space dimensions and minimum surface requirements of habitable units. For more information, see Appolloni et al. (2020)

[102] Neither the EU-SILC nor the EU-HBS contains this information. The Household Finance and Consumption Survey by the ECB contains dwelling size information, but it only covers 20 Member States, and do not contain imputed rent information that would allow for the estimation of unit rental price. As for national HBS surveys, it is very difficult to uncover their information content and variable list (most are not shared publicly), but the ones requested for the pilot ABSPO countries do not have dwelling size information. Oeftering, Fleck, and Papastefanou (2013) contains more details about the accessibility of these country-level microdata sources.

[103] Eurostat considers a person as living in an overcrowded household if the household does not have at its disposal a minimum number of rooms defined on the basis of household members' age and gender. For specific details, see https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Overcrowding_rate.\
Concerning the exact calculation of housing deprivation statistics, consult the dedicated Eurostat website at https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_statistics_on_income_and_living_conditions_%28EU-SILC%29_methodology_-_housing_deprivation

almost exclusively by deficient dwelling quality in countries like Belgium, Cyprus or Ireland, while overcrowding is its main cause in countries like Poland or Slovakia.

Figure 5.5. Incidence of inadequate housing by population segment



Notes: Own calculations based on 2015 EU-SILC data. Figures refer to the share of households living in inadequate housing, measured as the union of those living in either deficient (i.e. poor amenities) or overcrowded dwellings according to Eurostat definitions, and represent cross-country averages across 27 Member States.

Figure 5.5 indicates that housing inadequacy also varies within countries. Heterogeneity is largest with respect to household size: while around half of large EU households with at least 5 members live in inadequate (and mostly overcrowded) dwellings, only about 30% of small households suffer from inadequate (and mostly deficient) housing. Horizontal gaps in the incidence of housing deprivation are less substantial along spatial lines, although the relative importance of deficient dwelling and overcrowding varies systematically between both regions and urban-rural areas. It is also worth noting that the presented EU-level figures tend to conceal large disparities in selected individual Member States: for example, the difference in inadequate housing amounts to 49 percentage points between small and large households in Greece, 30 percentage points between urban and rural areas in Romania, and 24 percentage points across NUTS1 regions in Spain. This suggests that household size, settlement type, and region of residence are equally important drivers of housing inadequacy that should be taken into account during the modelling of households' minimum financial needs.

Modelling of minimum expenditures

For the modelling of minimum housing expenditures based on housing inadequacy, we differentiate between the rental and non-rental components. The former is meant to capture the market value of obtaining user rights of an empty property, while the latter component accounts for the ongoing user cost of establishing residence there.[104] Separating these two is standard practice in the literature, given the highly different features and relative importance of these two components.

For the modelling of the rental component, we propose a two-stage procedure that makes direct use of the housing inadequacy rates derived from EU-SILC microdata for any given population segment defined by household size, settlement type and region of residence in each country. In the first stage, we convert the relevant cell-level inadequacy rates into percentiles, and use these to derive (non-parametrically) the corresponding quantile of the households' housing expenditure distribution separately for actual and imputed rents in the relevant population segment using EU-HBS microdata from 2015.[105] In the second stage, we take the frequency-based weighted

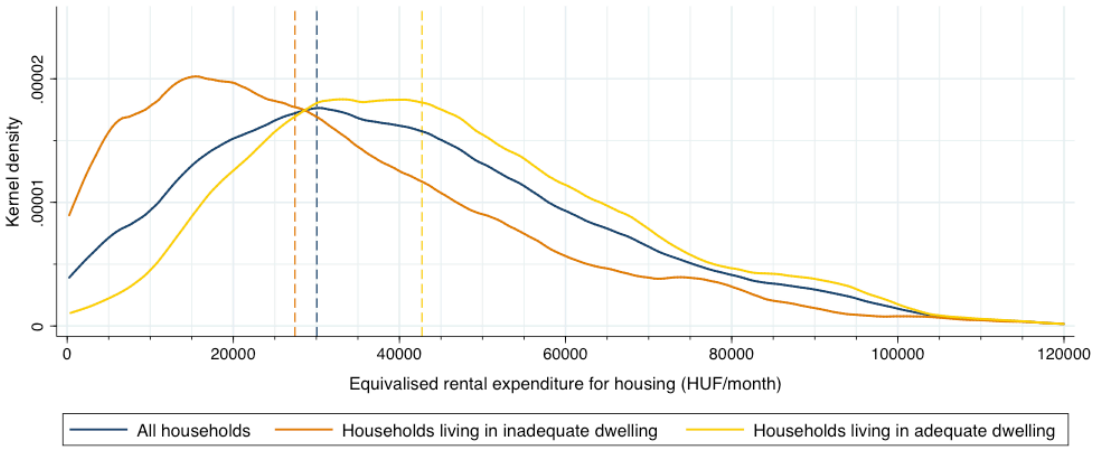
[104] The cost of durable goods, such as furniture, textile or housing appliances, are considered among residual expenditures. See Section 5.5 for more details.

[105] A more straightforward alternative would be to estimate the relevant quantile of the imputed rent distribution directly from EU-SILC data – either by using the cell-level inadequacy information, or directly by focusing on the sub-sample of households that live in dwellings of acceptable quality and with a number of rooms just above the overcrowding threshold. The main drawbacks of this strategy are the lack of consideration afforded to renters and actual rent payments (which make up almost half of the population in selected Member States such as Germany), and

average of the resulting actual and imputed rent percentile, and use it as the relevant minimum housing budget for rental expenditures.[106]

While the calculations are somewhat technical, the main underlying assumption for the chosen procedure is rather simple: deficient and/or overcrowded dwellings are expected to charge a lower rent and therefore occupy the left tail of households' expenditure distribution. If this is true, the relevant inadequacy percentile should identify the minimum rental cost of adequate housing. We test the empirical validity of the hypothesis using the joint SILC-HBS microdata from Hungary. **Figure 5.6** below reveals that the distribution of rental expenditures of households' living, respectively, in adequate and inadequate dwellings are indeed markedly different, with median equivalised imputed rents being 60% higher in case of adequate dwellings (i.e. yellow and orange dashed lines). Disregarding this information, and focusing on the relevant percentile (as defined by the inadequacy rate) of the joint expenditure distribution identifies a rental component (i.e. blue dashed line) in the preferred range between the aforementioned conditional median values. Specifically, the implied rental value is higher (lower) than what most households pay in inadequate (adequate) dwellings. Our analysis therefore suggests that the proposed method delivers reasonable housing expenditure thresholds despite the apparent overlaps between the rental distributions associated with different dwelling types.

Figure 5.6. Cross-validation of the proposed ABSPO methodology for minimum housing expenditures



Notes: Own calculations based on the 2018 wave of merged HBS-SILC microdata from Hungary. Rental expenditures are calculated as the sum of actual and imputed rents for each sampled household. The yellow and orange dashed vertical lines represent the respective medians of the conditional expenditure distributions (HUF/month), while the dashed blue line represent the ABSPO poverty threshold calculated on the full population sample.

For the modelling of non-rental housing components, we focus on household's water consumption, energy use and spending on routine maintenance.[107] To quantify the respective minimum budgets, we employ a simple regression-based statistical approach that focuses on the relative share of these expenditures to households' (actual or implied) rent payments. ISTAT uses a very similar approach to calculating household's minimum heating budget, and its broader scope of application in the ABSPO project is equally due to the lack of cross-country comparable (price) information needed for primary modelling, the comparatively low variation of non-rental expenditure components in proportion to rental expenditures, and the simplicity of the method itself. Our particular estimation strategy involves an OLS regression of households' non-rental expenditure share on the relevant

the rather serious data quality, comparability and measurement issues associated with the relevant imputed rent information in the EU-SILC (Törmälehto and Sauli, 2013). The more detailed housing expenditure in the EU-HBS microdata allow for a more accurate and robust appraisal of households' true rental costs. For more details on imputed rent, see Sections 7.4 and 7.5 of this Report.

[106] Note that this methodology presupposes that a positive (i.e. non-zero) share of households reside in inadequate housing. In the extreme case this should not hold, a pre-determined (sufficiently low) quantile of the observed rent distribution (i.e. such as the 25th percentile) may be used as the rental component of the minimum housing budget.

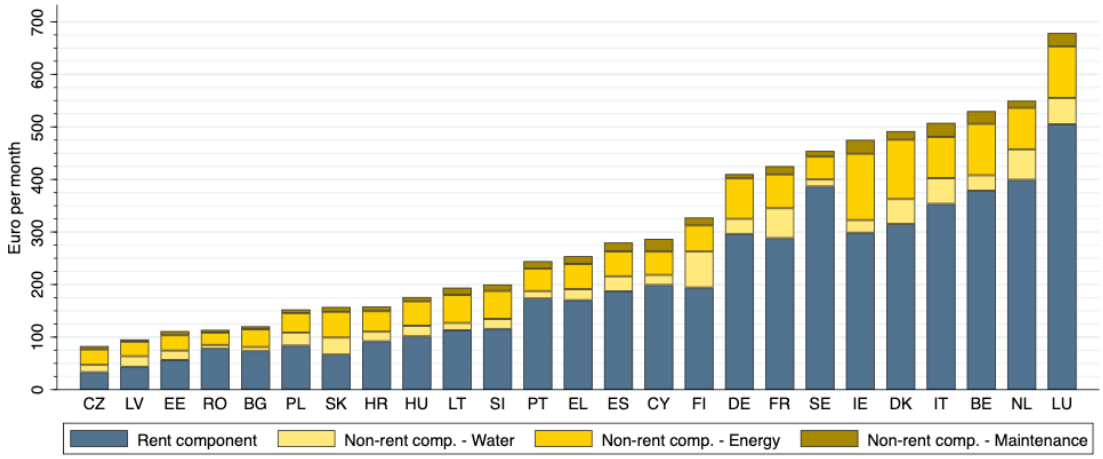
[107] The HBS variables used for the estimation of the housing component are the actual rent (HE041), imputed rent (HE042), water supply and various dwelling services (HE044), Electricity, gas and other fuels (HE045) and routine household maintenance (HE056). Extra maintenance is not considered because the adopted approach was to consider going-concern perspective. Furniture and other durables and electric appliances are not included in housing component for consistence with the budget-based approach, where these are compiled in the residual basket.

household characteristics (household size, region of residence, population density) by country in the appropriate rent quantile of the population that contains the housing inadequacy percentile used for the estimation of the rental component. This ensures that the resulting non-rental expenditure ratios refer to the target population whose actual rent payments are very close to the minimum rent expenditure threshold. The actual non-rental minimum budgets are calculated as the product of the rental minimum budget and the estimated non-rental expenditure ratio for any given household type.

Resulting expenditure thresholds for housing

Based on the methodology outline above, it is straightforward to derive households' total housing budget as the simple sum of the respective rental and non-rental expenditure thresholds. **Figure 5.7** below presents the resulting average monthly figures and their composition for 2020 by country. It shows that equivalised minimum household budgets are equivalent to 331 euros per month on average, 60% of which (around 203 euros per month) is made up by the rental component. **Figure 5.7** also reveals that minimum housing expenditures (similarly to median housing expenditures) display substantial variation across Member States: the lowest monthly values amount to no more than 100 euros in Eastern European countries like Bulgaria or Latvia, while the highest monthly values exceed 700 euros in Finland, Ireland and Luxembourg. The ranking of countries is closely in line with housing prices statistics made available in a recent Eurostat publication, where the capital cities of Denmark, Finland, Ireland and Luxembourg turn out to be the most expensive locations for housing (Eurostat, 2020e).

Figure 5.7. ABSPO minimum housing budgets and its components by country

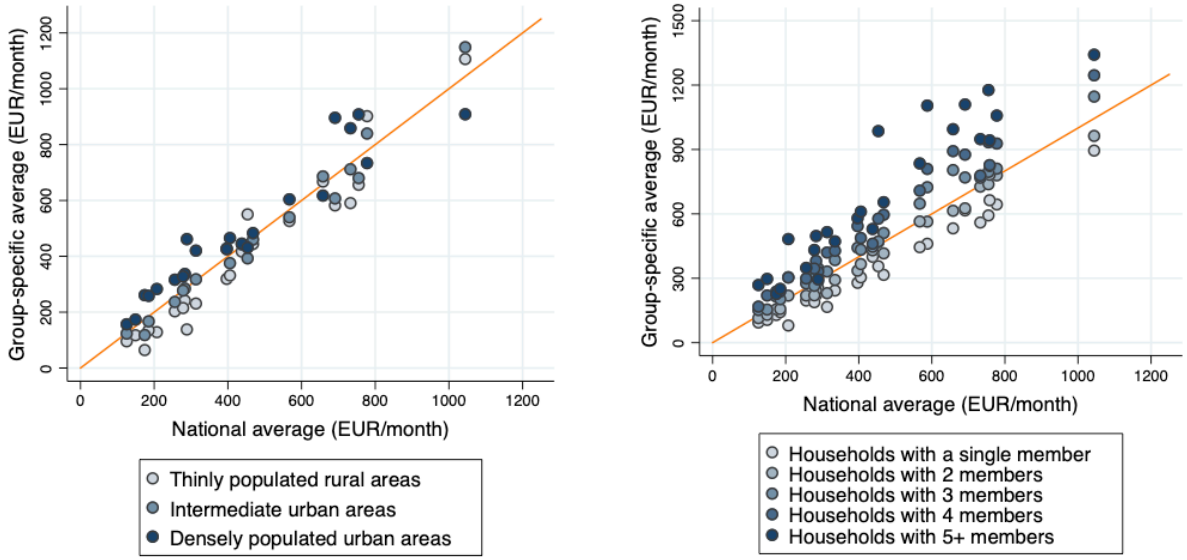


Notes: Own calculations using data from the 2015 wave of the EU-SILC and the EU-HBS, as well as official HICP information by Eurostat. Figures denote the representative national average of equivalised household-specific thresholds as of 2020. Austria and Malta are missing due to data unavailability.

Besides the level, the composition of minimum housing budgets is also highly variable. The relative weight of the rental component varies between 37% and 77%, and tends to be particularly low in Member States characterised by a colder climate. Indeed, energy spending accounts for the majority of non-rental expenditures in all countries, and tends to be particularly substantial in Nordic countries. (Indeed, the minimum energy budget of 258 euros per month in Finland is higher than the minimum rental budget in half of the Member States). The contribution of water use and regular maintenance is relatively minor, and amount to 27 and 22 euros per month on average. Furthermore, as regards access to water and sanitation services, most European countries implement local level support measures facilitating access for people on low incomes to these essential services. Conversely, the policy-targeting of energy poverty is less effective and more centralised at the national level. The phenomenon concerned 7.6% of European households in 2018 and is addressed by a patchwork of policies: reduced energy tariffs (11 EU countries), cash benefits (18 EU countries), in-kind benefits and provision of uninterrupted supply of energy (14 EU countries). The variation in the non-rental component size can also arise from cross-country differences in support measures across countries (Baptista and Marlier, 2020). As may be expected from the geographic and demographic differences in housing inadequacy rates, and potential economies of scale associated

with non-rental budget components, the minimum housing budgets also differ considerably within countries. Depending on the number of NUTS1 regions and settlement types in a country, the number of different housing budgets calculated for a given Member State ranges from a handful (in Slovenia) to more than a hundred (in France or Spain). The scatterplots in **Figure 5.8** below highlight the most relevant margins along which ABSPO housing budgets vary within countries. They show, for example, that the minimum housing threshold in densely populated urban areas (thinly populated rural areas) is on average 18% higher (17% lower) than the respective country average. Even more marked are the differences with respect to household size: single households' minimum housing needs are estimated to be only 74% of the national average, while large households with 5 or more members face minimum costs amounting to 160%. The extent of these differences changes significantly from one Member State to another, due to many different geographic, demographic and economic factors.

Figure 5.8. Dispersion of minimum housing budgets within countries



Notes: Own calculations using data from the 2015 wave of the EU-SILC and the EU-HBS, as well as official HICP information by Eurostat. Figures denote the representative group-specific and national averages of equivalised household-specific thresholds as of 2020. Austria and Malta are missing due to lack of relevant data.

Concerning the adequacy of the ABSPO minimum housing expenditure thresholds, there are only a limited number of benchmarks to use for comparison and assessment. The estimated rent component for a single adult household, inflated to 2020 housing prices and averaged over region and degree of urbanisation, is 316.92, representing the 84% of the total housing expenditure. (Grassi and Panuzzi 2009). The ABSPO housing budgets are also broadly in line with the corresponding reference budgets of the ImPRovE projects derived for illustrative households living in metropolitan areas in selected Member States (Godemé et al., 2017). Using the 30th percentile of the relevant SILC-based expenditure distribution for households living in "adequate" dwellings (as defined on the basis of the 2012 special SILC module on housing), these authors calculate monthly rental budgets of 527 euros for single- person households in Brussels, 243 euros in Budapest, 649 euros in Helsinki, 575 in Barcelona and 541 euros in Milan, in 2020 price levels.[108] Although not directly comparable to average equivalised housing budget, presented in **Figure 5.8,** broadly speaking these figures are broadly aligned in terms of order of magnitude.

Other national minimum housing budgets are also available for comparison. In France, estimates of minimum housing costs (net of utilities) amount to 953 (729) euros per month for a single adult person living in private (public) housing in a mid-sized town (Concialdi et al., 2014). The corresponding rental component for the Netherlands is estimated as 276 euros per month for a minimum income holder person (Warnaar, 2009; Hoff, 2010). Housing budgets for various Finnish settlements range from 435 euros per month in small towns to 843

[108] The original amounts, as reported in Penne et al. (2016) are inflated using Eurostat HICP data (prc_hicp_aind).

euros per month in Helsinki for single persons, with roughly double rents for families with children (Lehtinen et al., 2011). Very high rent component in Luxembourg are much aligned with STATEC calculated reference budgets (859 euros for the total budget smaller apartment for a single adult, with roughly 80% for the rent component) (Allegrezza, 2016). Given that these various estimates are all based on different assumptions, target populations and calculation methods, it is hard to draw robust consequence in each individual case. However, taken together, the findings in the empirical literature clearly indicate that the ABSPO housing budgets represent reasonable, consistent and internationally comparable estimates for minimum housing budgets for the EU population as a whole.[109]

5.4. Transportation expenditures

Transportation and mobility are typically considered instrumental needs that ensure the fulfilment of other primary needs such as work, education, social participation. Despite the derivative character of the underlying needs, transportation expenditures accounted for 13.1% of European households' total expenditures in 2019, constituting the second highest expenditure component after housing (Eurostat, 2020). The difficulty of estimating minimum transportation expenditures lies with the large heterogeneity in individuals' mobility needs, the availability and structure of transportation infrastructure across different geographical areas, and the user costs associated with different transportations means (Lodovici and Torchio, 2015; EC, Directorate-General Mobility and Transport, 2019; Baptista and Marlier, 2020). All these factors jointly determine individuals' observed transportation patterns, especially as far as the multiple trade-offs surrounding location choice and transportation means are concerned. This section presents a novel solution to fixing individuals' and households' minimum transportation budget in a representative (rather than illustrative) manner that allows the large majority of EU population to satisfy their basic mobility needs.

Definition of minimum needs

While much of individuals' transportation activity takes place in service of justifiable basic needs (e.g. daily commute to school or workplace, daily chores, leisure activities and social gatherings), prevailing patterns of mobility are far from ideal, efficient or frugal enough to be considered as a basis for minimum budget calculations. This renders the definition of individuals' and households' minimum transportation needs particularly challenging. First, one needs some basic criteria to separate the truly relevant transportation components from the aggregate pool of observed mobility data and expenditures. Second, one needs to have an appropriate reference point to gauge whether the prevailing mobility patterns truly reflect the most efficient and budget-friendly way of transportation. Further problems are posed by the extreme heterogeneity in individual conditions and mobility needs, which renders any fixed transportation threshold either too generous or insufficient for most households.[110]

In practical applications, minimum transportation budgets are calculated for selected well-defined household types by reference budget methods. The central modelling question in most cases revolves around the treatment of car use and the definition of minimum motoring-related expenditures. Some initiatives, such as the ImPRovE/EURB project take a categorical position and deem car use and ownership as unnecessary in metropolitan areas (Goedemé, Storms, Penne, et al., 2015; Penne et al., 2016). In contrast, reference budgets targeted at rural populations typically assume car travel and motoring as essential means of transportation. (Smith, Davis, and Hirsch, 2010). As for the intensity of justifiable car use, calculations may be based on geographical considerations, such as the average distance to the nearest town. Due to illustrative and customised application of these methods, as well as the large cross- and within-country differences in transportation demands and infrastructure in the EU,

[109] All the reference budgets for households taken from previous national experiences have been inflated to reflect 2020 prices, using HICP specific to actual rentals for households (prc_hicp_aind).

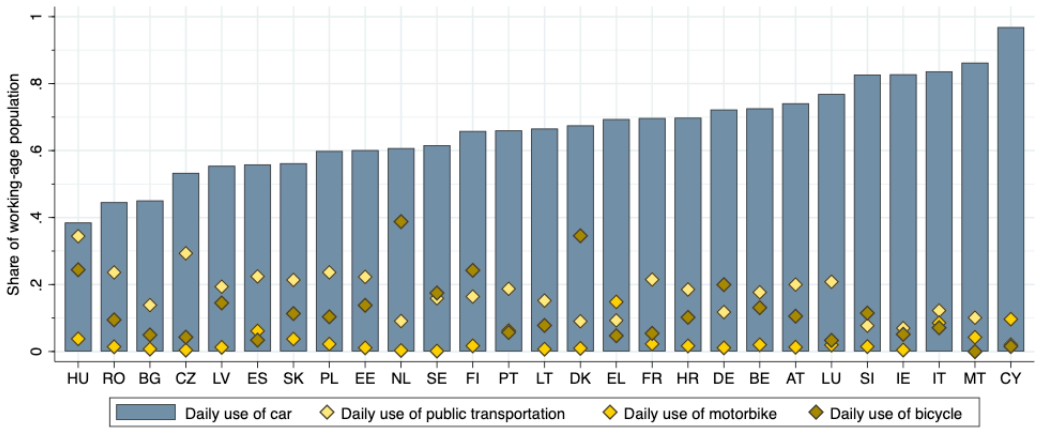
[110] Another potential issue is the close inter-dependence of transportation needs with other basic needs such as housing. Different arrangements of residence and work locations can have a massive effect on one's housing and transportation expenditures, and there seems to exist a clear trade-off between the two: cheaper accommodation often comes with increased transportation needs, while better or more central housing location can drastically reduce one's transportation needs. Due to the potential complexities involved, the joint analysis of these two respective budgets is beyond the scope of ABSPO project.

none of the above methods are suitable for internationally comparable poverty measurement aiming at full population coverage.

For survey-based measurement, we start with the analysis of the main transportation patterns across Member States in order to identify minimum transportation needs in a reasonable manner. Nationally representative and cross-country comparable microdata on individuals' transportation habits are very scarce.[111] One exception is the special Eurobarometer module from 2013 aimed at the "Attitudes of Europeans towards Urban Mobility" (European Commission, 2013a). This survey focuses on European citizens' transportation habits, perceived transportation problems and expectations for future improvements in urban transportation. The accompanying report reveals a great diversity of transportation arrangements across countries, but also highlights robust similarities in the prevalence of car use and worrying preoccupation of EU citizens with the negative externalities of urban transportation (European Commission, 2013b).[112]

Of particular interest to us are the reported frequency distributions associated with different means of transportation. We specifically focus on the incidence of daily use associated with a given transport mode as a potential indication of regular necessity. **Figure 5.9** shows the relevant country-level averages by transportation mode across countries for 2013, as derived from SEB #406 microdata. These reveal that the majority of European working-age population (aged 25-64) use a car on a daily basis: the relevant cross-country average is 66.4% while country-level figures range between 39% in Hungary and 97% in Cyprus. Compared to car use, the appeal of alternative means of transportation is rather low: only 17%, 11% and 3% of Europeans use public transportation, bicycle or motorcycle on a daily basis on average. These aggregate figures hide considerable divergence across countries, as almost 40% of prime-age adults cycle daily in Denmark or the Netherlands, or use public transportation in Hungary.

Figure 5.9. Daily use of different modes of transportation by country



Notes: Own calculations based on microdata from the Eurobarometer survey 79.4 (2013), and in particular its special module on "Attitudes of Europeans towards urban mobility" (SEB 406). The figures represent the share of working-age population (aged 25-64) that reports daily use of various modes of transportation as of 2013.

The observed large variations in daily transportation frequencies tend to indicate substantial cross-country differences in the necessity of car use and the accessibility of alternative transportation modes. Despite these idiosyncrasies, the data also reveal some robust cross-country patterns regarding European households' transportation activity. In particular, **Figure 5.10** below shows how the incidence of daily car use changes systematically with respondents' socio-demographic characteristics: daily car use is substantially smaller among the elderly, women, the financially-constrained and urban residents. These results tend to suggest that intensity of

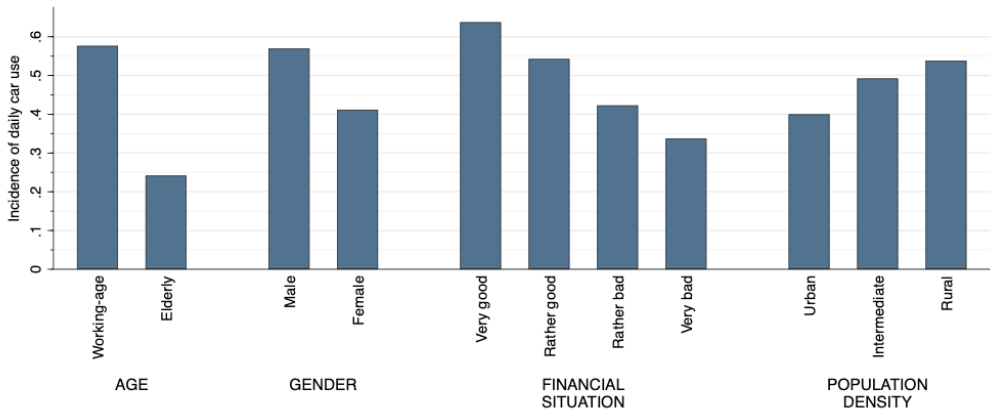
[111] The European road freight transport survey (ERFT) microdata https://ec.europa.eu/eurostat/web/microdata/european-road-freight-transport-survey, EU Survey on issues related to transport and mobility https://publications.jrc.ec.europa.eu/repository/handle/JRC96151

[112] More recently, another special Eurobarometer module (SEB #495, wave 92.1) was compiled with a largely similar focus, but the relevant microdata have not yet been made accessible to the general public. The related summary report is nevertheless available (European Commission, 2013a). While Eurobarometer surveys operate with relatively smaller sample sizes and are typically considered of lower data quality, they are only used for descriptive evidence

car use depends equally on differences in underlying mobility needs (working-age vs. elderly persons, urban vs. rural households), individual and social preferences (male vs. female) as well as households' financial situation.

For the modelling of minimum expenditure thresholds for transportation, we therefore differentiate individuals' basic mobility needs along two margins. The first of these is age, which strongly determines both the minimum needs of individuals, as well as the possible modes and cost of transportation available to them. Specifically, the mobility needs of most elderly persons are substantially lower than those of working-age persons due to inactivity, children are excluded from car or motorbike use due to legal age restrictions, while both of them may be eligible to subsidised public transportation use. The second margin of differentiation concerns population density, given the large differences in required travelling distances and available transportation infrastructure across sparsely populated rural and densely populated urban areas.[113]

Figure 5.10. Daily car use by individual characteristic



Notes: Own calculations based on microdata from the Eurobarometer survey 79.4 (2013), and in particular its special module on "Attitudes of Europeans towards urban mobility" (SEB 406). The figures refer to 2013 and represent the EU-level share of sampled individuals of different backgrounds, calculated as the average of country-specific ratios, that report car use on a daily basis.

Modelling of minimum expenditures

Similar to the approach used in relation to other non-food expenditure categories, the observed daily modal frequencies provide us with effective entry points to determine the appropriate quantile of the transportation expenditure distribution. In particular, we assume that non-daily (i.e. weekly, monthly, occasional) users populate the bottom part of the expenditure distribution, while daily users feature predominantly in the right tail. If this is true, then the percentile corresponding to one minus the relative share of daily users would identify the minimum expenditure level required to finance the daily operation of the relevant transportation mode in question. Applying the same approach to all transport modes separately then allows us to construct the overall minimum transportation budget in an additive and modular fashion, depending on the particular needs of any given individual type.

For the practical implementation, several issues emerge. The first concerns the structure of transportation expenditure data as featured in the EU-HBS. The relevant variables differentiate between the purchase of vehicles (EUR_HE071), the operation of personal transport equipment (EUR_HE072) and transportation services (EUR_HE073). While these give a comprehensive account of transportation-related needs, the problem is that only the purchase-related and service-related components are broken down by transportation mode. These allow us to separate spending on motor-car, motor-cycle and bicycle ownership, and collectively account for expenditure on public transportation services (net of air travel or private purchased transportation services). For the respective operation component, we need to assume that these are all related to car use.[114]

[113] We abstract from gender-based differentiation of minimum needs for equity reasons.

[114] This is justified on the grounds of much incidence of motor-car use and ownership relative to motor-cycles and bicycles, as well as the considerably higher maintenance cost associated with these. Therefore, we expect that accounting for fuelling costs of motorcycles and maintenance costs of motorcycles and bicycles among car related expenses have no qualitative effect on our estimates.

The second issue relates to the fact that transportation expenditures are recorded only at the household-level in budget survey data. This makes it challenging to identify minimum transportation needs separately for different individual types: equivalisation techniques do not allow for a refined assessment of their particular needs and constraints, while focusing on single-person households does not account for potential economies of scale and may produce biased estimates due to misrepresentation. A particular problem arises in relation to children's needs, which can only be estimated on the basis of adult households. To provide an operational solution, we assume that young children (aged 0-6) do not create additional transportation needs, and that school-age children's minimum needs are proportional to those of working-age adults. Based on these simplifying assumptions, we estimate minimum transportation needs separately for working-age and elderly households using equivalised expenditures. For equivalisation, we use the modified OECD equivalence scale in most expenditure sub-categories, but assign a higher weight of 50% to school-aged children when modelling households' minimum expenditures for public transportation use among working-age households.[115] Importantly, we also disregard motorbike use among children and the elderly when considering minimum transportation needs.

The third modelling issue concerns which expenditure quantile to focus on to represent minimum needs associated with a given form of transportation. Given that a considerable share of households are non-users and report zero expenditures for most transportation modes, we focus exclusively on the positive domain of distributional support (i.e. non-zero values) to calculate expenditure thresholds, which we subsequently adjust for the relative frequency of non-zero expenditures (i.e. take the population-weighted average). For the operating cost associated with car use, we use the Eurobarometer-based incidence of daily car use to designate the relevant distribution quantile among those who report positive expenditures. For all other transportation components (i.e. purchasing cost of all private transportation means and operating costs associated public transportation), we focus instead on the median expenditure among users. This decision is based on the relatively low share of households reporting positive expenditures, as well as on the conjecture that dispersion in reported expenditures is due less to the intensity of use and more to the local circumstances (e.g. different fare levels and seasons ticket prices charged for public transportation).[116]

Table 5.2. ABSPO modelling of transportation needs

Transport mode	Cost type	Modelling focus	Individual types		
			School-age child	Working-age adult	Elderly adult
Car	Operating cost	HH-level	Relative to working-age adult (30% weight)	"Daily use" expenditure	"Daily use" expenditure
	Purchasing cost	HH-level	Relative to working-age adult (30% weight)	Median expenditure	Median expenditure
Public transportation	Operating cost	Individual	Relative to working-age adult (50% weight)	Median expenditure	Median expenditure
Motorbike	Purchasing cost	HH-level	N/A	Median expenditure	N/A
Bicycle	Purchasing cost	HH-level	Relative to working-age adult (30% weight)	Median expenditure	Median expenditure

Table 5.2 gives a schematic overview of all the aforementioned modelling choices across all the five different transportation components considered (i.e. purchasing cost of cars, motorcycles and bicycles, and operating cost of cars and public transportation). Adding up the respective sub-budgets in a modular fashion yields the overall transportation budget for each relevant age category (school-aged children, working-age adults, elderly adults). As discussed previously, we calculate minimum transportation budgets on equivalised terms by accounting for differences in household size and composition through the modified OECD equivalence scale and the pre-

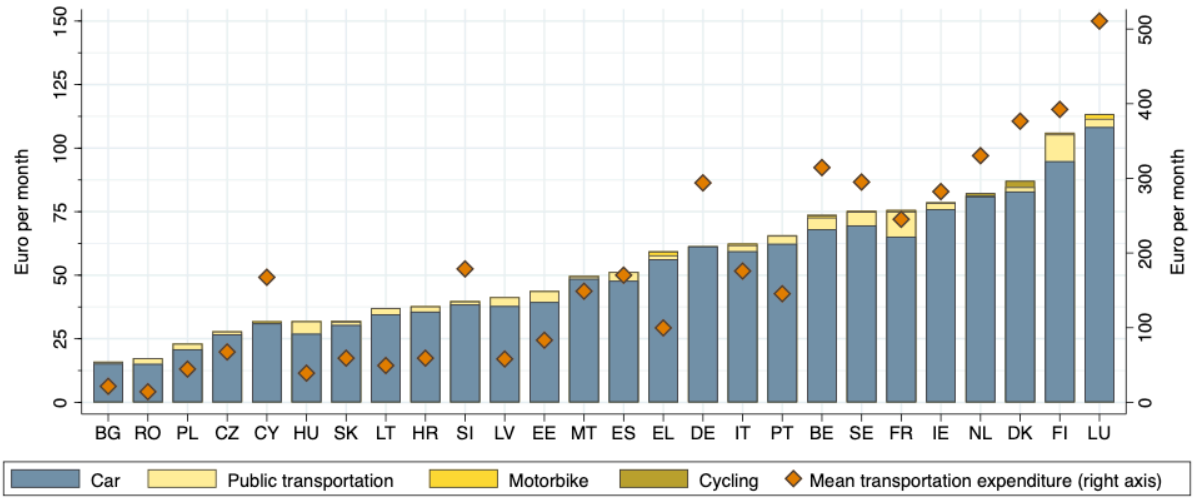
[115] Household-level equivalence scales are adjusted to disregard young children aged below 6. The choice of a 50% equivalence weight for public transportation among school-aged children is based on available empirical evidence on public transportation fares in the EU (EC Directorate General for Mobility and Transport and Transport, 2016, p.76).
[116] Figure 5.11 and the related discussion shows that this simplification has virtually no effect on the resulting minimum transportation budgets.

determined individual weights for children. Geographical differences in households' transportation needs are then calculated by separate sub-sample analysis of each NUTS1 region and settlement type combinations.

Resulting expenditure thresholds

The resulting minimum transportation budgets for single working-age persons are presented in **Figure 5.11** by country. The relevant national monthly figures for 2020 equal 55 euro on average, and range from 16 euro in Bulgaria to 113 euro in Luxembourg. The ranking of national minimum budgets is strongly correlated with households' median (equivalised) transportation expenditure in Member States, but the cross-country elasticity of the minimum thresholds is much lower: they are roughly equal (or even superior) to the median spending on transportation in poorer countries, while significantly lower than these in richer Member States. Regarding the composition of minimum transportation budgets, it is driven almost exclusively by variation in the car component: the contribution of this latter to the total budget is 94% on average and varies between 85% in Hungary and 98% in Cyprus. Operating costs make up the largest part (82%) of car-related minimum expenditures in a typical Member State, with substantial purchasing costs components observed only in a limited number of countries (such as Cyprus, France, Ireland or Slovenia). The second largest component is that of public transportation (6% on average), while the budget components associated with motorbike use and cycling are truly negligible. Due to age- and geography related differences in daily car use and expenditure patterns, minimum transportation budgets also exhibit considerable variation within countries. Regional variation in minimum expenditure thresholds in Member States with multiple NUTS1 regions typically amount to 30% in relative terms, but well exceed 40% in countries like France, Italy or Hungary. Estimated minimum transportation needs budgets also differ considerably by population density: densely populated urban and intermediate areas have, respectively and on average, 17.7% (6.6 EUR) and 10% (5.5 EUR) higher monthly budgets than rural areas of the same country.

Figure 5.11. ABSPO minimum transportation budgets for single working-age individuals by country



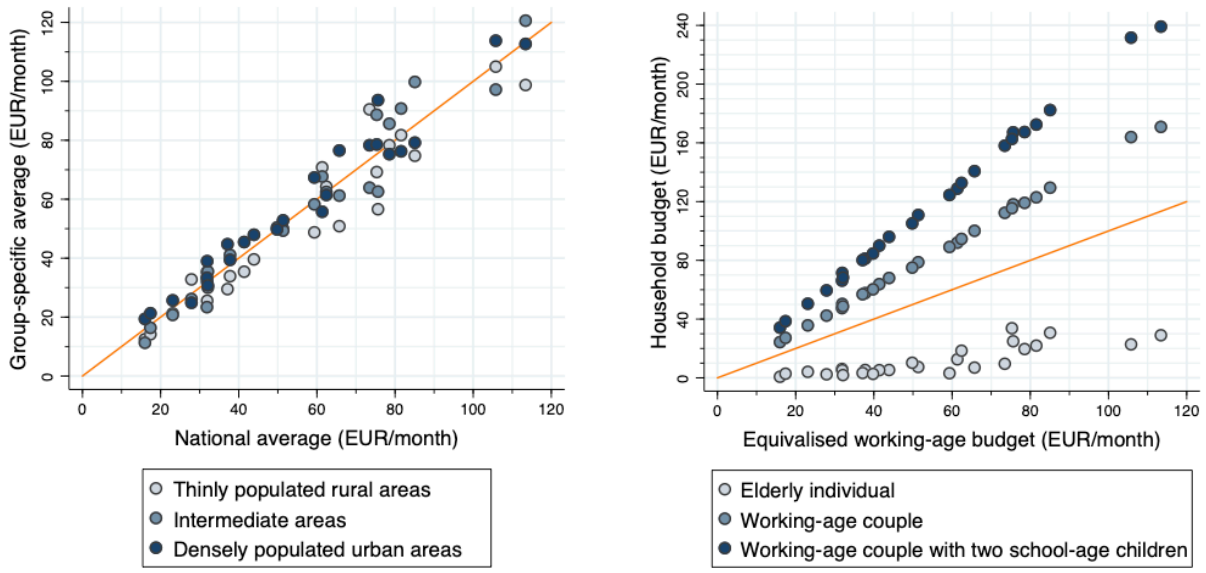
Notes: Own calculations using microdata from the 2015 wave of the EU-HBS (2010 for Malta, Portugal and Slovenia) and the 2013 Special Eurobarometer module on "Attitudes of Europeans towards urban mobility" (SEB 406), as well as official HICP information by Eurostat. Figures denote the representative national average of single adults' minimum thresholds as of 2020. Mean transportation expenditures are defined in equivalised terms and calculated on households' total transportation expenditures. Austria are missing due to lack of relevant EU-HBS data.

As the left panel of **Figure 5.12** shows, there is considerable cross-country divergence in terms of both the size and the direction of these differences. Socio-demographic background also plays an import role in determining minimum transportation expenditures. The estimated expenditure thresholds for the elderly are only 17% of that of working-age adults on averages (the country level scores vary between 6.2% in Slovakia and 40.9% in Denmark), due to the reduced mobility needs (i.e. less frequent car use) and lower observed household spending (e.g. subsidised public transportation access) among those aged 65 or more. The right panel of **Figure 5.12** also reveals strong economies of scale with respect to household size and composition: on average, the transportation budget

of couples and families with 2 school-age children represent 153% and 215% of the equivalised budget for the single working-age person.

To assess the adequacy of the presented ABSPO transportation budgets, there is limited empirical evidence to rely on. The transportation budgets produced by the ImPRovE/EURB project refer to urban households in metropolitan areas whose basic needs supposedly do not include car use or ownership (Goedemé, Storms, Stockman, et al., 2015).[117] The corresponding mobility budgets account for public transportation and bicycle use, and range from 34 euro per month in Antwerp to 49 euro per month in Milan to 59 euro per month in Helsinki for a single adult in 2020 prices. National reference budget estimates from Finland foresee minimum transportation spending of 45 euro per month for a single adult person without a car in Helsinki, but a whopping 562 euro per month for a couple with two children with a car (Lehtinen et al., 2011). Minimum Income Standard (MIS) reference budgets from the United Kingdom are available simultaneously for urban and rural areas, and estimate supplementary minimum monthly costs of 51 euro in rural areas due to public transportation/motoring trade-offs (Smith, Davis, and Hirsch, 2010). Reference budgets for France estimate the minimum cost of car-based transportation for a single-parent household with children around 331 euro per month (Concialdi et al., 2014). Altogether, available evidence seems to suggest that the level of ABSPO transportation budgets are reasonable, especially if considered as an appropriate intermediate solution that accounts for households' observed transportation patterns and modal splits - in contrast to illustrative reference budgets that tend to vary enormously depending on whether car use is postulated or not.

Figure 5.12. Dispersion of minimum transportation budgets within countries



Notes: Own calculations using microdata from the 2015 wave of the EU-HBS and the 2013 Special Eurobarometer module on "Attitudes of Europeans towards urban mobility" (SEB 406), as well as official HICP information by Eurostat. Figures denote the representative group-specific and national averages of single adults' minimum transportation thresholds as of 2020. Austria are missing due to lack of relevant data.

5.5. Health expenditures

Out-of-pocket health expenditures amount to 4.4% of households' total spending in the EU as of 2019, and thus represent a relatively minor financial burden for the typical household. However, this is not necessarily true for

[117] The ImPRovE/EURB project also produced separate mobility budgets with urban motoring costs and second-hand car ownership in mind. In accordance with our own estimates, this significantly increases the corresponding minimum expenditure threshold: depending on whether gasoline costs are accounted for (or not), minimum monthly transportation needs jump to 325 (177) euro per month in Helsinki and 179 (90) euro per month in Athens (Goedemé et al., 2017) .

vulnerable segments of the population, such as the elderly, the chronically sick or those suffering from health-related limitations in daily activities. Empirical evidence based on EU-HBS microdata from 2015 suggests that elderly households devote 7% of their total expenditures to healthcare on average, and up to 13% in selected Member States such as Greece or Latvia. This is consistent with other existing findings on the highly uneven distribution of out-of-pocket health expenditures across the population due to physical and socio-economic factors (Pino and Pérez, 2011; Mitra et al., 2017). Indeed, the affordability of healthcare services is a serious concern for many: despite the supposed universality and freeness of public healthcare systems operated by Member States, recent comparative analysis of healthcare provision in the EU reveals that the incidence of unmet medical needs is strongly correlated with household income and may exceed 30% in the lowest income quintile groups (Baeten et al., 2018). Relatively high out-of-pocket payments (or co-payments) for medicine and pharmaceuticals, and limited social security coverage for certain healthcare services (such as dental care or mental hygiene) are important drivers of these phenomena. Based on these considerations, the stand-alone modelling of minimum health expenditures seems a legitimate component of the survey-based approach to ABSPO measurement.

Definition of minimum needs

Accurate modelling of households' minimum health expenditures is very challenging: given the extreme heterogeneity in individuals' physical conditions and medical needs, no fixed monetary threshold can adequately represent the minimum needs of other than marginal population segments. The only feasible solution is to identify some of the more important observable drivers of households' medical needs in the aggregate, and calculate minimum expenditure thresholds conditional on these as broad approximations. Once such health drivers are identified, the modelling of relevant expenditure thresholds is more straightforward, at least conceptually, than in other expenditure categories. The reason being that overuse or conspicuous consumption of medication and health services is unlikely to be a prevalent issue, despite some evidence to the contrary.[118] Therefore, assuming by default that all health expenditures are necessary and respond to basic human needs, observed median health expenditures can reasonably be considered as representing the minimum monetary healthcare needs of the majority of the population.

The most important determinant of households' healthcare needs is the health status of their members. Representative and cross-country comparable data on this is available only through standard EU-SILC microdata, which contains information adult persons' self-assessment of their general health, chronic illness, limitation in activity and unmet medical needs among its core variables.[119,120] Slightly more detailed micro-level information on individuals' health is provided by the 2017 ad hoc SILC module dedicated to health and children's health, especially as far as one's health service take-up, dietary habits and physical conditions are concerned. The European Health Interview Survey (EHIS) contains a much more comprehensive account of individuals' health conditions, but only for a limited number of Member States and on an irregular basis.[121]

Having contrasted and analysed all these possible sources, we define individuals' health status in a binary fashion using information from among the core EU-SILC variables. In particular, we consider a person of poor health if they report suffering from a chronic illness (variable PH020) or health-related limitations in daily activities (variable PH030). The two groups are related but not identical, but both are likely to require long-term care and

[118] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5708862/

[119] These core variables are found in the personal data files of the EU-SILC: General health (PH010), Suffer from any chronic illness or condition (PH020), Limitation in activities because of health problems (PH030), Unmet need for medical examination or treatment (PH040), Main reason for unmet need for medical examination or treatment (PH050), Unmet need for dental examination or treatment (PH060), Main reason for unmet need for dental examination or treatment (PH070).

[120] Other datasets, notably the European Health Interview Survey (EHIS) contains a considerably more detailed representative information on individuals' health status. The main findings of the third wave of this multi-annual survey have been released recently, and the microdata is also expected to be released soon. Given that health expenditure modelling is not made easier, the more detailed analysis of these is beyond the scope of the current report.

[121] The first wave of the European Health Interview Survey contains information on individuals' expenditures as well. However, this practice was discontinued in later waves, comprehensive data are available only from the 2006-2009 period and 9 Member States (see the EHIS website for more details, https://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey). Further potential measurement would arise due to the lack of detailed information on households' economic situation (e.g. total expenditures, disposable income).

potentially significant extra healthcare spending.[122] Besides these general considerations, detailed statistical analysis based on joint Hungarian HBS-SILC microdata also reveals that additional potential alternative indicators contained in either the core or the 2017 ad hoc SILC module provide very little (if any) additional explanatory power when modelling households' health expenditures. Most children fortunately enjoy good or very good health, while neither the frequency of medical visits nor the perceived financial burden of healthcare turns out to strongly correlate with observed health expenditures. On the contrary, both chronic illness and health-related limitations affect households' health spending in statistically significant ways among adults, and we therefore focus on them for the modelling of healthcare expenditure thresholds. It is a necessary limitation to use a subjective information as the basis for poverty assignment, but the analysis of conditional expenditure distributions reveal that the discriminatory power of the chosen health indicators is no worse than that of the more objective metrics used in relation to other expenditure categories elsewhere in this chapter.

Figure 5.13. The incidence of bad health by country

Notes: Own calculations based on microdata from the 2015 wave of the EU-SILC.

Figure 5.13 above shows the incidence of poor health among working-age and elderly persons in 2019 by country, and contains some important lessons. First, it reveals that a surprisingly high share (31.6%) of working-age persons in the EU are of poor health, even in rich Member States that are well-known for high quality of living and high levels of life satisfaction among its residents (such as Denmark or Finland). Country-level figures vary considerably between 15% in Greece and 50% in Finland, which points to certain cultural factors also being at play behind these self-assessments. Second, the perceived health status of the elderly is substantially worse than that

[122] Note that there are clear limitations to using these variables to reliably select the relevant population segments with superior healthcare needs. In particular, increased healthcare often arise not after the onset of these conditions, but already in the prevention phase.

of working-age persons: the average incidence of poor health among those aged 65 or more is 67%, with the majority of the elderly affected in each Member State. Third, despite the apparent overlaps between the underlying health indicators (close to 60% of those in poor health suffer both from chronic illness and daily limitations), chronic illness is the more common condition of the two in most EU countries, and only 10% of those reporting health-related limitation in daily activities fail to mention it. Given the (non-reported) stability of national figures across regions, settlement types and household characteristics, the results presented in **Figure 5.13** show that healthcare minimum needs are best modelled at the individual level, separately for each country, and differentiated by broad age category.

Modelling of minimum expenditures

The main difficulty of modelling health expenditures stems from not knowing individuals' and households' health status, as this information is not featured in the EU-HBS dataset. Since households' health expenditures are highly skewed even conditional on their observable survey characteristics, meta-level joint analysis of the HBS-based and SILC-based information set (as is done, for example, for the Eurostat's ICW project that combines income, consumption and wealth data from different micro-level surveys) is unable to uncover the relevant distributional aspects.[123]

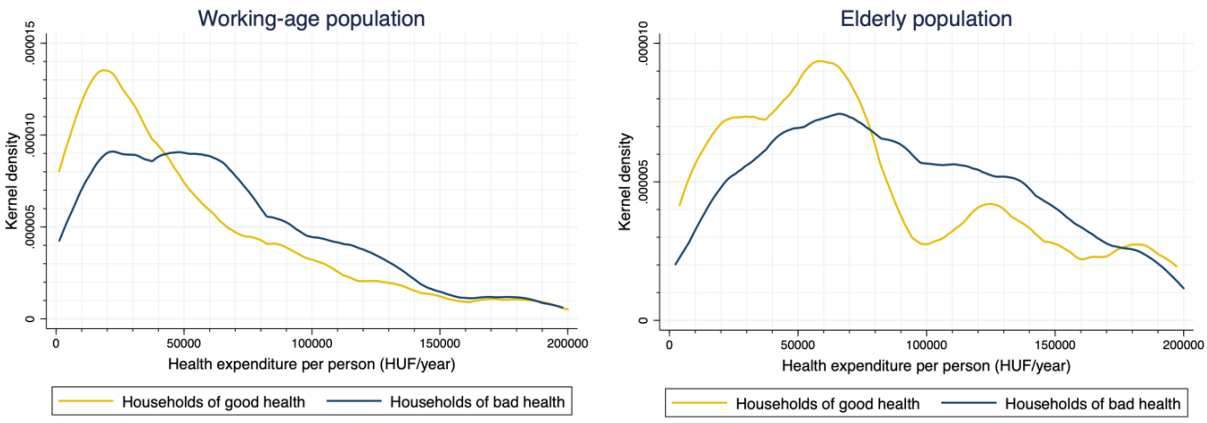
To our best knowledge, the available data sources in the EU that allows for the joint analysis of health expenditures and health status at the micro level are the Hungarian national HBS and SILC files. Uniquely among EU countries, both of these data are collected simultaneously and based on the same population sample, and are liable to dissemination as joint microdata for research purposes by the Hungarian Statistical Office. The analysis of these data allows us to uncover the statistical relationship between households' out-of-pocket health expenditures (from the HBS component) and their health status as defined on the basis of chronic illness and limitations in activity (from the SILC component). **Figure 5.14** below shows the different distributions of per-person health expenditure among working-age and elderly households by health status using 2018 data from Hungary. Specifically, it reveals that health spending among households of poor health are less skewed, more evenly distributed and centred to the right when compared with healthy households of the same age. The magnitude of these differences is quite substantial: the median per-person expenditures among those of poor health are, respectively, 60% and 44% higher in working-age and elderly households than among the healthy. **Figure 5.14** also shows that the elderly spends much more on healthcare in absolute terms than prime-aged cohorts, regardless of their health status.

While the corresponding numerical results are likely be different in each Member State, the study of health expenditure patterns alone reveals further some important insights for health budget modelling. First, age play a pivotal role in determining individuals' minimum health needs: EU-HBS data from 2015 indicates that per-person health expenditures of the elderly are 49.8% higher in a typical EU country than those of working-age persons. The data also show that out-of-pocket health expenditures are effectively zero for children of all ages, due to their better general health, limited medication needs and free access to public healthcare provision. Second, the overwhelming majority of households' healthcare needs are individual in character: observed economies of scale are very low, and the majority of out-of-pocket health expenditures are devoted to pharmaceutical products and medical and dental services.[124] The third general implication for modelling is that healthy individuals are also liable to spending considerable amounts on healthcare: EU-HBS data show that more than 75% of European households report non-zero health expenditures, with the corresponding share bordering on 100% in selected countries like the Czech Republic or Luxembourg.

Figure 5.14. Relationship between individuals' health status and health expenditures in Hungary

[123] More information on the Eurostat's ICW project is available here: https://ec.europa.eu/eurostat/web/experimental-statistics

[124] Data from the 2015 wave of the EU-HBS indicate that, on average, 56%, 12% and 14% of European working-age households' out-of-pocket health expenditures went to pharmaceutical products, medical services and dental services, respectively. The combined share of these components is similar among elderly households, even though the relative expenditure share of pharmaceuticals is even higher (64%).



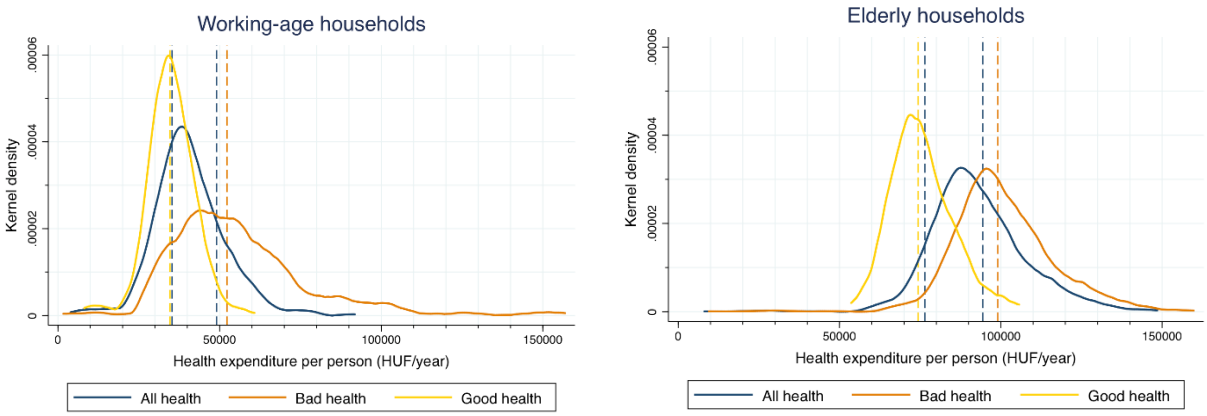
Notes: Own calculations based on the 2018 wave of merged HBS-SILC microdata from Hungary. Figures represent the kernel densities of per-person health expenditures derived on the sample of childless households containing only working-age and elderly members, respectively.

For modelling minimum health expenditures on an individual basis, we therefore differentiate needs only by age and health status in a given country.[125] The methodological challenge consists in finding the appropriate central tendency measures of the expenditure distribution associated with good and bad health status, without using this information during the modelling procedure. Focusing specifically on separate national samples of working-age and elderly households without children, we decided to use the observed incidence of poor health from the EU-SILC (see **Figure 5.15**) as a separator percentile p_h, and designate the respective percentiles $[p_h/2]$ and $[(p_h + 100)/2]$ of the per-person distribution of health expenditures as the minimum health budgets for healthy and non-healthy individuals. The approach and underlying reasoning are similar to the ones applied in relation to other expenditure categories: healthy individuals should feature predominantly in the bottom part of the distribution (below percentile p_h), while households of poor health are expected to populate the upper part of the distribution (above percentile p_h). The only difference is that, in contrast to other expenditure categories where the separator percentile was used directly as the single pursued expenditure threshold, here we identify the conditional medians of the resulting two distributions segments as the respective budgets for the healthy and non-healthy.[126]

We tested the empirical validity of the proposed modelling approach using the joint Hungarian HBS-SILC data file from 2018, which allowed us to compare the estimated expenditure thresholds with the true median expenditures among healthy and unhealthy households. **Figure 5.15** above shows that using the implied distribution quantiles associated with the observed unhealthy rate of 40% for adults and 80.8% for the elderly (i.e. the 20th - 70th and 40.4% - 90.4% percentiles, respectively) yields an almost perfect matching of health status-specific thresholds in both populations.[127] The difference between the conditional median expenditures (dashed yellow and orange lines) and the implied median expenditures based on joint expenditure data (dashed lower and upper blue lines) is less than 5000 HUF or 15 euro per year. This amounts to a few percentage-point deviation in relative terms, which suggests that the proposed modelling approach is likely to work reasonably well in other EU countries, as well. regardless of the specific expenditure patterns.

[125] Conditional age, healthy and unhealthy individuals are assumed to have the same minimum health expenditure needs regardless of their region of residence, settlement type, and household configuration. We also abstract from gender-based differentiation for equity reasons.
[126] We also explored alternative empirical strategies in order to match the median expenditure levels for households of good and bad health. The simpler of these was to use the 25th and the 75th percentiles of the per-person expenditure distribution as the relevant healthy and unhealthy thresholds. The more complex alternative was to use finite mixture models to identify the two distinct unobserved groups (i.e. households of good and bad health) from the joint distribution, as proposed by Cameron and Trivedi (2010) for medical data with lognormally distributed expenditures. (See https://www.stata.com/manuals/fmm.pdf for more details and technical explanation of this approach.) Somewhat surprisingly, analysis of the joint Hungarian HBS-SILC data revealed a strong preference and much more accurate matching for the proposed method.
[127] The specific estimation procedure we implemented involved a simple log-log OLS regression of (per-person) health expenditures on income, with the relevant percentiles derived from the predicted values. Using income as a control variable considerably increases the accuracy of the estimates, without qualitatively changing the central tendency measures associated with the expenditure distributions (i.e. the income-conditional and unconditional median expenditures for healthy and unhealthy households are virtually identical).

Figure 5.15. Cross-validation of proposed ABSPO methodology for minimum health expenditures



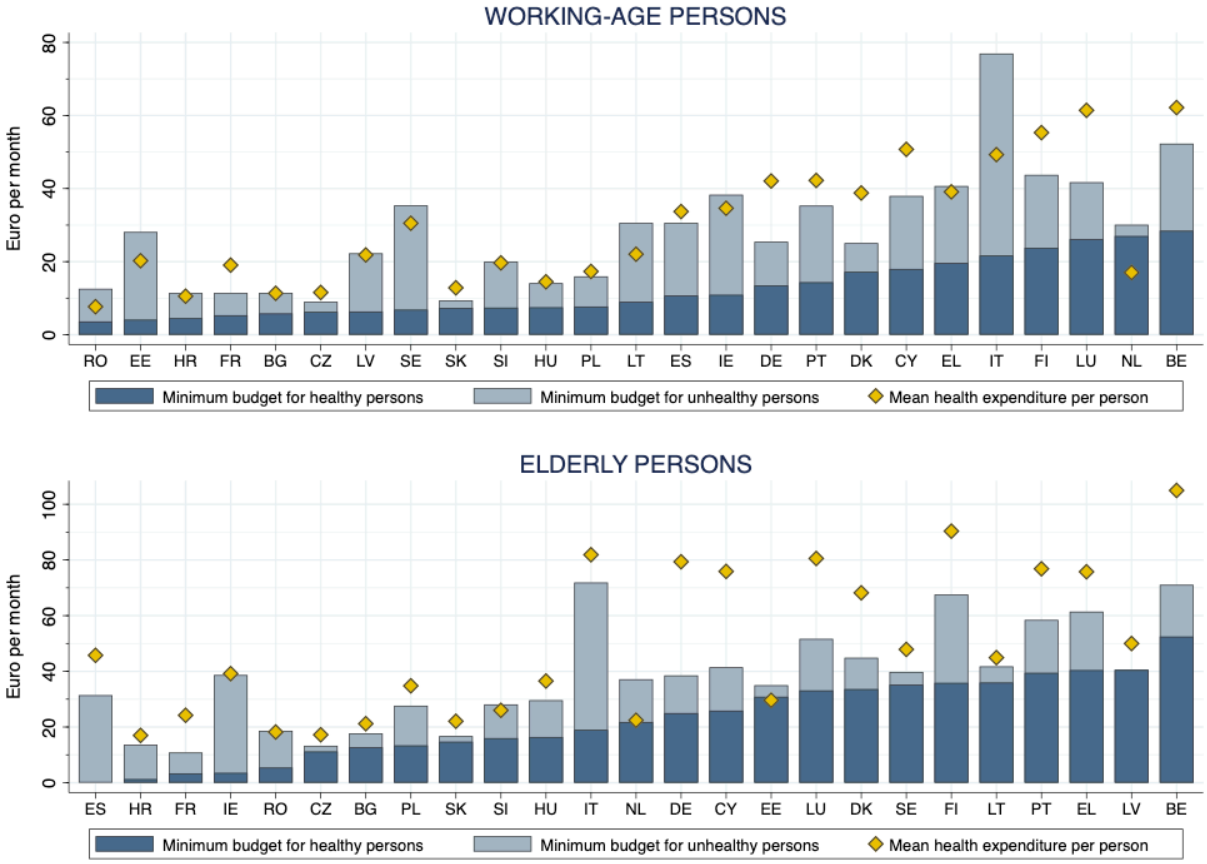
Notes: Own calculations based on the 2018 wave of merged HBS-SILC microdata from Hungary. The yellow and orange dashed vertical lines represent the respective medians of the conditional expenditure distributions (HUF/month) among those in good and bad health, respectively, while the dashed blue line represent the ABSPO poverty threshold calculated on the full population sample.

Resulting health expenditure thresholds

The resulting health expenditure thresholds for 2020 are presented in **Figure 5.16** by country. For working-age persons of good health, the estimated level of minimum health expenses amounts to 13 euros per month on average, and ranges from 4 to 28 euros per month across Member States (see upper panel). The respective budgets of unhealthy persons are 2.3 times higher on average, and range between 9 and 77 euros per months. While the cross-country correlation across the two types of budgets is robust and positive ($\rho = .73$), the budget ratios exhibit considerable variation between Member States. The most notable cases include Estonia, Italy and Sweden, where unhealthy budgets are several times larger than the corresponding healthy ones. In these countries, the minimum expenditure thresholds estimated for person of poor health also exceed the national average of per-person health expenditures. This variability reflects differences in the relative frequency of healthy and non-healthy households, as well as the level and relative concentration of health expenditures by health status across Member States. Importantly, the relevant figures are broadly in line with cross-country differences in the share of out-of-pocket expenditures among total health expenditures (e.g. 9.3% in France and 23.6% in Italy based on WHO data from 2018).

The minimum health budgets derived for elderly persons display broadly similar patterns (see bottom panel of **Figure 5.16**). The relevant expenditure thresholds are 62% and 27% percent higher on average than those of working-age persons in a typical EU country, and amount to 23 and 38 euros per month on average. The ranking of countries in relation to healthy minimum budgets is largely similar across the two age groups (correlation 64%), and close to identical when the minimum budgets of unhealthy persons are considered (90%). It is also reassuring to see a strong statistical relationship between the value of respective minimum budgets and mean expenditure levels, even though the large variation in budget ratios within countries is hard to reconcile with intuition.

Figure 5.16. ABSPO minimum health budgets by age group across the EU



Notes: Own calculations using microdata from the 2015 waves of the EU-HBS and the EU-SILC, as well as official HICP information by Eurostat. Figures denote the representative national average of working-age and elderly adults' per-person health thresholds as of 2020. Austria and Malta are missing due to lack of relevant data.

Since most available reference budgets refer to healthy individuals only, while existing absolute poverty typically consider households' healthcare needs among residual expenditures, there exist very few benchmarks against which the adequacy of the resulting healthcare budgets could be reliably determined – especially in relation to the minimum budgets of the chronically ill. The healthcare budgets produced by the ImPRovE/EURB project, for example, refer only to everyday care, personal hygiene and basic healthcare access, and range between 17 euros per month in Hungary and 107 euros per month in the Netherlands, expressed in 2020 prices (Goedemé, Storms, Penne, et al., 2015). Using a similar target population but a much broader accounting for healthcare needs (including top-up insurance and co-payment schemes), national reference budgets for France calculate a monthly healthcare budget of 71.2 euros for single adult (Concialdi et al., 2014). Comparable estimates for the United Kingdom and Luxembourg amount to around 50 euros and 16 euros per month, respectively (Bradshaw et al., 2008; Hartfree, Hirsch, and Sutton, 2013; Allegrezza, 2016). In short, available evidence tends to suggest that the resulting ABSPO minimum health expenditure thresholds are generally of the same magnitude as the ones featured in existing reference budgets, and should therefore provide a reasonable (if potentially somewhat conservative) estimate of individuals' and households' minimum out-of-pocket healthcare needs in most EU countries.

5.6. Residual expenditures

Residual expenditures represent a category that accounts for all expenditures classes that are part of the selected welfare aggregate and are not considered elsewhere. Residual not only in name but also in character, these

expenditures are typically modelled by statistical means, and most often in direct relation to other expenditure categories - most often to food. Since this strategy, with a rather comprehensive focus, is applied as part of the food-based approach for ABSPO implementation (see Chapter 6 for more details), we undertake the modelling of residual expenditures in the survey-based approach on a stand-alone basis. This is challenging mainly for two reasons. First, residual expenditures outside of food, housing, transportation and health expenditures made up 44.9% of European households' spending on aggregate in 2019, and therefore represent the single largest modelling category for thematic ABSPO measurement (Eurostat, 2020). The second methodological challenge associated with stand-alone modelling of residual expenditures stems from the vast heterogeneity of associated consumption goods and services, which renders the corresponding definition of minimum needs rather difficult. The current nevertheless proposes a relatively simple and easy-to-implement procedure for calculating households' minimum residual expenditures in a reliable and adequate way.

Definition of minimum needs

The definition of minimum residual needs must start with the careful consideration of those components of the welfare aggregate that are note considered elsewhere. Assuming that the normative decisions about which expenditure categories may reasonably or justifiably represent minimum needs are taken in the course of the definition of the welfare indicator itself, this is a straightforward accounting exercise.[128] Accordingly, the sum of following expenditure categories that we consider as part of residual expenditures are as follows: alcoholic beverages, tobacco and narcotics (ECOICOP_02), clothing and footwear (ECOICOP_03), furnishing and household equipment (ECOICOP_5), communication (ECOICOP_08), recreation and culture (ECOICOP_09), education (ECOICOP_10), accommodation services (ECOICOP_11) as well as miscellaneous goods and services (ECOICOP_12).

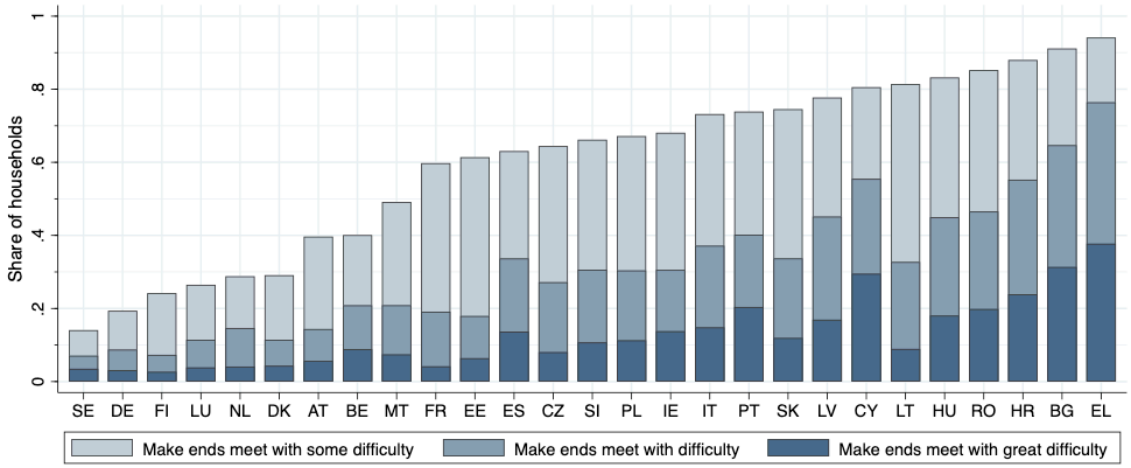
The definition of minimum residual needs poses a particular methodological challenge that stems from the heterogeneity of related consumption goods and services. These include as diverse and disparate categories as clothing, education, or leisure and social life, which makes it difficult the determine the appropriate minimum requirements without recourse to reference budget practices. The second methodological issue is related to the character of (some of) the individual needs themselves: relative to principal expenditure categories that tend to represent truly basic needs (such as adequate nutrition, protective housing or physical health), many of the residual needs are either non-strictly necessary (e.g. hotel accommodation), culturally determined (e.g. entertainment or recreation) or even detrimental to the fulfilment of other basic needs (e.g. alcohol or tobacco consumption). This is the main reason why fixing a residual monetary threshold particularly difficult on a stand-alone basis, and why existing measurement frameworks tend to determine residual needs in relation to other minimum expenditure thresholds. This is the practice followed by the Italian Statistical Office (ISTAT) that estimates minimum residual thresholds in direct relation to minimum food expenditures using household budget survey data (Grassi and Panuzzi, 2009; Cutillo, Raitano, and Siciliani, 2020).

Since we apply this strategy as part of the food-based approach of ABSPO implementation, here we pursue an alternative modelling procedure. In particular, we exploit households self-reported ability to make ends meet to identify the relevant residual expenditure quantile that may correspond to an appropriate minimum budget. The Cambridge Dictionary defines the concept of "making ends meet" as having enough money to pay for the things one needs, and the typical usage of the terms tends to evoke the very same residual perspective that appropriate modelling requires: conditional on having one's truly basic needs of health, food and housing satisfied, it refers to one's general ability to meet his or her auxiliary and potentially less primordial needs. Qualitative ordinal information on households' ability to make ends meet is part of the core cross-sectional EU-SILC data file. The relevant variable (HS120) contains six categories, from making ends meet with great difficulty to making ends meet very easily. The share of households that report limited ability to make ends meet is presented in **Figure 5.17** for 2019 by country. It shows that the share of households that make ends meet either with at least some difficulty is 60% on average, while the incidence of making end meet with considerable difficulty is 31%. Cross-

[128] In theory, it is possible to consider a different set of expenditures for the calculation of minimum needs than what is included in the selected welfare aggregate. The normative debates surrounding the adequacy of alcoholic beverages, tobacco, narcotics, or restaurants and accommodation services as representants of minimum needs are particularly noticeable. Studies using consensual approaches find that people deem moderate consumption of alcohol and holidays as necessary for adequate social participation (Goedemé, Storms, Penne, et al., 2015). These preferences are in line with sociological studies assigning to food cultural functions, rather than only nutritional (Ashley et al., 2004).

country variation in households' ability is substantial, as the national shares for financially constrained households (that make ends meet with difficulty or great difficulty) range between 7% in Finland and 76% in Greece. Importantly, households' ability to make ends meet with difficulty is strongly related to the incidence of material deprivation across Member States (see Figure 2.3 for more details).

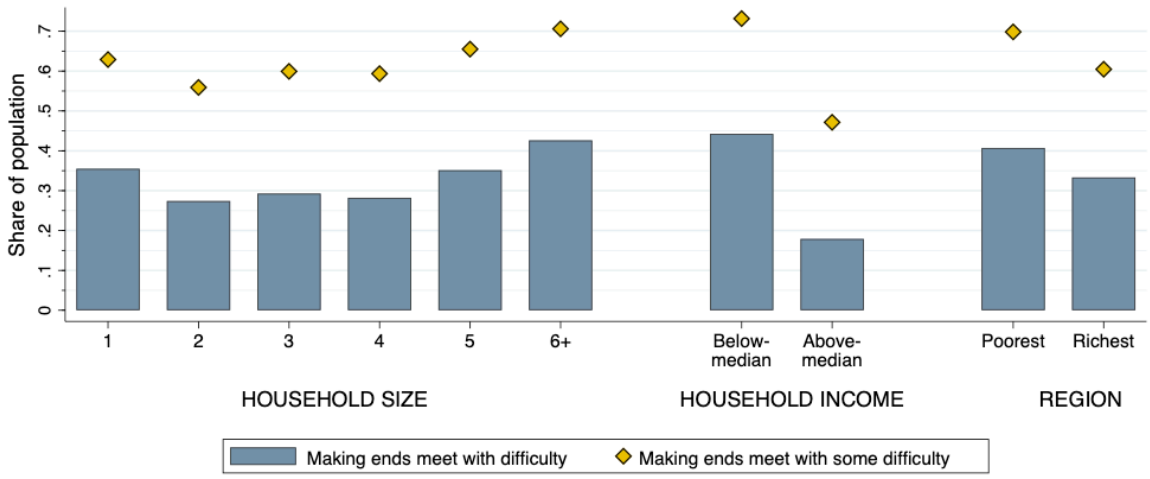
Figure 5.17. Households' ability to make ends meet by country



Notes: Own calculations based on microdata from the 2015 wave of the EU-SILC.

While the self-reported ability to make ends meet is an admittedly subjective metric for poverty classifications, it also strongly correlates with many objective household characteristics at the micro level. **Figure 5.18** below shows that, in a typical EU country, the statistical probability of making ends meet with difficulty is almost three times higher among households with below-median income than among households with above-median income. It also shows that household size and region of residence are both strong determinants of households' ability to make ends meet. Taken together, these findings suggest that exploiting the ample variation in households' ability to make ends meet across and within countries promises a sound basis to model residual needs and determine the monetary requirement of making ends meet without difficulty.

Figure 5.18. Households' ability to make ends meet by socio-demographic characteristics



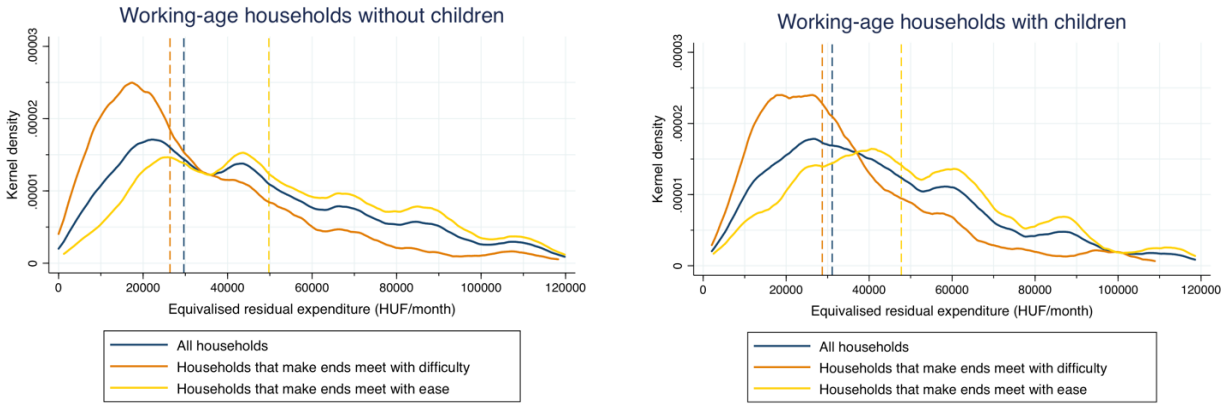
Notes: Own calculations based on microdata from the 2015 wave of the EU-SILC. Figures represent the EU-level mean of relevant national shares across 27 EU Member States.

Modelling of minimum expenditures

The modelling of minimum residual expenditure thresholds is similar to that of other expenditure categories in the survey-based approach. Specifically, we use the relative share of households that make ends meet with difficulty or great difficulty to identify the relevant quantile of the relevant expenditures as the minimum threshold by region and household type. Assuming that households with financial difficulties populate the lower tail of the expenditure distribution, the designated quintile represents the minimum expenditure level needed to make ends meet without difficulty. We also assume that minimum residual needs vary according to the OECD modified scale across household size, and are qualitatively different across household structure (households with elderly members, childless working-age households, and households with children).[129]

As usual, we test the empirical validity of this modelling strategy using joint HBS-SILC microdata from Hungary. **Figure 5.19** shows that the empirical densities associated with the ability (inability) of making ends meet without difficulty are markedly different from one another, and that focusing on the distribution quantile designated by the observed SILC-based population shares produces an expenditure threshold (blue dash line) that is higher than the median expenditure of financially constrained households (orange dash line) but significantly lower than the median expenditure of non-financially constrained households (yellow dash line).

Figure 5.19. Cross-validation of proposed ABSPO methodology for minimum residual expenditures



Notes: Own calculations based on the 2018 wave of merged HBS-SILC microdata from Hungary. The yellow and orange dashed vertical lines represent the respective medians of the conditional expenditure distributions (HUF/month), while the dashed blue line represents the ABSPO poverty threshold calculated on the relevant full population sample.

Resulting expenditure thresholds

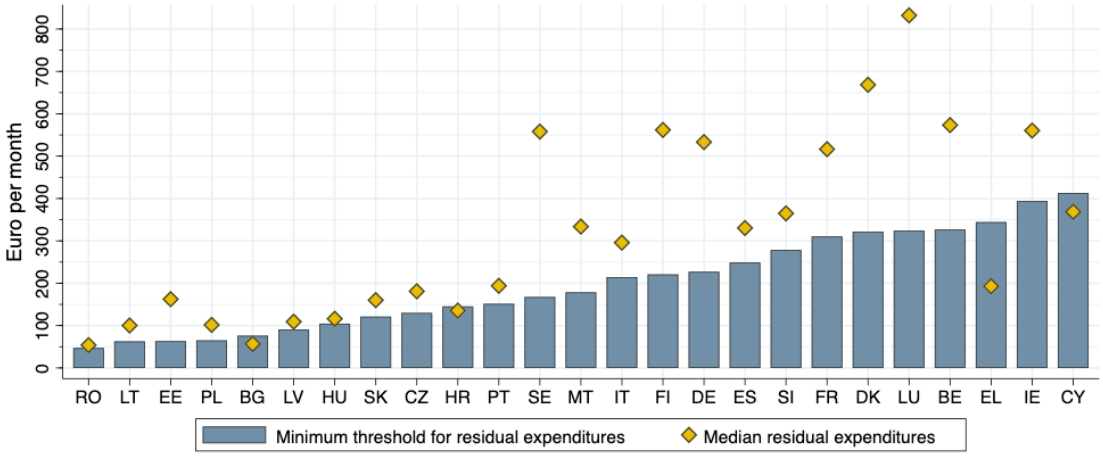
The resulting residual expenditure thresholds for 2020 are presented in **Figure 5.20** by country. The relevant equivalised amounts equal 225 euros per month on average, and range between 37 euros per month in Estonia and 565 euros per month in Cyprus. The respective national thresholds correspond to the median (equivalised) residual expenditure in poorer Member States, and remain considerably lower than this in most EU15 countries. While this is generally consistent with absolute focus of ABSPO modelling, the large disparities in the ratio of these two metrics across countries (compare Greece and Luxembourg, for example) also raise doubts about the robustness of the presented estimates.

The adequacy of the ABSPO residual budgets and the appropriateness of their large cross-country and within-country variation are hard to determine: available evidence is thin and come mostly from reference budget studies that do not rely on budget survey data. The combined reference budgets for the relevant expenditure categories produced by the ImPRovE/EURB project range between 200 euros per month in Budapest and 290 euros per month

[129] For empirical support, consider the large differences in residual reference budgets across these household types produced by the budget-based approach (see Chapter 4 for more details) as well as the horizontal structure of households' self-reported subjective poverty line (see Section 8.3 for more details).

in Helsinki, without an additional safety in childhood component amounting to 49-76 euros per month, expressed in 2020 prices (Godemé et al., 2017). National reference budgets in Spain foresee minimum residual expenditures of 340 and 240 euros (in 2020 terms) for single adults with and without children, respectively (Cussó-Parcerisas, Carrillo Álvarez, and Riera-Romaní, 2018).[130] Corresponding estimates for Luxembourg budget 350 euros per month for a single adult, with additional childcare costs between 104 and 114 euros depending on the age of the child (Allegrezza, 2016). The Minimum Income Study from the United Kingdom calculates with similar residual budgets for adults (roughly 300 euros per month), but estimates minimum childcare costs to be much higher than other studies (about 650 euro per month for one child) (Bradshaw et al., 2008).

Figure 5.20. ABSPO minimum residual expenditure thresholds by country



Notes: Own calculations using data from the 2015 wave of the EU-SILC and the EU-HBS, as well as official HICP information by Eurostat. Figures denote the representative national average of equivalised household-specific thresholds as of 2020. Austria and the Netherlands are missing due to lack of relevant data.

This review indicates that our calculations are not dissimilar to existing estimates for individuals' and households' minimum residual needs in most EU countries, and thus provide a reasonable basis for thematic poverty analysis. At the more conceptual level, it also indicates that it is possible to determine minimum residual needs on a stand-alone basis using household survey data alone – something that the ABSPO project demonstrates for the first time. For further contextualisation of our estimates, see Section 8.1 of this Report, where the outcome of the budget-based and survey-based approaches are compared in detail.

5.7. ABSPO poverty thresholds of the survey-based approach

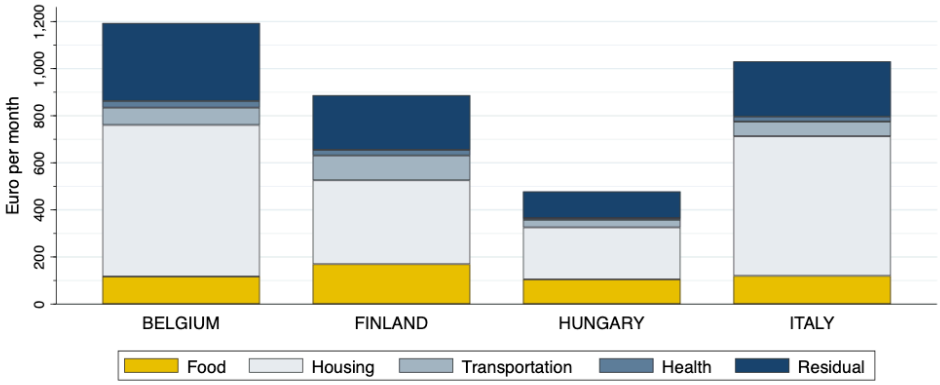
The appropriate additive combination of all the relevant thematic expenditure thresholds yields the overall 'survey-based' ASBPO poverty lines for all individual types and household configurations. This sub-section presents and contextualises these poverty lines, by focusing predominantly on the ABSPO pilot countries of Belgium, Finland, Hungary and Italy. The analysis of resulting ABSPO poverty lines in Italy is particularly insightful, given both the apparent similarities and methodological differences between the current approach and the official measurement practice of the Italian Statistical Office.

Figure 5.21 below present the level and composition of ABSPO poverty line estimates for working-age persons in single households in Belgium, Finland, Hungary and Italy. The monthly poverty lines for 2020 amount to 508 euro in Hungary, 1051 euro in Italy, 1229 euro in Belgium and 1330 euro in Finland. Despite the large difference in the level of ABSPO poverty lines, the relative weights of each component are rather stable across countries: housing expenditures are dominant (51-59%), the budget shares of food and residual expenditures range between

[130] Safety in childhood basket for the ImPRovE/EURB reference budgets exclude the cost of formal childcare, because of large heterogeneity in publicly provided childcare services (Goedemé, Storms, Penne, et al., 2015).

10-21% and 17-29%, while the combined contribution of health and transportation is less 11%. This structure indicates the soundness of the ISTAT methodology in focusing exclusively on the three main budget components (i.e. food, housing, residual) and bypassing the modelling of less consequential expenditure categories (i.e. transportation, health).

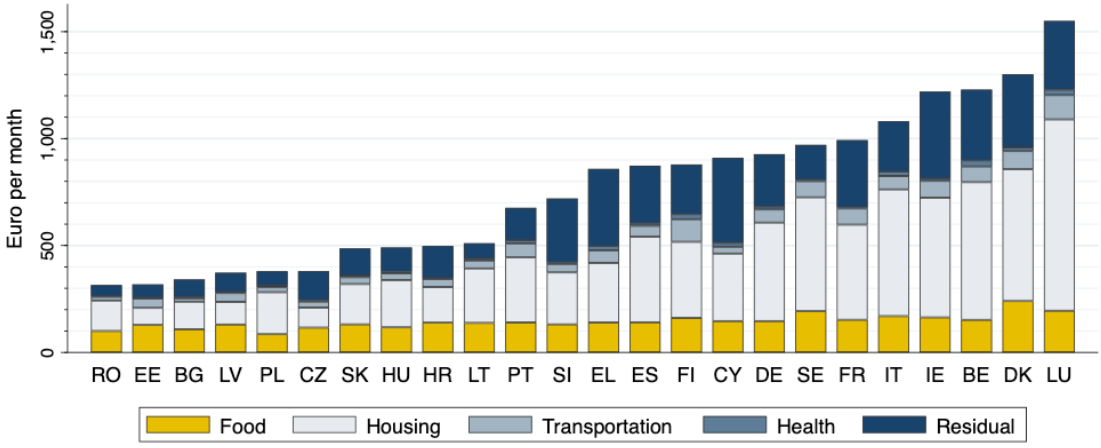
Figure 5.21. Overall poverty lines for single working-age adult households in ABSPO pilot countries



Notes: Own calculations based on various European microdata sources. The figures refer to 2020. Food reference budgets are calculated in a simplified manner using harmonised national average price data from Eurostat.

The resulting ABSPO thresholds are also broadly in line with available national and international estimates. Since these give a more prominent role to reference budget practices in modelling non-food needs, and many are used as official tools of poverty measurement or budget counselling, they represent particularly useful benchmarks for adequacy assessment of the ABSPO poverty lines. ISTAT estimate for the overall poverty line for a single adult household ranges between 627 euros per month (south) and 839 euros per month (north). Corresponding ImPRovE budgets for the large metropolitan areas, expressed in 2020 prices, range from 595 euro in Hungary, 1012 euro in Italy and 1252 euro in Finland

Figure 5.22. ABSPO survey-based poverty lines for single adult households by EU Member State



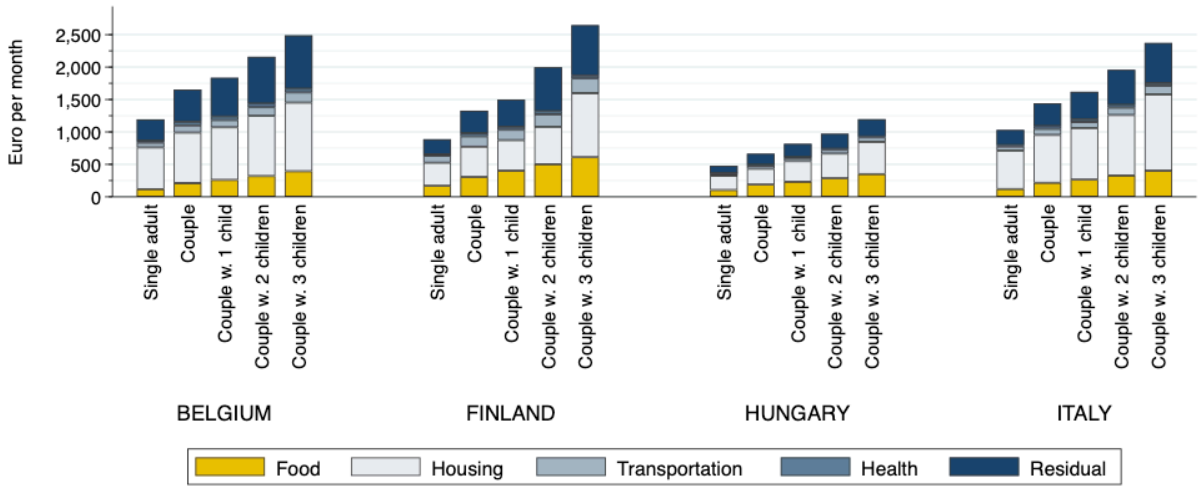
Notes: Own calculations based on various European microdata sources. The figures refer to 2020. Food reference budgets are calculated in a simplified manner using harmonised national average price data from Eurostat.

Since HBS expenditure-based minimum thematic budgets are available for most EU Member States, it is insightful to present a cross-country comparison of resulting food-based ABSPO poverty lines on a broader sample of countries. For these comparison, we use the simplified food budgets derived on the basis of national average price statistics (see Chapter 6 and Section 7.1. of this Report for more details). For country-by-country comparisons, these baskets are perfectly fine: their overall level is very close to the food budgets of the survey-based approach

priced with national price information sources. **Figure 5.22** below lists the overall "hybrid" ABSPO poverty lines for 24 EU countries for which appropriate survey data are available. It shows that, with the broader geographic focus, the range of ABSPO poverty lines also increase: national monthly figures for single-person adult households vary between 277 euro in Bulgaria and 1763 euro in Luxembourg. These figures are similarly structured on average and are equally reasonable - even though data issues are likely to have biased some of the estimates in selected countries (e.g. see housing component in the Czech Republic or residual component in Cyprus).[131]

Since all budget components vary with household size and composition, the resulting poverty lines associated with most household configurations are very different from the one presented above. Food and health minimum expenditures are modelled on an individual basis and increase in additive fashion with limited or no economies of scale. The transportation component is modelled on equivalised terms with largely linear increments across different household sizes, but housing and residual needs are modelled separately for different household configurations and are allowed to increase in non-linear fashion. **Figure 5.23** below highlights the cumulative effect of these and shows how the ABSPO poverty lines of single, healthy, working-age adults increase gradually with the addition of new household members (i.e. partner, small child, young child, teen child). The figures indicate that households' minimum needs increase by 38, 33, 50 and 37 percentage points in relative terms with each supplementary member, pushing the 5-member family's budget to 216-275% of the single persons, up to 2664 (Belgium), 3663 (Finland), 1312 (Hungary) and 2550 (Italy) euro per month.

Figure 5.23. Variation in ABSPO poverty lines by household size and composition

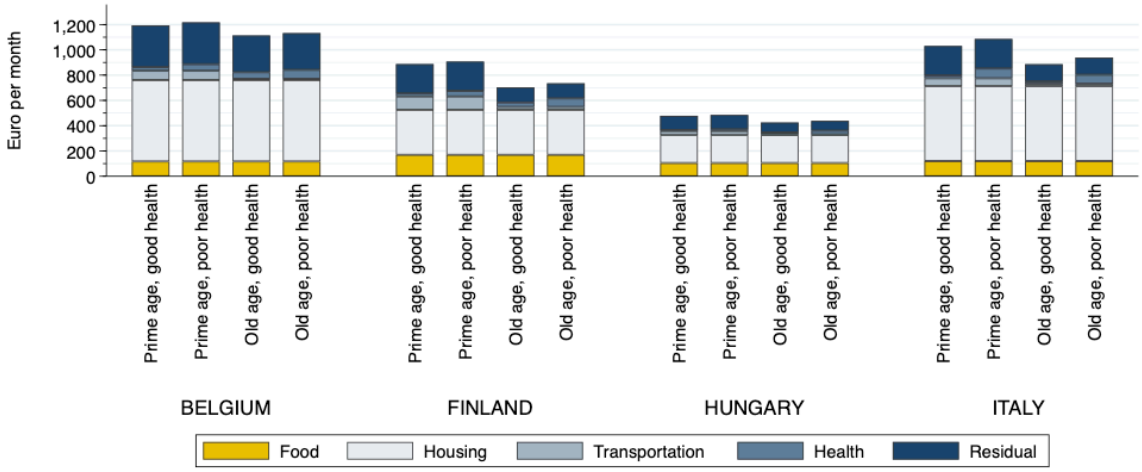


Notes: Own calculations based on various European microdata sources. The figures refer to 2020. Food reference budgets are calculated in a simplified manner using harmonised national average price data from Eurostat.

Variations in ABSPO poverty lines by age and health status are relatively minor. **Figure 5.24** below shows that the poverty lines calculated for single elderly adults (aged 65 or more) amount to 79-90% of their working-age peers, independently of their health status. The difference stems primarily from the lower transportation and residual needs of the elderly, which far outweighs their marginally larger healthcare budget. This latter represents a truly marginal component of the overall poverty lines, and the difference between the minimum needs of healthy and non-healthy individuals range between 7 euro per month (among working-age adults in Hungary) and 55 euro per month (among working-age adults in Italy) only.

[131] Reference budget based estimates for total budgets for single person households, expressed in 2020 prices, were 1016 euro for Spain, 2035 euro for Luxembourg and for France it ranges from 1513 euro for social housing to 1668 for private housing (Concialdi et al. 2014; Cussó-Parcerisas, Carrillo Álvarez, and Riera-Romaní, 2018).

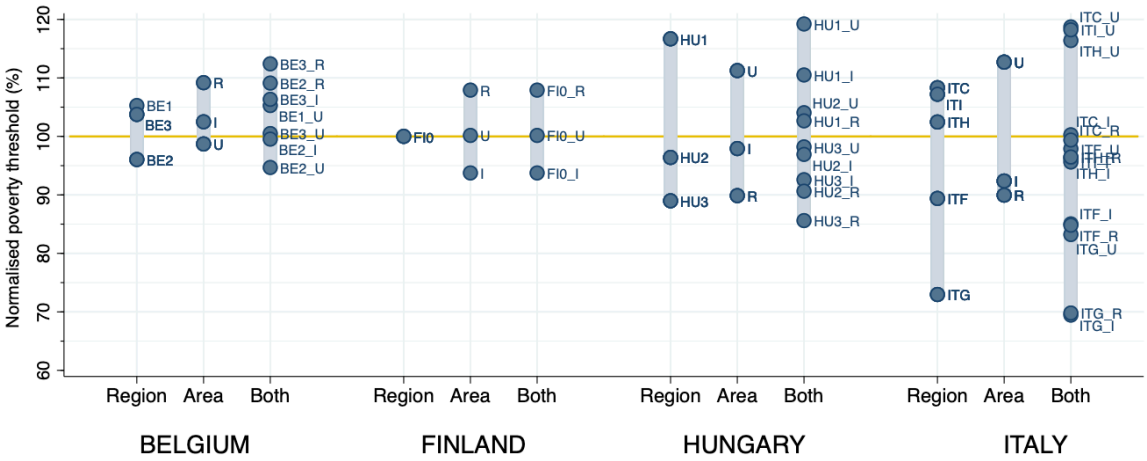
Figure 5.24. Variation in ABSPO poverty lines for a single person by age and health status



Notes: Own calculations based on various European microdata sources. The figures refer to 2020. Food reference budgets are calculated in a simplified manner using harmonised national average price data from Eurostat.

Lastly, we discuss how the ABSPO poverty lines vary by geographical area in the pilot countries. **Figure 5.25** below plots the value of the national poverty lines for a healthy, single, working-age adult relative to the national average, across three different dimensions: 1) NUTS1 region, 2) settlement type, 3) NUTS1 region and settlement type combined. The figure shows that regional and urban-rural variation in the poverty lines can be equally substantial, driven primarily by spatial differences in the housing component. The regional and urban-rural wedge can introduce relative differences as high as 35-40 percent in the poverty lines around the national mean. Among the four pilot countries, Belgium is the most geographically homogenous: the gap between the relevant highest and lowest poverty lines amounts to less than 20% in relative terms. At the other end of the scale are Hungary and Italy, where ABSPO poverty lines in central metropolitan areas exceed minimum living costs of peripheral rural places by as many as 35% and 45%, respectively. For Italy, these estimates are in line with both the official poverty line patterns produced by ISTAT and the minimum living cost estimates obtained with small area estimation (SAE) methods (Pratesi, 2016).

Figure 5.25. Geographical variation of ABSPO poverty lines in pilot countries



Notes: Own calculations based on various European microdata sources. The figures refer to 2020. Food reference budgets are calculated in a regionally disaggregated manner using national price statistics data. For each observation, the labels indicate the relevant NUTS1 region and settlement type (U – urban, I – intermediate, R – rural).

CHAPTER 6.

Food-based statistical approach to ABSPO measurement

This Chapter presents the food-based statistical approach as the most straightforward and resource-efficient ABSPO measurement strategy. Its main role in the project is to ensure that absolute poverty measures are developed for all EU countries as part of the ABSPO project, and to test the most algorithmic way of monitoring poverty in the EU based on existing data sources. In practice, this means reducing the reference budget and piecemeal elements of modelling to the minimum, and relying on harmonised European survey information and statistical methods as much as possible.

The main qualitative difference between the food-based approach and alternative ABSPO strategies concerns two measurement aspects. First, in contrast to the individual modelling of thematic expenditure categories by the budget-based and survey-based ABSPO strategies, the food-based approach differentiates only between food and non-food minimum needs. This latter includes minimum expenditures on housing, transportation, health and residual needs, but are estimated jointly using household expenditure data. The second difference is that, relative to the stand-alone or self-contained modelling of minimum expenditure thresholds elsewhere, the food-based approach determines households' minimum non-food needs and overall poverty lines in direct relation to their respective minimum food budgets using regression-based statistical methods on observed expenditure patterns. This is a well-known procedure of absolute poverty measurement in developing countries, but has never been used previously in high-income countries characterised by low food expenditure share.

The main measurement challenge for the food-based approach is therefore twofold: develop a new methodology for the relevant food/non-food mapping in the context of advanced economies, and identify the relevant harmonised European data sources that enable simultaneous EU-wide measurement. We address the methodological challenge by developing a new simulation-based inverse method that works in high-income countries characterised by relatively low food expenditures, and has been tested to match existing poverty estimates in Italy (Menyhert, 2022b). Concerning the data inputs, we use the same new cross-country comparable and EU-wide ABSPO nutritional food baskets as in the survey-based approach but rely on the Eurostat's national average price dataset for their monetisation.

The presentation in the Chapter starts with the methodological aspects of modelling, and introduces the new simulation-based inverse approach developed for poverty measurement in high-income countries in particular. The next section deals with the technical and data-related aspects of the methodology as implemented in the ABSPO context. The third and final section presents the resulting food-based ABSPO poverty lines and discusses their most remarkable features.

6.1. The methodology of the food-based statistical approach

This section discusses the main methodological aspects of the food-based statistical approach to ABSPO measurement. We first present the standard method employed in international poverty measurement, and point out their limitations in the context of advanced economies characterised by relatively low share of food expenditures. This in itself is a new ABSPO finding, but our main related contribution to absolute poverty measurement is the development of a new simulation-based inverse method that deliver reliable and consistent poverty estimates for developed countries. Section 6.1.2 presents the new method in detail.

6.1.1. Standard methods in international poverty measurement

Simpler statistical methods for absolute poverty measurement are typically used in developing countries. These countries are often characterised by dominant food expenditures, inferior non-food needs and lack of reliable

survey data, which renders more in-depth and granular poverty measurement impractical or unfeasible. For this reason, the use of plain nutrition-based food budgets and simple statistical mapping techniques based on household budget survey microdata has become the standard workhorse in the developing world. The convergence of methods is actively promoted by the World Bank which has long been offering expert training, financial support and a clear blueprint to local policy-makers engaged in absolute poverty measurement (World Bank, 2007; 2019). Academic researchers have employed similar strategies to estimate poverty in many developing countries such as Indonesia, Uganda or Ethiopia (Ravallion and Bidani, 1994a; Dercon and Krishnan, 2000; Appleton, 2001).

In these measurement frameworks, food reference budgets are typically constructed on nutritional grounds and target the same pre-determined standard of living across all individual and household types. At the conceptual level, the main challenge lies in ensuring that the appropriate non-food threshold derived from observed household expenditures also corresponds to the same standards. Given the large heterogeneity in households' basic needs and financial position, and the lack of established normative criteria to assess the necessity of different components of non-food spending, this is no easy task. In most applications, the practical question boils down to selecting a reference set of households whose observed non-food expenditures may reasonably be considered as appropriate non-food poverty lines for all.

Two different approaches have gained widespread currency. The so-called "traditional" method focuses on those households whose food expenditure is equal to their food reference budgets, and considers their typical non-food expenditure as the non-food poverty threshold (Bidani et al. 2001). This approach takes an agnostic view of what constitutes basic non-food needs and only assumes positive demand elasticities for, and limited trade-offs between, food and non-food consumption. Specifically, if a household can barely afford to satisfy its basic food needs, it is presumed to be at risk of failing to meet its minimum non-food needs. However, since non-food needs are less satiable and often subordinate to food needs in practice, the resulting traditional poverty lines are best considered as generous upper bound estimates of minimum living costs.

The second, "austere" method by Ravallion and Bidani (1994) gained popularity by proposing an appealing test for assessing the necessity of non-food spending. Specifically, these authors argue that only those non-food expenditures should be included in the poverty line that demonstrably displace spending on basic food needs. While some displacement likely occurs over a wide range of consumption levels, it clearly takes place among households whose total expenditure equals their food reference budget. For them, every dollar of non-food spending immediately reduces basic food spending, and can therefore be considered just as essential as those. Ravallion and Bidani (1994) thus claim that the non-food poverty line should correspond to the typical level of non-food spending among these households. Given the strictness of the underlying necessity test, the "austere" poverty lines likely represent lower bound estimates of households' minimum expenditures.

It is noteworthy that the austere and traditional methods deliver very similar poverty estimates in developing countries where food expenditures dominate household spending. As long as households' non-food spending is relatively low, both methods identify comparable reference households and the practitioner's choice between them may come down to minor political or methodological considerations.[132] In fact, the biggest practical concern for most applications is the availability (or lack thereof) of good-quality household budget survey data (Ravallion, 1998).

For ABSPO purposes, the main question is whether and how standard statistical methods are applicable in developed countries (Atkinson, 2019). In contrast to LMICs, advanced economies are characterised by relatively low food expenditures and extensive non-food needs: households in EU and OECD countries typically devote less than 20% of their total spending on food and non-alcoholic beverages.[133] Theoretically, this should pose no problems in the way of accurate measurement. First, neither of the standard methods posit a hierarchy of basic needs or depend on the primacy of food expenditures: as long as the food and non-food Engel curves are monotonically increasing,

[132] Specifically, the austere method may be discounted on account of its inconsistency with rational choice theory given the different utility levels the resulting food and non-food poverty thresholds represent. As Kakwani (2010) argues, the food budget component of the austere poverty line is associated with a higher income and utility level than the corresponding non-food component, and no rational household would choose the corresponding allocation as a result. The traditional method, on the other hand, can be rebuked for its unconditional accounting of households' non-food expenditures, despite available evidence that a non-negligible share of these hardly qualify as essential. Some further methodological concerns are common to both approaches (e.g. sensitivity to differences in preferences and relative prices).

[133] For detailed official statistics, see the series 'nama_10_co3_p3' of the Eurostat database at https://ec.europa.eu/eurostat/data/database or the national accounts statistics of the OECD at https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE5\#

standard methods remain operational regardless of the distribution of household expenditures. Second, while relatively low food budgets may compromise the precision of non-food mapping, cross-country analysis of EU-HBS data shows that within-country variation in households' food/non-food expenditure ratio decreases markedly with income. In other words, as the projection base (i.e. the food reference budget) shrinks, the projection accuracy (i.e. the predicted non-food expenditure share) improves, without a clear net effect on the quality of resulting poverty estimates. Third, good quality household budget survey data are more widely available in advanced economies.

At the practical level of measurement, however, the food expenditure share turns out to play a pivotal role in delivering accurate and valid poverty estimates. This is because the ratio of the food and non-food components in the standard poverty lines is a deterministic function of reference households' observed food expenditure share s^F. The traditional method consistently replicates the relevant expenditure ratio, but the food budget share of the austere poverty line follows a non-linear transformation and equals $1/(2 - s^F)$. Given the different functional forms, the alignment between the two mappings depends crucially on the observed food expenditure: specifically, the wedge in the food/non-food budget ratio between the austere and traditional methods grows exponentially as the food expenditure share decreases. While both methods deliver very similar results in developing countries with dominant food expenditures, the food budget share of the poverty line can diverge enormously in advanced economies with relatively low food spending.[134]

Moreover, beside the aforementioned divergence that may force the practitioner to take sides, standard methods are also likely to deliver unrealistic poverty estimates in rich countries. For one, as the food expenditure share decreases, the austere method is expected to understate the minimum cost of living to an ever-larger degree due to its increasing inability to account for the majority of typical non-food spending. Similarly, the traditional method increasingly overestimates the minimum living costs as an ever-larger share of households' non-food expenditures do not represent truly basic needs in advanced economies. In sum, existing methods tend to produce unrealistically low or improbably high poverty lines that provide little indication of true level of minimum expenditures associated with a given targeted living standard in rich countries.[135]

6.1.2. A modified simulation-based methodology for advanced economies

To implement absolute poverty measurement on such statistical grounds in rich countries, we propose a new inverse method that can reliably estimate absolute poverty even with inferior food expenditures. The proposed measurement strategy builds directly on the austere method but uses food reference budgets not as inputs but rather as targeted reference points to the estimation procedure. Specifically, exploiting the symmetry of the underlying demand system, which allows us to focus on the non-food Engel curve and use simulation-based methods to find the optimal level of hypothetical non-food inputs. The inverse method is described in detail in Menyhert (2022b). The method exploits the symmetry of the underlying consumer demand system and reverses the logic of Ravallion and Bidani (1994). In line with the dominance of non-food expenditures in European economies, the method identifies reference households as those whose total expenditure is close to the non-food poverty line.

The austere method of Ravallion and Bidani (1994) is based on the empirical regularity, called Engel's law, that household expenditure on food is an increasing concave function of total expenditures. The empirical application focuses on the food demand equation derived from the AIDS ("Almost Ideal Demand System") framework developed by Deaton and Muellbauer (1980). The AIDS model approximates the consumption demand of representative utility-maximizing households through relative budget shares driven by relative prices and real income. The model has many appealing features for the estimation of log-linear Engel curves that Ravallion and Bidani (1994) exploit in the rudimentary context of only two composite goods.

[134] One can also see that, given its focus on displaced food consumption, the austere method always delivers poverty lines where the food component dominates.

[135] On top of these methodological problems, there are also practical issues standing in the way of the straightforward application of standard methods in advanced economies. The austere poverty line, in particular, can suffer from lack of identification as the number of reference households whose total expenditure equals their food budget is likely to be very low. In the Italian HBS, for example, less than 1% of sampled households report total expenditures around or below the food poverty line, which raises strong doubts about the statistical robustness and empirical validity of the resulting poverty estimates.

Eventually, these authors estimate the following reduced-form specification of the food Engel curve using budget survey data:

$$s_h^F = \alpha^F + \beta^F \log(y_h/z_h^F) + \sum_{r=1}^{R} \varphi_r D_r + \pi^T x_h + \varepsilon_h^F \qquad (Eq. 6.1)$$

where s_h^F denotes the food expenditure share of household *h*, the log of real household income is expressed as nominal expenditures y_h adjusted for the respective food reference budget z_h^F, while dummy variables D_r and stacked factor variables x_h account for differences in relative prices across geographical areas and variations in minimum needs across different household types, respectively. The parameter β^F absorbs the variable effect of income on food expenditures, while the intercept α^F directly identifies the average food expenditure share among the generic reference household (where $y_h = z_h^F$). For each different household type, the customised minimum non-food budget is calculated as the food budget times one minus the predicted conditional food expenditure share $\hat{s}_h^F$. The overall poverty line is then given by

$$z_h^C = z_h^F + z_h^N = z_h^F + z_h^F(1 - \hat{s}_h^F) = z_h^F(2 - \hat{s}_h^F) \text{ where } \hat{s}_h^F = \alpha^F + \sum_{r=1}^{R} \varphi_r D_r + \pi^T x_h \qquad (Eq. 6.2)$$

The proposed ABSPO method for advanced economies builds directly on the same technical apparatus, but applies an inverse perspective. In particular, it focuses on the non-food demand equation in order to circumvent the main limitation of the original method -- that of producing non-food poverty thresholds inferior to the food reference budgets. By modelling the dominant non-food expenditures directly, and using food reference budgets as targeted reference points rather than inputs, it becomes possible to retain the necessity element of the austere method without biasing the resulting poverty lines. Let us focus on the corresponding empirical non-food Engel curve:

$$s_h^N = \alpha^N + \beta^N \log(y_h/z_h^N) + \sum_{r=1}^{R} \varphi_r D_r + \pi^T x_h + \varepsilon_h^N \qquad (Eq. 6.3)$$

where superscripted variables and parameters are exact non-food counterparts to the relevant food-specific terms in Equation 6.1. This specification follows directly from the symmetry of the AIDS model and the reduced-form specification of the demand equations. Estimating Equation 6.3 and using the predictions delivers minimum thresholds for the opposite expenditure type in exactly the same way. Specifically, Equation 6.3 is set to produce overall poverty lines with food/non-food budget ratios that are in line with households' observed expenditure shares in advanced economies.[136]

One major problem, however, is that households' minimum non-food budget z_h^N is unobserved, and the above regression equation cannot be directly estimated. Note, however, that the austere method establishes a functional relationship between the input and output reference budgets and the observed expenditure shares, which means that mapping from either expenditure type to the other is conceptually one and the same exercise. This makes it possible to use available food budgets not only as inputs to the calculations, but also as reference points against which the performance of different hypothetical non-food inputs can be evaluated. Specifically, the best estimate of minimum non-food needs is the one that predicts food poverty thresholds as similar to the actual food reference budgets at hand as possible. At the core of the inverse method is a simulation-based algorithm to identify non-food budgets of this kind.

The technical implementation of the inverse method involves the use of simulation-based optimisation methods. In order to find the minimum non-food needs and overall absolute poverty line for any given household type, the following steps are foreseen:

1. Define a range of expenditure amounts that covers all potential levels of households' minimum non-food needs.

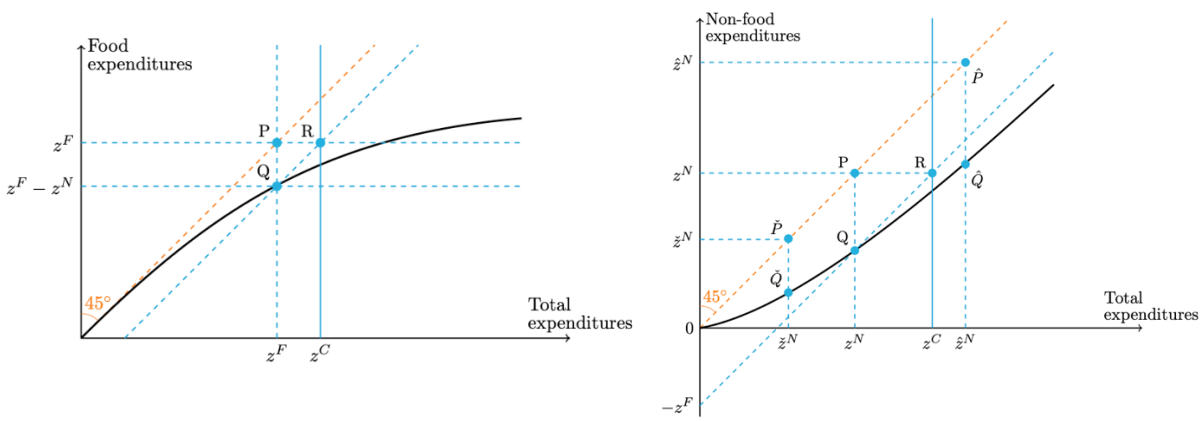
[136] Following Ravallion and Bidani (1994), for the actual regression, we also use a quadratic specification with an additional squared logarithmic term for added flexibility to capture the curvature of the food Engel curve along the income distribution.

2. Define an appropriate metric that captures the distance between households' implied food threshold and their available food reference budget.
3. Estimate the regression iteratively using each possible realisation of the non-food reference budget as input, and calculate the appropriate distance metric.
4. Choose the expenditure level with the smallest distance between implied and actual food budgets as the relevant minimum non-food budget.
5. Calculate the overall poverty line as the sum of the available food reference budget and the resulting optimal non-food budget.

This inverse procedure retains all the main properties of the original austere method once food and non-food labels are exchanged. In particular, it delivers reasonable (albeit stringent) absolute poverty lines in advanced economies in conformity with households' observed expenditure patterns - similar to what the austere method achieves in countries with dominant food expenditures. At the conceptual level, the method's validity hinges on the recognition of basic non-food needs as equally important components of decent living in developed economies as basic food needs.

Figure 6.1 offers a schematic illustration between the original and the modified method. The left panel shows a theoretical food Engel curve and highlights the increasing share of households' expenditures diverted towards non-food spending. The functional relationship itself reveals nothing about households' supposed minimum needs, but the insights of Ravallion and Bidani (1994) help pin down the potential level of basic non-food needs: specifically, for households whose total spending equals their food reference budget (z^F), all non-food expenditure PQ displaces essential food spending and can be regarded as a conservative estimate of minimum non-food needs (z^N) for all households. The sum of the food and non-food components produces the overall poverty line (z^C), in which the food component always dominates by construction. The mechanics of the modified method involve a very similar setting and are presented in the right panel. The main difference is that it focuses on the (convex) non-food Engel curve and lacks a clear-cut reference point (i.e. the minimum non-food budget) along the horizontal axis that would immediately designate the appropriate total expenditure level. However, since the food reference budget (z^F) is observed, one can draw an additional 45-degree line (i.e. the dashed blue diagonal on the graph) to represent all potential expenditure allocations with comparable food spending. The task is then simply to find the intersection of this shifted diagonal and the Engel curve, and choose the corresponding total expenditure level as the non-food reference budget. On the graph, (z^N) is the only non-food input that delivers minimum food needs PQ corresponding to the available food reference budget (z^F). Any expenditure level to the right of this point implies too large food thresholds, while any point to the left implies too small ones. Once the optimal non-food reference budget is found, the combined poverty line (z^C) is calculated in exactly the same way as in the original case.

Figure 6.1. Mechanics of the inverse statistical method of ABSPO measurement



Notes: Own illustrations. See Menyhert (2022b) for original source and further elaboration.

The implementation of the proposed inverse method is relatively straightforward, even though there are some important modelling choices involved. The first concerns the structural relationship of minimum non-food needs between different household types that needs to be defined in advance for the joint estimation of all household types in the sample. Since households' minimum non-food needs are unobserved, different hypothetical structures are possible (e.g. a fixed common threshold for all, differentiated minimum needs by a single or multiple household characteristics), which can influence the resulting estimates. A practical and convenient solution is to rely on standard equivalence scales, as these greatly reduce the complexity of the optimisation problem and deliver robust estimates if supported by a rich control structure in the regression model (see Menyhert (2022b) for further details).[137] A related modelling issue concerns the sampling algorithm used for the optimisation procedure. As long as households' minimum non-food needs are defined in a uni-dimensional manner (e.g. through equivalence scales), the simplest randomised or iterative sampling algorithms are sufficient. With multi-dimensional minimum needs and search domains, more elaborate sampling algorithms (such as Monte Carlo methods, rejection sampling, repeated systematic sampling) can become necessary, but the practical relevance or justifiability of using such sophisticated techniques is rather low.

6.2. ABSPO implementation for EU-wide measurement

This section discusses the specific modelling choices made and data sources used for the implementation of the methodology as part of the ABSPO food-based approach in the context of 27 EU Member States.

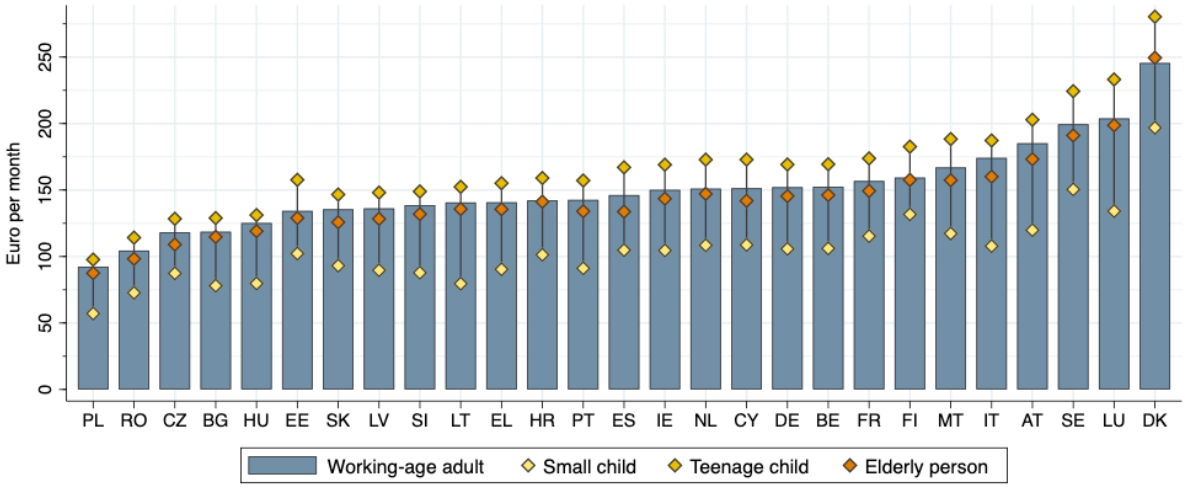
6.2.1. Comparable nutritional food reference baskets and reference prices

We start with reviewing the food reference budget inputs. These include the same new cross-country comparable nutritional food baskets that we developed specifically for ABSPO purposes and used already in the survey-based approach to ABSPO measurement (see detailed discussion in Section 5.2 and Section 7.1). The main difference with respect to this latter concerns pricing: instead of using national consumer price statistics that are of restricted access and limited comparability, we rely on the harmonised national average price dataset compiled by Eurostat. These data are available for all 27 EU Member States and differentiate along several product dimensions, including packaging size and brand type, among others. Eurostat detailed average prices comply with existing international standards, basing product descriptions on specifications used in PPP surveys, while the price collection was meant to utilise the timeliness and frequency of HICP data collection. More details about this pricing source, especially in comparison with alternative sources, are presented in Section 7.2.

The resulting minimum food reference budgets for 2020 are presented in **Figure 6.2** for all EU countries. The respective monthly values for working-age adults amount to 151 euro on average and vary between 92 euro in Poland and 246 euro in Denmark. Both the average level (151 vs. 195 euro) and the relative dispersion (21% vs. 28%) of these national budgets are considerably lower than those of the existing cross-country budgets of the ImPRovE/EURB project (Goedemé, Storms, Penne, et al., 2015). The respective cross-country rankings, however, are rather similar (with a rank correlation of 68%), despite the occasional large shifts in selected countries relative position (e. g. Greece is 24th in EURB and 11th in ABSPO, increasing order).

[137] For the application of the inverse method, equivalence scales may be applied in two different ways: either by considering households' equivalised (rather than total) disposable income, or by appropriately scaling up the hypothetical (generic) non-food budget used in the search algorithm. Since the regression equation only features the ratio of these two in the logarithmic term (see Equation 6.3 for more details), the two approaches are computationally equivalent. For a more detailed discussion on equivalence scales, see Section 7.3 of this Report.

Figure 6.2. ABSPO food reference budgets based on harmonised national price averages by country



Notes: Own calculations based ABSPO nutritional food baskets and harmonised national average price data provided by Eurostat. All values refer to 2020. The age-based definition of various individual types is consistent throughout the Report.

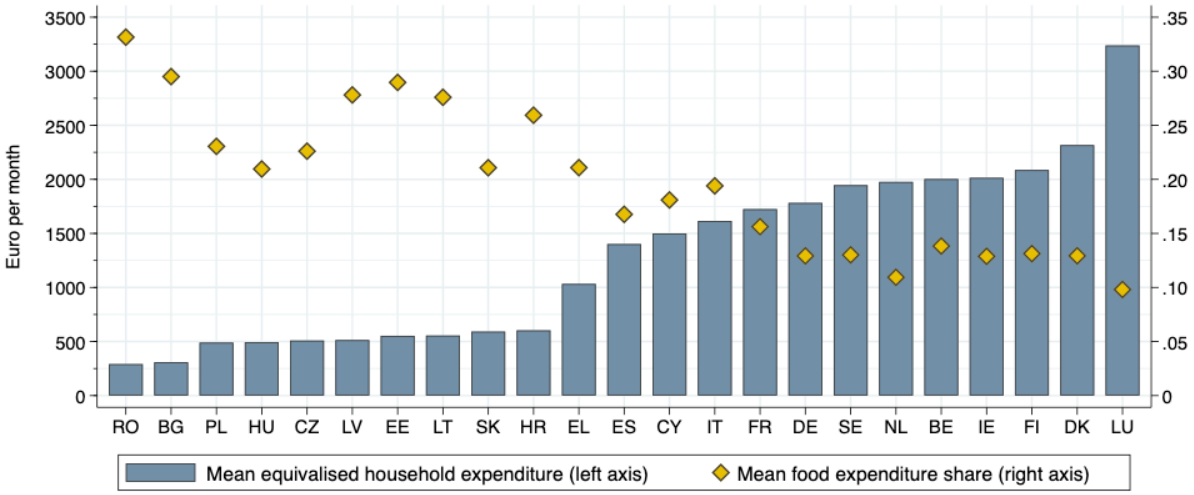
Figure 6.2 also indicates the cross-country stability of the structure of ABSPO nutritional budgets across different individual types. The respective food budgets of small children, teen-age children and elderly persons make up 69%, 110% and 95% of working-age persons budget in a typical EU country, in a rather consistent fashion. The relatively minor cross-country discrepancies stem from compositional differences in the relevant baskets as well as its cross-effects with relative prices in a given Member State.

6.2.2. Harmonised household budget survey microdata

The next important component concerns harmonised and nationally representative budget survey data, which makes it possible to study the observable patterns of households' expenditures at the micro level. The modelling dataset we use for the empirical analysis is the recently released 2015 wave of the EU Household Budget Survey (EU HBS). More detailed description of these data are available in Section 3.3 and Chapter 9 of this Report, and here we focus only on those aspects that are specific to the implementation of the food-based method.[138] Among these, the statistical relationship between households' food and total expenditures is the most important. **Figure 6.3** below shows the cross-country variation in households' mean (equivalised) total expenditure and mean food expenditure share across the EU. In This reveals a robust negative relationship ($\rho = -0.91$) between the two: households' in countries with higher (lower) levels of total spending devote a smaller (higher) share of their consumption expenditures to food and non-alcoholic beverages. This is in line with Engel's law stating that, as household's income increases, the percentage of income spent on food decreases.

[138] Among the general limitations of the EU-HBS that are of immediate relevance to the implementation of the food-based pproach are the lack of cross-country harmonisation, the lack of full country coverage (i.e. Austria) and the lack of regional identifiers (i.e. Germany).

Figure 6.3. Households' mean total expenditure and food expenditure share by country in 2015

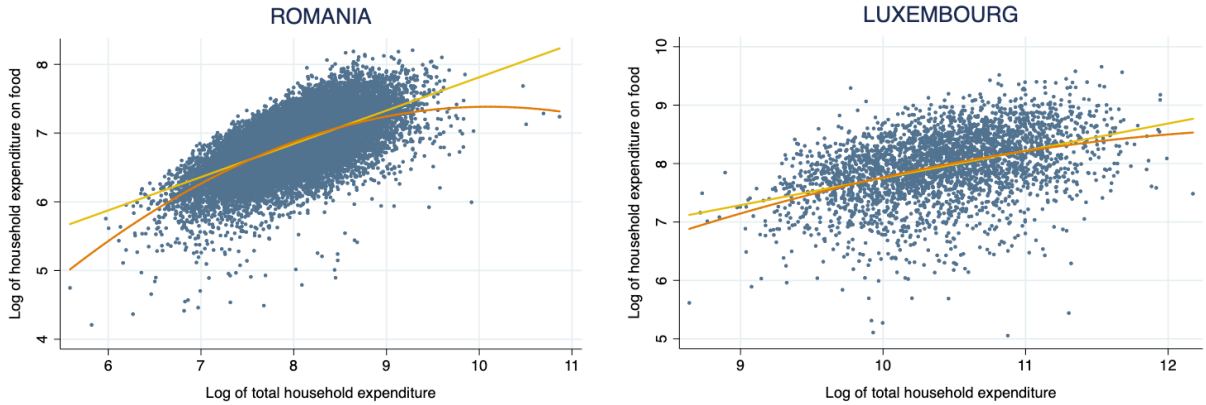


Notes: Own calculations based on the 2015 wave of the EU-HBS. Austria, Malta, Portugal and Slovenia are missing due to lack of data.

Figure 6.3 also indicate the extent of this reduction: while households overall spending varies more than tenfold across Member States (as of 2015, average total expenditures ranged from 291 euro per month in Romania to 3239 euro per month in Luxembourg), food expenditures fluctuate within a much narrower range (between 10% and 33% in 2015). Importantly, the average share of food expenditures is 20% in the aggregate and below 50% in all EU Member States. This suggests that the original statistical methods of poverty measurement, as used in developing countries, are unable to account for the majority of non-food expenditures and would most likely understate the true extent of poverty in Europe.

Another important modelling aspect is the relationship between households' food and total expenditures within countries. Two considerations are of particular relevance. The first concerns the elasticity of average food expenditures to total expenditures as it determines the appropriate functional form to be used. The second relates to the cross-sectional variation in food shares conditional on the level of total expenditure, as it determines the prediction accuracy of the food/non-food mapping. The scatterplots in **Figure 6.4** illustrate these aspects by presenting the within-country relationship between the (logarithm of) households' food and total expenditures in Romania and Luxembourg. It shows that the log-log Engel curve is well approximated with either a linear or quadratic fit lines. The income elasticity of food spending is almost identical in both countries (0.47 vs 0.46), which shows that the underlying modelling assumptions hold for poor and rich Member States alike. Regarding the (unconditional) dispersion of individual data points around the best fitting line, EU countries are less alike: while total expenditures explain 39% of the cross-sectional variation in food expenditures in Romania, the corresponding figure for Luxembourg is only 15%. Depending on whether individual variations are idiosyncratic or systematically related to households' observable features, this may imply more (or less) accurate poverty mapping in poorer Member States.

Figure 6.4. Relationship between households' food and total expenditures in selected EU countries



Notes: Own calculations based on the 2015 wave of the EU-HBS.

6.2.3. Estimation method

The third modelling component is the estimation method itself and the applied regression specification in particular. Given the expenditure patterns shown in **Figure 6.4**, the quadratic specification appears more appropriate than the linear one, but the resulting differences in the poverty lines are minimal.[139] More important is the control structure used on the right hand side of Equation 6.3: the presence of geographic shifters may allow for spatial differentiation of the poverty lines, while the indicator variables of household characteristics may introduce a potential new source of socio-demographic variation in addition to the one driven by standard equivalence scales. The choice of the exact control specification to use boils down to both modelling preferences and practical constraints. In line with ABSPO modelling principles and implementation in the budget-based and survey-based approaches, we account for region of residence, urban-rural settlement type and household composition when calculating absolute poverty lines. Since national sample sizes in the EU-HBS are occasionally rather small (i.e. less than 3000 observations), reliable measurement based on well-identified parameters call for relatively parsimonious modelling.

Table 6.1. Poverty lines with different model specifications

Model specification	Control structure				Poverty outcomes		
	Equivalence scale	Regional identifier	Settlement type	Housheold composition	Equivalised poverty line	Coefficient of variation	Max/Min ratio
Model #1	X				690.9	0,00%	1
Model #2	X	X			692.9	1.10%	1.05
Model #3	X		X		692.9	2.91%	1.07
Model #4	X	X	X		694.6	3.48%	1.12
Model #5	X			X	687.4	3.81%	1.36
Model #6	X	X	X	X	691.4	5.68%	1.47

Notes: Own calculations and modelling based on the 2015 wave of EU-HBS microdata. The presented poverty lines represent the cross-country average of the relevant national (equivalised) poverty lines in euros.

Our preferred specification therefore includes only a single (composite) indicator variable for each possible region and settlement type combination, and a set of categorical variables associated with the number of household members by age category (0-6, 7-12, 13-18, 19-65, 65+ years of age, respectively) beside the quadratic income term on the right hand side. **Table 6.1** presents the main statistical features of the resulting poverty lines

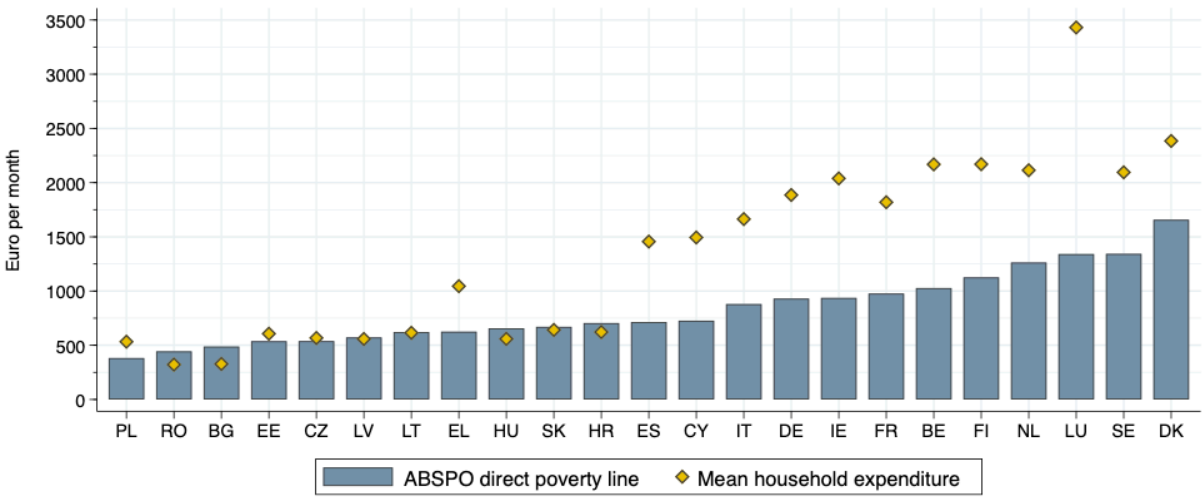
[139] The estimated ABSPO poverty lines are virtually identical (less than 1% removed from one another) across the two specifications.

in comparison with various alternative (more parsimonious) specifications. The relevant cross-country averages show that the value of the mean (equivalised) poverty line is highly invariant to changes in the control structure. The effect of these latter mainly concerns the dispersion of (equivalised) poverty lines assigned to various household types around the country average. In a typical EU country, the coefficient of variation increases markedly with both geographic and demographic controls, and amounts to 5.68% for the proposed specification (Model #6). In this case, the highest of the customised (equivalised) poverty lines across demographic-geographic cells in a country is almost 50% higher on average than the lowest one. This appears reasonable and broadly consistent with the observed within-country variability of absolute poverty lines derived from the budget-based and survey-based approaches to ABSPO measurement (see Chapters 4 and 5 of this Report for further details).

6.3. ABSPO poverty thresholds of the food-based statistical approach

This section presents the resulting food-based ABSPO poverty lines. **Figure 6.5** shows the monthly equivalised values by country, as they average 833 euro and range between 382 euro in Poland and 1658 euro in Denmark. These levels are largely in line with the survey-based ABSPO poverty lines, amounting to 339 euro in Poland and 1301 in Denmark. Despite the difference in levels - average survey-based ABSPO poverty line is 771 euro – there is only minor country re-ranking across the two approaches (see Section 8.1 for extensive cross-approach comparisons of poverty lines). The cross-country variation in the poverty lines is much smaller than that of mean expenditures (the respective standard deviations are 334 euro and 849 euro), which is reassuring. The comparison between the two at the national level reveals that food-based ABSPO poverty lines are very close (and even superior) to the typical expenditure level in poorer Member States of Central and Eastern Europe, but considerably lower than them in most richer Member States of EU15. The difference in the relation across the two groups is supposedly amenable to the different points in the food expenditure distribution corresponding to nutritional food baskets' levels, which in turn affects the reference non-food share and the overall poverty line (in CEE countries the level is closer to the mean).

Figure 6.5. ABSPO poverty thresholds associated with the food-based approach by country

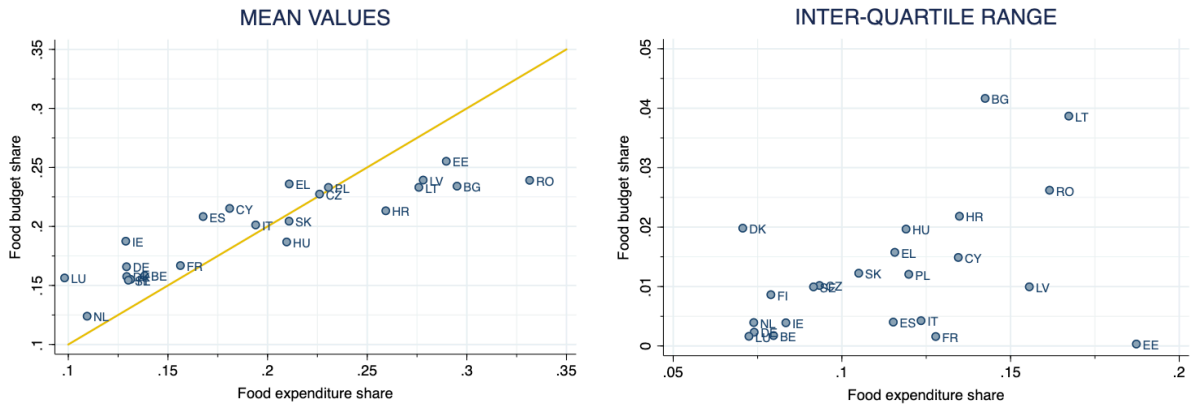


Notes: Own calculations and modelling based ABSPO nutritional food reference budgets and the 2015 wave of EU-HBS microdata. Figures denote the representative national average of equivalised poverty lines and refer to 2020.

For a better understanding of the workings of the food-based approach, it is also worth comparing the observed food expenditure shares with the resulting food budgets shares in the resulting ABSPO poverty lines. The scatterplots in **Figure 6.6** show the cross-country relationship between these two, and reveals that the food budget share is an inelastic increasing function of the food expenditure share. The food budget share is the higher of the two in rich Member States characterised by a low food expenditure share, but falls gradually behind in poorer

Central and Eastern European countries. Intuitively, this means that a considerable part of a typical household's non-food expenditures is excluded from the poverty line in Luxembourg, while all of that (and more) are included there in Romania – in line with the highly different relative position of the reference household along the expenditure distribution in the two countries.

Figure 6.6. Relationship between observed food expenditure shares and ABSPO food budget shares



Notes: Own calculations and modelling based ABSPO nutritional food reference budgets and the 2015 wave of EU-HBS microdata. Figures denote the representative national average and inter-quartile range of expenditure ratios and budget shares.

CHAPTER 7.
Thematic aspects of EU-wide absolute poverty measurement

This chapter explores the most relevant thematic and methodological aspects of absolute poverty measurement in greater detail. Many of the related issues have already been addressed from an applied perspective in Chapters 4, 5 or 6 during the detailed presentation of various ABSPO modelling approaches. However, the cross-cutting character of certain modelling components calls for a more comprehensive discussion and analysis. In particular, we focus on five key areas that are central to the ABSPO measurement framework: food reference baskets, pricing strategy, equivalence scales, the definition of the welfare indicator, and the quality and comparability of survey data.

The objective of this chapter is therefore twofold. First, to offer a broader perspective of the potential methods, available tools, various best practices available to absolute poverty measurement, and provide ample context to better understand and critically assess the methodological choices made during ABSPO implementation. Second, to highlight the (potential) implications of these choices on the resulting poverty estimates, and assess the robustness of ABSPO outcomes. As such, the current chapter contains mainly supplementary material, and may be skipped by readers more interested in the results, rather than the methodologies, of ABSPO measurement.

The initial sections of the chapter focus on the design of food reference baskets and the use of price information used for the purposes of translating them into appropriate minimum food budgets. Section 7.3 discusses the question of equivalence scales, while Section 7.4 focuses on the appropriate definition of the welfare indicator. The last section concludes with a discussion of the applicability and compatibility of European survey data for the purposes of cross-country comparable absolute poverty measurement.

7.1. Design and specification of food reference baskets

Food reference budgets play a central role in most absolute poverty measurement frameworks. They feature predominantly in all three ABSPO measurement approaches, and their specification has a direct effect of households' minimum financial needs and the resulting ABSPO poverty thresholds. Constructing food reference budgets requires two main inputs: a set of illustrative food reference baskets with detailed lists of items and corresponding quantities, and a set of prices that adequately reflects the minimum costs of obtaining them in a given geographical location. This section focuses on the issue of food reference baskets, and discusses how these may be developed in a customised and cross-country comparable way for all segments of the EU population. Moreover, the current section also presents a comprehensive set of new nutritional reference baskets derived on the basis of common European dietary reference values, country-specific food consumption habits and optimisation techniques. These are used for ABSPO measurement in the survey-based and food-based modelling approaches, but are also applicable for broader social policy analysis.

7.1.1. Existing cross-country harmonised food reference baskets

Most existing food reference budgets have been developed at the national level and are not comparable or compatible enough for the purposes of sound international analysis.[140] In the EU, the only available cross-country comparable food reference budgets are the ones produced by the ImPRovE/EURB project (Goedemé, Storms, Penne, et al., 2015). These represent the minimum needs of selected individual and household types for healthy and varied eating in all EU Member States (except for Ireland). In absence of a common European standard at the time, the ImPRovE/EURB baskets were based on national food-based dietary guidelines (FBDGs). These guidelines aim to

[140] Storms et al. (2014) provide a general overview of national RBs in the EU that have been constructed over the past 40 years, and highlight the lack of common concepts, definitions and procedures available to practitioners until recent times.

inform the general public about the main requirements and attributes of healthy eating based on local food consumption and prevailing dietary habits. Using this information, local country teams produced illustrative bundles of popular food items by relying on mixed set of inputs and procedural guidelines provided by the project core team. The resulting ImPRovE/EURB food baskets have since been used in a number of international social analyses (Penne et al., 2016; Decerf, Van den Bosch, and Goedemé, 2017; Penne, Cornelis, and Storms, 2020).

As both locally valid and cross-country comparable food baskets, the ImPRovE/EURB outputs represent useful building blocks for ABSPO poverty measurement. In particular, they serve as direct starting points for the implementation of the reference budget-based modelling approach in selected pilot countries (see Chapter 4 for more details). However, since the methodological and data requirements of illustrative reference budget construction and representative poverty measurement differ in substantial ways (see Sections 2.3 and 4.1 of this Report for more details), it is important to critically assess the applicability of ImPRovE/EURB reference budgets for ABSPO implementation of survey-based statistical approaches.

The main comparability issue surrounding the ImPRovE/EURB food baskets stems from their reliance on existing national food-based dietary guidelines. These latter exhibit substantial variation across Member States in terms of format, scope, and level of detail. The database of European FBDGs, compiled previously by the JRC, highlights particular divergence across national approaches in relation to the targeted population segment (i.e. adults and/or children), character type (i.e. quantitative and/or qualitative guidelines), level of granularity (i.e. specific or generic recommendations) and thematic scope (i.e. ecological sustainability and/or lifestyle considerations).[141] Most national FBDGs are not specific enough to reliably inform reference budget practitioners on exact technical choices (such as particular food items and daily reference quantities). Moreover, the various recommendations themselves are also liable to change from one country to the next, especially as far as meat and alcohol consumption are concerned.

The resulting unevenness of the ImPRovE/EURB food reference baskets is acknowledged by the ImPRovE/EURB project owners themselves (Goedemé, Storms, Penne, et al., 2015). Their empirical analysis reveals inconsistencies regarding basket structure and composition, minimum quantities and caloric patterns, as well as horizontal differences between men's, women's and children's reference diets. Supplementary ABSPO analysis documents further cross-country divergence in terms of reference prices as well as the alignment of reference baskets with households' observed food consumption patterns. These issues raise doubts about the usefulness of ImPRovE/EURB reference budgets for the purposes of consistent absolute poverty measurement at the international level.[142]

A further issue concerns the relative generosity of ImPRovE/EURB food budgets when compared with households' observed food expenditures as reported in the EU-HBS. The comparatively high budget standards represented by the ImPRovE/EURB outputs may be driven by the selection of controversial basket item (such as caviar, spirits or candies), large reference quantities or high reference prices, but reliability concerns about budget survey data may equally be a factor (Sekula et al., 2005; Smith, Dupriez, and Troubat, 2014). **Figure 7.1** below shows the monthly ImPRovE/EURB budgets for adult men in 2015, and highlights their substantial cross-country variation, in terms of both overall levels (ranging between 126 euro in the Czech Republic and 372 euro in Denmark) and the relative share of the budget component for healthy eating (ranging between 55% in Luxembourg and 90% in Slovakia). It also shows the extremely high food deprivation rates they imply when compared with EU-HBS data.

[141] Box 7.1 of this Report provides an in-depth discussion of the main features of national FBDGs across the EU, and considers current and expected state of their harmonisation. More information on the European Commission's database of national FBDGs are available here: https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/topic/food-based-dietary-guidelines-europe_en.

[142] This is also one of the reasons why the updating of the original ImPRovE/EURB reference baskets was considered an important element of ABSPO reference budget development in the budget-based modelling approach. For more details, see Sections 4.1 and 4.2 of this Report.

Box 7.1. Harmonised food basket development based on national dietary guidelines

Food-Based Dietary Guidelines (FBDGs) are science-based national recommendations for healthy eating aimed at the general public. Expert consultations by the World Health Organisation and the UN's Food and Agriculture Organisation established the methodological basis and best practices for their development during the 1990s (WHO/FAO, 1998). According to these, FBDGs shall take into account not only people's biological needs and customary dietary patterns, but also the broader ecological, socio-economic and cultural context when formulating dietary recommendations for a healthy diet. In theory, FBDGs therefore meet the basic requirements to serve as direct foundations for reference basket development. Indeed, many national and international projects, including the ImPRovE/EURB ones, rely on them for the specification of minimum food reference baskets.

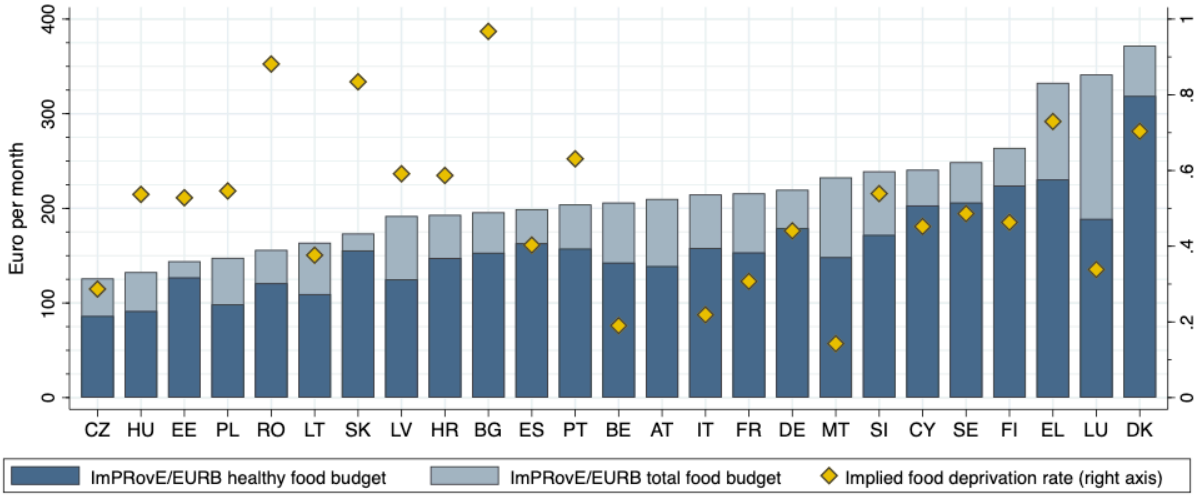
Despite their popularity, the usefulness of FBDGs for reference budget development and poverty measurement is rather limited. The main issue is that most national FBDGs are not granular enough for the particular needs of piecemeal modelling: they often refer to broad food categories (rather than specific reference items) and feature qualitative recommendations (rather than exact quantitative guidance). As a result, a wide range of differently structured or specified reference baskets may be consistent with a given set of guidelines.

Additional issues emerge in the cross-country context related to the lack of harmonisation between Member States. In 2010, the European Food Safety Authority (EFSA) explored the possibility of developing a set of common European guidelines aimed at the whole EU population. The inquiry concluded that European FBDGs do not represent a feasible solution due to considerable national differences in diet-related public health considerations, nutritional habits, food availability as well as harmonised consumption data (EFSA, 2010). EFSA, however, did provide a set of common principles for harmonised definitions and common procedures to be used at the national level.

In 2018, the JRC, in collaboration with the Directorate-General for Health and Food Safety and the High-Level Group on Nutrition and Physical Activity, assessed the implementation of these principles and compiled a comprehensive database of national FBDGs for EU and EFTA countries. These data reveal considerable differences in the structure, scope and functional role across national FBDGs. Cross-country divergence is particularly large in relation to both recommended quantities (e.g. recommendations for meat are twice as high in Eastern and Southern Member States than in continental Europe), and measurement units considered (e.g. maximum energy intake, tablespoons). Recommendations for alcohol and sugary products vary considerably (i.e. from avoidance to toleration to recommendation), and exemplify the influence of cultural determinants of these guidelines. These inconsistencies between national FBDGs likely compromise the cross-country comparability of food reference baskets developed on their basis, as evidenced by notable differences in quantities and basket composition of ImPRovE/EURB food reference baskets (Goedemé et al., 2015).

The harmonisation of national FBDGs is not expected in the foreseeable future. The recent publication of common European Dietary Reference Values (DRVs) by EFSA, however, represents a potentially important step in this direction and can pave the way for further harmonisation efforts (EFSA, 2017). For these to succeed, significant convergence would need to take place in the way national governments perceive their diet-related public health mandate, especially as far as public education, ecological balance or environmental sustainability are concerned. Given the conditionality and time-consuming character of any such convergence process, it is nevertheless preferred to base cross-country comparable food reference baskets for absolute poverty measurement directly on common European DRVs rather than national FBDGs.

Figure 7.1. Food reference budgets for single adult men by the ImPRovE/EURB research project



Notes: Figures represent monthly food reference budgets of single working-age adult men produced by the ImPRovE/EURB project as of 2015. Healthy budgets concern reference diets defined at the individual level, while total budgets also include social functions of food and food-related household items (such as kitchenware). The food deprivation rate is calculated by comparing adults' healthy food budgets with households' equivalised expenditures on food using EU-HBS data from 2015 (or 2010 for Malta, Portugal and Slovenia), and identifies the share of those households where this latter is lower. Data are completely missing for Austria, the Netherlands and Ireland.

The lack of harmonised structure of the ImPRovE/EURB food baskets represents another limitation for international poverty measurement. Given that most available price statistics feature either well-defined representative items or generic COICOP-based product categories serviceable reference baskets should also be defined in similar terms. The ImPRovE/EURB food reference baskets, however, represent an impractical middle ground between these two solutions, without readily available survey-based price information for monetizing them. Matching basket items to either sampled products or COICOP categories is a possibility, but this mapping is not always possible or straightforward.[143]

7.1.2. The development of new nutritional food baskets for consistent measurement

For these reasons, we employ a different strategy for food budget modelling as part of the survey-based and food-based approaches to ABSPO measurement. This novel method places equal and simultaneous emphasis on the cross-country comparability, local validity and straightforward pricing of the resulting food baskets. In particular, we rely on exact dietary reference values for different individual types across a large number of nutrients to determine adequate minimum quantities associated with any given basket structure. For item selection and basket composition, we target households' observed food consumption habits to ensure the local validity of the resulting food baskets. Finally, we specify basket items in terms of generic COICOP categories at the 5-digit level in order to secure straightforward pricing based on available data sources. Based on these sources and constraints, it is possible to develop food reference baskets that represent affordable, accessible and healthy diets in a consistent and comparable manner by age groups and gender types across the EU.

For ABSPO measurement, we implement the above procedure featuring common European dietary reference values, survey-based estimates of national food consumption habits, and statistical optimisation based on linear programming. We review each of these components in turn.

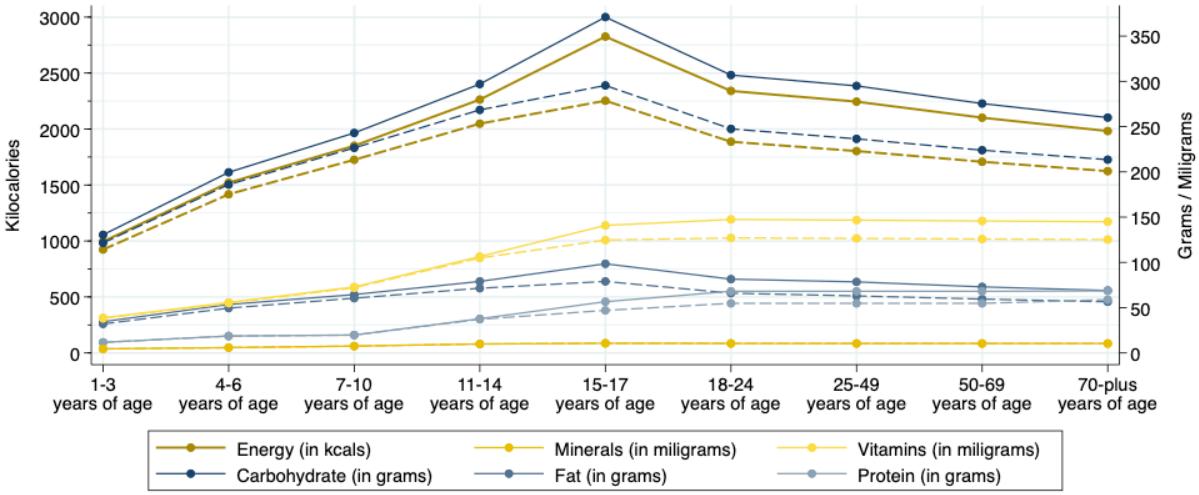
[143] For more details about available price information and the matching of food items across various price collection formats, see Section 7.2 of this Report.

Common European dietary reference values

The nutritional foundations of the new ABSPO food reference baskets are provided by common European dietary reference values (DRVs) compiled by the European Food Safety Authority (EFSA, 2017). The DRVs are an umbrella term for a comprehensive set of reference values – such as population reference intakes (PRIs), average requirements (ARs), adequate intakes (AIs) and reference intake ranges (RIs) – for macronutrients. These values indicate the daily nutrient amounts associated with healthy individuals' regular diet by age and gender. DRVs differ from FBDGs in that they refer directly to nutrients, are quantitative in character and specific to well-defined individual types. The EFSA reference values, in particular, are the common European synthesis of recently published thematic scientific opinions across 34 different nutrients (EFSA, 2017).

Figure 7.2 presents the corresponding daily reference quantities by nutrient category across 18 different age and gender combinations. It shows that one person's dietary needs can be very different from those of another: daily reference intakes typically increase substantially during childhood, peak in early adulthood, and decrease somewhat in later years - with men's values (solid lines) frequently surpassing those of women (dashed lines) throughout the life cycle. The graph also shows that the reference profiles themselves are equally variable across different nutrients: some peak at a younger age (such as energy and carbohydrates), some even out in old age (such as vitamins or protein), while others remain relatively stable during a person's lifetime (such as minerals). This suggests that the development of nutritionally adequate food reference baskets for the whole population requires the simultaneous modelling of many different individual types.

Figure 7.2. Dietary reference summary values provided by the European Food Safety Authority



Notes: The figures represent the total sum of corresponding daily reference intake values by main nutrient category based on EFSA (2017). The featured reference values for each nutrient are based either on the average requirements or the mean of the corresponding reference intake range. The markers connected by dashed and solid lines indicate women's and men's values, respectively.

For ABSPO implementation, we simultaneously consider all 34 nutrient categories with available EFSA reference values. Among these, we disregard certain nutrients that are not primarily acquired through food ingestion (such as vitamin D or fluoride), or not featured in standard databases on food nutrition (such as choline, molybdenum or selenium). At the same time, we introduce auxiliary upper limits for selected over-consumed nutrients such as saturated fats, sugar and salt, using recommendations from the World Health Organisation (2015) and the German Society for Nutrition (2016). The resulting set of 39 common quantitative attribute provide a comprehensive nutritional representation of a healthy diet, and ensure that, conditional on individuals' age and gender, all newly-developed ABSPO food baskets have identical nutritional profiles and are fully comparable across EU Member States. For more information on the nutritional foundations of the ABSPO food baskets, see Menyhert and Thiele (2022) or study the detailed list of targeted nutrients and associated reference values in Annex B of this Report.

National food consumption patterns

Nutrition-based food reference baskets are usually derived in two different ways. The first of these involves searching for the most affordable basket combination that corresponds to the targeted nutritional profile. This is the approach followed by Allen (2017) to produce subsistence-level food baskets for the purposes of international poverty measurement. While potentially delivering comparable outputs across a wide range of developed and developing countries, price-based optimisation is unlikely to yield acceptable results in the European context: the resulting food baskets typically include a limited number of food items, are at odds with households' observed consumption habits and perceived minimum needs, and do not represent a healthy or varied diet.[144]

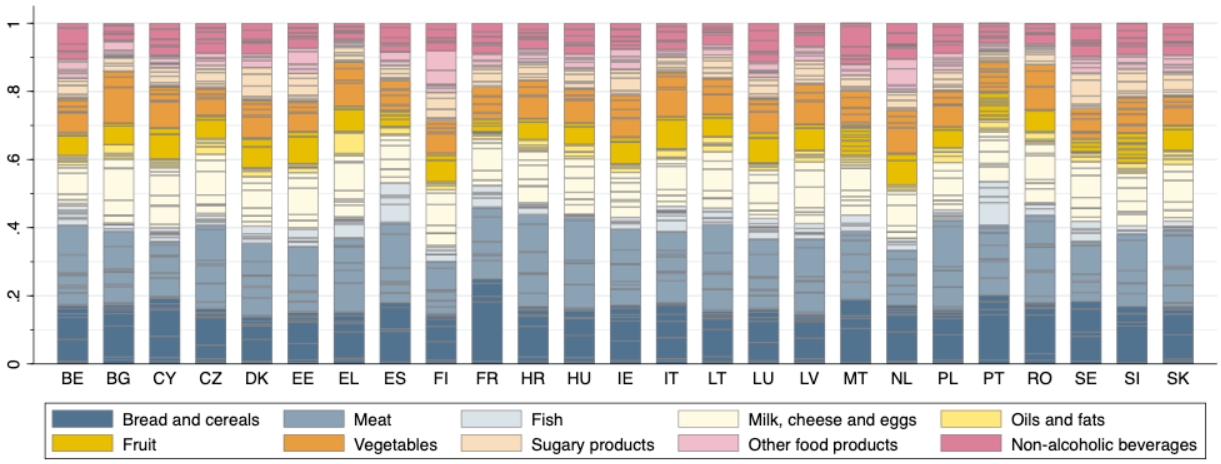
For these reasons, we follow the alternative strategy of using initial food basket allocations and distance-based optimisation for ABSPO measurement. In this setup, optimal food baskets are those that deviate the least from the respective initial allocation while simultaneously meeting all pre-determined nutritional requirements. In particular, we specify the starting baskets to reflect European households' national food consumption patterns. This ensures that the resulting nutritional food baskets deviate from these latter only to the extent that is necessary for becoming compatible with healthy eating. (See Box 7.2 on the budgetary effects of featuring a comprehensive set of nutritional targets rather than caloric requirements only for food basket development.)

Using EU-HBS microdata, we have undertaken a detailed analysis of European households' food consumption habits in order to assess the similarity of these between and within Member States. The recently released 2015 survey wave offers the first opportunity to study food consumption patterns both directly (through purchased quantities) and indirectly (through monetary expenditures) according to the European classification of consumption by purpose (ECOICOP) at the 5-digit level. These include 55 food and 6 non-alcoholic beverage categories under 10 broader headings (at ECOICOP 4-digit level). The detailed result of this analysis is presented in Menyhert and Mina (2022), but many of the relevant findings are summarised in **Figure 7.3** below. It presents the observed structure of households' food consumption across 5-digit ECOICOP categories and 4-digit ECOICOP headings by country, and reveals considerable variability across Member States. Differences in national dietary habits are most obvious in relation to meat and fish consumption, where relative consumption shares vary between 15.3% and 27.8%, and 0.9% and 12.7% percent, respectively). While much of the cross-country variation at the broader (i.e. ECOICOP 4-digit) level can be attributed to regional dietary clusters (representing Central and Eastern, Northern, Southern and Western Europe), heterogeneity at the more granular ECOICOP 5-digit level remains largely idiosyncratic.

Our analysis also shows that food consumption patterns are relatively stable within countries. Based on EU-HBS microdata, we find little evidence that low-income households allocate a lower fraction of their food spending to fruit and vegetables consumption, or that family status and household structure have a strong influence on one's diet – as suggested by the relevant literature (Kirkpatrick and Tarasuk, 2003; Thiele and Weiss, 2003; Daniels and Glorieux, 2015; Pechey and Monsivais, 2016). Relative to the extent of cross-country dispersion presented in **Figure 7.3**, our calculations reveal substantially smaller differences within countries. Regional and urban-rural gaps in food consumption habits tend to be marginally higher than differences along socio-demographic lines, particularly in a small number of geographically and culturally diverse Member States such as France, Italy or Spain.

[144] Using price-based optimisation, Allen (2017) produces minimum food baskets that include up to eight generic (such as fish or oil) or specific (such as maize or cassava) food items by country. These baskets tend to correspond with European households' dietary habits at broad (3-digit) level of COICOP classification, but either lack variety and representativeness (if specific) or become difficult to price appropriately (if generic).

Figure 7.3. Structure of households' food consumption patterns by country



Notes: Figures represent the average share of households' food expenditures across 55 food and 6 non-food categories defined (at the ECOICOP 5-digit level) under 10 broader headings (at ECOICOP 4-digit level) by country. They are based on EU-HBS microdata from the 2015 wave, except for Malta, Portugal and Slovenia for which data from the 2010 wave were used (as the most recent available source). Figures for Austria and Germany are missing due to missing data in the standard EU-HBS files.

These findings suggest that the EU-wide development of comparable food reference baskets should proceed at the country level, where observed consumption habits tend to be rather similar and representative of broad segments of the national population – including low-income and financially constrained households. For this reason, we develop separate sets of age- and gender-specific nutritional food baskets for each Member State, using nationally representative food consumption shares at the 5-digit ECOICOP level as inputs.[145] This ensures that the resulting outputs not only share the same structure and nutritional foundations across all EU Member States, but also enjoy considerable empirical validity at the local level.[146]

Optimisation procedure based on linear programming

Since observed consumption patterns are not fully aligned with individuals' dietary requirements, choosing among the potential set of food reference baskets with similar nutritional profiles requires the use of some optimisation algorithm. For ABSPO measurement, we rely on a linear programming procedure developed and implemented by the ife Institute of Food Economics in Kiel. The underlying optimisation technique has previously been used in a series of nutritional studies (Conforti and D'Amicis, 2000; Darmon, Ferguson, and Briend, 2002; Maillot et al., 2008; Masset et al., 2009), and is increasingly recognised as an effective and transparent tool for developing food-based dietary guidelines and reference baskets (Allen, 2017; Schäfer et al., 2020). The aim of this method is to solve a constrained optimisation problem that features a linear system of restrictions and a number of decision variables (Vanderbei, 2015).

[145] To focus on food item quantities, we rely on item-level data from 2015 on national average prices provided by Eurostat. Based on evidence from alternative pricing data sources, and in line with other elements of the ABSPO pricing strategy, we specifically focus on the 25th percentile of the relevant price distribution to map from expenditure levels to consumption quantities. For more information on food prices, see Section 7.2 of this Report.

[146] It is worth noting that the proposed basket structure at the ECOICOP 5-digit level features generic food categories (such as cheese, poultry meat or fruit) that leaves ample scope for potential further elaboration, customisation or refinement according to particular local needs or features. Given the related conceptual challenges and technical (or data related) difficulties, especially in the international context, this is not considered a priority for ABSPO measurement and is not pursued any further in this Report – despite the potential advantages for nutritional optimisation and adequate pricing. For more details, see the current and next sections of this Report.

Box 7.2 The effect of healthy diet requirements on minimum food budgets

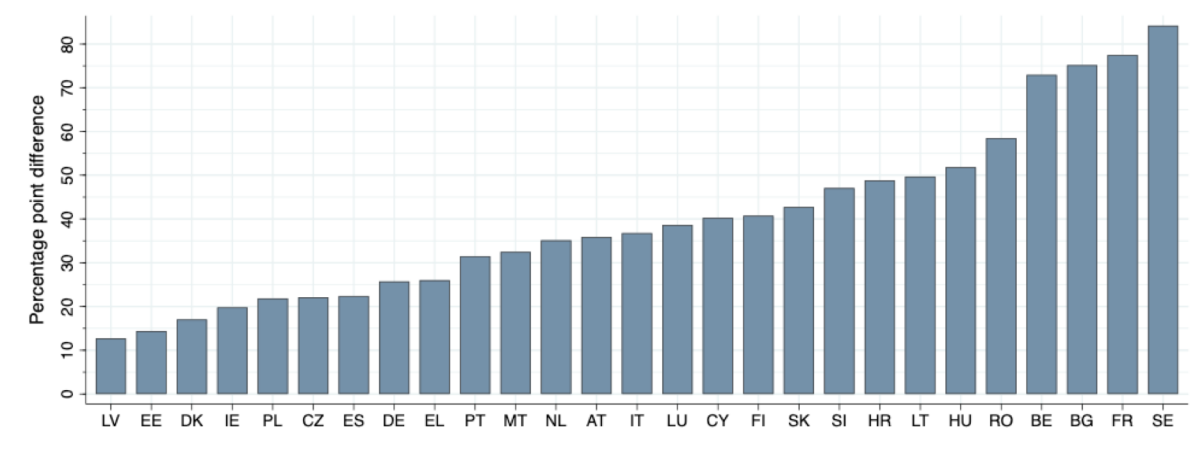
Most reference budgets are simultaneously normative and descriptive in character (Fisher, 2007; Warnaar, 2009). The relative balance between these two aspects tends to depend equally on the strategic purpose of reference budgets, as well as the data sources used for their development (Deeming, 2011). Despite the considerable variability characterising these domains, the alignment of budgets standards with actual affordable consumption patterns is an important source of their validity (Storms et al., 2014).

In case of food reference budgets, existing approaches tend to rely on observed consumption patterns or nutritional guidelines for healthy eating (see Sections 2.3 and 7.1 of this Report for further discussion). To our best knowledge, no systematic analysis of reference budgets has focused on the effect of healthy eating on households' minimum financial need. Available empirical evidence suggests that healthier diets are more costly than less healthy ones, but the source of the cost difference often remains unexplained (see Rao et al. (2013) for a systematic cross-country review and meta-analysis).

The procedure used to develop new ABSPO nutritional food reference budgets allows us to investigate the effect of healthier diets on the corresponding minimum budgets. In particular, we can compare the resulting nutritionally optimal reference budgets with those (appropriately scaled) variants that represent the same calorie content but remain fully aligned with observed consumption patterns (for a more detailed discussion, see the main text in Section 7.1 in this Report). The resulting budget differences then reflect the additional cost of adjusting one's consumption structure to simultaneously meet all EFSA dietary requirements for healthy eating.

The figure below shows the additional budget needs associated with healthy eating by Member State for single working-age men (aged 30-49) using Eurostat national average prices from 2018. The extra cost of a healthy reference basket amounts to 58 euro per month on average. In proportionate terms, this represent an increase of 13-84 percentage points over similar reference budgets based on observed consumption structure. The main source of this difference is the higher share of relatively costly and less nutritious items (such as fruit, fish or vegetables) in healthy baskets, and the over-representation of relatively cheap, high-calorie but less healthy items (such as sugary or bakery products) in actual consumption budgets. Cross-country differences in retail price structures are a further important consideration.

The additional cost of healthy nutritional food budgets



Notes: Own calculations based on EU-HBS microdata, different ABSPO nutritional food baskets and harmonised national average price statistics by Eurostat.

This explorative analysis suggests that imposing comprehensive set of nutritional targets leads to non-negligible increases in the level of minimum food reference budgets. This finding may help better understand and contextualise existing reference budget estimates for food at the national and international level.

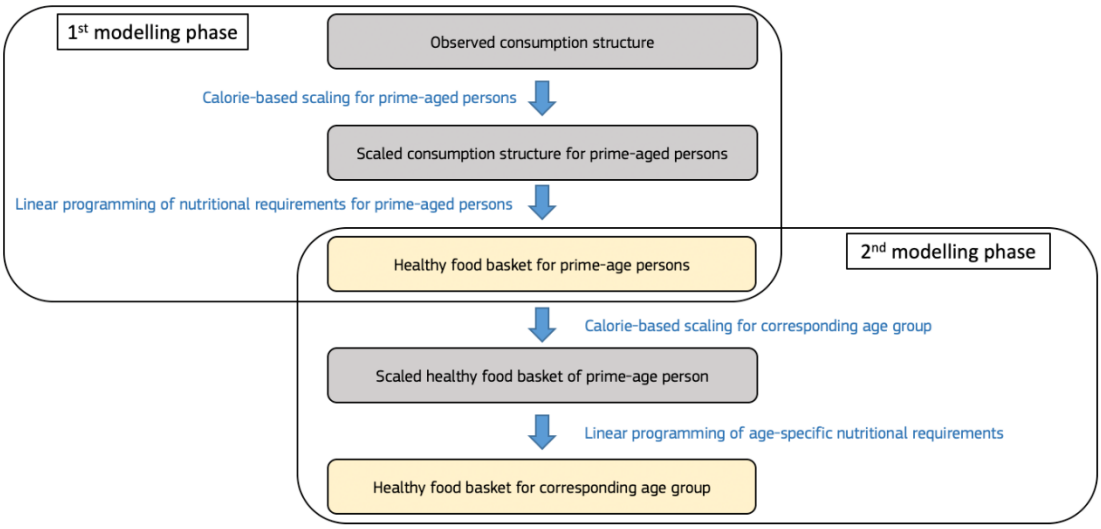
In the ABSPO context, the linear programming model seeks to identify those basket combinations that deviate as little as possible from observed consumption patterns while simultaneously meeting the pre-determined nutritional targets and constraints associated with any given age and gender category. To determine the nutritional profile of any food basket, we rely on the German Food Composition Database (GFCB, Max Rubner-Institut, 2021) that contains comprehensive nutritional information on close to 15000 food items. Since the food items featured in the GFCB are well defined, we used the most commonly consumed articles in each 5-digit ECOICOP category as representative items for modelling purposes.[147]

The goal of the optimisation procedure then is to find the food reference basket that simultaneously meet all nutritional targets while deviating as little as possible from the observed structure of households' food consumption. The implementation involves two modelling stages. In the first stage, we focus on prime-aged individuals (aged 25-49) of both sexes, and scale their input consumption structure in a proportionate manner to meet the corresponding EFSA calorie requirements. This is a necessary standardisation step when working with a linear objective function that depends on absolute deviations between observed and selected food quantities. Following the goal programming approach proposed by Anderson and Earle (1983), the selected "total departure of mean food intake" (TDMI) objective function is given by

$$\mathrm{TDMI}(x_1, x_2, \dots, x_n) = \sum_{i=1}^{n} |m_i - x_i| / m_i \qquad \text{(Eq. 7.1)}$$

where m_i and x_i represent observed and chosen food quantities of ECOICOP category *i*. Implementing a simple search algorithm that minimises total departure conditional on the nutritional and dietary constraints yields the optimal nutritional food baskets for prime-aged men and women separately for all EU27 countries.[148] The second modelling stage repeats the same scaling and optimisation steps, with the exception that it uses the first-stage results (i.e. the optimal prime-aged baskets) as inputs for the basket optimisation of non-prime-aged individual types. This sequential approach ensures that the structure of the resulting food baskets is sufficiently similar across all age and gender categories within a country, despite the differences across the individual dietary profiles. **Figure 7.4** presents a schematic overview of the optimisation procedure and highlights the main modelling steps. For more details on nutritional food basket development, see Menyhert and Thiele (2022).

Figure 7.4. *Schematic overview of ABSPO nutritional food basket development*



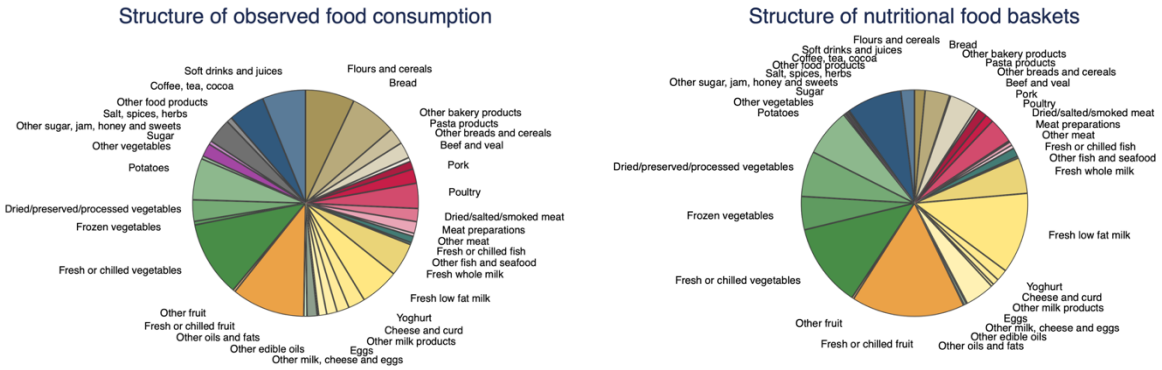
[147] See Annex B for more details about the selected food items for each ECOICOP category.

[148] Beside the EFSA nutritional requirements, some additional constraints and limits were imposed on specific food categories (such as fruits and vegetables, water, eggs, coffee and tea) to ensure conformity with the relevant recommendations by the German Society for Nutrition (such as no caffeine consumption for children below 14 years of age). Further restrictions include the occasional use of relative or absolute limits to ensure positive and reasonable loadings for all ECOICOP categories. In the second modelling stage, some additional thresholds were also introduced to limit the potential age-specific deviations from the prime-ages basket structure. For more information on the methodology of ABSPO nutritional food basket development, see Menyhert and Thiele (2022).

7.1.3. Presentation of ABSPO nutritional food baskets

In this sub-section, we present the structure and main features of the resulting ABSPO nutritional food baskets. **Figure 7.5** contrasts the structure of European households' observed food consumption (left panel) with that of the new nutritional food baskets of prime-aged men and women (right panel). It reveals that healthy reference diets are considerably different from those typically consumed: the nutritionally optimal share of bakery products and soft drinks (8.6% and 3.1%, respectively) is significantly lower than their actual consumption share (16.8% and 9.8%, respectively), while the recommended ration of dairy products (19.5%), fruits (13.9%) and vegetables (24.8%) is more 1.5 times higher than the respective observed allocation of these.[149]

Figure 7.5. Composition of households' food consumption and ABSPO nutritional food baskets



Notes: The relevant quantity shares are calculated as the simple average of the relevant national figures across EU Member States. The structure of observed food consumption was derived on the basis of households' average food consumption across 55 food and 6 non-food categories at the ECOICOP 5-digit level, using EU-HBS microdata from 2015 (from 2010 for Malta, Portugal and Slovenia; excluding Austria and Germany). The ABSPO food basket shares were calculated using the average of prime-age men's and women's baskets in all 27 EU countries.

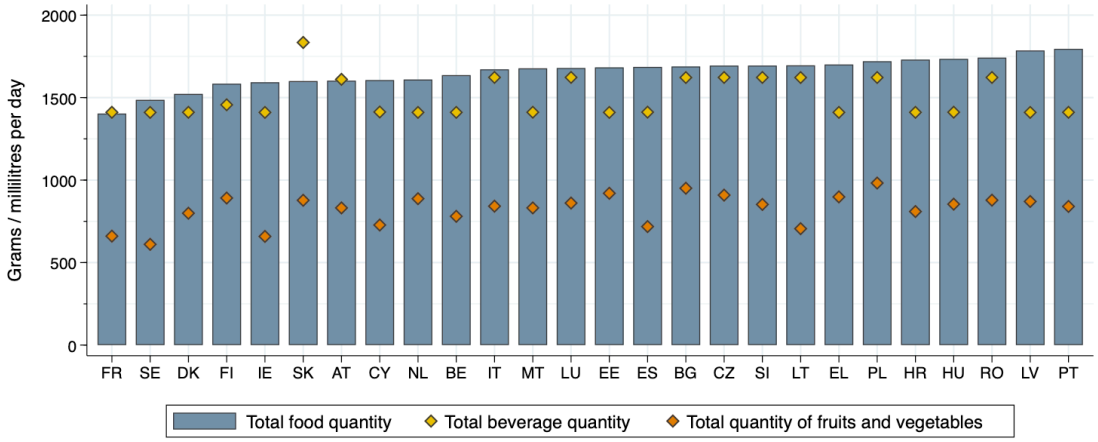
In addition to their nutritional foundations and healthy character, the main appeal of the ABSPO nutritional baskets comes from their cross-country comparability. This is reflected in the remarkable similarity of the level and structure of reference food quantities across Member States. **Figure 7.6** shows that total daily basket quantities for food among prime-age adults amount to 1655 grams on average, and vary between 1403 grams (in France) and 1796 grams (in Portugal). This variability is considerably smaller than the one observed in relation to the mixed-method food reference baskets produced by the ImPRovE/EURB projects or used for the ABSPO budget-based approach.[150] Moreover, in case of ABSPO nutritional baskets, we know that the aforementioned quantity variations are mostly systematic, and stems from differences in national food consumption patterns. In particular, **Figure 7.6** indicates that the overall size of the food basket strongly correlates with the quantity share of low-calorie basket items (such as fruits and vegetables). It also shows that total daily basket quantities for non-food (i.e. beverage) items are broadly similar to food quantities, and highly stable across Member States (i.e. 1411 and 1622 milliliters per day).

Given the structural similarities of ABSPO nutritional food baskets across Member States, one may wonder the extent to which they retain their national character. Imposing a common set of nutritional constraints is bound to eliminate some of the divergence in food consumption patterns across countries – especially if national dietary patterns do not conform to a healthy and balanced food regime. Statistical analysis nevertheless shows that the resulting nutritional baskets preserve a large part of their national character: the cross-country correlations

[149] See Box 7.2 of this Report for a detailed assessment of the budgetary effects of this re-allocation.
[150] The relevant ImPRovE/EURB baskets for a typical adult person weigh between 1584 grams per day (in the Czech Republic) and 2753 grams per day (in Poland), excluding non-food and liquid components. See Chapter 4 of this Report and Goedemé, Storms, Penne, et al., (2015) for more details.

between consumption item and basket item shares imply that around half of the relative differences in consumption (with respect to the EU average) is retained on the basket allocation side.[151]

Figure 7.6. Overall daily food and beverage quantities contained in ABSPO food baskets by country



Notes: Own calculations based on ABSPO nutritional food baskets. The figures refer to the average of the relevant basket quantities of prime-aged men and women in each country.

The new ABSPO nutritional food baskets therefore provide a sound basis for cross-country comparable absolute poverty measurement in the EU. They are age- and gender-specific, aligned with common European dietary requirements, representative of local and national dietary habits, and compatible with the structure of existing standard pricing sources.[152] **Figure 7.7** compares the resulting food budgets used by statistical modelling approaches of ABSPO measurement, and contrasts them with (hypothetical) ImPRovE/EURB food budgets monetised with the same national average price data from Eurostat (see the next section for more details).[153] Specifically, it shows that, for single adults, ABSPO nutritional food budgets are smaller (148 vs. 204 euro per month on average), less dispersed (23% vs. 37% coefficient of variation), and more closely aligned with purchasing power parities (90% vs. 55% cross-country correlation) than the similarly priced ImPRovE/EURB food budgets.[154] These differences reflect both the lower average weight of the ABSPO food baskets, as well as the high degree of cross-country harmonisation achieved through the use of common nutritional foundations and ABSPO modelling procedures.

The sensitivity of ABSPO poverty outcomes depends on the particular measurement approach considered. In case of the additively separable budgets of the reference budget-based and survey-based approaches, most absolute deviations in the food component would lead to relatively minor changes in the resulting poverty estimates. For example, an (equivalised) increase of 55 euro in the monthly food budgets (i.e. the average difference between the food budgets presented in **Figure 7.7**) implies a 3.5 percentage point rise in the survey-based national ABSPO poverty rates on average. The implications for the food-based poverty estimates are much larger, given the multiplicative effect of food budget differentials on the resulting overall poverty lines. In this case, the same 55 euro increase in the monthly food budgets raises the ABSPO poverty thresholds by 39%, and the

[151] The statistical association and transitive property between the input and output sides may differ considerably across food categories: for example, cross-country rankings and differences are largely retained in relation to meat consumption but abandoned for vegetables. For more details, see Menyhert and Thiele (2022).

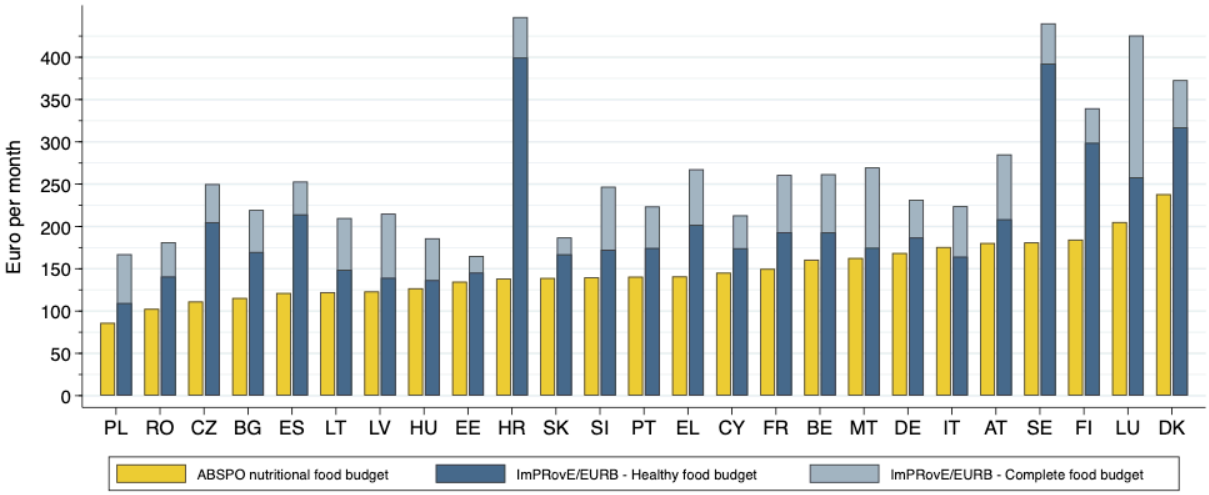
[152] The detailed contents of the new nutritional food baskets are presented in Annex B of this Report, while their specific application for ABSPO poverty measurement is explained in detail in Chapters 5, 6 and 7.

[153] The pricing of both types of food reference baskets took place at the 5-digit ECOICOP level, using the 25th percentile of the relevant price distribution featured by the Eurostat national average price (NAP) dataset. In case of the ImPRovE/EURB baskets, this specifically required a two-step prior matching procedure. First, we matched the ImPRovE/EURB basket items to the most similar reference item featured in the NAP dataset. Second, we aggregated the relevant quantities by ECOCIOP category. For more details about pricing issues, see

[154] The presented figures relate to the comparison of ABSPO food baskets with the healthy ImPRovE/EURB baskets containing only food (and beverage) items. The relevant statistics and association measures are rather similar with respect to the complete ImPRovE/EURB food baskets, as well as the updated/extended ABSPO mixed-method food reference baskets developed by the reference budget-based approach for the pilot countries of Belgium, Finland and Hungary.

associated poverty rates by 18 percentage points on average. The potential high sensitivity of absolute poverty estimates to changes in the food budget inputs calls for transparent, consistent and algorithmic modelling of individuals' minimum food needs, and highlights the relevance of ABSPO efforts made in this direction.

Figure 7.7. Comparison of similarly priced ABSPO and ImPRovE/EURB food reference budgets by country



Notes: Own calculations using ABSPO and ImPRovE/EURB reference baskets, as well as official HICP data and harmonised national average price (NAP) statistics by Eurostat. The presented food budgets are based on different baskets but are priced with the same NAP data at 5-digit ECOICOP level from 2015, using the 25th percentile of the relevant price distribution. The non-healthy food sub-component of the ImPRovE/EURB budgets were left unchanged (except for inflation adjustments). All figures refer to the budget of a single working-age adult as of 2020.

7.2. Reference budget pricing

Similar to the specification of individuals' and households' minimum needs, the pricing of reference baskets constitutes an equally important modelling aspect. Reference budgets are homothetic in the price level and change in direct proportion to them. Despite its importance for poverty measurement, the question of appropriate pricing has received relatively little attention from practitioners. Existing reference budget initiatives and poverty measurement frameworks use a large variety of different sources and methods, without offering a systematic comparison between various alternatives.

This section presents and compares different pricing sources that are used for absolute poverty measurement at sub-national, national and supra-national levels. In particular, we discuss the general features and main advantage of each source for ABSPO implementation, and present a detailed comparative analysis of all relevant price-related modelling aspects, and assess the sensitivity of the resulting poverty thresholds to particular pricing choices.

7.2.1. Different pricing sources used for ASBPO measurement

The presentation of the ABSPO data infrastructure in Section 3.3 of this Report introduced the typical pricing sources used for absolute poverty measurement in general, and listed the particular data applications in the context of ABSPO modelling. Given the extensive and peculiar information needs of reference budget pricing, none of the standard price collections aimed at CPI, GDP or PPP statistics constitute optimal inputs for international poverty measurement. Practitioners therefore need to balance the relative strengths and weaknesses associated with each potential source in terms of data scope, granularity, accessibility and international comparability, among others. It is through this lens that we review the various pricing data types below.

Small-scale price collection

Small-scale price collections represent the traditional and most accessible method of reference budget pricing. Several national and international budget standards (including the ImPRovE/EURB projects) rely on them due to low costs, straightforward implementation, and high potential for customisation in terms of location, retailer and product characteristics. The appeal of *ad hoc* price collection decreases strongly with the need for representative and/or regular measurement, as the systematic sampling across various locations and time periods can become prohibitively expensive. The availability of online prices and centralised price setting by large retailers can significantly reduce the cost of repeated price collections (e.g. through web scraping), but the limited representativeness and international comparability of hand-collected prices remain a major limitation.

National consumer price surveys

The main alternative to hand-collected prices are national price statistics collected by national statistical authorities. In the EU, the main (and sometimes sole) objective of these surveys is to provide inputs to the calculation of the national consumer price index (CPI), the European Harmonised Index of Consumer Prices (HICP) and Purchasing Power Parities (PPPs) (Eurostat, 2018a; OECD, Eurostat, 2012). The quantity and granularity of price statistics differ considerably from one Member State to the next, but all surveys employ strict sampling protocols and contain representative retail prices for a wide of consumer items at monthly frequencies in a comparable COICOP-based structure. Auxiliary information on product characteristics, sampling locations and retailer types allows for exploring the distributional aspects of retail prices across various dimensions.

The main limitations of national consumer price surveys for ABSPO measurement are threefold. First, they are not harmonised across countries and offer limited comparability for international measurement at the level of individual consumer items. Second, sampled items do not adequately reflect households' purchasing habits or indicate the minimum living costs faced by poor households. Third, microdata access is often confidential, restricted to researchers, and/or confined to specific analytical purposes. Moreover, traditional consumer price surveys are being replaced by price scanner data in a growing number of EU Member States (such as Belgium), which further limits their usefulness for EU-wide poverty measurement.

Harmonised international price data from Eurostat

Price surveys that are less granular but more comparable across countries may be more suitable for the purposes of international poverty measurement. Harmonised item-level consumer price data has been collected and analysed by Eurostat since 2008.[155] Between 2012 and 2015, some of these data were published as part of the Detailed Average Price (DAP) for up to 190 consumption items across all 27 EU Member States (Eurostat, 2016). While the DAP project was discontinued in 2015, the underlying national average prices (NAP) for around 400 different consumer items are still available for internal research purposes. The most recent waves from 2015 and 2018 include several items within each 5-digit COICOP category and differentiate along several product dimensions, such as packaging (i.e. small, large, multi-pack) or brand type (i.e. well-known brand, special brand, brandless). These product variants allow for reference budget pricing aimed specifically at poor households, and can reveal important insights about various pricing-related aspects (such as scale economies, or the price-quality relationship).

The main limitation of internationally harmonised price data for ABSPO measurement concerns the lack of regional disaggregation. This does not appear to be a major issue in the large majority of EU countries, but poses a considerable challenge for sound measurement in larger and geographically diverse Member States (such as France, Germany, Italy or Spain) where spatial variation in living costs is substantial (Pratesi, 2016; Giusti, Masserini, and Pratesi, 2017; Dapena et al., 2021). One potential solution could be to use a mixture of different sources for reference budget pricing in these countries – such as regional shifters derived from national price statistics, scanner data or indicators of purchasing power parity.[156]

[155] See the official Eurostat website for more details: https://ec.europa.eu/eurostat/web/hicp/methodology.

[156] Note that this strategy is not pursued for ABSPO implementation, for two reasons. First, among ABSPO pilot countries with relevant data availability, regional differentiation matters substantially in Italy alone. Second, the impact of using regionally differentiated food budget inputs

Retail and household price scanner data

Transaction-level data collected via bar code scanners represent a powerful emerging information source for cost of living calculations. Around one third of EU countries use such data for official CPI calculations, and several other NSIs also consider replacing or complementing traditional price collections with scanner data (Eurostat, 2017a). Their use for reference budget development was pioneered by NIBUD in the Netherlands and ISTAT in Italy (Warnaar, 2009; Grassi and Panuzzi, 2009; ISTAT, 2019). The main advantage of scanner data lies with the unparalleled richness and granularity of price information they provide at a relatively low cost and high degree of representativeness. For the purposes of international measurement, another clear advantage is the possibility to compare the price of a large number of identical or highly similar products across Member States.

Scanner data come in two different types. Retail scanner data are collected by retailers on their own product portfolio, while household scanner data feature actual transactions made by a panel of households (across different retailers). Both types have advantage over traditional price collections in terms of data volume, but household scanner data have the added benefit of containing detailed information on household characteristics. This allows for customised and/or targeted reference budget development and pricing – through a direct focus on low-income households' consumption bundles and effective purchasing costs, for example.

However, scanner data also have its drawbacks. One is the dependence on commercial providers or retailers for data access, which typically involves rather high financial cost and strict confidentiality constraints. The second limitation concerns the methodological challenges and computational needs associated with the processing and analysis of a large amount of transaction-level data. ABSPO implementation nevertheless demonstrates that it possible to develop a consistent mapping strategy that produces comparable reference prices for food budget development at the 5-digit ECOICOP level across the EU.

Detailed household budget survey data

Among potential pricing sources, one also needs to mention household budget survey (HBS) data. In several EU Member States, national files contain detailed information on both household expenditures and consumption quantities in a highly disaggregated manner (i.e. at the level of individual transactions or by 5-digit COICOP category). This makes it possible to calculate the effective unit prices paid by sampled households, either on an aggregate basis or conditional on socio-demographic characteristics. Budget survey data, despite its primary focus on the structure of household expenditures, can therefore replicate much of the richness and variability of scanner prices for the purposes of reference budget modelling.

The main limitation of budget survey data for ABSPO measurement stems from the lack of comprehensive data availability. In the 2015 wave of the EU-HBS, only 13 national files contain quantity information on households' purchases. The number is even lower in those Member States where the structure of consumption data is comprehensive and granular enough for an in-depth analysis of unit prices. Household budget survey data therefore constitute only as a secondary and complementary pricing source for ABSPO implementation.

Comparison of different pricing sources

Among the different pricing data considered, ABSPO implementation features all primary sources. The reference budget-based approach builds on small-scale price collections in ABSPO pilot countries, the survey-based approach relies on national consumer price statistics based either on traditional surveys (for Finland and Hungary) or scanner data from the GfK Household Panel (for Belgium and Italy), while the food-based statistical approach uses internationally harmonised average prices by Eurostat for consistent EU-wide food budget pricing.[157] In all cases, the selected pricing source and method are closely aligned with the main character and modelling focus of the respective measurement approach.

on the resulting (food-based) Italian ABSPO poverty estimates is rather modest: the relevant national poverty rates are separated by less than 0.3 percentage point. The gaps in regional poverty rates, however, are considerably higher and may reach up to 4 percentage points between the two measurement options.

[157] We are grateful for the AiMark Foundation for providing access to the GfK Household Panel, and providing expert analysis and processing of these data for ABSPO measurement. Particular thanks got to Günter Beck, Alfred Dijs, and Syed Muzammil Hussain for their contributions.

Table 7.1 gives a schematic overview of the various price sources used for ABSPO measurement, and shows their main features with respect to data volume and coverage, granularity and accessibility. It also reveals vast differences between pricing sources in certain domains: the number of price observations, for example, ranges between 120 in small-scale price surveys and 6 million in household scanner data. Moreover, it highlights the apparent trade-offs between measurement accuracy and measurement scope: while most national sources offer rich and highly disaggregated price information, comprehensive EU-wide measurement appears most feasible through the use of low-frequency aggregate data. This also implies that none of the pricing sources are clearly superior to all others from the standpoint of ABSPO implementation, and either of them are capable of producing appropriate reference prices for food budget development. The relative merits and disadvantages of different data sources become much more apparent in the context of a potential EU-wide roll-out and regular use of ABSPO methodologies, but the related discussion is relegated to Section 9.1 of this Report.

Table 7.1. Comparison of different pricing sources used in ABSPO measurement

	LOCAL SOURCES	NATIONAL SOURCES			INTERNATIONAL SOURCES
	Small-scale price collection	**Consumer price statistics**	**Household scanner data**	**Household budget survey**	**National average price data**
Data coverage	Belgium (2020) Finland (2020) Hungary (2020)	Finland (2015-2018) Hungary (2017, 2018)	Belgium (2017, 2018) Italy (2017, 2018)	Belgium (2016)	All EU 27 countries (2015, 2018)
Observation frequency	Singular	Monthly	Daily	Monthly	Yearly
Number of food items priced	40 - 80	150 - 180	140.000 - 200.000	407	411
Number of price observations	120 - 200	540.000 - 700.000	4 - 6 million	855.865	411
Geographical variation	Regional	Regional	Regional & area-based	Regional	No
Household information	No	No	Yes	Yes	No
Retailer information	Yes	No	Yes	Yes	No
Product characteristics	Detailed	Limited	Detailed	Limited	Limited
Transaction-level focus	No	No	Yes	Yes	No
Accessibility	N.A.	Non-commercial use	All uses	Non-commercial use	Internal use
Cost of access	Medium	Low	High	Low	Free

7.2.2. Comparative analysis of food budget pricing

After considering the main features of the different pricing sources in general, this sub-section explores the compatibility and comparability between them in the particular context of ABSPO reference budget pricing. This latter is complex procedure that involves a number of technical decisions, and the choice of pricing sources and methods can have a strong impact on the resulting reference prices and budget levels. With no established protocols or best practices available for sound budget pricing, the empirical analysis presented below makes an important applied contribution to the absolute poverty measurement literature.

Most existing budget standards aim to feature reference prices that are affordable enough but also allow for a certain degree of consumer choice and autonomy on the part of (low-income) reference households (Goedemé, Storms, Stockman, et al., 2015). Since the retail price of most consumer goods tends to vary considerably between and within countries (Reiff and Rumler, 2014), operationalising this concept for practical pricing purposes is far from straightforward. Not only does one need to select a particular price quantile, he or she also needs to determine the relevant price distribution itself. This latter may depend on the acquisition channel (e.g. retailer type), the type of consumer items considered, the socio-economic characteristics of targeted households, as well as the relevant price collection period and sampling location. Various pricing sources occupy very different points in this coordinate system, and are liable to producing different pricing outcomes.

In the context of ABSPO measurement, each modelling approach employs different pricing sources and methods to identify the appropriate reference prices. The budget-based approach employs small-scale price collections and

low-end prices (i.e. weighted average price for food items and the lowest price for residual items) in line with previous international reference budget initiatives (Storms et al., 2013; Goedemé, Storms, Penne, et al., 2015). The survey-based and food-based modelling approaches, on the other hand, use large price surveys and statistics to monetise the newly-developed ABSPO nutritional food reference baskets. In these cases, we identify the 25th percentile of the (quantity-adjusted) price distribution of all sampled items within each item category (i.e. 5-digit COICOP class) at either regional or country levels. The 25th distribution percentile is supposed to represent a sufficiently low price point in the universe of all sampled prices (across different products, locations, retailer types and time periods) that also allows for a decent amount of consumer choice. Since the alternative large-scale pricing sources employ different sampling methods – traditional consumer price statistics tend to sample the more popular (rather than the cheapest) items, while scanner data include all transactions along with expenditure weights – the focus on the 25th price percentile may be considered a generic solution to delivering affordable but not rock bottom representative price aggregates. While this approach is technically different from existing methodologies of food budget pricing aimed at specific large-scale price data, it is very similar at the conceptual level.[158]

In the following empirical analysis of food budgets, we consider all relevant pricing-related aspects of ABSPO measurement. To isolate the effect of pricing sources and pricing methods, we focus on the same food basket throughout the analysis – a generic ABSPO nutritional food basket of single adult men (aged 25-49), representing the EU-wide average of the respective 27 national baskets (as calculated at the level of 5-digit ECOICOP basket items). To ensure comparability across different prices sources (i.e. the hand-collected prices of the budget-based approach, in particular), we mapped all relevant prices to the corresponding (or most appropriate) ECOICOP category.[159] Due to limited data availability, the analysis is restricted to the ABSPO pilot countries of Belgium, Finland, Hungary and Italy, and focuses on 2018 as the reference year.[160]

Price dispersion and pricing source

We first consider the robustness of the monthly food reference budgets across pricing sources, and their sensitivity to the pricing choice. **Figure 7.8** below present the relevant budget values across different combinations of these by country, and indicates considerable variation along both dimensions. In particular, it reveals that minimum budgets, at least as far as food expenditures are concerned, are rather sensitive to the pricing assumption: on average, the reference choice of the 25th price percentile produces 30% higher and 26% lower budget levels than the 10th or 50th percentiles, respectively. Given the high dispersion of retail prices, the pricing choice turns out to be a highly important aspect of reference budget development and absolute poverty measurement – one that is comparable in importance to the definition of the underlying needs themselves.

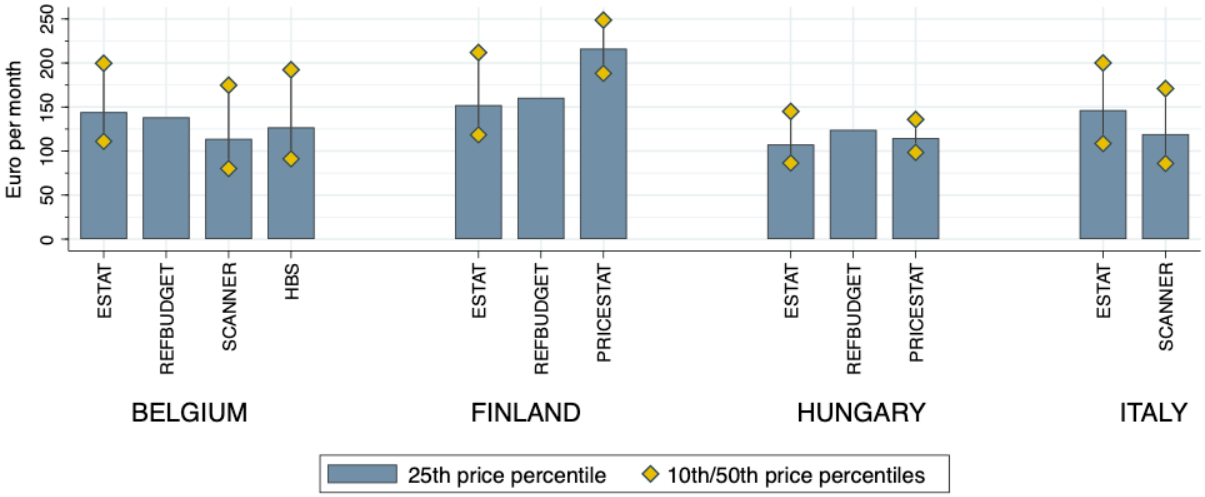
The presented food budgets are equally sensitive to the choice of the pricing source: the variants based on the 25th percentile are found in a relative range of 23, 36, 14 and 20 percentage points around the respective national means in Belgium, Finland, Hungary and Italy. Tentative evidence seems to suggest that pricing sources based on actual purchases (such as HBS and scanner price data) yield somewhat lower budget estimates than representative prices from national or international statistics. The close alignment between the resulting budgets based on the most customised and most algorithmic methods of price collection (i.e. small-scale pricing and international harmonised Eurostat prices, respectively) nevertheless is a reassuring feature from the standpoint of ABSPO measurement. Overall, no clear pattern of budget rankings emerges across the different pricing sources, and the observed degree of price dispersion also seems identical within countries. This suggests that all of the presented sources are equally suitable for poverty measurement, that the preference for one or the other should be based mostly on practical considerations (e.g. accessibility, data scope, conformity with other modelling tools).

[158] For example, the official ISTAT methodology for reference budget pricing based on retail scanner data is based on the sectoral revenue-weighted average of minimum prices collected in supermarkets, discount stores and local retailers for each food item at the province (NUTS3) level. The corresponding minimum prices are then aggregated into the level of regions (NUTS2) and macro-areas (NUTS1) using population weights. The input minimum prices used refer to lowest price collected for the most popular product variant, and are not representative of the price of the cheapest items in absolute terms. For more details, see Grassi and Panuzzi (2009).

[159] In the limited number of cases when this matching was not possible (i.e. ECOICOP categories with no matched prices), we used the average of the unit prices applied for the matched items to impute missing values.

[160] Price inputs used for the construction of ABSPO reference budgets and expenditure-based microdata from the 2016 Belgian HBS were adjusted using the Eurostat's HICP index for food items.

Figure 7.8. Price dispersion and reference price in ABSPO pilot countries by pricing source



Notes: Own calculations based on ABSPO nutritional food baskets (single adult person) and different price sources (ESTAT – Eurostat national average price data, HBS – household budget survey microdata, PRICESTAT – national price statistics, REFBUDGET – small-scale ABSPO price collections, SCANNER – GfK household scanner data). In case of REFBUDGET prices, the 25th price percentile denotes the single available hand-collected price. All values refer to 2018, after potential HICP adjustments based on official Eurostat data.

Adequacy of reference prices

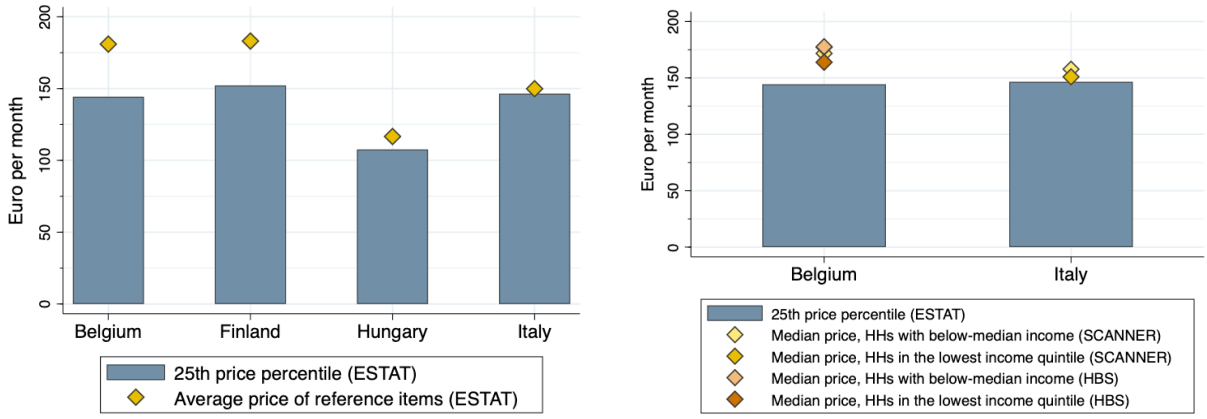
Given the considerable price dispersion discussed above, it is not straightforward to determine whether the 25th price percentile used for ABSPO measurement is appropriate in the sense of adequately matching poor households' effective purchasing costs. Using available data, we consider two alternative strategies to answer this question. The first one focuses on a sub-sample of particular consumer items that feature disproportionately in poor households' food consumption bundles. This is made possible by the differentiation in Eurostat's NAP data between more expensive (branded) and cheaper (brandless) variants of many sampled food items. The left panel of **Figure 7.9** compares the resulting food budgets for single adults, and shows that the ones based on the average price of more affordable brandless items are 15% higher on average than the respective default budgets based on the 25th percentile of all relevant item prices. Given the positive skewness of the price distribution, the relatively small difference above appears to imply that the default pricing strategy (based on the 25th percentile) ensures the affordability of such brandless baskets for the median buyer.[161]

The second strategy of verifying the adequacy of default prices is to compare them with the observed level of actual spending by low-income households. This requires joint microdata on households' income position and transaction-level food purchases, as featured by HBS data from Belgium and household scanner price data from Belgium and Italy. These sources make it possible to zoom in on the median price level paid by households in the bottom part of the income distribution in each basket item category. The right panel of **Figure 7.9** shows the resulting reference budgets and their similarity with the corresponding reference values based on the 25th price percentile of the Eurostat's NAP dataset. The figure also reveals that the effective prices paid by low-income households are rather similar across the lower income quantiles. Moreover, together with the previous figure, it equally indicates that financially constrained households pay only marginally lower effective prices than the rest of the population, and realise savings of no more than 10-15 percent in relative terms.

These analyses suggest that the 25th price percentile represents a broadly adequate price point for monetising food reference baskets for poverty measurement purposes. Given the broader availability and increased stability of these prices across different data sources, they are more appropriate for comparable international measurement than customised pricing strategies aimed at particular reference products or population segments.

[161] It is not indicated on the graph, but worth noting that the 50th price percentile produces 20% higher budgets on average than the ones based on the average price of brandless reference items.

Figure 7.9. Adequacy assessment of reference prices

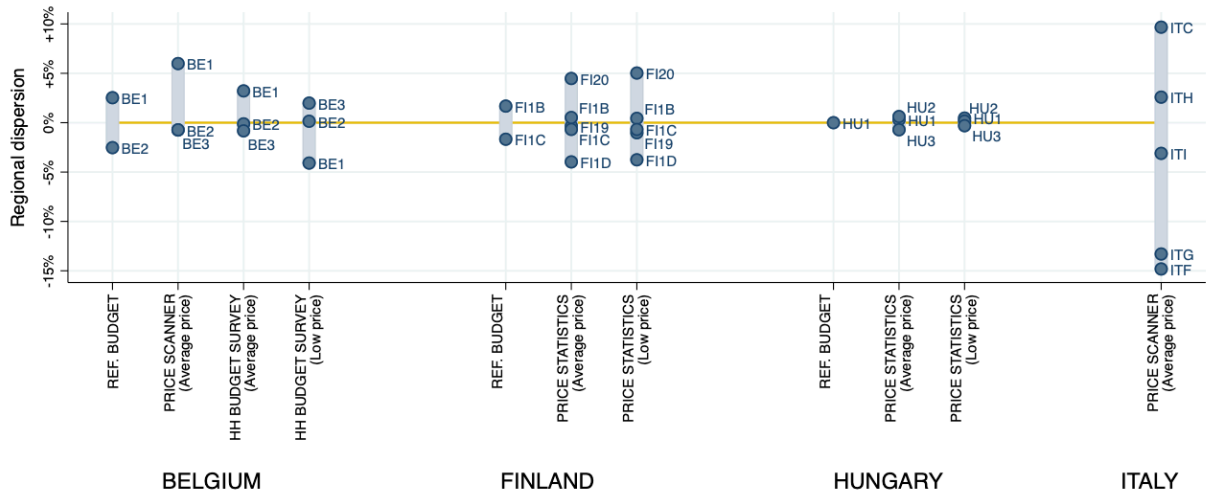


Notes: Own calculations based on ABSPO nutritional food baskets (single adult person) and different price sources (ESTAT – Eurostat national average price data, HBS – household budget survey microdata, PRICESTAT – national price statistics, REFBUDGET – small-scale ABSPO price collections, SCANNER – GfK household scanner data). All values refer to 2018, after potential HICP adjustments based on official Eurostat data.

Geographical variation in prices

One clear advantage of absolute poverty measures over relative ones is that geographical differences in minimum living costs can be directly reflected in the poverty lines. Empirical evidence on the spatial variation of consumer prices within EU countries is rather limited, but available studies reveal considerable price gaps across areas characterised by different level of economic development, population size or density (Roos, 2006; Cavallo, Neiman, and Rigobon, 2014; Reiff and Rumler, 2014; Biggeri, Laureti, and Polidoro, 2017; Berardi, Sevestre, and Thébault, 2017; Janský and Kolcunova, 2017). More recent analysis based on price scanner data confirms these findings and enables a more detailed spatial break-down of existing price differentials (Giusti, Masserini, and Pratesi, 2017; Léonard et al., 2019; Weinand and von Auer, 2020).

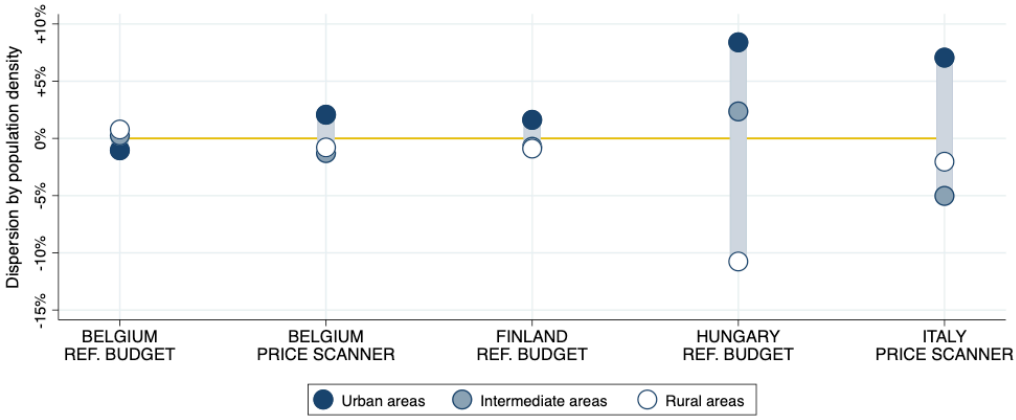
Figure 7.10. Regional variation in reference prices in ABSPO pilot countries by pricing source



Notes: Own calculations based on ABSPO nutritional food baskets (single adult person) and different price sources (ESTAT – Eurostat national average price data, HBS – household budget survey microdata, PRICESTAT – national price statistics, REFBUDGET – small-scale ABSPO price collections, SCANNER – GfK household scanner data). All figures are based on 2018 budget data, after potential HICP adjustments using Eurostat data. Reference budgets based on "low price" are monetised using the 25th percentile of the relevant distribution.

Our own comparative analysis contributes to this literature by exploring the robustness of geo-spatial price differences across different pricing sources in ABSPO pilot countries. **Figure 7.10** shows the extent of regional differences in ABSPO food budgets around the national mean across different combinations of pricing source and pricing strategy (i.e. average price and 25th price percentile, respectively). It shows that overall price differences across NUTS1 or NUTS2 regions in a country are highly robust across pricing sources. Importantly, it also reveals that small-scale, hand-collected and location-specific prices used in the budget-based approach adequately replicate the regional price patterns derived from large-scale price surveys.[162] **Figure 7.10** also indicates that the extent of regional price dispersion may be rather different from one Member State to the next: NUTS1/NUTS2-level relative differences are minimal in Hungary, less than 10% in Belgium and Finland, and as high as 25% in Italy.

Figure 7.11. Price variation by population density in ABSPO pilot countries



Notes: Own calculations based on ABSPO nutritional food baskets (single adult person) and different price sources (ESTAT – Eurostat national average price data, HBS – household budget survey microdata, PRICESTAT – national price statistics, REFBUDGET – small-scale ABSPO price collections, SCANNER – GfK household scanner data). All figures are based on 2018 budget data representing the 25th price percentile, after potential HICP adjustments using Eurostat data.

Price statistics typically do not account for settlement type, but price scanner data and small-scale price collections can offer useful insights on the extent and direction of price gaps across urban and rural areas. Based on these sources, **Figure 7.11** presents the urban-rural price wedge in ABSPO pilot countries. It reveals that urbanisation-related differences in living costs may be just as substantial as regional ones in selected Member States. In particular, urban and rural prices turn out to be very similar in Belgium and Finland, but rather different in Hungary and Italy. In these countries, living cost in urban centres are up to 12-20% higher than in intermediate or rural areas – large enough gaps to matter for absolute poverty calculations. However, since population density-related information is often inaccurately measured (through regional proxies at the NUTS3 level) and/or missing from standard price statistics, we do not take it into account for food budget development in the survey-based and food-based ABSPO modelling approaches.

Price developments over time – seasonality and yearly updating

Another potentially important pricing aspect is the price collection period. Retail prices are known to exhibit strong seasonality patterns, especially in case of food items (Valpiani et al., 2015). Much less is known about the seasonal patterns of minimum living costs, which may take into account household different consumer choice and consumption baskets during the course of the calendar year. Our own comparative analysis seems to indicate that CPI-related changes in retail prices may underestimate the true cyclicality of minimum living costs. **Figure 7.12** below shows that average food prices exhibit very little variation in time over the year (based on data from Hungary and Finland), while price estimates based on actual transaction data (from scanner prices and HBS data in Belgium and Italy) display much stronger seasonality in food reference budget levels that may approach 10% in relative

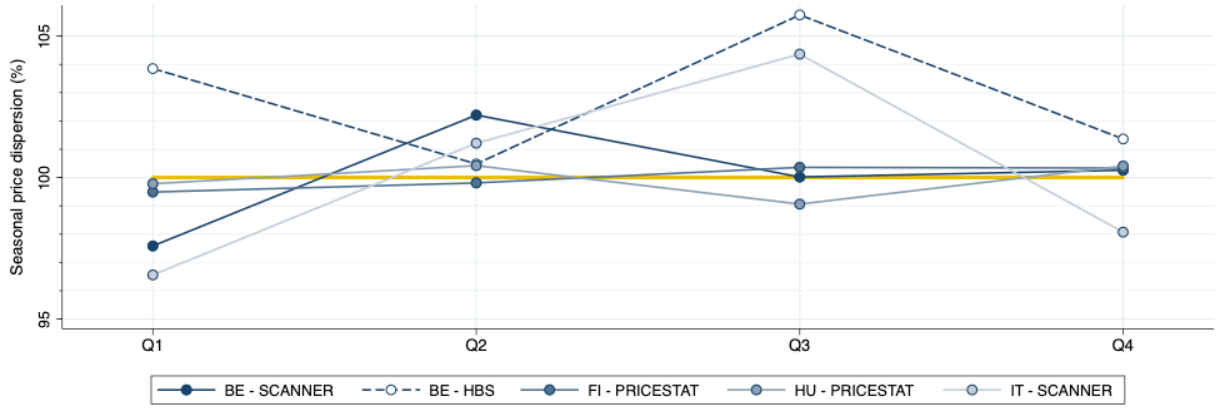
[162] It is worth noting, however, that the shape of the price distributions may be different across regions, as indicated by the reversed ranking of regional budgets based on low (25th percentile) and average prices in case of HBS-based estimates for Belgium.

terms. Since the presented price trajectories are rather variable and peak in different quarters of the year, the preferred approach to robust measurement is to consider a rich set of observations collected during the entire reference year (in case of price survey data), or do repeated small-scale collections within the year.[163]

An equally important analytical aspect concerns longer-term price changes from one reference year to the next. Different updating methods and re-pricing frequencies are possible, and these may have important consequences for the resulting poverty lines. This is a crucial measurement issue for the purposes of regular monitoring: since annual re-pricing of reference baskets is typically impractical or unfeasible (due to data limitations or other resource constraints), it is through price updating that the value of the poverty lines can be regularly adjusted and their validity over time ensured.

Price updating can take place at different levels of aggregation. One solution is to re-price at the level of individual food items or categories (e.g. 5-digit ECOICOP level), or with an even more granular focus on specific product variants included in the reference basket. An alternative method is to update prices at the level intermediate food categories (e.g. 4-digit ECOICOP level), such as breads and cereals or dairy products. The last and most straightforward option is to use official harmonised consumer price indices (HICP) from the Eurostat to update thematic parts or the overall poverty line with expenditure category-specific or overall inflation figures. The extent to which these methods produce similar results depends on the degree of representativeness of reference basket items, the horizontal variation in item specific price dynamics, as well as the alignment of the associated relative weights with the broader consumption patterns statistics offices use for CPI calculations.

Figure 7.12. Seasonality of reference prices in ABSPO pilot countries by pricing source

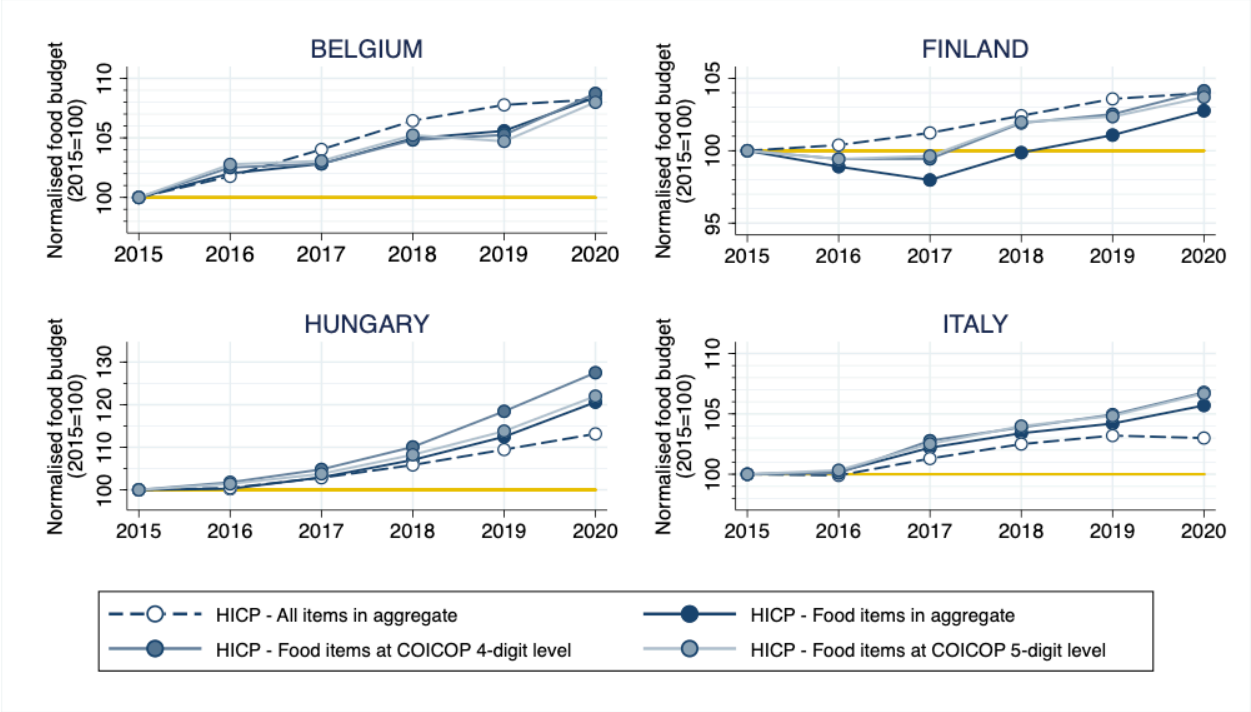


Notes: Own calculations based on ABSPO nutritional food baskets (single adult person) and different price sources (ESTAT – Eurostat national average price data, HBS – household budget survey microdata, PRICESTAT – national price statistics, REFBUDGET – small-scale ABSPO price collections, SCANNER – GfK household scanner data). All figures are based on 2018 budget data, after HICP adjustments using Eurostat data.

Figure 7.13 shows the evolution of ABSPO food reference budgets (as calculated on the basis of Eurostat data and the 25th price percentile) in relative terms between 2015 and 2020 in pilot countries based on the aforementioned updating methods. The figures indicate that the item or item-group based updating methods (i.e. at 4-or 5-digit ECOICOP levels) are rather hardly needed as the aggregate food-related HICP index adequately matches the price evolution implied by these more granular updating methods in most cases (with the exception of Finland). The difference in food budget evolution is more noticeable when food-related HICP indices are contrasted with overall HICP indices: this latter typically produces noticeably different trajectories over time, due to markedly different food and non-food price dynamics. Our analysis therefore suggests that using food-related HICP for food baskets and overall HICP for non-food thematic budgets and overall poverty lines represents a simple yet appropriate method for the updating of ABSPO poverty lines, especially at shorter horizons.

[163] Within the reference budget-based approach, price collection in Brussels was carried out in spring 2020 and autumn 2020. The food budget is 2.5% lower when valued with the second vector of prices (160 vs 156 euros per month) and the difference is mostly driven by dairy products and vegetables.

Figure 7.13. Price indexing methods based on HICP data at different levels of aggregation



Notes: Own calculations based on ABSPO nutritional food baskets for single adult person, monetised suing Eurostat national average price data from 2015. For pricing indexing, official Eurostat HICP data are used at different levels of COICOP disaggregation.

Another important question concerns the reliability and robustness of inflation-adjusted reference budgets in comparison to hypothetical ones that are continually re-priced using the original pricing source. While recurrent pricing of minimum budgets is not a real measurement option (e.g. preference for time consistency, lack of available data), it is entirely possible that HICP indices are not fully adequate for the re-pricing of minimum budgets that may feature different items, consumption weights or customised pricing strategies. Our own calculations, based on 2015-2018 data from repeated cross-sections of ABSPO pricing, indicate that the difference between HICP-based price updating and (zero-based) re-pricing can be substantial (i.e. amounting to several percentage points) even on shorter (1-2 yearly) horizons. We also find that re-pricing based on scanner price data tends to produce better alignment with HICP-updated budgets than re-pricing based on international price averages. These can be consistent with different hypotheses (i.e. the volatility of collected price information, the importance of large data volumes or transaction-based sampling for accurate indexing), but highlights the importance of regular (3-5 yearly) re-pricing of reference budgets for sound absolute poverty measurement.

Price-based economies of scale

Some of the pricing sources considered also allow for the analysis of the level of scale economies that larger households may realise relative to single or smaller households in relation to food purchases. This is an important question for constructing minimum budgets for multi-person households based on individual needs, but has received relatively little attention from practitioners. Potential scale economies driven by price differentials are either ignored by reference budget initiatives (such as the ImPRovE/EURB projects), or estimated jointly with other (non-price-based) forms of savings on the basis of expenditure data (such as the ISTAT methodology does). It is therefore useful to assess whether the same set of reference prices are equally appropriate for different types of households when their calculating minimum financial needs.

Our analysis focuses specifically on the reference prices derived on the basis of those item and retailer types that large households are more likely to frequent. In particular, Eurostat's NAP data reveal that, among selected food items differentiated by packaging type, the unit price of large (multipack) items is 20-45% cheaper on average than that of the corresponding small (single pack) variants. This observation is also confirmed by the Finnish

consumer price survey: when ranking the same food items by net weight or package size, we find that the reference price associated with the upper quartile (i.e. large items) is 29% lower on average than the one calculated for the bottom quartile. The analysis of actual consumption data from the Belgium HBS produces similar results: large (i.e. upper quartile) quantities of given food items are sold at 35% lower unit prices on average than small quantities in the bottom quartile. From the analysis of scanner data from Belgium and Italy, we also find that the households' food purchases in discount stores come at 23-27% cheaper than in super- or hypermarkets, and 30-40% cheaper than in local supermarkets or traditional retailers. The totality of these findings suggests that the availability of larger items and discount stores offers ample scope for larger and/or financially constrained households to economise on their food purchases.

However, empirical evidence from budget survey and scanner data in Belgium and Italy also suggests that the actual savings large households realise are rather limited. Our calculations indicate that multi-person households of 5 or more members only spend 4-11% less than single households for reference food items. This suggests that, while large households indeed buy their food bundles at somewhat cheaper prices on average, price advantages are not the main driver of the substantial scale economies that can be derived from observed expenditure data (see Sections 5.2 and 7.3 of this Report for more details).

7.2.3. Sensitivity of ABSPO poverty estimates to pricing choices

In light of the documented dispersion of prices and the sensitivity of reference budgets to the price choice, it is important assess the robustness of ABSPO poverty estimates to different pricing assumptions. Since reference budgets play only a partial role for ABSPO measurement, the impact of pricing on the resulting poverty thresholds is somewhat limited. Although the budget-based approach relies on price inputs for the calculation of both food and residual expenditures, the other two modelling approaches use them only in relation to food expenditures that make up a relatively small part of the total poverty thresholds. Pricing choices are naturally more consequential in the food-based approach where any change in the relevant food budget has a multiplier effect on the resulting overall poverty thresholds.

Specifically, a proportionate 10% increase in all reference budget prices would lead to an average increase of 5.3%, 1.5% and 12% in the respective budget-based, survey-based and food-based ABSPO poverty thresholds. The corresponding rise in the ABSPO poverty rates are 2.7, 0.4 and 4.9 percentage points, respectively. It is worth noting, however, that neither the likelihood nor the measurement implications of such price variations are alike across different pricing sources. For example, applying a different price percentile on the basis of Eurostat NAP data would certainly change the poverty outcomes in all Member States, but would do so in a consistent manner that retains existing poverty gaps across different population segments. On the other hand, alternative pricing strategies in the context of small-scale price may risk producing larger and less systematic variations in the resulting poverty lines and rates.

7.3. Equivalence scales

This section considers equivalence scales as another important component of poverty analysis. Equivalence scales are widely used tools of welfare analysis that allow for a straightforward comparison of different household types and configurations. For this reason, many existing poverty indicators, including the at-risk-of-poverty (AROP) thresholds, are calculated on the basis of equivalised household income.

Absolute poverty measurement does not require equivalence scales by construction. In theory, households' minimum financial needs can be calculated in a customised manner for a wide range of different types, and the poverty thresholds can be directly compared with households' disposable income (or total expenditure) at the individual level. In practice, however, equivalisation techniques are often used in poverty measurement to quantify the minimum needs of large cross-sections of different household types simultaneously. For ABSPO measurement, we specifically use the modified OECD equivalence scale when estimating households' minimum transportation and residual needs in the survey-based approach, and non-food needs in the food-based statistical approach (see Chapters 3, 5 and 6 for a detailed discussion).

The role of this section, therefore, is to provide a brief overview of the most commonly used equivalisation methods, present the main empirical features and validity of these in the ABSPO context, and assess the sensitivity of ABSPO poverty outcomes to the choice of the equivalence scale.

7.3.1. Equivalence scales in poverty measurement

Equivalence scales allow for the comparison of different household types for the purposes of well-being or demand analysis. They represent a set of scaling parameters that, for any given household configuration, determine the degree and manner in which their monetary welfare indicator may be adjusted so that it becomes comparable across households. The standard concept of equivalence scales requires that households' utility function and preferences are represented in money-metric terms, and that utility monotonically increases with income or expenditure (Ravallion, 2016). Formally, an equivalence scale is a functional relationship between a set of household characteristics and some pre-determined model parameters. A sufficiently generic and flexible specification for most equivalence scales is

$$\mathrm{ES} = (\mathrm{c} + \alpha \mathrm{N_a} + \beta \mathrm{N_c})^{\theta} \qquad (\mathrm{Eq.}\,7.2)$$

where the relevant scaling coefficient depends on the number of adult and child household members (respectively $\mathrm{N_a}$ and $\mathrm{N_c}$) in a potentially non-separable and non-linear manner. Equivalence scales of this kind tend to feature the single adult household as the reference category, and adjust all other household type's income or consumption Y in relation to this ($Y^e = Y/ES(\cdot)$). Depending on the scaling parameters, the level and relative distribution of households' welfare-consistent monetary resources can be very different.

In the literature, several different methods exist for deriving equivalence scales (Lewbel and Pendakur, 2008). Econometric equivalence scales are estimated on observed consumption behaviour using representative household survey data. Three different approaches are used most commonly: so-called Engel equivalence scales assume that household welfare is best proxied by the food expenditure share, Rothbarth equivalence scales focus on the level of personal consumption among adult household members, while utility-based equivalence scales posit a specific functional form for household utility a priori. While these approaches impose different implicit or explicit restrictions on individual preferences, they all tend to assume that structure of utility is independent of household configuration and that the underlying cost functions are separable in prices, utility and household characteristics.[164]

Another common way of estimating equivalence scales is to focus on household's own subjective assessment of their welfare and well-being (Danziger et al., 1984). One typical variant compares households of different composition that report the same level of satisfaction, while the more direct alternative is to rely on households' perceived level of minimum income needed to make ends meet (Schwarze, 2003; Bishop et al., 2014).[165] The main advantage of subjective equivalence scales is that they represent individuals' very own assessment of their subjective welfare – which, due to the limited inter-personal compatibility and intra-personal consistency of these latter, is also their biggest limitation (Ravallion, 2012).

Finally, practitioners tend to use a third kind of equivalence scales based on simple statistical formulas. These so-called pragmatic equivalence scales appeared with the emergence of harmonised survey-based international statistics and policy (Conference of European Statisticians UNECE, 2011). The most widely-used equivalence scale is the modified OECD scale that assigns uniform weights of 1, 0.5 and 0.3, respectively, to the first adult, supplementary adult and under-14 children members of each household (Hagenaars, De Vos, and Zaidi, 1994).[166] Another well-known alternative is the exponential equivalence scale ($ES = N^{\theta}$) proposed by Atkinson, Rainwater, and Smeeding (1995). Among the potential exponent values ranging from either full ($\theta = 0$) or no scale economies

[164] Pollak and Wales (1979) argue that this assumption is illegitimate, since one would need to compare the well-being of households in alternative situations which differ with respect to both their demographic profile and consumption pattern simultaneously. In the face of this fundamental under-identification, Blundell and Lewbel (1991) propose three alternative solutions: combine demand data with other types of (psychometric) information, report only the component of equivalence scales that is identified from demand data (i.e. cost of living indices by household type), or make plausible identifying assumptions concerning the equivalence scale properties that have testable implications for demand data.

[165] For further details, see Section 8.3.2.

[166] The traditional OECD equivalence scale created in 1982 assigned larger weights of 0.7 and 0.5 to supplementary adults and young household members. This scale is generally deemed too excessive to offer an adequate representation of large households' economic welfare or basic needs.

($\theta = 1$), the square root scale associated with $\theta = 0.5$ has received the most attention. Besides their practical advantages, pragmatic equivalence scales also allow one to test the effect of changing the equivalence scale on the horizontal distribution of poverty and inequality (Coulter, Cowell, and Jenkins, 1992).

7.3.2. Contextualisation of equivalence scales for ABSPO measurement

Given the potential importance of equivalence scales for poverty measurement, we devote this sub-section to assessing the validity and robustness of using the modified OECD scale in the context of ABSPO modelling. In particular, the analysis presented below compares equivalence scales based on reference budgets, subjective valuations and demand data from a large number of EU countries, and offers a unique comparative perspective that is largely absent in the relevant empirical literature.

Equivalence scales from ABSPO reference budgets

ABSPO reference budgets represent the minimum cost of basic consumption goods and services associated with adequate social participation (see Chapter 4 for more details). They are constructed in modular fashion on the basis of individual and household-level needs, and are available for a wide range of household configurations. As such, they allow for a straightforward assessment of how households' minimum living costs change with the addition of each new member. The main limitation of calculating equivalence scales this way is the relatively narrow population focus: reference-budget based equivalence scales are valid only for those households whose income or consumption corresponds to the living standards targeted by the underlying budgets.

Despite these limitations, analyses of this kind have been useful for estimating the cost of children in the United Kingdom (Oldfield and Bradshaw, 2011), or for rendering reference budgets applicable for poverty measurement purposes (Penne et al., 2016). This latter study uses the reference budgets produced by the ImPRovE/EURB projects, and thus offers a methodological blueprint and clear reference point for our calculations. Accordingly, we choose the gender-neutral single person household as the reference category, and calculate the additional costs of various individual types in relative proportion to these.[167] With the demographic extensions implemented in the ABSPO budget-based approach, we can also replicate the same procedure in relation to elderly households, as well as children of different age brackets (i.e. young children aged 0-6, middle children aged 7-12, and adolescent children aged 13-18) separately.[168]

Table 7.2 below presents the resulting equivalence weights for the ABSPO pilot countries of Belgium, Finland and Hungary, separately for the food, residual and total budgets. The parameters for the first adult or elderly persons are set to 1, while the ones associated with subsequent adult members or children (young/middle/adolescent) in the household reflect the relative contribution of these types to the household-level budgets. The following main features stand out. First, the derived equivalence factors are rather high, and amount to 0.8 for working-age and elderly adults, and 0.42 / 0.8 / 1 for children types on average. This means that very limited saving potential is associated with additional household members, with the possible exception of small children. This is in line with the relatively low weight of household-level components and lack of price economies in the underlying reference budgets (see Section 4.2 for more details). The second implication of the same features is that the equivalence factors are essentially linear in the number and rank of additional household members. These typically make similar contributions to the minimum household budget, except for Belgium where subsequent members tend to have slightly lower needs by around 10 percentage points. This bodes particularly badly for large households that see their minimum needs increase almost proportionately with the number of household members. The third observation is that the implied economies of scale are different for food and residual expenditures: equivalence weights tend to be higher for food among adults, while higher for residual expenditures among children. This is mostly due to the presence of an additional expenditure category dedicated exclusively to children's needs ("safety in childhood"), which markedly inflates the total budgets of households with children. Finally, we

[167] For example, the cost of the first additional adult in a household is computed as the difference between the respective reference budgets of two-person and single households.
[168] Naturally, the single adult household remains the reference household for estimating the cost of children.

detect considerable cross-country variation in equivalence weights: the range of country scores associated with a given parameter type is typically below 0.15 for adults, but extend up to 0.70 among adolescent children.

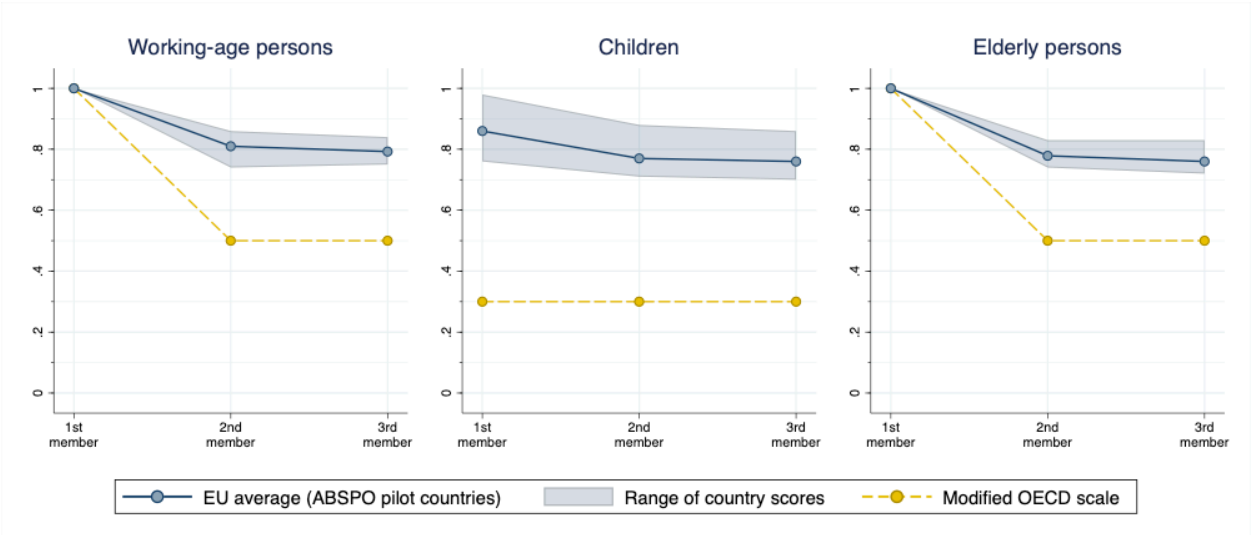
Table 7.2. Equivalence scale parameters derived from ABSPO reference budgets

		Working-age persons			Elderly persons			Children		
		1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
BE	Food budget	1	0.83	0.83	1	0.84	0.84	0.26 / 0.74 / 0.94	0.31 / 0.78 / 0.99	0.26 / 0.74 / 0.95
	Residual budget	1	0.89	0.74	1	0.68	0.57	0.77 / 1.27 / 1.85	0.50 / 0.98 / 1.59	0.53 / 1.01 / 1.62
	Total budget	1	0.86	0.79	1	0.78	0.72	0.50 / 0.98 / 1.36	0.40 / 0.88 / 1.27	0.40 / 0.86 / 1.26
FI	Food budget	1	0.94	0.94	1	0.94	0.94	0.43 / 0.58 / 0.72	0.43 / 0.58 / 0.72	0.43 / 0.58 / 0.72
	Residual budget	1	0.55	0.57	1	0.54	0.54	0.57 / 1.06 / 1.18	0.34 / 0.83 / 0.92	0.34 / 0.82 / 0.92
	Total budget	1	0.74	0.75	1	0.74	0.74	0.51 / 0.83 / 0.96	0.39 / 0.71 / 0.82	0.39 / 0.70 / 0.82
HU	Food budget	1	0.80	0.80	1	0.80	0.80	0.33 / 0.54 / 0.63	0.33 / 0.63 / 0.93	0.14 / 0.62 / 0.74
	Residual budget	1	0.87	0.87	1	0.86	0.86	0.62 / 0.87 / 1.02	0.56 / 0.81 / 1.21	0.43 / 0.81 / 1.07
	Total budget	1	0.84	0.84	1	0.83	0.83	0.49 / 0.76 / 0.81	0.46 / 0.73 / 1.09	0.30 / 0.73 / 0.92

Notes: Own calculations based on ABSPO reference budgets developed by the reference budget-based approach. The multiple parameters displayed in the last three columns refer to young / middle / adolescent children, respectively.

Figure 7.14 offers a visual representation of the corresponding equivalence scales, and highlights the respective parameters of the modified OECD scale as reference points for the three pilot countries, contrasting them with the OECD scales. In line with Penne et al. (2016), our results indicate that the reference budget-based equivalence scales imply considerably higher equivalence weights among household members of all ages than the modified OECD scale. Based on these numbers, the modified OECD scale overstates the extent of potential scale economies by around 30-50% for each additional household member, and implies drastically smaller budgets for large families with multiple children. As compared with the results by Penne et al. (2016), we find that additional cost of small children (aged 0-5) is much lower than previously thought and more closely aligned with the modified OECD weight (e.g. 39% versus 72% in Finland based on the ImPRovE/EURB budgets), due largely to advances in the modelling procedure.

Figure 7.14. Equivalence scales based on ABSPO reference budgets



Notes: Own calculations based on the respective ABSPO reference budgets as derived in the budget-based approach (see Chapter 4 of this Report for more details). The figures presented for children are based on the 7-12 age category. The shaded areas represent the range of relevant country-specific equivalence parameters derived across the ABSPO pilot countries of Belgium, Finland and Hungary.

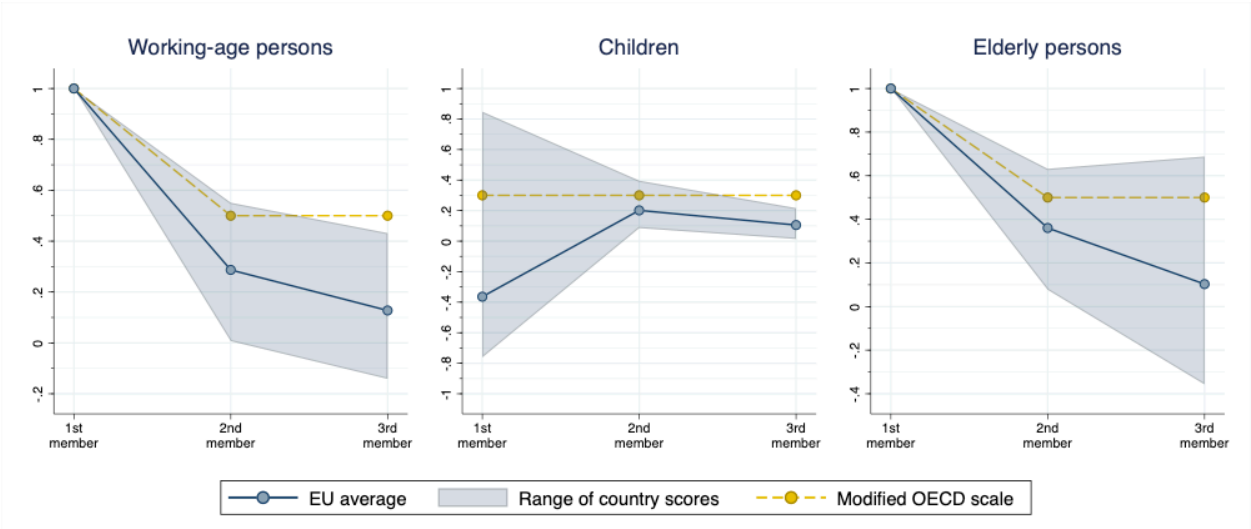
Equivalence scales based on subjective poverty lines

The second type of equivalence scale we focus on are subjective in character: they are based on the comparison of poverty lines derived from households' personal valuations of their minimum financial needs. Using information from the EU-SILC on household's self-reported assessment of the lowest level of monthly income needed to make ends meet, it becomes possible to derive customised subjective poverty lines using the so-called intersection method proposed by Goedhart et al. (1977). (For further details on this and alternative subjective poverty lines, see Section 8.3.2 of this Report.) Comparing these subjective poverty lines across households of different size and composition, one can derive equivalence scales in a straightforward manner.[169] Formally, the equivalence weight associated with the *n*-th additional household member is given by

$$\mathrm{c_n} = (\mathrm{SPL_n} - \mathrm{SPL_{n-1}})/\mathrm{SPL_1} \qquad \text{(Eq. 7.3)}$$

where SPL stands for the subjective poverty line and the subscript denotes the rank of the last member in the household.[170]

Figure 7.15. Equivalence scales based on subjective poverty lines



Notes: Own calculations based on the 2019 wave of the cross-sectional EU-SILC microdata. The figures presented for children are based on the analysis of households with children of any age (0-18). The shaded areas represent the range of relevant country-specific equivalence parameters derived across all EU countries.

Having calculated the relevant subjective poverty lines for three different sets of households (i.e. working-age households without children, working-age households with children, elderly households) and all EU countries using microdata from the 2019 wave of the EU-SILC, we present the resulting equivalence scales in **Figure 7.15**. Relative to the modified OECD weights, the EU-level average coefficients are very small: the marginal increase in households' minimum financial needs associated with a second or third adult member equals less than 40% or 20% of the household head's budget. Particularly interesting is the case of children, the appearance of whom in a household is associated with a major drop in households' perceived minimum needs in most EU countries (Van den Bosch, 2016).[171] Other noteworthy features include the generally declining shape of the subjective equivalence scales, as well as the rather large cross-country heterogeneity in the relative structure of subjective minimum needs.

[169] There are some technical and methodological issues concerning the preferred regression specification. The presented equivalence scale coefficients are based on log-log specifications featuring only income and household-specific categorical scalers on the right-hand side. Our results are however robust to the introduction of alternative control structures featuring gender-specific or employment-related information.
[170] SPL_1 therefore denotes the single-person household used as the reference category.
[171] The negative effect of the first child could also be the result of differences in spending composition between families. The sample includes all households with children from 0 to 18 years-old, thus the estimate is likely to be affected by heterogeneous preferences when expressing subjective minimum income. Van den Bosch (2016) tries to answer the same question ("Are children really cheap?") without finding a decisive explanatory factor.

Our findings of large scale economies among households is consistent with other similar EU-level studies. Bishop et al. (2014), for example, estimates similar subjective equivalence scales across EU15 countries using EU-SILC data from 2004-2007, and finds that countries with a large welfare state and generous in-kind transfers (such as France, Germany or the Netherlands) exhibit higher economies of scale than others. The analysis by Kalbarczyk-Steclik, Mista, and Morawski (2017) extend these results to non-Eurozone countries as well, but finds somewhat higher and less persistent equivalence weights in CEE countries.[172]

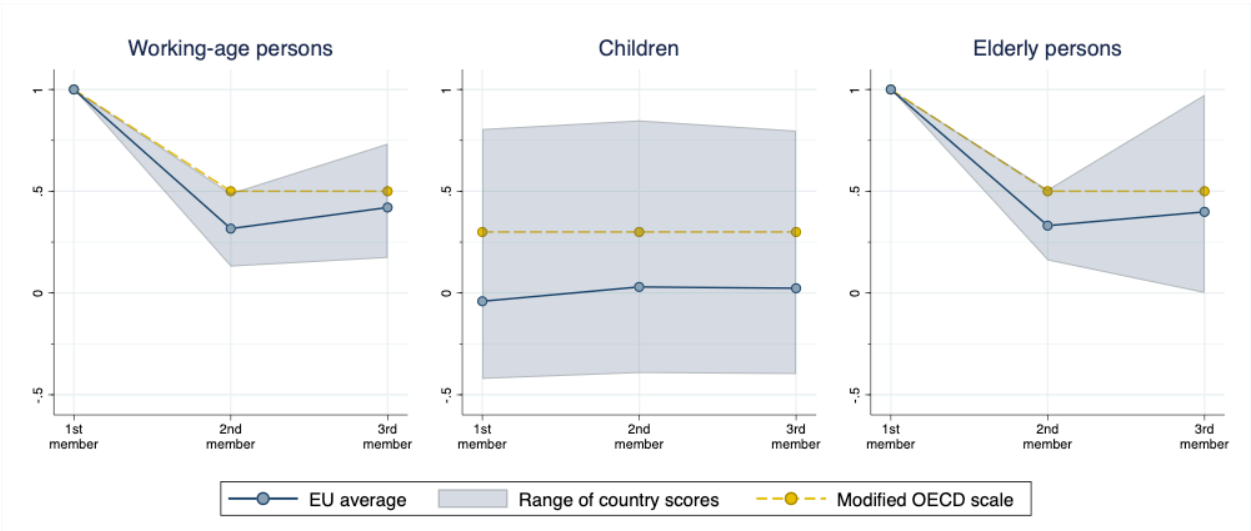
Equivalence scales based on household expenditure data

The most common approach to calculating equivalence scales is based on econometric methods using household expenditure survey data. These data contain detailed information on household expenditures and characteristics in a representative manner, and enable the use of very different approaches to calculating equivalence scales (see detailed discussion in the previous section). For the current analysis, we implement one of the simplest and most widely-used empirical strategies, the Engel method, using the 2015 wave of the EU-HBS data for all EU countries. This approach centres on the food expenditure share as the presumed indicator of household welfare, and estimates mean differences in total expenditure conditional on these.[173] The Italian statistical office (ISTAT) uses the same strategy to account for economies of scale when measuring absolute poverty (Grassi and Panuzzi, 2009). The estimated regression specific is the following:

$$\ln(y_i) = \alpha + \beta \ln(s_i^F) + \sum_{j=1}^{N} \gamma_j D_{ij} + \varepsilon \qquad \text{(Eq. 7.4)}$$

where y_i, s_i^F and D_{ij} denote the total expenditure, food expenditure share and indicator characteristics of household *i*, and the parameter estimates for γ_j directly identify the conditional (i.e. welfare- adjusted) differences in expenditure needs. To ensure consistency with the subjective and reference budget-based approaches, we estimate Eq. 7.4 separately for the three different household samples.

Figure 7.16. Equivalence scales based on household expenditure data



Notes: Own calculations based on the 2015 wave of the EU-HBS microdata. The figures presented for children are based on the analysis of households with children of any age (0-18). The shaded areas represent the range of relevant country-specific equivalence parameters derived across all EU countries (except for Austria, Malta, Portugal and Slovenia due to missing data).

[172] These findings are also corroborated both by the recent study of Mysíková et al. (2021) as well as our very own estimates. For example, we find average equivalence weights of 0.25 and 0.33 for the second working-age adult in EU15 and non-EU15 countries, respectively.
[173] See Section 6.2 of this Report for more details on the food Engel curve, i.e. the empirical relationship between the food expenditure share and the level of household income or total expenditure.

Figure 7.16 shows the resulting equivalence scales by age category, in comparison with the parameters of the modified OECD scale. For both working-age adults and elderly persons, the EU average coefficients for the first individual are lower than OECD estimates (0.3 vs 0.5) while the marginal increase in living costs associated with an additional member gets closer to the benchmark (0.4). Similar to our findings based on subjective poverty lines, the equivalence weights associated with children are just above 0 for the second and third child and negative (-0.04) for the first one. This appears to underscore an apparent limitation of the Engel method – namely, that welfare comparisons become biased if different household types (such as those with and without children) have different preferences and consumption patterns.

These results are comparable to the equivalence scale ISTAT uses for absolute poverty measurement in Italy.[174] They are also consistent with recent estimates based on the German Sample Survey of Income and Expenditure, even though these latter associate positive expenditure needs with children (Dudel, Garbuszus, and Schmied, 2021).

Conclusions

The empirical analysis above has shown that different methodologies can lead to very different equivalence scales. Reference budget-based approaches tend to indicate limited saving potential among larger households, while individuals' subjective valuations attest to considerable reductions in per-capita living costs with the addition of new household members. Data-driven statistical methods based on household spending patterns typically produce intermediate equivalisation weights that are consistent with pragmatic equivalence scales used in international measurement and policy applications (such as the modified OECD scale).[175]

In line with these findings, the modified OECD scale emerges as an appropriate tool for the equivalisation procedures implemented in the context of ABSPO measurement (Hagenaars, De Vos, and Zaidi, 1994). This ensures that ABSPO and AROP poverty lines are directly comparable. Its inherent limitation is the disregard for potential cross-country variations in minimum living costs – it is especially in poorer Member States where the use of the modified OECD scale may overstate the true increases in minimum living costs.[176] Despite the critical role of equivalence scales for poverty measurement in general, it is worth noting that this choice has a relatively limited effect on the resulting ABSPO poverty lines: the reference budget-based approach models household-level needs in a direct and modular way, the survey-based approach separately identifies the relevant minimum thresholds for households of different size and composition in most expenditure categories, while the food-based statistical approach ensures that individual food/non-food mapping parameters are used for a large number of household configurations. This implies that, using the very same household-level ABSPO poverty lines and disposable income information in the EU-SILC, it is possible to measure the extent and concentration of poverty using different equivalence scales.

7.4. Welfare indicators and poverty measurement

The related literature on poverty measurement extensively discusses strengths and weaknesses of using different indicators and variables as a proxy of individual wellbeing. For most practical applications, the main methodological issues concern whether an income-based or consumption-based focus is preferable, and what technical adjustments are required to render households' total consumption or disposable income as a suitable welfare indicator. This section reviews the most contentious measurement aspects, and contains a brief empirical analysis of the sensitivity of ABSPO poverty indicators to the related modelling choices.

[174] The ISTAT calculations, based on 2003-2005 data from the Italian HBS, deliver equivalence weights of 0.67 and 0.56 for the first and second additional adult. The slight differences in the estimates are mostly due to the use of different functional forms in the regression specification between the two exercises (logarithm of household size vs. separate indicator variables).

[175] See Dudel, Garbuszus, and Schmied (2021) for a comprehensive review of these and alternative approaches.

[176] Our analysis shows that the estimated equivalence scales based on expenditure data tend to be somewhat steeper in poorer Member States. (Note the large cross-country variations in Figure 7.18). A more detailed analysis of Hungarian microdata by Cseres-Gergely and Molnár (2008) comes to the same conclusion and finds that minimum costs of larger households may be underestimated by up to 20% with the modified OECD scale.

7.4.1. Income-based or consumption-based measurement

The theoretical literature on poverty measurement typically proposes households' (equivalised) disposable income as the preferred indicator of economic well-being (Aaberge et al., 2010; Atkinson and Bourguignon, 2015; Atkinson, Guio, and Marlier, 2017). Disposable income includes all types of monetary and non-monetary earnings as well as direct social benefits received by household members, and can be further extended to incorporate notional income components (such as imputed rents or unpaid domestic services). It therefore represents an exhaustive concept of households' available economic resources that can be mobilised to meet their basic needs. Income-based poverty measurement, however, also has its shortcomings. At the practical level, the main issues concern the potential biases associated with survey-based income reporting, the difficulty of correctly accounting for certain notional income components, and the limited cross-country comparability of income definitions due to legal and institutional differences. In addition, the main theoretical argument against using income-based measurement is that is affected by temporary fluctuations over time that do not necessarily change households' economic well-being as long as these have recourses to savings (Ravallion, 2016). Attempts to account for wealth-related income components for welfare comparisons are long-standing, but reliable data collection and correct asset measurement remains problematic (Simons, 1938).[177]

The main alternative to income-based poverty measurement is to focus on households' consumption, as proxied by self-reported expenditures in budget survey microdata. Given the widespread availability of these data around the world, this is the preferred choice of the World Bank when measuring global poverty in a large number of developing countries. The theoretical underpinnings of this approach go back to the seminal concepts of permanent income and the life-cycle hypothesis (Friedman, 1957; Modigliani, 1966), as well as the standard economic thesis that utility derives from the consumption of goods and services. The proponents of consumption-based measurement therefore argue that expenditures reflect household's long-run resources and social position better than contemporaneous income.[178] Another practical advantage of the consumption-based approach based on HBS data is that it offers more flexibility towards customisation when it comes to defining an appropriate welfare indicator. In particular, detailed information on households' expenditures makes it possible to selectively specify the relevant set of needs-based or welfare-relevant components that may merit consideration for a given poverty concept. International recommendations along these lines have been developed within the Living Standard Measurement Studies (LSMS) of the World Bank, and generally prefer broad measures of total consumption (Deaton and Zaidi, 2002; Ravallion, 2016). ISTAT, the Italian National Institute of Statistics, for example, uses households' total consumption as the welfare aggregate, but deducts a series of expenditure components (such as housing extraordinary repairs, life insurance premiums and mortgages) that do not represent a going-concern perspective to consumption (Grassi and Panuzzi, 2009). With income survey data such as the EU-SILC, the potential degree of customisation is much lower and typically limited only to the inclusion (or exclusion) of certain in-kind benefits or implicit transfers (such as imputed rent for housing).

Are there systematic differences in poverty estimates driven by the choice of measurement? Atkinson (2019a) hints at slightly higher observed poverty rates with income-based measurement, and Chen and Ravallion (2004) comes to the same conclusion based on the analysis of 27 developing countries. Evidence for advanced economies is inconclusive at best, and the choice of the welfare indicator in existing national measurement frameworks is primarily driven by data availability: while Italy measures poverty using consumption data, the official poverty rates in Canada and the United States are based on household income (before taxes and non-cash benefits).[179] HBS data typically allow for the implementation of both approaches using the very same household sample, and even permit the mixing of expenditure-based and income-based modelling elements (i.e. the use of expenditure data for the calculation of poverty lines, and income data for the poverty assignment). Explorations by Cutillo, Raitano, and

[177] Evidence from micro-level survey data tends to show that wealth accumulation and the propensity to save are rather low among below-median households, which points to the limited practical relevance of this consideration. Microdata analysis from 2015 indicate that savings in the lowest income quintile are negative (-13.4% of total income on average), and only substantial in the top quintile (37.7%) (Eurostat, 2020b). This squares with other evidence showing that, in 2017, the average median net wealth in the top income decile across the EU (411.200 €) was more than 20 times that of the bottom quintile (18.700 €) (European Central Bank, 2020).

[178] Indeed, consumption has been shown to depend markedly on both future income expectations and accumulated savings over the life-cycle (Meyer and Sullivan, 2011; 2013; Brewer and O'Dea, 2012). Blundell, Pistaferri, and Preston (2008) find considerable consumption insurance against transitory shocks in the United States, while Alderman and Paxson (1992) underscore the existence of risk-sharing arrangements in developing countries.

[179] For further details, see Grassi and Panuzzi (2009), Employment and Social Development Canada (2018) and Semega et al. (2019).

Siciliani (2020) along these lines based on Italian microdata show that both the level and concentration of poverty can change considerably from one approach to the next.

Cross-country comparable ABSPO measurement at the EU level favours a dual approach. In particular, we use detailed expenditure data from the EU-HBS for the modelling of households' minimum needs and absolute poverty lines, but rely on the EU-SILC income survey for the purposes of poverty assignment and the measurement of the poverty rate. There are several reasons supporting this choice. First, the existing AROPE framework is based on the EU-SILC data, and a direct comparison between ABSPO and 'at-risk-of-poverty' or material deprivation indicators are only possible using the same data sources. Second, using the EU-SILC data for poverty rate calculations is also preferable for reasons of international consistency and comparability, due to their higher degree of harmonisation than the EU-HBS (see Section 7.5 of this Report for more details). Third, the annual frequency and relatively rapid accessibility of the EU-SILC allows for a more accurate and timely updating of the poverty estimates, relative to the multi-annual (5-yearly) data collection cycle and delayed accessibility of the EU-HBS. In the next sections and sub-sections, we briefly discuss the construction of the ABSPO welfare aggregate and assess the implications of the proposed dual approach for the resulting poverty estimates.

7.4.2. Housing costs, durables and deferred expenses

Both income-based and consumption-based measurement approaches typically start from households' overall cash flow (i.e. disposable income and total expenditure, respectively) when deriving appropriate welfare aggregates. However, since not all monetary transactions are linked with contemporaneous welfare, and also because some welfare enhancing items are not associated with actual cash flows, one usually employs various accounting techniques to appropriately adjust the level of total income or expenditure for welfare comparisons and poverty measurement. These adjustments generally include the customised treatment and valuation of durable goods, imputed rent for households living in owner-occupied homes, in-kind benefits or services, as well as deferred and extraordinary expenses. We briefly review these in turn.

Durable goods

According to the Classification of Individual Consumption by Purpose (COICOP) nomenclature, consumption goods are classified either as non-durable (ND), semi-durable (SD) or durable (D). Durable goods include expenditure categories such as furniture and furnishing, vehicles, household and garden appliances and tools, therapeutic, communication and electrical equipment and appliances, as well as personal items of various kinds (jewelry, watches etc.).[180]

Due to the difficulties of correctly estimating their value, services from household consumer durables are typically excluded from the operational definition of income (UNECE, 2011; OECD, 2013; United Nations, 2018). While the potential need to account for the flow of services provided by consumption durables is widely recognised, the relevant microdata to do so are typically not available.[181] For consumption-based welfare aggregates, accounting of consumption durables is generally possible. In the relevant literature, three different valuation approaches are available (Diewert, 2004; Amendola and Vecchi, 2014):

- the **acquisition approach** includes the entire value of a durable good in household expenditure when the good is purchased, disregarding that the durable's flow of services is deferred in time;
- the **rental equivalent approach** focuses on the per-period market rental price of durable goods, provided that a rental or leasing market for consumer durable in question exists;

[180] Semi-durable goods instead include clothing and footwear, household textiles, small electrical household appliances, glassware, tableware and household utensils, spare parts for vehicles, recording media, games, toys, hobbies, equipment for sport, camping (for more information see ILO (2004)).

[181] "As with owner-occupied housing, household consumer durables normally provide their owner with services over a number of years. The economic resource flowing to the owner is notionally the rental value of the durables less the costs such as maintenance expenses, depreciation and interest on any loan used to purchase the items. While similar in nature to the net value of owner-occupied housing, it is separated out because it is much more difficult to obtain relevant data, and because on average it is likely to have less impact on the micro data, although it may be significant for some sub-population analysis." (OECD, 2013)

- the **user cost approach** calculates the per-period difference between the acquisition cost and the potential subsequent re-sale price of a durable.

While all three of these approaches are theoretically applicable to any durable commodity, the rental equivalent and user cost approaches are only used in relation to owner-occupied housing in practice. This leaves the acquisition approach focusing on purchasing expenses as the only feasible method to assigning consumption value to most durable goods with the available data. ABSPO measurement therefore uses the acquisition approach for the valuation of durable goods using self-reported purchase information from the EU-HBS. According to Diewert (2004), this may lead to rather similar valuations as hypothetical alternative approaches, especially for survey-based cross-sectional analyses where the per-period value of even durables with a very long lifespan can be correctly estimated.

In-kind services, deferred and extraordinary expenses

Non-monetary components of income and consumption include in-kind private goods (e.g. home production of vegetables) and services (e.g. domestic services, use of company car) as well as publicly-provided goods and services as healthcare and education. The value of in-kind private goods is self-reported in both EU-HBS and EU-SILC and can be directly included in disposable income or total expenditure. The valuation of public in-kind transfers is more contentious: it typically involves the imputation of the average production cost of these services to recipients following either the actual value or the insurance value method (Aaberge et al., 2010; Verbist, Forster, and Vaalavuo, 2012).[182]

Despite the consensus about the welfare-enhancing properties of private and public in-kind goods and services, only a small part of these are accounted for in household survey data or existing poverty measurement frameworks. The most important of these are near cash income and in-kind income from employment or non-salaried activities (such as company car) that are included in total disposable or net income of both the EU-HBS and the EU-SILC. The income value of domestic services or public services, however, are not reported. On the expenditure side, home production of food items is included in some national files of the EU-HBS, with different scope and levels of aggregation.

By contrast, most poverty measurement also features some expenditures that are excluded from consumption-based welfare aggregates because they do not contribute to a person's utility in the reference period. One reason is that certain expenses are primarily considered as investment rather than consumption due to their deferred utilisation in time – such as mortgage and interest payments, the purchase of financial assets, or loan repayments financing past consumption. A similar treatment is typically applied for lumpy purchases and irregular or infrequent expenditures (such as extraordinary housing maintenance) that should ideally be smoothed over several years (Deaton and Zaidi, 2002).

ISTAT therefore follows existing practices and international recommendations when it focuses on total expenditures and excludes extraordinary dwelling maintenance expenditures, life insurance premiums, mortgage payments and loan repayments for the calculation of its welfare aggregate (Grassi and Panuzzi, 2009). ABSPO measurement follows the principles and relies on total expenditures (net of home production) for poverty modelling in the EU-HBS, and uses total (monetary and non-monetary) disposable income as reported in the EU-SILC for poverty measurement. As financial operations related to loans, mortgages and insurance payments are not systematically recorded in the EU-HBS, no specific accounting for these is needed.

Imputed rent

The most important auxiliary modelling component are imputed rents. According to the European System of Accounts (ESA), the purchase of a dwelling is regarded primarily as an investment rather than consumption expenditure. However, since ownership of a dwelling may also produce a durable consumption good (i.e. housing itself), the ESA requires that the market value of this service be estimated in the form of a hypothetical rent

[182] The actual value method assigns the service value to actual beneficiaries and is typically used for the valuation of universal public investment services such as education. The insurance value method, on the other hand, assesses the individual cost of selectively used public services (such as healthcare) as a function of each individual's probability of use, from an actuarial insurance perspective. At the national level, further and more sophisticated techniques are also used (Aaberge et al., 2018).

payment. This so-called imputed rent is reported as part of household consumption expenditure in household surveys, and thus recommended for inclusion in the welfare indicator used for poverty measurement.

The imputed rent assigned to each owner-occupied household in European household surveys corresponds to the market rental value of a similar unfurnished dwelling as that occupied, less any rent actually paid or any minor repair or refurbishment expenses that would normally be incurred by the landlord (Eurostat, 2020). Utility costs, expenses for major repairs, depreciation or changes in market valuation of the dwelling should be excluded or ignored. In accordance with both the 2008 System of National Accounts (United Nations et al., 2009) and the EC Regulation on the principles for estimating dwelling services (European Commission, 2005), the rental equivalent approach is the recommended valuation technique in relation to imputed rents.

In practice, different methods – ranging from subjective self-assessment to regression-based statistical analysis – are used to estimate households' imputed rents. Regression-based methods make use of available rental price data from local housing markets, and typically account for the geographic features (e.g. location, degree of urbanisation) and hedonic characteristics (e.g. size, age, conditions, amenities) of the dwelling. In areas with small rental but ample owner-occupied housing markets (e.g. CEE countries), the user cost method is oft-used alternative that estimates the opportunity cost of homeownership based on potential returns on similar financial investments. This approach is more controversial (e.g. assumption of market liquidity, sensitivity to interest and depreciation rates), but allows for simpler techniques (such as the subjective assessment of dwelling value or the calibration of implicit rate of return) that do not require the availability of detailed housing market information (Balcazar et al., 2014; Eurostat, 2020c).

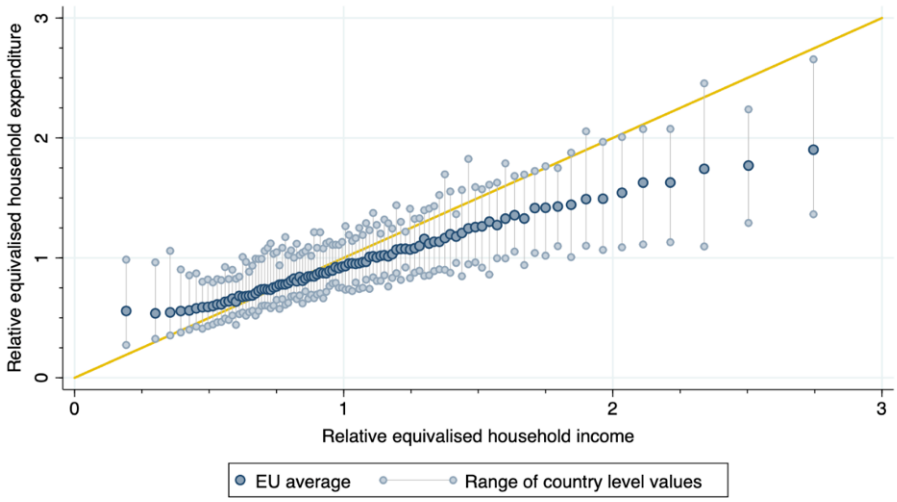
Available evidence shows that the resulting imputed rents are rather sensitive to the estimation method (Frick et al., 2010; Törmälehto and Sauli, 2013). This is particularly problematic for the purposes of poverty measurement, given the relatively large share of housing expenditures in poor households' budget. Unfortunately, the calculation of imputed rents is not harmonised across the EU, and the relevant figures featuring in both the EU-HBS and the EU-SILC are based on a large number of fundamentally different national methods. This creates a serious comparability issue for cross-country ABSPO measurement that can only be addressed by future harmonisation of statistical practice and survey construction (Eurostat, 2020a).[183]

7.4.3. The choice of the welfare indicator

Following this general introduction, we now turn to investigating how the estimated level and incidence of absolute poverty are driven by the particular choice of the welfare indicators used for ABSPO modelling and measurement. Our analysis is similar the study by Cutillo, Raitano, and Siciliani (2020) on the comparison of income-based and consumption-based poverty estimates in Italy, but takes a somewhat broader perspective by simultaneously differentiating between various welfare aggregate components. Using the 2015 wave of the EU-HBS, we first focus on the stylised relationship between households' total expenditure and total disposable income. **Figure 7.17** below plots the level of household expenditures as a function of income in the EU (in equivalised terms and relative to the national median) for each percentile of the respective national income distributions. It shows that household expenditures increase inelastically with income, and are larger than this latter in the lowest income decile in most Member States. Specifically, the figure also shows that, among the most likely marginal population for poverty measurement (i.e. the 10th-40th percentiles of the income distribution), household expenditures are equivalent to household income on average. This suggests that, in a typical EU country, most households in the bottom half of the national income distribution consume all (or even more) of their income, and that income-based and consumption-based measurement should lead to rather similar poverty outcomes. **Figure 7.17** also highlights that above-median households (i.e. with relative income above one) do save a non-negligible share of their income, and that households' relative expenditure position changes considerably from Member State to the next. These together indicate that, in a number of EU countries, the choice between income-based or consumption-based measurement is likely to be far from inconsequential.

[183] See the discussion in Section 7.5 and Section 9.2 of this Report for more details on cross-country comparability and harmonisation of imputed rents.

Figure 7.17. Empirical relationship between household expenditures and incomes



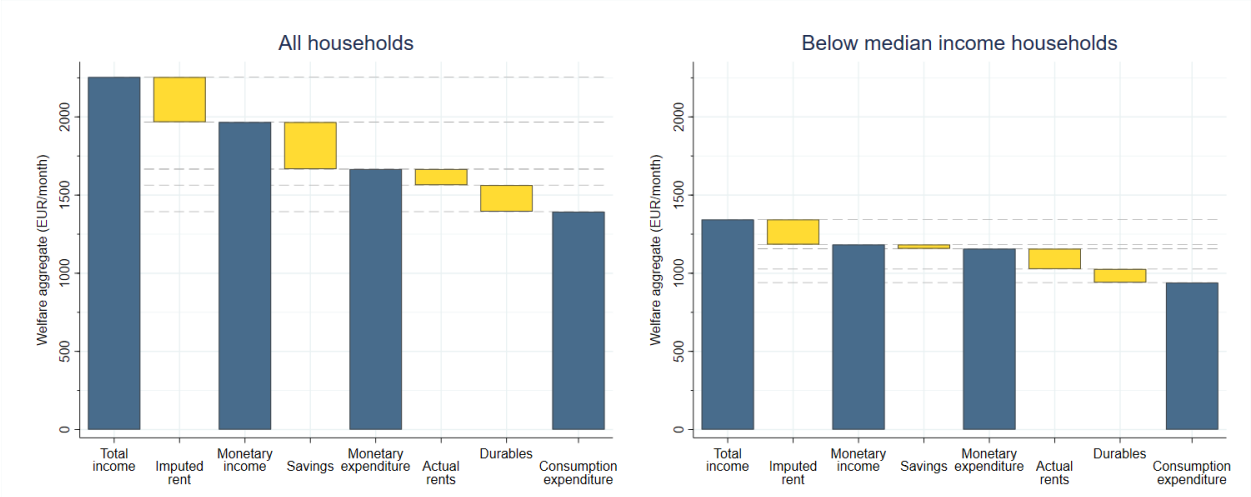
Notes: Own calculations using microdata from the 2015 wave of the EU-HBS. In each EU country, the analysis focuses separately on each percentile of the national (equivalised) income distribution, and the associated average (equivalised) level of total household expenditures. The relevant income and expenditure levels are standardised by the national median of (equivalised) household income. The markers represent the relevant country-specific minimum and maximum (small light blue markers) and average value (larger dark blue marker) across all EU countries (except for Austria, Malta, Portugal and Slovenia due to missing data).

Next, we assess how the more contentious modelling choices regarding the construction of the welfare indicator are likely to impact the resulting ABSPO poverty estimates. Household budget survey data allow for considerable flexibility in this regard: between the most comprehensive and most restricted welfare aggregates (i.e. total income and consumer expenditures, respectively), a wide range of potential arrangements are possible depending on the treatment of notional income components, in-kind goods and services, savings, actual rents or durable goods. Using data from the 2015 wave of the EU-HBS, the left panel of **Figure 7.18** shows EU-level averages associated with various potential welfare indicators and the aforementioned income or expenditure components. Starting from the inclusive concept of total income (2260 euro per month on average), the deduction of notional and in-kind income components leads to a substantially lower income-based monetary welfare aggregate (1960 euro per month). The overwhelming part of this reduction comes from imputed rents (280 euro per month), whilst the contribution of in-kind goods and services (including home production) is rather negligible (20 euro per month). Households' average monetary income is still considerably larger than total monetary expenditure (1685 euro per month in a typical EU country), due to household savings amounting to 274 euro per month on average. Focusing on monetary consumption expenditures (i.e. devoid of actual rents, durables and extraordinary expenses) further reduces the value of the welfare aggregate by another 275 euro per month. Among the relevant incremental components, durables represent the largest category (170 euro per month), while extraordinary expenses make up for less than 15 euro per month on average. The potential deduction of actual rents (i.e. to make tenants comparable to owner-occupants) represents a surprisingly small reduction (i.e. 6% of total monetary expenditure or 100 euro per month), due to the relatively small share of tenants across most national populations.

Based on the above decomposition, one may suspect that the most impactful measurement choices concern income vs. expenditure-based measurement, the related accounting for housing rents (i.e. the addition of imputed rents vs. the deduction of actual rents), as well as the treatment of durable goods. However, the true effect of these on the resulting ABSPO poverty estimates may still be relatively limited. The right panel of **Figure 7.18** shows the same welfare aggregate comparison as derived on the sub-sample of households with income below the national median, and reveals several important features. First, different welfare aggregates are much more similar among poorer households (i.e. 940-1330 euro per month) than among the whole population (1410-2260 euro per month). Second, the largest previous incremental component, household savings are virtually non-existent in the below-median sub-population. Third, actual and imputed rents are close to identical on average, due to the more even distribution of tenants and owner-occupants among low-income households. Fourth, household

expenditures on durables are half as large among below-median households as in the overall sample (85 vs. 170 euro per month). This suggests that income-based or expenditure-based measurement of poverty in the EU, and the particular combination of these for ABSPO implementation, is unlikely to generate major gaps in ABSPO poverty outcomes.

Figure 7.18. Welfare aggregate decomposition



Notes: Own calculations using microdata from the 2015 wave of the EU-HBS. The figures represent the relevant cross-country averages associated with each expenditure category. Austria, Malta, Portugal and Slovenia are not part of the analysis due to missing data.

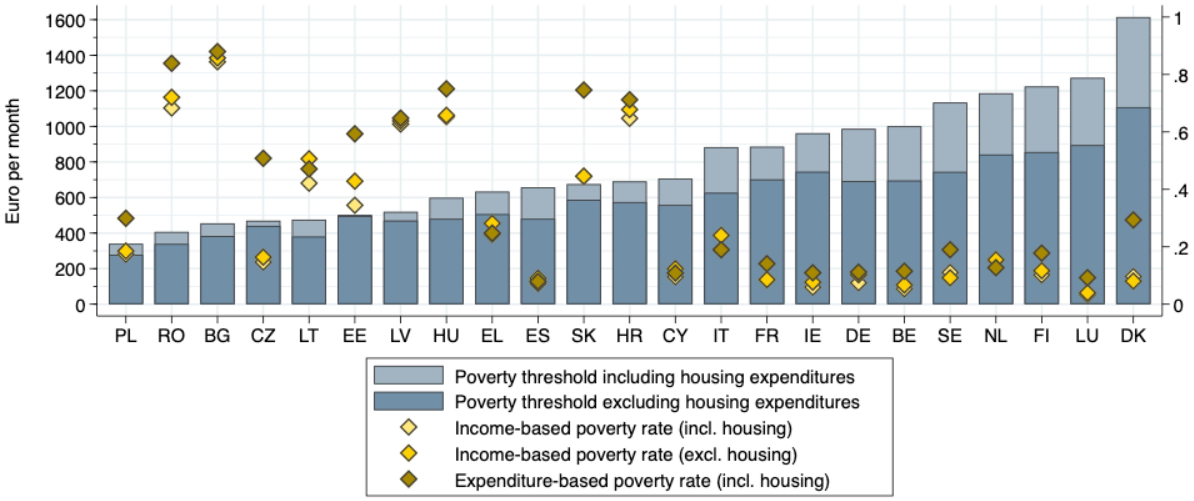
Using the food-based ABSPO measurement approach (see Chapter 6 for more details) and the 2015 wave of the EU-HBS, we have also checked the sensitivity of the resulting poverty lines and rates to the choice of different welfare indicators. In light of the discussion above, we specifically focus on the difference between income-based and expenditure-based measurement, and the potential treatment of minimum housing needs.[184] In particular, we derive absolute poverty lines both with and without housing costs (based on household expenditure patterns), and compare these to the relevant income-based or expenditure-based welfare aggregates to arrive at the associated poverty rates. **Figure 7.19** below presents the resulting poverty indicators by country, and highlights the following structural features. First, minimum housing needs represent a substantial share (i.e. 20% on average) of equivalised ABSPO poverty lines that increases significantly with the level of the non-housing component.[185] Second, the associated income-based ABSPO poverty rates are virtually identical with or without housing costs across the EU (i.e. 27.4% and 28.8%, respectively, on average). The difference is less than 2 percentage points in most Member States, but can quite substantial in selected Member States (such as Croatia or Romania). Overall, housing poverty tends to be higher than non-housing poverty in relatively rich countries with high absolute poverty lines (such as Denmark or Sweden), while the opposite holds poorer Member States characterised by a large owner-occupied population (such as Croatia, Lithuania or Romania).[186] The third marked feature shown in **Figure 7.19** is that income-based poverty rates (including housing) are systematically lower than expenditure-based ones (i.e. the cross-country averages are 19% and 27%, respectively). The extent of the wedge between the two is rather idiosyncratic in both absolute or relative terms, but it nevertheless points to the importance of savings in reducing observed poverty with income-based measurement.

[184] Due to their relatively small expenditure share, the differential treatment of home production, in-kind income components and durable goods in the ABSPO welfare aggregate exerts a marginal effect on the resulting poverty indicators. For example, the exclusion of durable goods (i.e. by far the largest component) from the welfare aggregate reduces the ABSPO poverty rate by only 0.2 - 0.8 percentage point across Member States.

[185] The share of the housing component is the smallest in Estonia (less than 1%) and largest in Denmark (44%).

[186] This relationship may be driven by overly high imputed rent estimates, the widespread availability of affordable (sub-market) rental opportunities for tenants in poorer EU countries, or even by idiosyncratic factors (e.g. survey data limitations).

Figure 7.19. Sensitivity of poverty lines and rates to the choice of the welfare indicator



Notes: Own calculations using microdata from the 2015 wave of the EU-HBS. The presented welfare aggregates and poverty rates all refer to the same year. Austria, Malta, Portugal and Slovenia are not part of the analysis due to missing data.

As observed previously by Cutillo, Raitano, and Siciliani (2020), income-based and expenditure-based measurement may not only change the overall level of poverty but also its distribution across different population segments. We find that, across the EU, the difference between the share of income-poor and consumption-poor households is particularly large among households with children (26% vs. 33%) and the elderly (7.7% vs. 15%), while relatively small among single adult households (7.6% vs. 9.6%). In terms of geographic patterns, the gap between income-based and consumption-based poverty incidence is much lower in urban areas (9% vs. 13%) than in rural areas of low population density (24% vs. 35%).

Overall, our findings suggest that the choice and specification of the welfare aggregate can have a substantial effect on the estimated level, cross-country rankings and horizontal distribution of poverty between and within countries. While the ABSPO poverty lines and rates presented in this Report are based on a rather straightforward approach in line with international best practices, the related modelling choices (i.e. calculation of poverty lines based on expenditure data, measurement of the poverty rate with respect to households' total disposable income, the inclusion of imputed rents for owner-occupants) still need to be transparently communicated, well understood and deliberated for potential monitoring or policy use. For example, the likely effects and effectiveness of social policy interventions (such as minimum wage or means-tested social assistance schemes) may be very different, in potentially heterogeneous ways, depending on whether the same earnings, income or consumption concepts are used as the basis for measurement and policy-making.

7.5. Household survey use for EU-wide poverty measurement

This section assesses the applicability, comparability and reliability of the existing data infrastructure of European household surveys for the purposes of EU-wide absolute poverty measurement. From the perspective of ABSPO implementation, at least three major aspects are worthy of attention. The first concerns the systematic features and potential biases that survey-based measurement of poverty may entail in general. The second aspect concerns the cross-country comparability of national and European household surveys for consistent measurement. The third aspect concerns the degree of comparability between various European household surveys – especially the correspondence between the EU-HBS and EU-SILC, the two main datasets used for poverty modelling and measurement as part of the ABSPO project. We review these in turn.

7.5.1. Survey-based poverty measurement in the EU

Survey-based measurement of poverty in the EU is the only feasible way for ABSPO implementation, yet it is not without its shortcomings. The first of these concerns limitations in population coverage and representativeness. European household surveys such as the EU-HBS or the EU-SILC are meant to be nationally representative and employ a societal focus at large. Accordingly, their reference population is made up of private households residing in Member States' territory of Member States, while persons residing in non-conventional living arrangements remain unaccounted for. These latter often include highly vulnerable groups (such as elderly, the sick and disabled, homeless or detained persons, asylum seekers and refugees) that are at particularly high risk of poverty and social exclusion. For example, a recent special EU-SILC survey targeted at marginalised Roma communities in Slovakia revealed that these were uniformly at risk of poverty and social exclusion, with the corresponding AROP rate being almost 75 percentage points higher than in the national population (United Nations, 2020). No cross-country comparable information is available on the population share of persons living outside of private households, but indirect estimates point to likely magnitudes of several percentage points.[187] In addition, some hard-to-reach marginalised groups living in private households might also be unwilling or unable to respond to survey requests, leading to a further underestimation of poverty (Nicaise and Schockaert, 2014). It is therefore possible that the true poverty rate is several percentage points higher than the corresponding survey-based estimates.

A second potential shortcoming stems from the limited reliability of self-reported survey information. In general, this concerns the various cognitive, psychological and administrative obstacles standing in the way of accurate survey reporting (e.g. stigma surrounding income reporting, the difficulty of consistent recording of expenditures). Moore, Stinson, and Welniak (2000) find a wide range of random and non-random error properties across income characteristics and income types in U.S. government surveys, while Verma and Betti (2010) take stock of the various sampling and non-sampling errors specific to the EU-SILC. The overall effect of these on aggregate statistics or poverty indicators is not known or knowable based on the publicly available information on sampling-related aspects of European surveys. A particular concern specific to poverty measurement relates to the distributional patterns and sub-sample focus of the ABSPO analysis. With lower effective sample sizes among the target population and often skewed frequency distributions, sampling errors associated with poverty indicators tend to become much larger than those associated with aggregate statistics based on the full sample. Effective sample sizes in the EU-SILC depend on the size of the respective national populations with the intention of ensuring minimum precision criteria for key social indicators at national level (e.g. one percentage point accuracy for the 'at-risk-of-poverty' rate.[188] However, as Goedemé (2010) demonstrates, the true AROPE standard errors in many EU countries may be considerably larger than foreseen due to differences in sampling design. A further issue concerns non-sampling errors due to systemic non-response in the lower tail of the income distribution, which can result in the significant underestimation of poverty (Brewer, Etheridge, and O'Dea, 2017; Meyer et al., 2021). Item non-response is indeed relatively high for some income components in the EU-SILC, and is dealt with imputation techniques by Eurostat. The accuracy of these are not known but are expected to offer only a partial solution as long as non-response is not completely at random.[189]

The third limitation of the existing European survey data infrastructure for poverty measurement is the potential need to rely on different datasets simultaneously. Data files of the EU-HBS and the EU-SILC are typically collected and compiled using different population samples, national definitions, and harmonisation tools. This presents a difficulty for ABSPO implementation that uses HBS-based expenditure data for poverty modelling and SILC-based income data for poverty measurement (see Section 3.4 of this Report for further details). For certain applications, using only HBS-data constitutes a straightforward solution, but the more fundamental remedy lies with using the

[187] According to the OECD's Affordable Housing Database, the estimated share of homeless persons varies between 0.1-0.5% of the total population in the EU. Eurostat data show furthermore that the incarceration rates range up to 0.25%, long-term care beds in nursing and residential care facilities make up 0.1-1.5%, and curative care beds in hospitals accommodate 0.1-0.6% of the total population across Member States.

[188] For more information, see Eurostat (2018b) or the Reference Metadata for ESS quality standards (Eurostat, 2020d).

[189] "The technique aims at 'filling the holes' in a distribution, so only unit non-response can be assumed. However, it has to be kept in mind imputed values are not exact values and underlain on a model that could not be the perfect fit of the reality. Imputation can have a significant effect on the overall accuracy: it generally skews a sample distribution so estimates will be biased. Furthermore, variance estimates assuming that imputed values are exact ones will be generally biased." (Eurostat, 2018b)

same population sample for both surveys – as is the case in Hungary where (uniquely in the EU) joint HBS-SILC microdata are made available by the NSI for scientific or policy analysis.

The thematic focus of existing European surveys also excludes the consideration of household wealth in the calculation of EU-wide poverty indicators. This information is not part of standard national or European household surveys, and is not available in representative manner for all Member States. The best harmonised data source in this regard is the Eurosystem's Household Finance and Consumption Survey (HFCS) coordinated by the European Central Bank the collects household-level data on households' wealth and financial situation in 20 (mostly Eurozone-member) EU countries. For sampled countries, it becomes possible to link consumption data from the EU-HBS, income data from the EU-SILC and wealth data from the HFCS using cell-level statistical matching based on income. This is exactly what the Eurostat's experimental project "Income, Consumption and Wealth (ICW)" does to create a joint distribution of these socio-economic indicators and help describe households' material well-being and economic vulnerability more accurately. While the resulting analysis and observed interplay between indicators are interesting and plausible, the reliability of the matching is hard to assess given the potential residual inter-dependencies between variables.[190] For these reasons, and in line with current international practices, we do not consider household wealth for ABSPO poverty measurement.

7.5.2. Cross-country comparability of European household surveys

The second important aspect of the European survey data infrastructure concerns the cross-country comparability of European household surveys. These are typically produced in two stages. The actual data collection is the responsibility of National statistical institutes (NSIs) that are also in charge of defining sampling frames, methods and definitions on the basis of European statistical standards and recommendations. In the second stage, Eurostat merges national files into harmonised European datasets. The potential scope and true extent of harmonisation in the final datasets primarily depend on the upstream degree of coordination between national sampling strategies. In this regard, the main household surveys used for ABSPO measurement are at very different stages of development.

The Survey on Income and Living Conditions (EU-SILC) was established in the early 2000s with the specific objective of collecting timely and comparable cross-sectional and longitudinal data on European households' income, living conditions, poverty and social exclusion. Definitions, fieldwork aspects, imputation procedures, sampling and tracing rules were defined accordingly by European regulations and under Eurostat's auspices (EC Regulation n° 1177/2003). Despite the common statistical framework, potential cross-country differences may arise during both the pre-data collection and the post-data collection phase. These typically include deviations in sampling strategies, interview modes, follow-up rules for contacting household members, treatment of outliers, handling of item non-response, or weighting, among others. Krell, Frick, and Grabka (2017) take a systematic look at these, compare the cross-sectional and longitudinal SILC components, and find large discrepancies related to income, inequality and poverty mobility over time in selected Member States.[191] Their findings are consistent with the result of the analysis by Frick and Krell (2010) that compares EU-SILC and SOEP data for Germany and better highlights the effect of differences in sampling, interviewing methods, and post-collection data treatment on the resulting income and poverty statistics. These and related findings calls for further data improvements in the future, but demonstrate a high level of overall consistency across national SILC files (Verma and Betti, 2010).

The situation is rather different for the European Household Budget Survey (EU-HBS). Household budget surveys are conducted on a regular basis since the 1960s in most EU Member States, and focus on households' consumption expenditure. These are collected with the dual objective of determining (and updating) statistical weights for the calculation of Consumer Prices Indices (CPI), and monitoring households' economic well-being (European Communities, 2003). Eurostat has been collecting and publishing these national survey data every five years since 1988. Since then, participation in the EU-HBS has been voluntary, without a clear legal basis, and involved rather

[190] For further information and results, see the relevant Eurostat website at https://ec.europa.eu/eurostat/web/experimental-statistics/income-consumption-and-wealth.

[191] In particular, Krell, Frick, and Grabka (2017) find that the largest discrepancies are observed in register countries that derive their income information from registers and usually conduct telephone interviews to obtain the remaining information. Such countries include Bulgaria, the Czech Republic, Denmark, France and Germany, as well as Norway and Sweden where results seem dubious enough to merit particular extra attention.

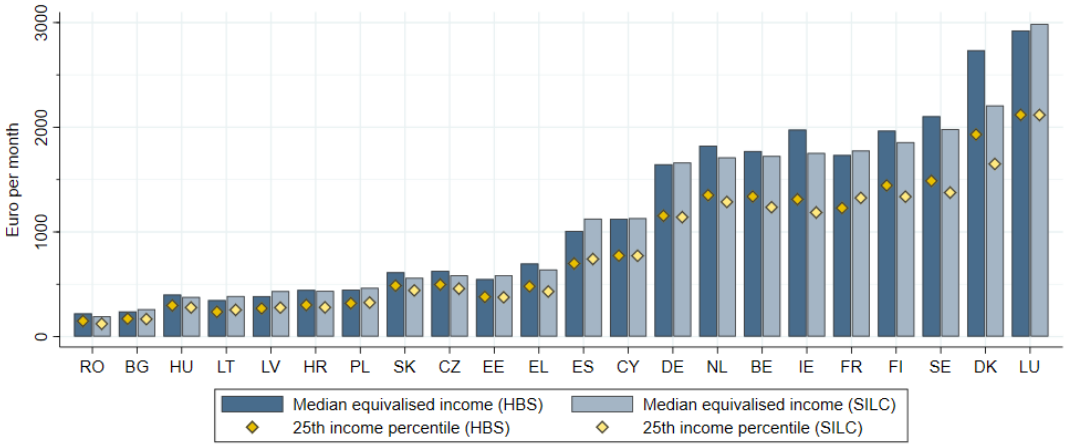
limited ex-ante or ex-post harmonisation by either NSIs or Eurostat. (Eurostat, 2020) presents a detailed account of the sampling and procedural aspects, data quality issues and cross-country comparability of the latest 2015 survey wave used for ABSPO calculations. In particular, it highlights that - despite the absence of common regulations - the most important data collection aspects are identical or very similar across EU countries. These include the data collection period (i.e. mostly 2014-2016), the use of detailed household diaries of expenditures, the definition of the national target population (i.e. private households, reference person as the main income holder), the classification of consumption expenditures (i.e. ECOICOP 5-digit 2013) and territorial units (NUTS 2-digit 2013), as well as the concept of consumption expenditures (i.e. monetary and non-monetary components). Most cross-country divergence concerns sampling-related aspects (such as the sampling frame, the sample size or the response rate), the breadth of collected information (e.g. home production, consumption quantities) and the calculation of imputed rents (i.e. different national methods). These, however, do not put the straightforward implementation of ABSPO methodologies in jeopardy for EU-wide measurement – with the exception of Austria which does not feature in the publicly released data files by Eurostat.

A promising future development for cross-country comparable expenditure data at the European level is the implementation, as of 2021, of a new common framework for European micro-level statistics related to persons and households, the Integrated European Social Statistics (IESS, Regulation 2019/1700). This creates a new legal environment for mandatory and harmonised data collection for social statistics in the EU near future. In relation to the EU-HBS, it specifically means improved comparability of consumption data across countries for subsequent survey waves. For more details on how this and other changes in the European survey data infrastructure may improve ABSPO measurement in the future, see Section 9.3 of this Report.

7.5.3. Compatibility of EU-HBS and EU-SILC survey data

This sub-section presents a brief empirical analysis of survey data comparability and compatibility for the purposes of ABSPO measurement. Since no clear reference points exist for the assessment of international comparability, we focus on the alignment of relevant income and imputed rent variables across EU-SILC and EU-HBS data at the national level. Given the different degrees of harmonisation that these two surveys represent, our results also address the issue of cross-country comparability in an indirect fashion. This is the same strategy as followed by Eurostat in the HBS Quality report to assess the consistency between the EU-HBS and the EU-SILC in the domains of at-risk-of-poverty and income inequality statistics (Eurostat, 2020a).[192]

Figure 7.20. Income comparison between the EU-SILC and the EU-HBS by country (2015)



Notes: Own calculations using microdata from the 2015 wave of the EU-HBS and the EU-SILC. Austria, Germany, Malta, Portugal and Slovenia are not part of the analysis due to missing data in either of the datasets.

[192] Donatiello et al. (2014) carry out a more in-depth comparative analysis of HBS and SILC data based on statistical matching in Italy. Their study not only highlights the consistency issues surrounding joint survey use, but also demonstrates the various idiosyncrasies associated with linking them together at the micro-level.

Our empirical analysis focuses on the most relevant common components that matter for ABSPO measurement: households' total disposable income and imputed rents.[193] **Figure 7.20** plots the median and 25th percentile of the (equivalised) income distribution, derived separately from each survey, by country. It reveals high overall consistency between the 2015 waves of the EU-SILC and the EU-HBS: median and lowest-quartile income levels are highly similar in most countries. The largest within-country gaps in median income are observed in Denmark (527 euro per month or 19.2% in relative terms) and Ireland (223 euro, 11.3%). These and other within-country differences are partly driven by variations in imputed rents (especially in case of Ireland or Sweden, see discussion below), but other factors are also likely to be at play.[194] The fit between the respective surveys is even better among low-income households: compared to the average median gap of 80 euro per month (6.9% in relative terms), the average absolute difference in the 25th income percentiles is only 54 euro per month (6.4%).

Given the overall consistency of household's total income, the most critical income component for ABSPO measurement is imputed rent. This latter, as an auxiliary (notional) income component, plays an important role in ensuring comparability in welfare analysis between owner-occupier and renter households (see Section 7.4 of this Report for more details). The main issue with imputed rents are twofold. First, the size and the structure of national housing markets are very heterogeneous across Europe. For example, the share of population living in owner-occupied dwellings range from 12% in the Netherlands to 96% in Romania, while the share of households paying non-subsidises market rents vary between 1% (in Romania) and 43% (in Germany).[195] Second, imputed rents are estimated in very different ways from one EU country to the next: at least four different methods are in use, from direct self-assessment to rather sophisticated regression-based procedures (Eurostat 2020). A particular difficulty arises due to the fact that many NSIs use various estimation method simultaneously. For example, while the 2015 wave of the EU-HBS features imputed rents based on self-assessments and alternative user-cost based methods in close to half of the Member States, the EU-SILC contains estimates based on regression or stratification methods for all EU countries by default. Assessing the validity of one approach over another is far from straightforward, but existing analysis suggests that the SILC-based harmonisation alone is unlikely to eliminate (or significantly reduce) the existing data inconsistencies associated with imputed rents (Törmälehto and Sauli, 2017).

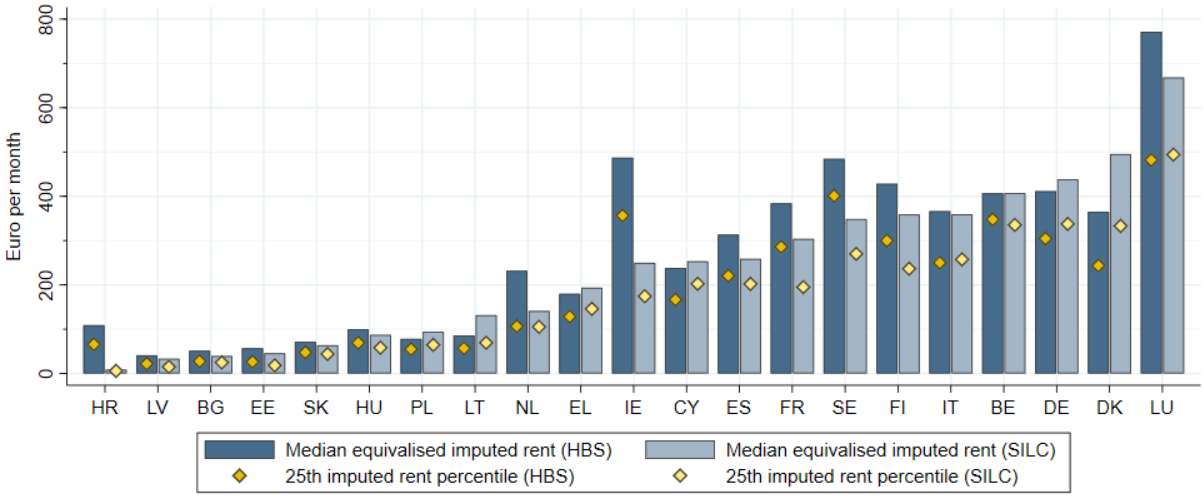
Figure 7.21 plots some aggregate statistics on imputed rent as featured in EU-SILC and EU-HBS data from 2015. It shows that consistency in imputed rents at the national level is more limited than in the case of total household income. Median and 25th percentile levels of equivalised (non-zero) imputed rents are well aligned in most Member States, but the number of countries with marked differences across surveys is considerably higher. These include Sweden, Ireland, Luxembourg and the Netherlands, among others, where HBS-based estimates are consistently higher then SILC-based ones – despite the apparent similarities in estimation methods. Denmark is an outlier as the only country with significantly higher imputed rent estimates based on the EU-SILC, even though smaller gaps of the similar kind are also present in Germany, Greece and Poland. Our results further indicate that, in many cases, the relationship between imputed across survey is markedly different at various parts of the distribution (e.g. compare the median and 25th percentile values in France, Luxembourg or Spain). Given the relatively large share of imputed rents in the broad concept of total income used as ABSPO welfare aggregate (i.e. 33% on average among households with income below the national median based on HBS data), the observed differences in measurement can have potentially large effects on the resulting level and concentration of ABSPO poverty estimates in selected Member States.

[193] There are further important data inconsistencies between EU-SILC and EU-HBS for ABSPO measurement. One of these concerns the different classification of settlement types: while urban, intermediate, and rural areas in the EU-HBS are designated by population density alone (i.e. more than 500, 100-499, and less than 100 inhabitants/km^2, respectively), the relevant classification in the EU-SILC involves two criteria: population density and population size. (Densely populated areas are characterised by at least 1500 inhabitants/km^2 and a minimum population of 50.000, while intermediate areas by at least 300 inhabitants/km^2 and a minimum population of 5.000 – the rest are considered rural areas.) This entails using potentially different estimated poverty lines for a non-negligible share of households in selected countries: while the respective population shares are rather similar overall, the difference between the relative frequency of urban and intermediate areas in the survey is found to be as large as 20% in selected Member States (such as Belgium or Luxembourg). For such reasons, harmonisation not only within but also across European surveys also needs to proceed. For concrete suggestions, see Section 9.3 of this Report.

[194] There is no straightforward explanation for the large discrepancy between SILC-based and HBS-based income estimates for Denmark. One reason may be that the Danish SILC focuses predominantly on income as it earned rather than paid out (see Quality Report EU-SILC 2016, Denmark). Another factors may be the low effective sample sizes and limited recourse to face-to-face interviews used during HBS data collection that may produce potentially biased estimates (Eurostat, 2020).

[195] Further complications arise by the availability (or even dominance) of rent-free or reduced-rent housing for renters in many EU countries, as well as the large cross-country differences in mortgage payments that are not properly accounted for by European household surveys.

Figure 7.21. Comparison of imputed rents across the EU-SILC and the EU-HBS by country (2015)



Notes: Own calculations using microdata from the 2015 wave of the EU-HBS and the EU-SILC. Austria, Germany, Malta, Portugal and Slovenia are not part of the analysis due to missing data in either of the datasets.

Overall, our analysis shows that EU-HBS and EU-SILC microdata are sufficiently similar in terms of income and expenditure patterns, and their joint use for ABSPO modelling appears to ensure sufficiently robust measurement of poverty across the EU. Available data could be improved in several dimensions (such as the sampling frame, the calculation of imputed rents, technical definitions), but the observed correspondence between the two main European household surveys in terms of income and expenditure aggregates suggests that the existing data infrastructure is capable of delivering absolute poverty estimates of considerable comparability and consistency. Recent and ongoing harmonisation efforts by the Eurostat and national statistical institutes are expected to bring further improvements in the near future, while the recently adopted IESS regulation represents a qualitative step forward towards the consolidated and integrated household microdata at the EU level (see Section 9.3 of this Report for more information and detailed suggestions).

CHAPTER 8.
ABSPO poverty measures in the EU

This chapter presents the resulting ABSPO poverty estimates and highlights their most distinctive features in the context of existing headline EU indicators and alternative measures. The derivation of the absolute poverty estimates in question requires two distinct analytical procedures: the modelling of poverty lines on the one hand, and the subsequent measurement of poverty on the other hand. The novelty and main contribution of the ABSPO project are concentrated in the former domain, while the actual measurement of ABSPO poverty relies on the use of standard tools and practices.

For the calculation of ABSPO poverty lines, we explore three different modelling approaches. These employ reference budget-based, survey-based and food-based strategies to modelling, and are presented in detail in Chapters 4, 5 and 6 of this Report. Despite relying on different methods, identifying assumptions and data sources, all three approaches target the same common standard of living (such as adequate social participation), use the same definitions and technical concepts, and employ identical measurement tools (such as reference budgets and survey-based statistical methods). Therefore, they all produce comparable absolute poverty lines that reflect EU citizens' and households' minimum financial needs in a customised manner.

Table 8.1 below provides a schematic overview of ABSPO measurement approaches and highlights the main differences between them. These concern the geographical scope, modelling strategy, expenditure structure, food budget inputs and the configuration of minimum needs associated with each modelling approach. Importantly, Table 8.1 also underscores the modular character of ABSPO modelling, the multi-purpose use of various building blocks, as well as the possibility of combining these in different ways across measurement approaches. This latter property, in particular, makes it possible to increase the geographic focus and country coverage of certain data-driven methodologies (such as the survey-based approach featuring simplified food budget pricing). In such manner, we manage to produce three different sets of comparable absolute poverty lines in the ABSPO pilot counties of Belgium, Finland and Hungary, as well as two different sets of poverty thresholds for all EU Member States (except for Austria) as project outputs.

Table 8.1. Schematic overview of ABSPO measurement approaches

	BUDGET-BASED APPROACH	SURVEY-BASED APPROACH	FOOD-BASED APPROACH
Country coverage	BE, FI, HU	BE, FI, HU, IT (EU27)	EU27
Base year of modelling	2020	2015	2015
Food reference basket	Mixed-method	Expert-based nutritional	Expert-based nutritional
Food budget pricing	Small-scale price collection	National consumer price statistics	National Average Price data (EUROSTAT)
Modelled expenditure categories	Food (Housing, Transportation, Health) Residual	Food Housing Transportation Health Residual	Food Non-food
Modelling strategy	Reference budget method	Reference budget method Statistical method	Reference budget method Statistical method
Differentiation of minimum needs	Age & gender Household size & composition Region & settlement type	Age & health Household size & composition Region & settlement type	Age Household size & composition Region & settlement type

The actual measurement of absolute poverty proceeds on the basis of the resulting poverty lines. To observe the relationship between households' available financial resources and minimum financial needs, we first calculate the appropriate monetary values of ABSPO poverty lines for any given reference year using price level adjustments based on official annualised HICP figures provided by Eurostat (see Section 7.2 of this Report for a more detailed discussion). We then map these updated poverty thresholds onto the relevant cross-sectional EU-SILC sample of households using the corresponding income reference period.[196] The mapping takes place in a customised manner at the cell level, conditional on the age and health status of individuals, the size and composition of households, as well as the region and settlement type of their residence.[197] In line with the welfare aggregate definition used for the modelling of poverty lines, we measure households' available financial resources by the sum of total disposable income and (gross) imputed rents.[198] The calculation of poverty estimates itself involves a straightforward comparison of minimum and available resources at the household level, and the subsequent binary assessment of poor and non-poor households.

It is important to note that absolute poverty estimates and measures presented in this Chapter and throughout the Report rely on original ABSPO poverty lines, derived on the basis of common modelling assumption and algorithms. They do not feature any posterior data cleaning, harmonisation or ad hoc statistical adjustments. Given the potential data-related limitations and methodological complexities of ABSPO modelling, certain modifications along these lines may be deemed preferable for the purposes of potential future policy or indicator use. However, since ensuring the full consistency and robustness of ABSPO estimates would likely require a considerable amount of collective effort and investment on the part of different stakeholders that goes well beyond the scope of the current analysis, this is not pursued as part of the ABSPO project.[199] While the presented ABSPO estimates are occasionally idiosyncratic and hard to reconcile with intuition or existing pieces of alternative evidence, they nevertheless represent equally valid and qualified estimates of absolute poverty for all Member States, time periods, and household types.

The first part of this chapter presents a comparative analysis of the resulting ABSPO poverty lines across the various measurement strategies, and explore the corresponding patterns of absolute poverty between and within Member States. In Section 8.2, we focus specifically on the food-based statistical measurement approach, and use the resulting ABSPO estimates to contextualise the headline AROPE indicators of the existing EU measurement framework across the EU. In the final section, we compare and contrast ABSPO poverty estimates with alternative measures of subjective poverty and monetary deprivation for further contextualisation and empirical validation.

8.1. Presentation of ABSPO poverty estimates

This section presents the resulting ABSPO poverty estimates, derived on the basis of different modelling approaches, for the reference year of 2020. Our analysis shows that different measurement strategies can lead to markedly different poverty outcomes, but also demonstrates the robustness of ABSPO poverty lines and rates in terms of cross-country rankings, horizontal poverty profiles and poverty trends over time.

[196] The income reference period in the EU-SILC is a fixed 12-month period (typically the previous calendar or tax year) for all countries except IE for which the survey is continuous and income is collected for the last twelve months. For more details, see https://ec.europa.eu/eurostat/cache/metadata/en/ilc_esms.htm.

[197] ABSPO poverty lines differ by individual, household and geographic characteristics. The average number of different household-specific absolute poverty thresholds in a given country is 1177, 1100 and 382 for the budget-based, survey-based and food-based approach, respectively. The relevant country-level figures range between 95 (Germany, food-based approach) and 3489 (Poland, survey-based approach) and tends to increase with the degree of geographic disaggregation (i.e. the number of NUTS1 regions), the variability of sampled household types, and the granularity of modelling (i.e. the number of separately modelled expenditure categories).

[198] See Sections 7.4 and 7.5 of this Report for detailed discussion of the ABSPO welfare aggregate and the compatibility between EU-HBS and EU-SILC microdata.

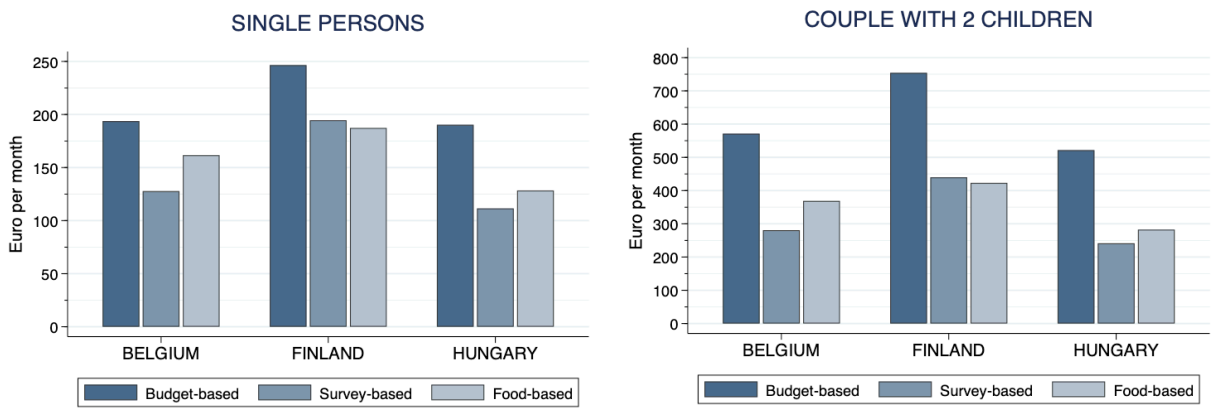
[199] Chapter 9 and in particular Section 9.3 of this Report contains a detailed discussion of the requirements and challenges of an EU-wide scale-up of ABSPO methodologies for the purposes of regular measurement, as well as some recommendations on data-related improvements and harmonisation steps that could potentially benefit sound absolute poverty measurement in the EU.

8.1.1. ABSPO poverty lines across different measurement approaches

We start the presentation of ABSPO poverty thresholds with the comparative analysis of the relevant reference budget sub-components. These specifically include the mixed-method and nutritional food budgets that are calculated across all measurement strategies in ABSPO pilot countries, as well as the residual reference budgets derived by the budget-based and survey-based approaches.

The resulting ABSPO food reference budgets for selected household types are presented in **Figure 8.1** below. It shows that the mixed-method budgets of the budget-based approach are consistently and considerably (19% - 116%) higher than the corresponding nutritional food budgets of the survey-based and food-based approaches. Part of the reason is their broader scope and the inclusion of auxiliary components related to the social function of food consumption (such as eating out, inviting people, celebrations, holidays or trips, among others) that amount to about one-fifth of the total food budgets.[200] More substantial factors include the different basket structure and higher item quantities specified for the mixed-method food budgets (see the detailed comparison of food baskets in Section 7.1 of this Report). Moreover, due to the comparatively high individual budgets assigned to children relative to adults by the budget-based approach, the divergence between the mixed-method and nutritional food budgets tend to increase with household size (see the right figure panel for illustration). It is worth noting, however, that the above-mentioned factors are not inherent features of mixed-method reference budget development, but rather accidental consequence of the particular modelling tools and procedures chosen for ImPRovE/EURB calculations and subsequent ABSPO implementation as part of the reference budget-based approach.

Figure 8.1. Food budgets of selected HH types in ABSPO pilot countries by measurement approach



Notes: Figures are based on ABSPO calculations and refer to 2020 values. The exact mixture of data sources, reference baskets and price statistics used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion. The relevant budgets in the right panel are based on the assumption of one young child (aged 0-6) and one middle child (aged 7-12). Adult persons are assumed to be of working-age in both panels.

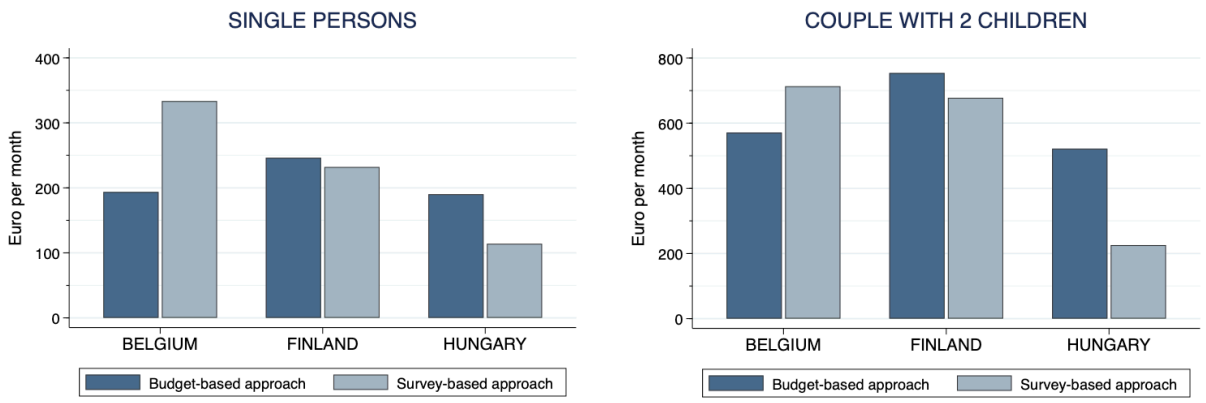
Figure 8.1 also shows that the food budgets associated with the survey-based and food-based approaches are much more even within countries and household types. They share the same underlying nutritional reference baskets and the difference between them is driven entirely by the observed price differentials across the relevant national and international pricing sources used (see Section 7.2 of this Report for more details). The prices derived from the Eurostat's national average price dataset for the food-based approach tend to be markedly higher in Belgium, but very similar in Finland and Hungary.

The ranking of reference budgets is less straightforward when it comes to the residual component. **Figure 8.2** compares the residual sub-component of the budget-based and survey-based ABSPO poverty thresholds for the

[200] ABSPO food budgets of the reference budget-based approach also account for some durable items related to home cooking and home food consumption that are taken into account by the residual (or non-food) budget components of the survey-based and food-based approaches. The budgetary contribution of these items, however, is rather small: 12 euro per month, or less than 6% of the typical household's food budget. See Chapter 4 of this Report for more details.

same illustrative household types. It shows that the relative position between the two types of budgets is rather unstable: budget-based residual thresholds for single adults are only about 60% of survey-based ones in Belgium (194 vs. 334 euro per month), comparable to them in Finland (247 vs. 232 euro per month), and almost 70% higher than them in Hungary (190 vs. 114 euro per month). These patterns carry over to larger households as well (see illustration in the right panel), with an even larger discrepancy in the Hungarian case. Given the methodological differences across the relevant modelling approaches, the source of the observed gaps in residual budgets between and within countries is very hard to pin down. One possibility lies with the relatively high degree of harmonisation of the budget-based residual bundles across countries: these all took the Belgian basket as the starting point for item selection, and evolved into very similar structures in all three countries (see Annex A of this Report for further details of the structure of residual items in ABSPO pilot countries). While the resulting budgets may represent truly basic needs for a decent living in Belgium, they may prove overly generous for Hungarian households with much lower residual needs and spending. This again points to the difficulty of translating abstract concepts such as adequate social participation into actual consumption bundles in a consistent and cross-country comparable manner. In this regard, the residual expenditure thresholds derived by the survey-based approach may be more reliable, as these are based on local households' own assessment of their ability to make ends meet and afford the totality of all essential consumption goods and services beyond the necessities of food and housing.

Figure 8.2. Residual budgets of selected types in ABSPO pilot countries by measurement approach

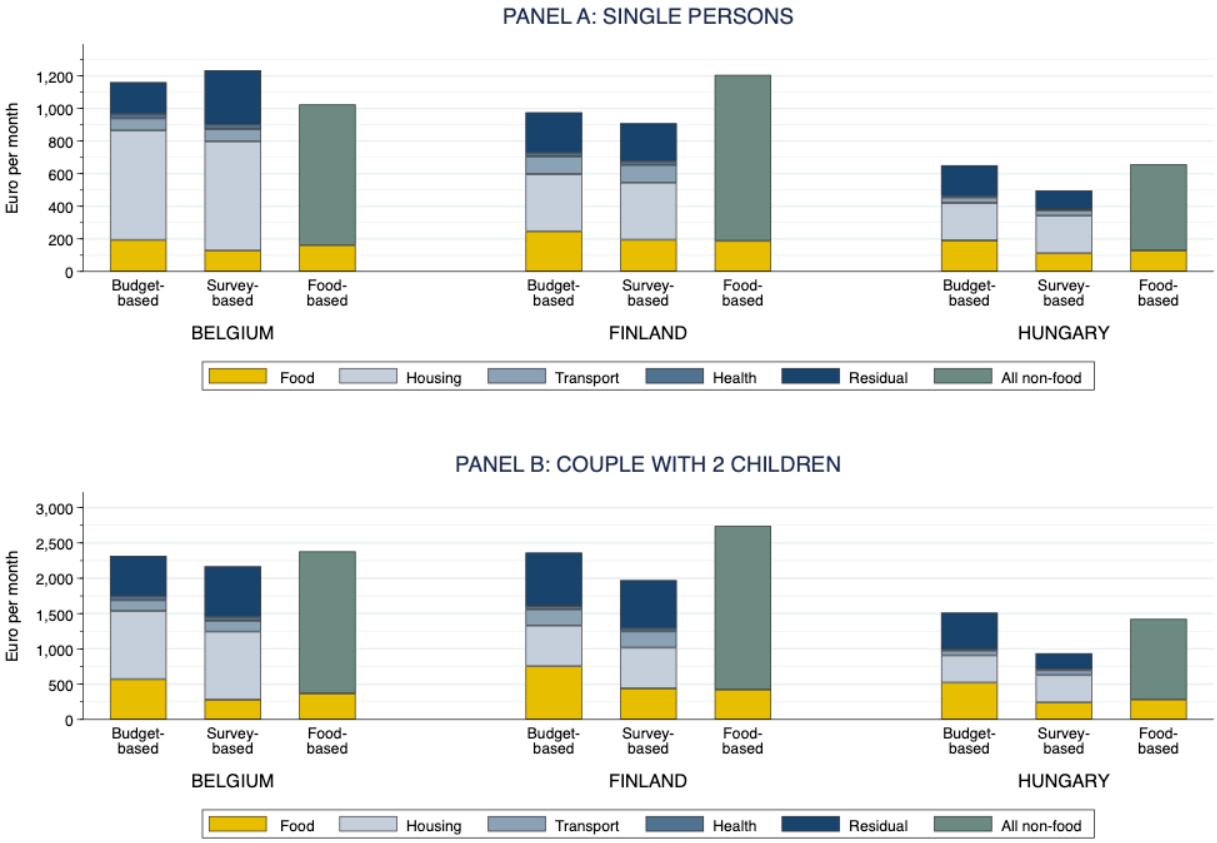


Notes: Figures are based on ABSPO calculations and refer to 2020 values. The exact mixture of data sources, reference baskets and price statistics used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion.

Turning now to the overall ABSPO poverty lines, **Figure 8.3** presents the relevant budget-based, survey-based and food-based expenditure thresholds by component in ABSPO pilot countries. Importantly, it shows that the overall poverty lines are more comparable within countries than their individual components: as of 2020, the estimated poverty thresholds for single adults vary between 1025 and 1235 euro per month in Belgium, between 910 and 1206 euro per month in Finland, and between 497 and 658 euro per month in Hungary. These figures indicate a rather high degree of consistency across ABSPO poverty estimates in a country (i.e. the relative dispersion is less 15%), despite the large divergence of methods, identification strategies and data sources across the different measurement approaches. The poverty thresholds for larger households (see illustration in Panel B) are somewhat different in structure (i.e. the budget share of the more variable food and residual components is higher) but rather similar in terms of variability. The relevant monthly figures for a couple with two children range between 2169 and 2381 euro in Belgium, 1973 and 2740 euro in Finland, and 938 and 1513 euro in Hungary.

Figure 8.3 also indicates that no clear ranking of poverty thresholds emerges from the analysis of ABSPO pilot countries. In most cases, the budget-based poverty lines are somewhat higher than the survey-based estimates, mostly on account of their larger food component. The food-based thresholds also appear slightly more generous than the survey-based ones, despite accounting for potential substitution effects between expenditure categories due to joint treatment of all non-food needs. While these differences may equally be systematic or idiosyncratic, the close alignment and comparability of the presented poverty lines seem to suggest that ABSPO modelling approaches all represent valid methodologies for harmonised poverty measurement in the EU.

Figure 8.3. ABSPO poverty lines for selected HH types in pilot countries by measurement approach



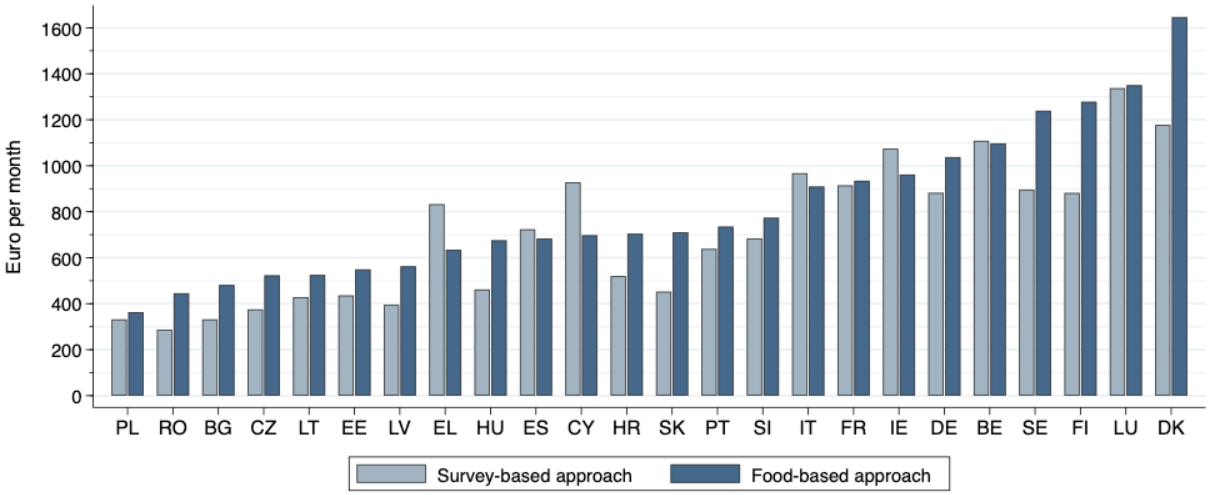
Notes: Figures are based on ABSPO calculations and refer to 2020 values. The exact mixture of data sources and methodologies used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion.

For a more structured comparison of the ABSPO poverty thresholds, **Figure 8.4** presents the results of the survey-based and food-based approaches for the full sample of EU countries.[201] These reveal that, similar to the findings in ABSPO pilot countries, the two statistical modelling strategies produce relatively similar outcomes: the equivalised poverty thresholds amount to 711 and 813 euro per month on average, and are separated by a relative difference of less than 20% in the majority of Member States. The gap in the poverty lines is particularly large in countries like Cyprus or Greece (where the survey-based thresholds are more than 200 euro higher), and in Nordic Member States of Denmark, Finland or Sweden (where the food-based thresholds are visibly higher). The exact reasons behind these differences are not known, but it is worth highlighting that none of them represent measurement errors. From a methodological standpoint, both sets of poverty thresholds are equally valid in all countries: their differences stem from the particular alignment (or misalignment) between households' subjective assessment of their living conditions and the objective patterns of their expenditure level and structure.[202] In particular, cross-country variations in this regard may be related to the limited comparability of subjective well-being measurement across different cultural and societal contexts (Diener and Suh, 2003).

[201] This requires replacing the original (regionally-differentiated) survey-based food budgets (based on national price statistics, available only for pilot countries) with the relevant country-level food budgets (based on international price data, available for all EU countries) used in the food-based approach. The impact of this on the resulting poverty lines is negligible in ABSPO pilot countries and is expected to be minimal in most other Member States, too. (The reason being that food prices tend to be rather similar across different pricing sources. See Section 7.2 of this Report for more details.) Note also that, from a methodological standpoint, this is the more appropriate comparison between the two measurement approaches in question: the identical food budgets make it easier to focus on those aspects where the approaches are truly divergent (i.e. the modelling of minimum non-food needs).

[202] Potential cross-country differences in the applied sampling methods used for the collection of household budget surveys may also play a part. For a more detailed discussion, see Sections 3.3 and 9.3 of this Report.

Figure 8.4. Comparison of ABSPO poverty lines by measurement approach across EU Member States



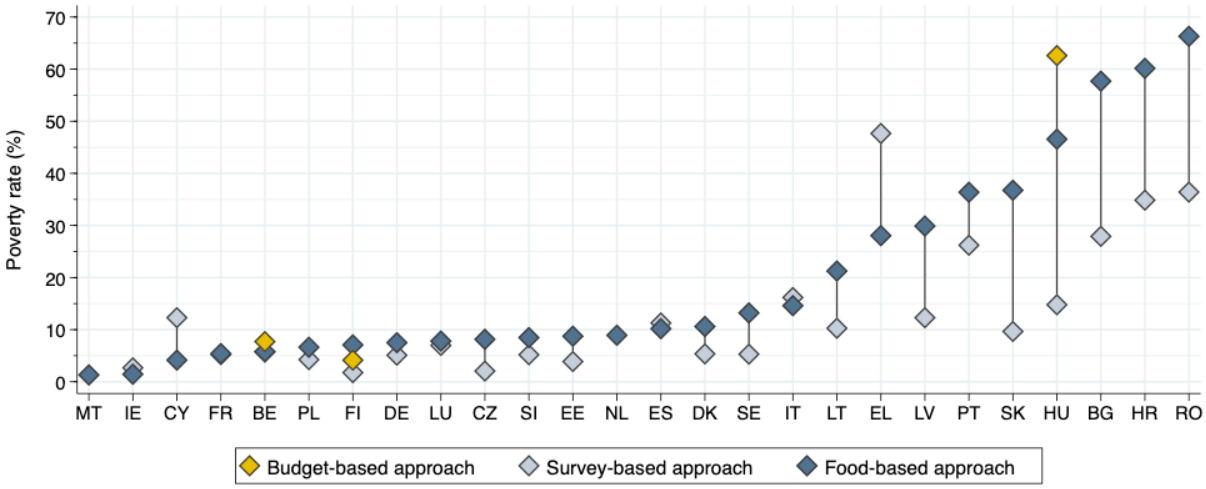
Notes: Figures are based on ABSPO calculations and refer to 2020 values in equivalised terms. The exact mixture of data sources and methodologies used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion. Austria, Malta and the Netherlands are missing due to unavailable data.

8.1.2. Cross-country analysis of ABSPO poverty rates

We now turn to the analysis of the corresponding ABSPO poverty rates at the country level. These are derived by comparing households' income data and relevant welfare indicator in the EU-SILC microdata with their customised ABSPO poverty thresholds in a given income reference period. Our objective is to measure the extent of poverty on the basis of different ABSPO poverty thresholds, and assess the robustness of absolute poverty rates across measurement approaches, countries and time periods.

The ABSPO poverty rates associated with each measurement approach are presented in **Figure 8.5** by country. This reveals that the poverty rate estimates are rather sensitive to changes in the underlying poverty thresholds. Despite the relative similarity of these latter within countries, the corresponding poverty rates are rather divergent: the poverty rate associated with the survey-based and food-based approaches are 13.1% and 19.7%, respectively, in a typical EU Member State. The variability of the headcount ratio is particularly large in many Central and Eastern European countries characterised by high levels of absolute poverty. At the same time, differences in the poverty thresholds have little or no effect on the absolute poverty rates in richer EU15 countries where the estimated poverty levels show a remarkable stability. This pattern is most apparent in ABSPO pilot countries, where the variability between the three different poverty rates is 2 and 5 percentage points in Belgium and Finland, but amount to a whopping 48 percentage points in Hungary. This underscores an important empirical regularity of poverty measurement: the sensitivity of poverty rates to changes in the poverty line increases with the poverty rate itself. This calls for particular caution with the modelling of poverty thresholds for poorer countries or population groups.

Figure 8.5. ABSPO poverty rates based on different measurement approaches by country



Notes: Figures are based on ABSPO calculations and refer to 2018 values. Poverty rates are calculated as the representative share of households whose relevant welfare aggregate is lower than the relevant customised ABSPO poverty line. The exact mixture of data sources and methodologies used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion therein. Data for Austria are missing.

The overall patterns of absolute poverty rates paint a rather uneven picture of poverty and social exclusion in the EU. Most ABSPO estimates are relatively low and below 10% in the majority of EU15 countries, exceed 30% in most CEE countries, and reach up to 60% in the poorest Member States. Regardless of the measurement approach considered, our results indicate that households' ability to meet their basic needs is very different across the EU – even if the required financial minimum is calculated in a customised and context-specific manner. Despite the level differences in the ABSPO poverty rates, the cross-country rankings are highly stable across the different measurement approaches (i.e. the rank correlation is 74%). This is also true for the relative dispersion of poverty estimates across countries: the coefficient of variation is close to one for both the survey-based and food-based poverty rates – which suggests that these latter may be considered as a proportionately scaled up variant of the former as far as overall patterns are concerned.

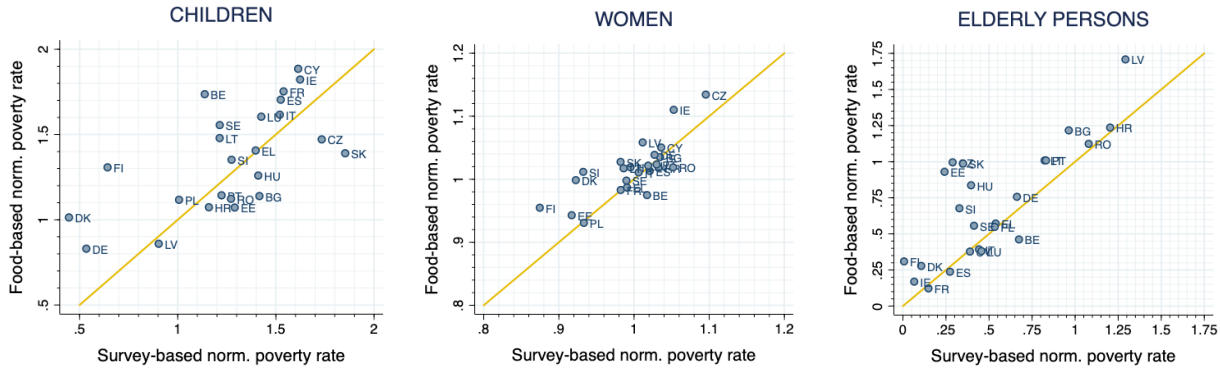
Given the substantial methodological differences between the relevant measurement strategies, the within-country dispersion of ABSPO poverty rates is not something unexpected. In absence of extensive available evidence, it is not easy to decide whether the typically higher food-based or lower survey-based ABSPO estimates are more representative. Existing reference estimates for absolute poverty in 2018 amount to 2.4% in Estonia, 5.4% in Poland, 6.2% in the Netherland 8.4% in Italy, 35% in Hungary – all of which figures are reasonably close to either the food-based or the survey-based ABSPO estimates in these countries.[203] Our analysis also reveals an alignment between existing and relevant ABSPO estimates for other reference years, as well. In fact, the behaviour of ABSPO poverty rates over time is highly similar across modelling approaches, and even more robust than the relevant cross-sectional rankings (i.e. the percentage point change in national ABSPO poverty rates between 2013 and 2018 is 84% across methods). These findings suggest that the observed differences in the generosity of ABSPO poverty lines and the resulting ABSPO poverty rates do not systematically affect the structural, cross-country specific or dynamic properties of the new absolute poverty measures in the EU.

[203] For more information, see https://www.stat.ee/en/find-statistics/statistics-theme/well-being/social-exclusion-and-poverty/absolute-poverty (for Estonia), https://www.cbs.nl/nl-nl/nieuws/2020/49/armoederisico-bevolking-in-2019-een-fractie-lager (for the Netherlands), https://www.eapn.eu/wp-content/uploads/2020/10/EAPN-Poverty-Watch-2020-Poland-4744.pdf (for Poland), https://www.istat.it/en/archivio/poverty (for Italy) and https://policyagenda.hu/wp-content/uploads/2019/06/L%C3%A9tminimum-%C3%A9s-t%C3%A1rsadalmi-minimum-el%C5%91zetes-adatok-2018.pdf (for Hungary). Additional single estimates for Croatia are available for 2004 and find considerably lower headcount poverty rate (11.1%) (Nestic and Vecchi, n.d.).

8.1.3. Within-country analysis of ABSPO poverty profiles

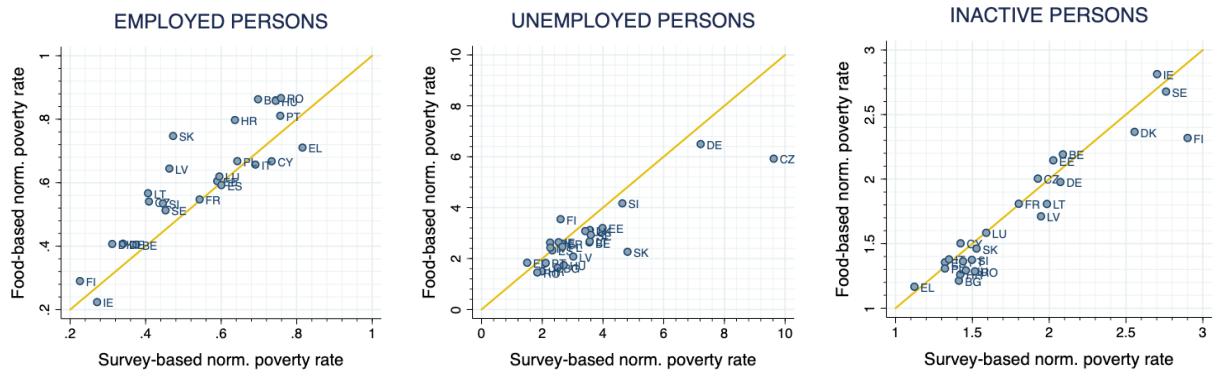
This sub-section reviews the extent of horizontal differences in ABSPO poverty rates within countries. Since the poverty thresholds calculated by different modelling approaches potentially vary not only in levels, but also in terms of horizontal structure, a given individual and/or household type may experience comparatively higher or lower incidence of absolute poverty. The scatterplots in **Figures 8.6, 8.7 and 8.8** present the normalised poverty rate among various population segments and vulnerable groups relative to the national average, as calculated by the survey-based and food-based approaches. They simultaneously show the poverty position of a particular national group, the corresponding cross-country variation, and the alignment between ABSPO modelling approaches. In particular, they highlight the high incidence of absolute poverty among European children (26%-36% above the national reference point on average) and the relatively favourable position of the elderly (30-48% below the national reference point on average). The scatterplots also indicate the high comparative risk of absolute poverty among unemployed or inactive persons, and single-person or single-parent households – along with the large cross-country heterogeneity in the relative deprivation of these groups. Importantly, these figures also show that different ABSPO measurement approaches produce rather similar horizontal poverty profiles within countries (as evidenced by the close position of most markers to the diagonal line).

Figure 8.6. Normalised poverty rates among vulnerable groups by ABSPO measurement approach



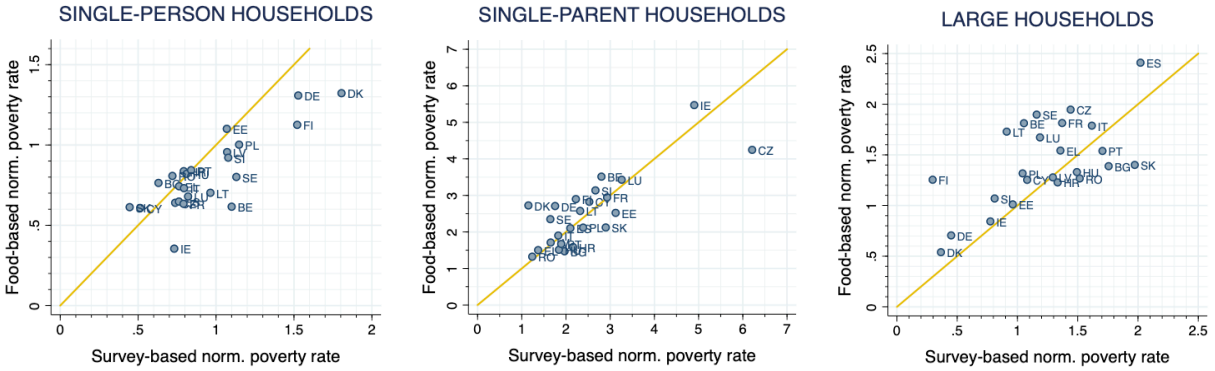
Notes: Figures are based on ABSPO calculations and refer to 2018 values. The presented normalised poverty rates represent the ratio between the relevant group-specific and national poverty rates. The data sources and methodologies used are presented in detail in Chapters 3-7 of this Report. Data for Austria are missing.

Figure 8.7. Normalised poverty rates by labour force status and ABSPO measurement approach



Notes: Figures are based on ABSPO calculations and refer to 2018 values. The presented normalised poverty rates represent the ratio between the relevant group-specific and national poverty rates. The data sources and methodologies used are presented in detail in Chapters 3-7 of this Report. Data for Austria are missing.

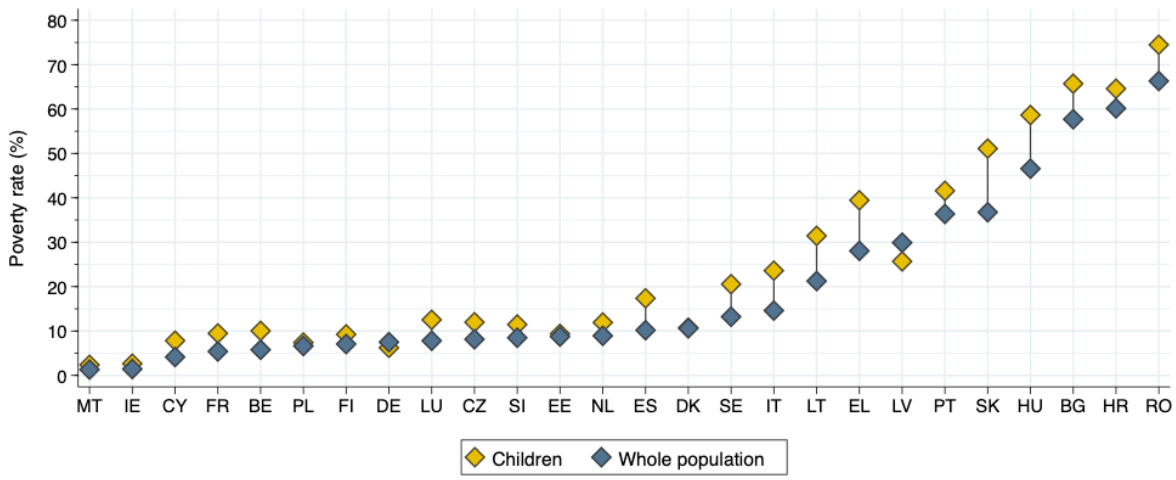
Figure 8.8. Normalised poverty rates among selected household types by measurement approach



Notes: Figures are based on ABSPO calculations and refer to 2018 values. The presented normalised poverty rates represent the ratio between the relevant group-specific and national poverty rates. The data sources and methodologies used are presented in detail in Chapters 3-7 of this Report. Data for Austria are missing.

Given the particular policy relevance of child poverty, **Figure 8.9** presents the absolute poverty rate among children by country. In comparison with the relevant national figures referring to the whole population, child poverty in 2018 was 4.8 percentage point higher in a typical EU Member State (24.5% vs. 19.7%). The difference is largest in Greece, Hungary, Latvia and Slovakia where children are at least 10 percentage point more likely to experience absolute poverty than the typical citizen of these countries. In 5 Member States, more than half of all children may be considered poor from and absolute standpoint, and only in Germany and Latvia do children fare better overall than adults in meeting their basic needs for a decent life. Since much of poverty and social exclusion is transmitted from one generation to another, these findings paint a rather bleak picture of the long-term poverty trends in the EU, and calls for effective and coordinated policy action.

Figure 8.9. Absolute poverty rates among children relative to the national population by country



Notes: Figures are based on ABSPO calculations using the food-based modelling approach and refer to 2018 values. Poverty rates are calculated as the representative share of households whose relevant welfare aggregate is lower than the relevant customised ABSPO poverty line. The exact mixture of data sources and methodologies used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion therein. Data for Austria are missing.

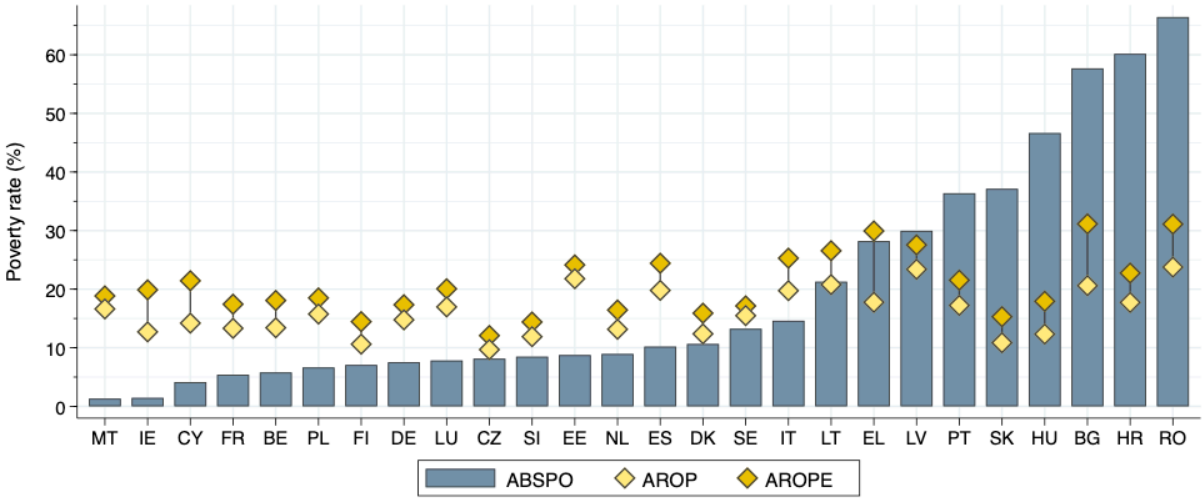
8.2. Contextualisation of existing EU indicators of poverty

This section presents ABSPO poverty estimates in the context of headline AROPE indicators, to highlight those measurement aspects where an absolute monetary perspective yields markedly different outcomes and additional insights. Throughout the section, we utilise the ABSPO poverty lines derived on the basis of food-based statistical analysis of survey data, to ensure comprehensive country coverage for EU-wide empirical analysis.

8.2.1. Cross-country comparisons of ABSPO and AROPE indicators

We start by comparing the relevant ABSPO outcomes with the national AROP and AROPE indicators. **Figure 8.10** presents the share population at risk of poverty and social exclusion by country. First, it reveals that, at the EU-level, new and existing indicators identify a rather similar level of poverty and social exclusion. The average headcount ratios associated with the ABSPO, AROPE and AROP indicators in 2018 are 19.7%, 21.8% and 16.8%, respectively. Second, and more importantly, **Figure 8.10** shows that applying different measurement perspectives can lead to highly different poverty outcomes at the national level. In particular, ABSPO poverty rates are much more variable across Member States, and range from 1.5% in Ireland and Malta to more than 60% in Romania. AROPE and AROP rates are much more evenly distributed across countries, and range between 12-31% and 10-24%, respectively. Third, as far as absolute poverty is concerned, EU Member States tend to fall in two distinctly different groups. While most EU15 countries are characterised absolute poverty rates that are below 10% and clearly inferior to corresponding AROP and AROPE rates. New Member States of Central and Eastern Europe, on the other hand, are found to experience absolute poverty on a significantly larger scale, in excess of 20% and above the corresponding AROP and AROPE rates. The boundaries between these two country groups are somewhat blurred, since the Czech Republic, Estonia and Poland records much lower (single-digit) absolute poverty rates than most CEE countries, while selected EU15 countries (such as Greece or Portugal) can also experience absolute poverty above 20%.

Figure 8.10. Comparison of ABSPO, AROP and AROPE poverty rates by country

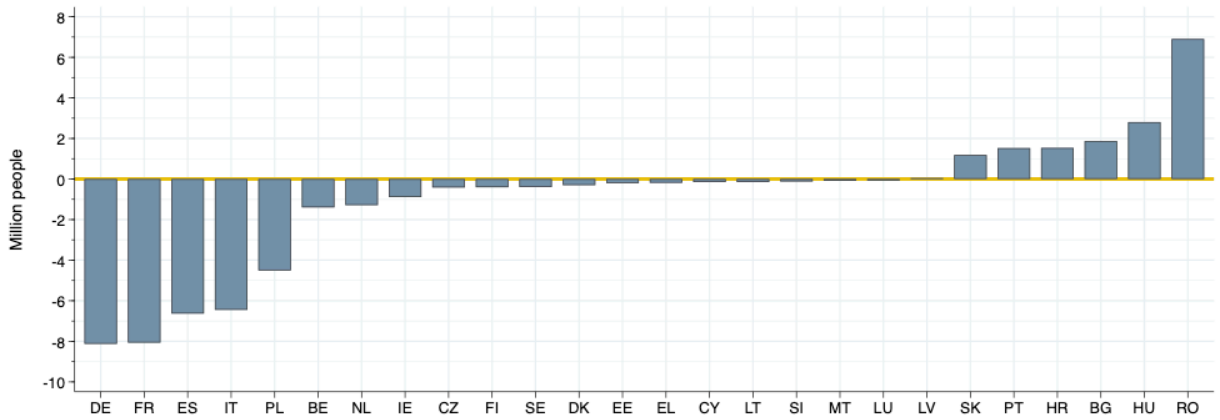


Notes: Figures are based on ABSPO calculations and refer to 2018 values. The presented normalised poverty rates represent the ratio between the relevant group-specific and national poverty rates, calculated as the share of households whose relevant welfare aggregate is lower than the customised HH-specific ABSPO poverty line based on EU-SILC data. The exact mixture of intermediate data sources and methodologies used are presented in Chapters 3-7 of this Report as part of the relevant thematic discussion therein. Figures for Austria are missing due to data unavailability. The relevant national AROP and AROPE figures are based on official Eurostat data.

This duality in the level of absolute poverty between EU15 and CEE countries is similar to the results obtained using common (relative) European poverty lines based on the EU-wide income distribution (Brandolini, 2007). What distinguishes our results from these latter analyses is that the underlying ABSPO poverty lines were calculated in

a context-specific manner, using local-level information on the perceived minimum needs, subjective views and spending patterns of the respective national populations. ABSPO findings thus give further support to the idea that the gap between EU15 and new Member States is not limited to neutral differences in living standards, but concerns the very ability of households to meet their basic needs for a decent life in their own communities.

Figure 8.11. Difference between the number of ABSPO and AROPE poor by country

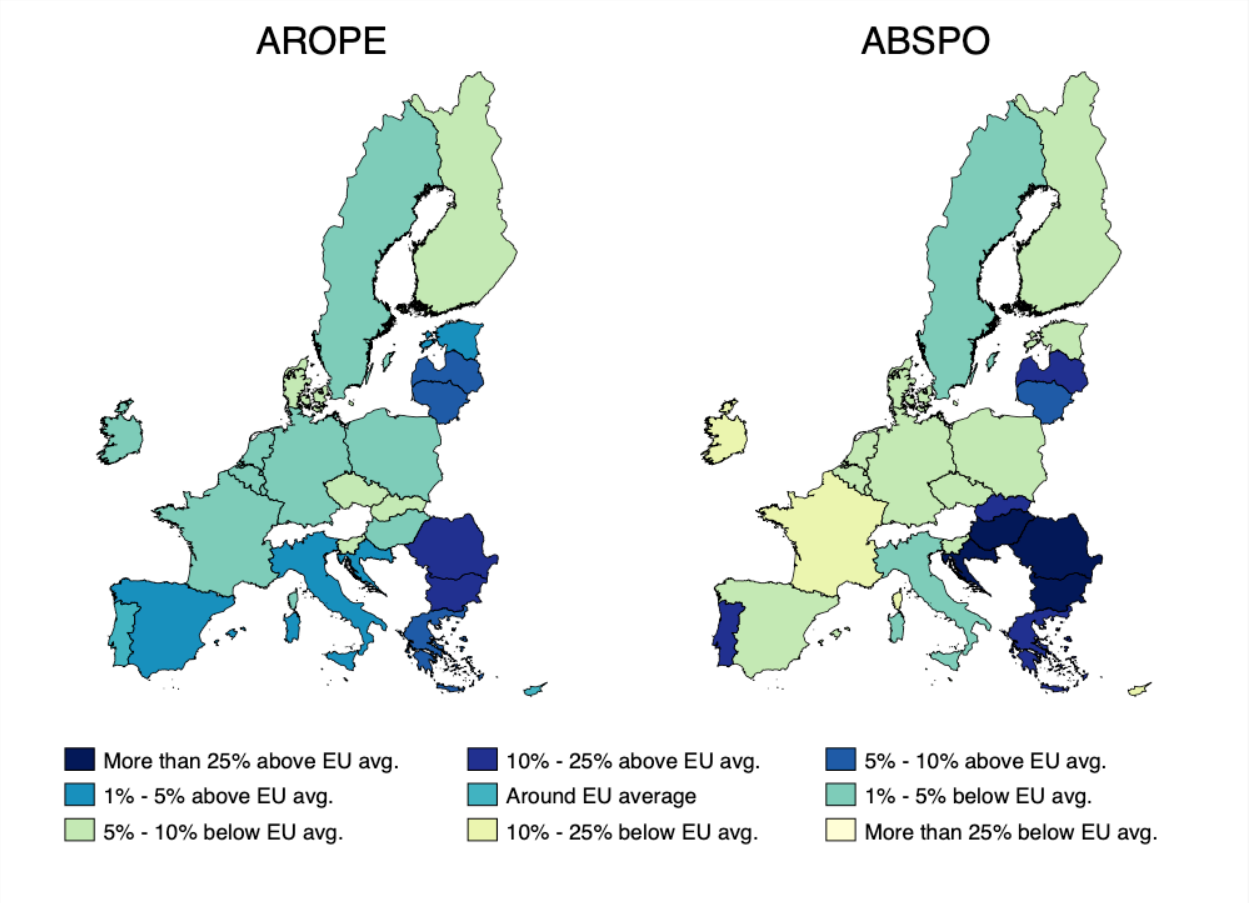


Notes: Figures are based on ABSPO calculations and refer to 2018 values. Figures for Austria are missing due to data unavailability. The relevant national AROP and AROPE used for the underlying calculations are based on official Eurostat data.

Figure 8.11 presents the absolute numerical difference between the size of ABSPO and AROPE poor populations in each EU Member State as of 2018, and highlights the sensitivity of the national make-up of the European poor to measurement choice. In particular, it reveals that the number of ABSPO poor is 6-8 million lower in large EU15 countries (such as Germany, France, Italy or Spain) than the number of AROPE poor, while millions more experience absolute poverty in CEE countries such as Bulgaria, Croatia, Hungary and Romania. The 'Easternisation' of European poverty based on ABSPO modelling is in line with the analysis of national and European income distributions by Brandolini and Rosolia (2021), who find that three quarters of Central and Eastern Europeans households' incomes are below (or at most comparable to) those of the poorest quarter living in most EU15 countries. Given the large differences in national populations, **Figure 8.11** also shows the importance of considering the absolute number of poor populations in each Member State to obtain a full picture of the anatomy of poverty and social exclusion at the EU level.

The maps presented in **Figure 8.12** show the same relationship from another different angle. The left panel shows the AROPE rate for each Member State compared to the EU-level average, and highlights the relative stability of national figures across the EU – even for Eastern European countries characterised by the highest risk of poverty and social exclusion. The map in the right panel displays the corresponding ABSPO poverty rates, and indicates the highly uneven distribution of absolute poverty across different parts of the European continent – with below-average ABSPO rates for most EU15 countries (except for Greece and Portugal) and very severe incidence of poverty in CEE countries that exceeds the EU average by more than 10 or even 25 percentage points. The maps also indicate the relative stability of cross-country rankings calculated on the basis of ABSPO and AROPE indicators poverty are similar (i.e. the cross-correlation of the poverty rates is 51%).

Figure 8.12. ABSPO and AROPE poverty rates relative to the EU average by country



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. Figures for Austria are missing due to data unavailability. The relevant national AROP and AROPE used for the underlying calculations are based on official Eurostat data.

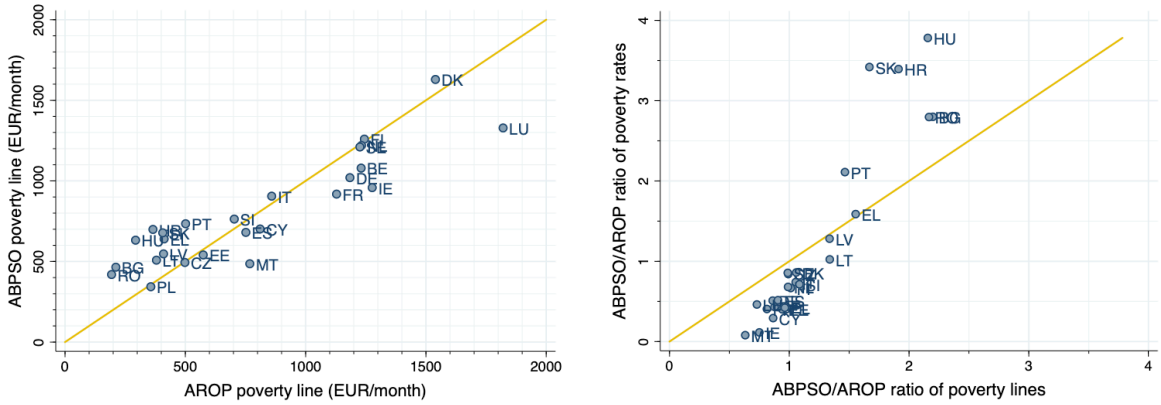
The relationship between ABSPO and different AROPE sub-components

It is also insightful to compare the resulting ABSPO estimates with individual AROPE sub-components. The relationship between absolute and relative poverty lines, in particular, is a crucial factor in explaining cross-country differences in ABSPO and AROPE rates. The scatterplot in the left panel of **Figure 8.13** compares the level of monthly equivalised ABSPO and AROP poverty lines in 2018 by country, and shows the close statistical relationship between the two (i.e. the correlation coefficient is 89%). It also reveals, however, that ABSPO poverty lines are less elastic then AROP ones: they are comparatively high in low-income CEE countries, and low in most high-income EU15 Member States.

The scatterplot in the right panel of **Figure 8.13** indicates how the relevant differences in the poverty line translate into differences in the poverty rate. In particular, it shows that the poverty rate is very sensitive to changes in the poverty line in most Member States: 1% increase in the ABSPO/AROP ratio of poverty lines is associated with close to 2% increase in the (normalised) ABSPO/AROP ratio of poverty rates.[204] In other words, a slight gap between ABSPO and AROP poverty lines can produce substantial differences between absolute and relative poverty rates. This highlights the importance of harmonised data use and accurate modelling for sound poverty measurement in the EU.

[204] One may observe that the ABSPO poverty rate is smaller than the AROP poverty rate in countries with similar poverty lines (i.e. where the ABSPO/AROP poverty line ratio equals one). This is due to the fact that the AROP poverty rate is calculated in comparison to households' disposable income, while the ABSPO poverty assignment takes the sum of disposable income and imputed rents as the reference point. For more details, see Section 8.1 of this Report.

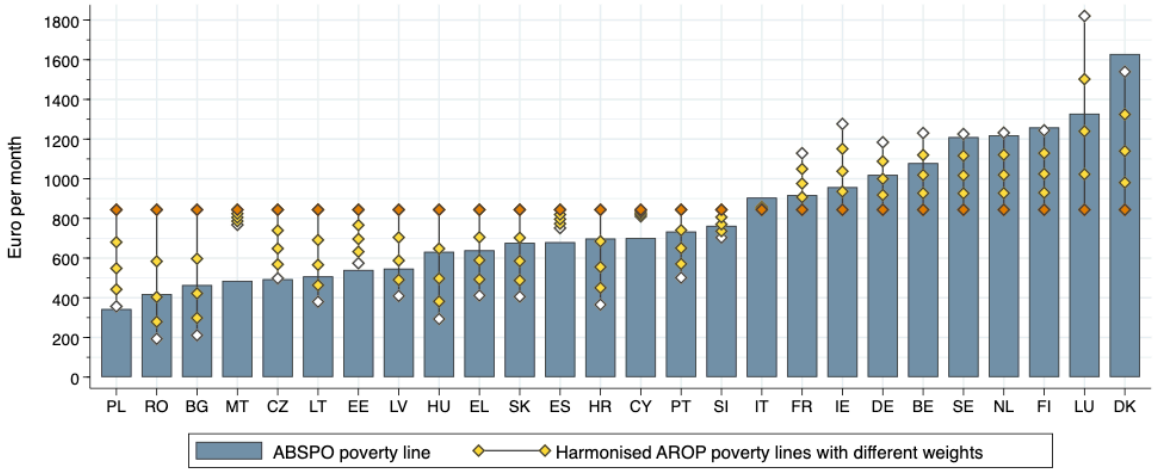
Figure 8.13. Statistical relationship between ABSPO and AROP poverty lines and rates across the EU



Notes: Figures are based on ABSPO calculations and refer to 2018 values. Figures for Austria are missing due to data unavailability. The presented ABSPO and AROP poverty lines represent the national averages in equivalised terms as calculated on the basis of EU-SILC microdata.

It is also useful to explore the statistical relationship between ABSPO poverty lines and relative thresholds derived on the basis of the EU-wide income distribution. The most widely used variants of these are calculated as the weighted average (i.e. geometric mean) of the respective national and common EU-wide at-risk-of-poverty (AROP) thresholds (Atkinson, 1998; Brandolini, 2007).[205] Accordingly, we calculated the harmonised AROP poverty lines for different weight combinations (i.e. based on 0%, 25% 50%, 75% and 100% loadings for the EU-wide component), and plotted the resulting monthly (equivalised) thresholds alongside the ABSPO poverty line in **Figure 8.14**. It shows that, in most Member States, the ABSPO poverty line is between the national AROP poverty line (white marker) and a hypothetical EU-wide poverty line (orange marker). The degree of AROP-harmonisation that national ABSPO thresholds represent, however, varies from one country to the next: ABSPO is very close to the national AROP in Northern European countries, matches the EU-wide AROP in countries like France, Germany or Ireland, and occupies a mixed position in most other Member States. These findings point to the practical relevance of hypothetical EU-wide AROP poverty lines, and their compatibility with needs-based absolute poverty measures. However, they also suggest that no single pre-determined weight combination is able to match the needs-based alternative consistently across all or most EU countries.

Figure 8.14. The relationship between ABSPO and harmonised EU-wide AROP poverty lines

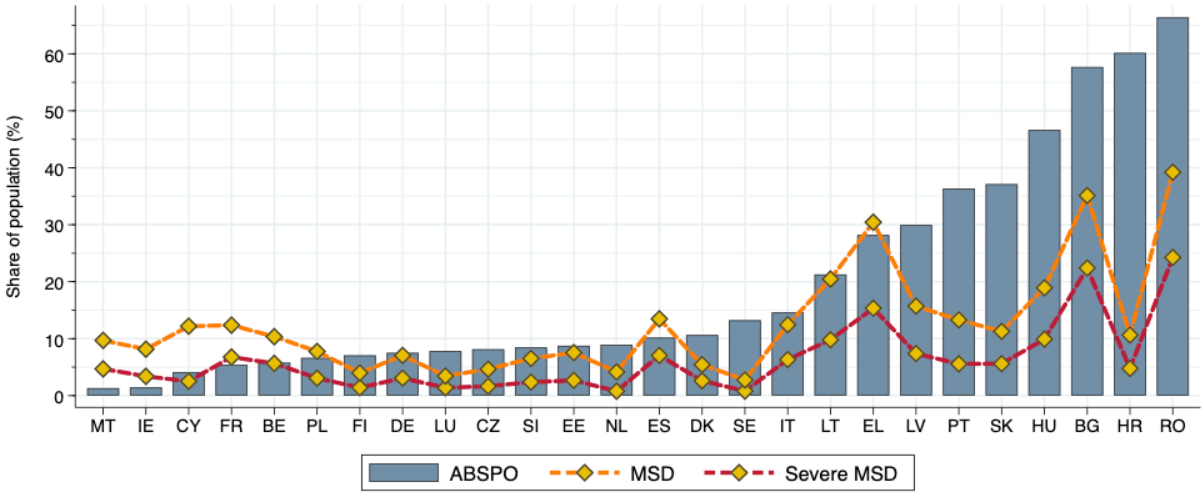


Notes: Figures are based on ABSPO calculations and refer to 2018 values. Figures for Austria are missing due to data unavailability. The presented ABSPO and AROP poverty lines represent the national averages in equivalised terms as calculated on the basis of EU-SILC microdata.

[205] Following Atkinson (1998), the harmonised European poverty line for country X can be defined as $PL_X = 60\% \times (MI_X)^{(1-\theta)} \times (MI_{EU})^{\theta}$ where MI_X and MI_{EU} denote the national and EU-wide median income, respectively, and θ denotes the relative weight afforded to the EU-wide component.

Among the non-monetary AROPE components, material and social deprivation indicators are the more important ones for contextualisation. Similar to ABSPO indicators, they employ a needs-based absolute perspective to identify households that are unable to satisfy their basic needs for a decent life. **Figure 8.15** presents the ABSPO and MSD indicators side-by-side across the EU. It shows that ABSPO and MSD indicators are highly correlated across Member States (ρ = 77%). It also shows that, in EU countries with significant incidence of deprivation, ABSPO rates are consistently higher than both severe and standard MSD rates. This appears consistent with ABSPO thresholds representing the joint affordability of households' basic needs in total, as opposed to the deprivation indicators that are meant to identify cases of substantial departure from this standard.[206]

Figure 8.15. The relationship between absolute poverty and material and social deprivation



Notes: Figures are based on ABSPO calculations using the food-based modelling approach and refer to 2018 values. Figures for Austria are missing due to data unavailability. The presented ABSPO and MSD (material and social deprivation) rates are derived on the basis of EU-SILC microdata.

8.2.2. Analysis of ABSPO and AROPE poverty rates over time

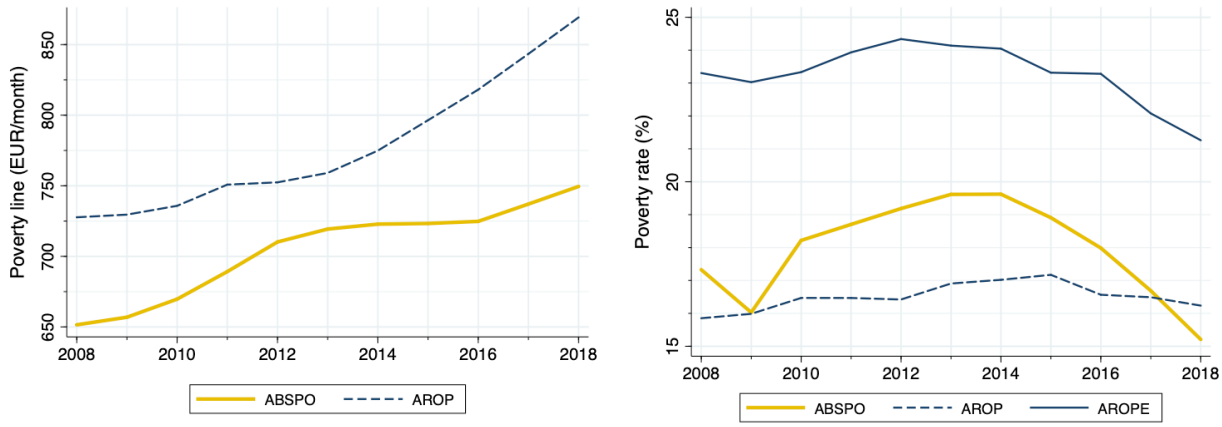
In this sub-section, we investigate the congruence between ABSPO and AROPE indicators from a dynamic perspective, and consider their behaviour over time. Compared to the ABSPO poverty measures that represent the same purchasing power and a time consistent reference points over time, AROP and AROPE indicators reflect continual movements in the level of national median income. The left panel of **Figure 8.16** presents the average EU-level monthly figures for equivalised ABSPO and AROP poverty lines by year between 2008 and 2018. It shows, in particular, the relatively even trajectory of the ABSPO poverty line and the more cyclical growth rate of the AROP poverty line. Particularly interesting periods with divergent trends in absolute and relative poverty lines include the duration of the 2008 financial and economic crisis (2008-2013) when ABSPO minimum thresholds rose by 7 percentage point more than AROP minimum thresholds (due to increasing living costs and stagnating median income levels). Opposite patterns dominate post-crisis period (2013-2018) when AROP poverty lines increased by almost 5 percentage points more on average relative to ABSPO poverty lines (due to robust growth and rising income levels).

The effect of these different trends on the corresponding poverty rates is clearly visible. The right panel of **Figure 8.16** shows that while the AROP poverty rate remained stable around 16% throughout the entire 2008-2018 period, the ABSPO poverty rate fluctuated considerably. Absolute poverty increased from 16% to around 20% in the wake of the 2008 financial and economic crisis (2008-2013), and decreased by almost 5 percentage points to the 2018 value of 15.2% during the subsequent recovery period. Since this reduction in absolute poverty was coupled with a strong increase in the level of national median income, very little of this change is captured by the

[206] For a more detailed analysis of absolute monetary poverty and material and social deprivation, see Section 8.3 of this Report.

AROP indicator. The composite AROPE indicator, driven mainly by the responsiveness of the material and social deprivation and low work intensity components, exhibits more cyclicality over time, and has fluctuated between 21 and 24 percent over the 2008-2018 period.

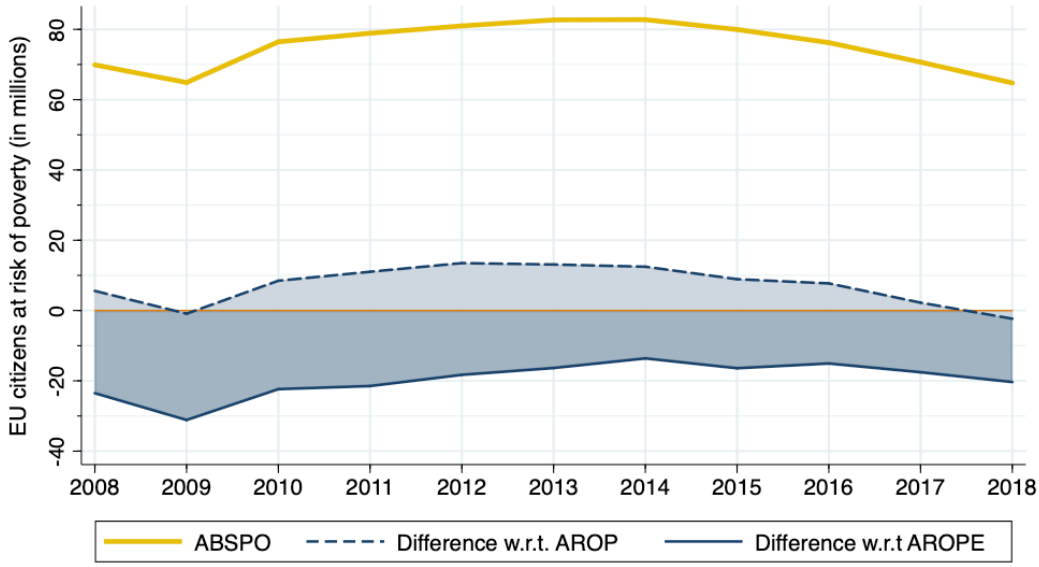
Figure 8.16. Evolution of ABSPO and AROPE poverty lines and rates over time



Notes: Figures are based on ABSPO calculations using the food-based modelling approach and refer to 2018 values. Figures for Austria are missing due to data unavailability. The presented ABSPO and AROP poverty lines represent the national averages in equivalised terms as calculated on the basis of EU-SILC microdata.

Figure 8.17 plots the evolution of the absolute number of ABSPO poor in the EU during the same period, as well as the absolute difference with respect to the size of the AROP and AROPE populations. In 2018, around 64.8 million EU citizens are set to experience absolute poverty, more than 15 million fewer than the 82.7 million peak value observed in 2014 in the aftermath of the financial and economic crisis of 2008. The gap between the size of the ABSPO and AROPE populations has remained largely the same (i.e. 85.1 million people at risk of poverty and social exclusion in 2018), with more visible cyclical differences in relation to the size of the AROP population (67.1 million in 2018).

Figure 8.17. Estimated number of poor persons in the EU from an absolute and relative standpoint

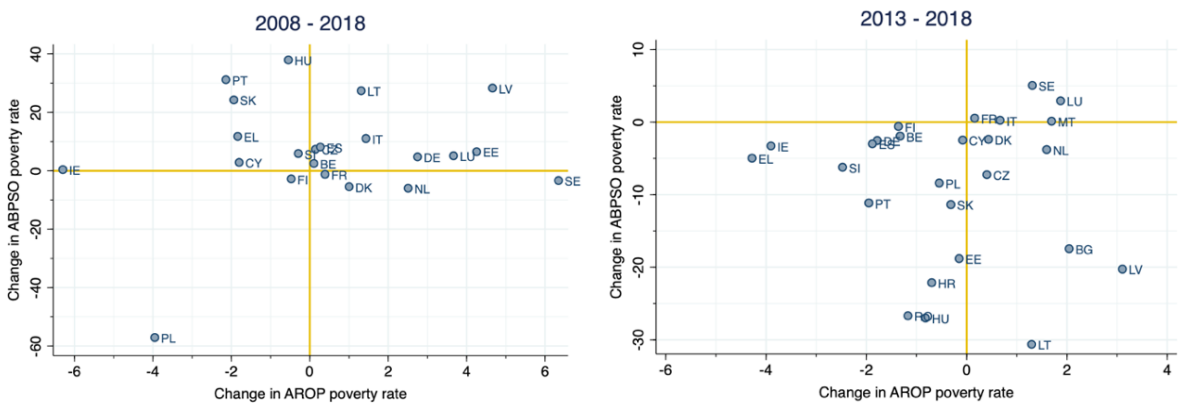


Notes: Figures are based on ABSPO calculations using the food-based modelling approach, and EU-SILC microdata from the 2008-2018 income reference period. Calculations do not include Austria (missing due to data unavailability) and use official Eurostat data on EU27 population by year.

It also interesting to see the relationship between ABSPO-based and AROP-based poverty trends in individual countries. The scatterplot in **Figure 8.18** shows the change in the ABSPO poverty rate against the one in the AROP poverty rate for all EU Member States over two different periods: during 2008-2018 (left panel) and during 2013-2018 (right panel), respectively. These graphs reveal that AROP-based and ABSPO-based changes in poverty rates are virtually uncorrelated ($\rho_{2008-2018} = 17\%$, $\rho_{2013-2018} = -9\%$), and that massive national differences exist in poverty performance over time depending on whether an absolute or a relative measure is used. Particularly noteworthy comparisons include Ireland and Sweden (where absolute poverty has remained largely unchanged between 2005 and 2019, despite massive reductions or increases in income inequality and relative poverty), or Slovakia and Poland (where relatively small reductions in relative poverty between 2008 and 2018 were coupled by massive changes of both directions in absolute poverty). Concerning the post-crisis years of 2013-2018, absolute poverty has displayed a decreasing trend throughout the EU, but in markedly different manner across Member States: country-level changes in percentage points range from plus 5% in Sweden to minus 30% in Latvia.

This analysis of poverty trends suggests that the assessment of poverty is inherently tied to the characteristics of the underlying measurement concept. Indicators based on relative poverty concepts such as AROP highlight changes in income inequality and income distributions. Indicators based on absolute poverty concepts such as ABSPO, on the other hand, focus on individual households' minimum financial needs and whether they are able to meet these through their income – regardless of the income distribution. It is also clear that the societal and policy importance of absolute and relative poverty varies considerably from one Member State to the next.

Figure 8.18. Change of the AROP-based and ABSPO-based poverty rates over time by country



Notes: Figures are based on ABSPO calculations using the food-based modelling approach, and EU-SILC microdata from the 2008-2018 income reference period. Calculations do not include Austria due to missing data.

8.2.3. Territorial differences in poverty within Member States

This sub-section focuses on regional and geographical differences in ABSPO and AROPE poverty rates, and assesses the importance of spatial differentiation of households' basic needs and poverty thresholds on the resulting poverty rates.[207] We start our analysis by considering the extent of regional poverty in the EU, as calculated on the basis of national and regional AROP poverty thresholds and ABSPO poverty lines. Regional AROP poverty headcount rates are computed using the subnational-level income distribution as reference to derive the threshold.

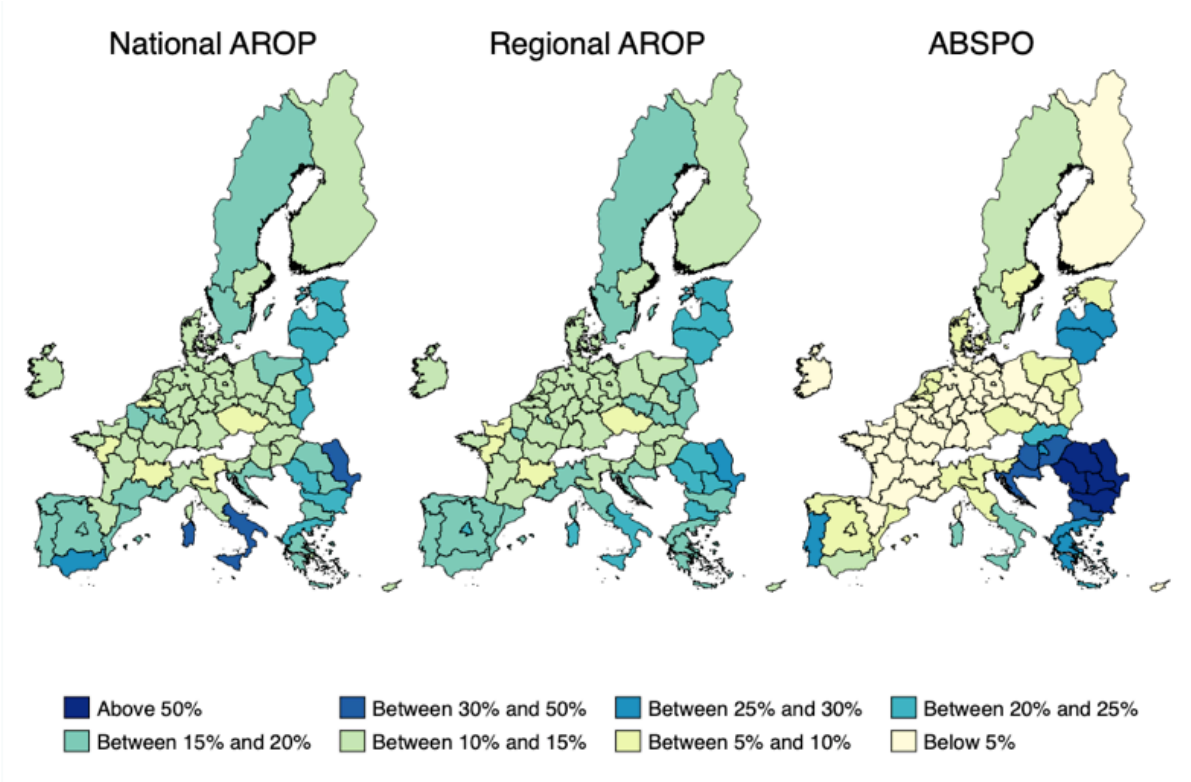
The respective maps in **Figure 8.19** illustrate the level and topology of regional poverty estimates based on these three approaches at the NUTS1-level for 2018. Figures based on national AROP poverty lines (left panel) indicate that the regional poverty rate hovers between 10 and 20% in most countries, even though strong regional disparities can be observed in a small number of Member States (such as Italy, Romania or Spain). Poverty estimates based on regional AROP thresholds (middle panel) are driven primarily by the shape of the regional

[207] Concerning the food-based approach estimates used for the present contextualisation, these geographical differentiations manifest themselves in relation to non-food needs only and are expected to slightly understate the true extent of regional and settlement type-related differences in household poverty lines and rates. For more details, see Section 6.2 of this Report.

income distributions, and (due to the similarity of these latter) are even more homogenous than the previous ones. The ABSPO regional poverty estimates (right panel) re-introduce variability both within and between countries, and document an extreme degree of inequality between European regions.

As may be expected, an overwhelming part of the regional variation in ABSPO poverty rates (92%) is explained by country affiliation – a considerably higher fraction than in the case of national and regional AROP-based estimates (30% and 53%, respectively). This does not mean that regional differences in absolute poverty within EU countries is smaller or less important than regional differences in relative poverty, but only that they pale in comparison to the vast cross-country differences in ABSPO estimates.

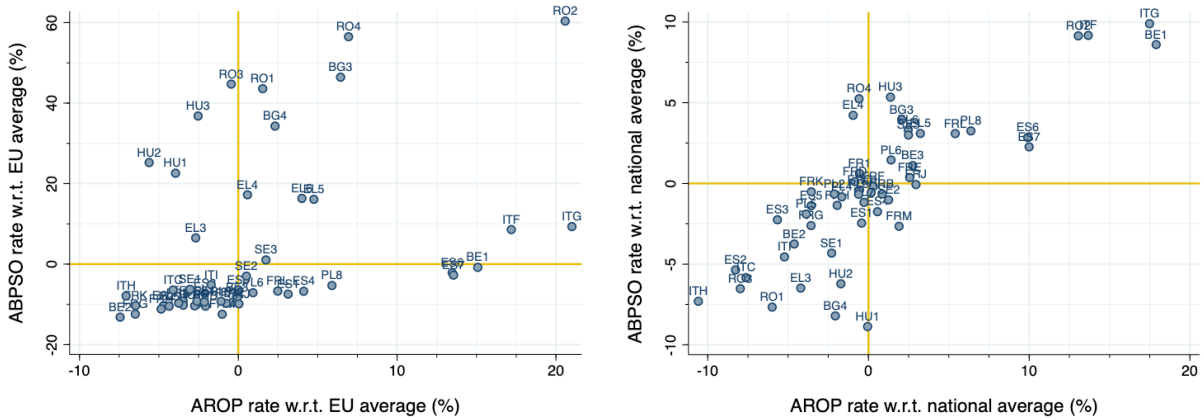
Figure 8.19. Regional poverty rates based on different absolute and relative indicators in the EU



Notes: Figures are based on ABSPO calculations using the food-based approach and AROP calculations based on the EU-SILC, and refer to 2018. Figures for Austria are missing due to data unavailability, while all regions of Germany are assigned the same national score (due to missing regional information).

To provide a more comprehensive picture of regional poverty, we investigate the difference of both ABSPO-based and (national) AROP-based poverty rates with respect to the respective EU-wide and national averages. This should reveal the degree to which the difference in measurement focus (absolute vs. relative) changes the relative ranking of NUTS1 regions based on poverty. The scatterplot in the left panel of **Figure 8.20** presents the regional ABSPO and AROP poverty rates relative to the EU average, and largely re-produces the patterns visible on the maps above: fair degree of regional homogeneity with occasional large gaps in both absolute poverty (in several CEE countries) and relative poverty (in a limited number of EU15 countries). The right panel of **Figure 8.20** is potentially more insightful, as it plots regional differences in poverty rates relative to the national average. Somewhat surprisingly, the within-country dispersion of ABSPO and AROP poverty rates is highly correlated ($\rho = 77\%$): regions with relatively high income inequality and AROP poverty are typically the ones with relatively high levels of absolute poverty, as well. This is not true of certain CEE countries (such as Bulgaria or Hungary) where massive differences in absolute poverty rates exists across regions with similar incidence of relative poverty. Overall, this analysis shows that the extent of regional differences in absolute and relative poverty is rather similar, amounts to 10-13% on average, but may exceed 20 percentage points in selected Member States (such as Bulgaria, Hungary, Italy or Romania).

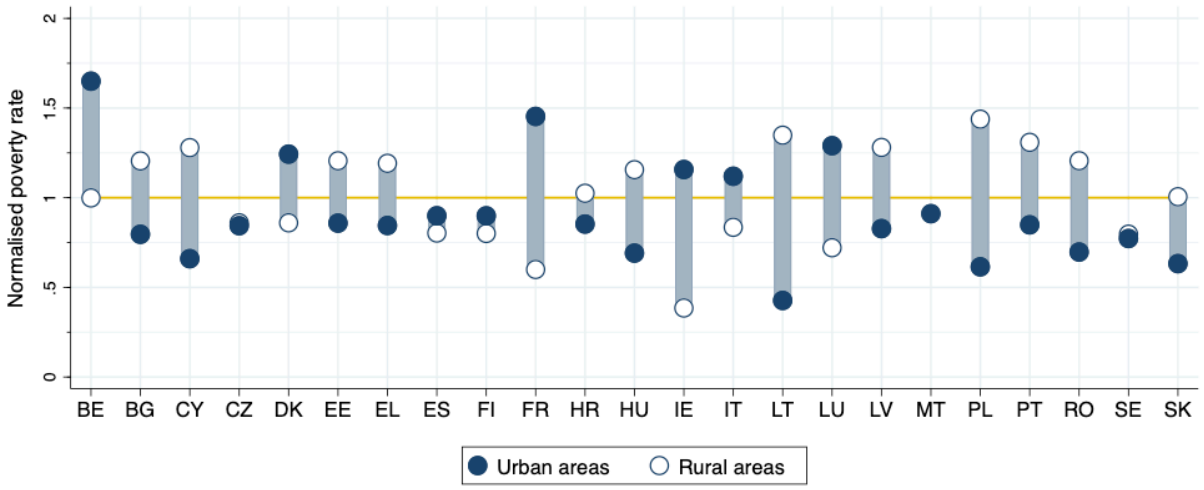
Figure 8.20. Regional ABSPO and AROP poverty rates relative to the national and EU average



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. Only Member States with multiple NUTS1 regions are displayed, except for Austria and Germany that are missing due to data unavailability.

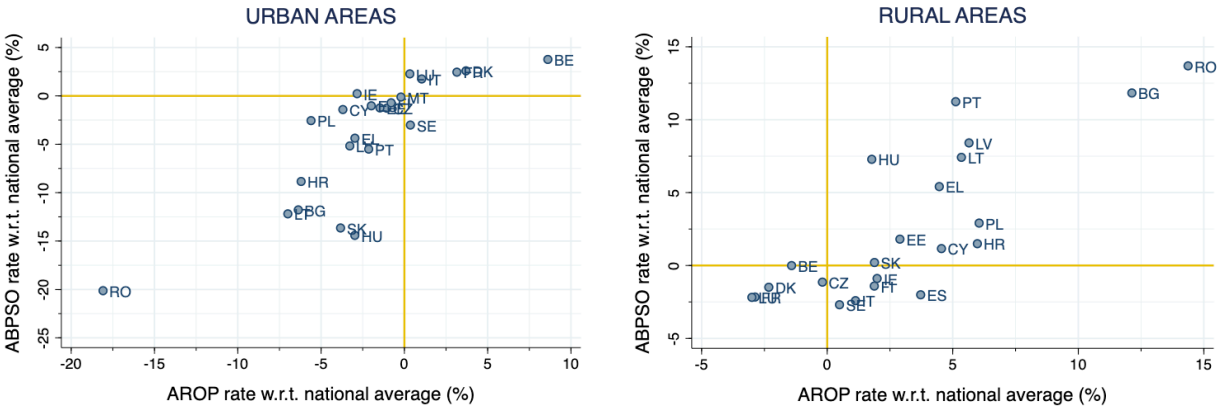
Alongside regional factors, another potential driver of spatial differences in poverty is settlement type. Households in urban and rural areas tend to have different minimum needs in relation to housing and transportation, and are also likely to face different living costs. These are reflected in the ABSPO poverty thresholds, which may produce different urban-rural absolute poverty profiles than the ones derived on the basis of AROP and/or AROPE indicators. Indeed, the urban-rural gap at the EU-level is almost double in absolute poverty than in terms of the risk of poverty and social exclusion: as of 2018, the relevant urban (rural) poverty rates are 14.7% (20.3%) for ABSPO, and 21% (23.9%) for AROPE. **Figure 8.21** breaks down the relevant gaps in absolute poverty by country, and shows that the spatial differences across urban and rural areas are quite common, rather large and highly uneven across the EU. The relative urban-rural poverty gap exceeds 35% in half of all Member States, with a sign that goes in both directions. In countries like France, Ireland or Luxembourg, urban poverty is several times higher than rural poverty. The opposite holds for countries like Cyprus, Hungary, Lithuania, Poland or Romania, where absolute poverty is concentrated predominantly in rural areas.

Figure 8.21. Absolute poverty gap between urban and rural areas by country



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. Austria and Germany are missing due to unavailability.

Figure 8.22. Urban-rural gaps in poverty based on absolute and relative poverty measures in the EU



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. The presented differences relative to the national means are calculated in absolute (percentage point) terms. Austria, Germany, Malta, the Netherlands and Slovenia are missing due to lack of relevant data.

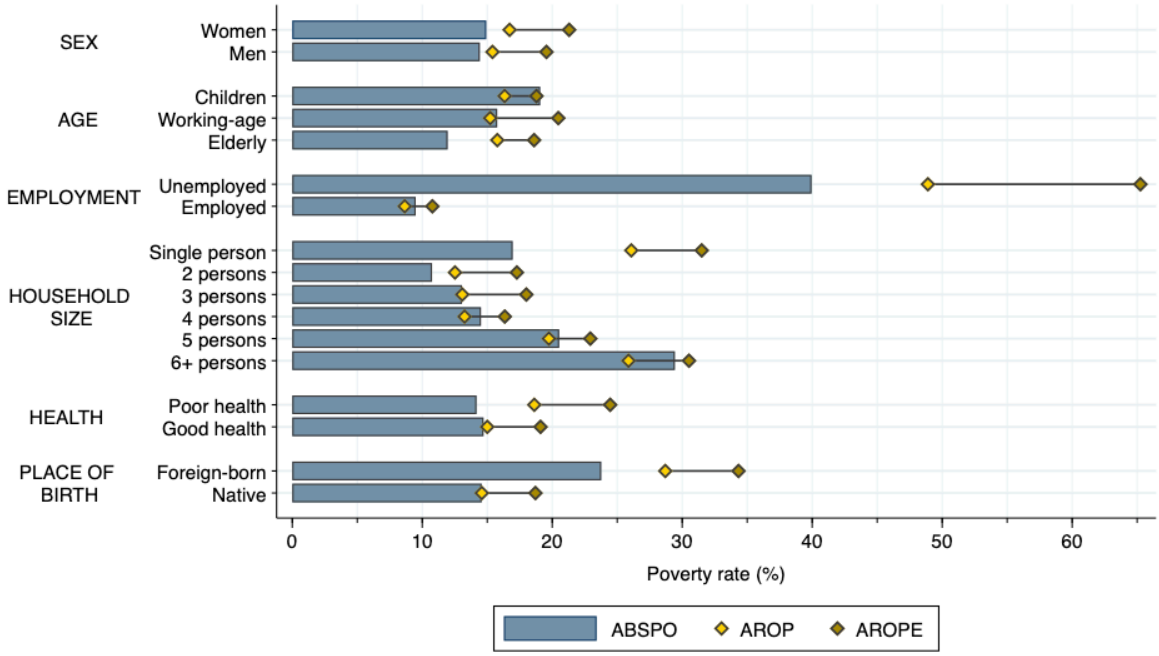
Figure 8.22 above shows that the observed urban-rural gaps are largely unrelated to differences in the measurement focus. When compared against the national reference point, ABSPO-based absolute and AROP-based relative poverty rates are rather similar in both urban and rural areas, especially in countries characterised by large heterogeneity. This shows that, similarly to our findings in relation to regional differences, the observed urban-rural gaps are driven primarily by spatial differences in the level and distribution of households' disposable income (i.e. the common element across measurement approaches), rather than the customisation of the poverty lines introduced by the absolute approach. This observation, however, does not equally apply for all Member States, and the use of the geographically differentiated ABSPO poverty lines constitutes an important refinement of poverty measurement in countries with large spatial differences in living costs (such as France, Italy or Spain).

8.2.4. Poverty among different population segments and vulnerable groups

This sub-section explores the horizontal variation in ABSPO poverty rates across different demographic segments and in the context of AROPE indicators. Section 8.1.3 of this Report already contains a detailed analysis of ABSPO poverty estimates across different individual and household types, and reveals rather large variations in the poverty rate of different population segments. The main objective of the current discussion is to compare and contrast these findings with the relevant differences observed on the basis of AROPE indicators. Since the food-based ABSPO and monetary AROP poverty threshold share many similar structural features from the standpoint of demographic modelling (e.g. no gender-specific or health-based differentiation, prominent use of the modified OECD equivalence scale), one may expect the resulting poverty profiles to be rather similar at the country level. In fact, much of the observed divergence in the horizontal structure of ABSPO and AROPE poverty outcomes is likely driven by confounding factors and compositional effects (such as the uneven distribution of different household types across regions with different living costs and ABSPO/AROPE poverty threshold ratios). This calls for particular caution when interpreting and assessing the relative performance of different population groups.

Figure 8.23 presents the poverty profiles associated with ABSPO, AROP and AROPE indicators at the EU level. Despite the potential similarities discussed above, the comparison of different population segments along various socio-demographic dimensions reveal considerable differences between the absolute and AROPE perspectives. As compared to the overall difference between these indicators (1.6 p.p. and 6.4 p.p. with respect to AROP and AROPE), the presented figures indicate much smaller and larger gaps for particular social groups. The position of children (19.1% ABSPO vs. 18.8% AROPE) and large households of 6 or more members (29.4% vs. 30.5%) are particularly unfavourable from an ABSPO perspective. On the other hand, the elderly (12% vs. 18.6%), the unemployed (40% vs. 65%) and single households (17% vs. 31.5%) fare comparatively well in terms of their capacity for adequate social participation.

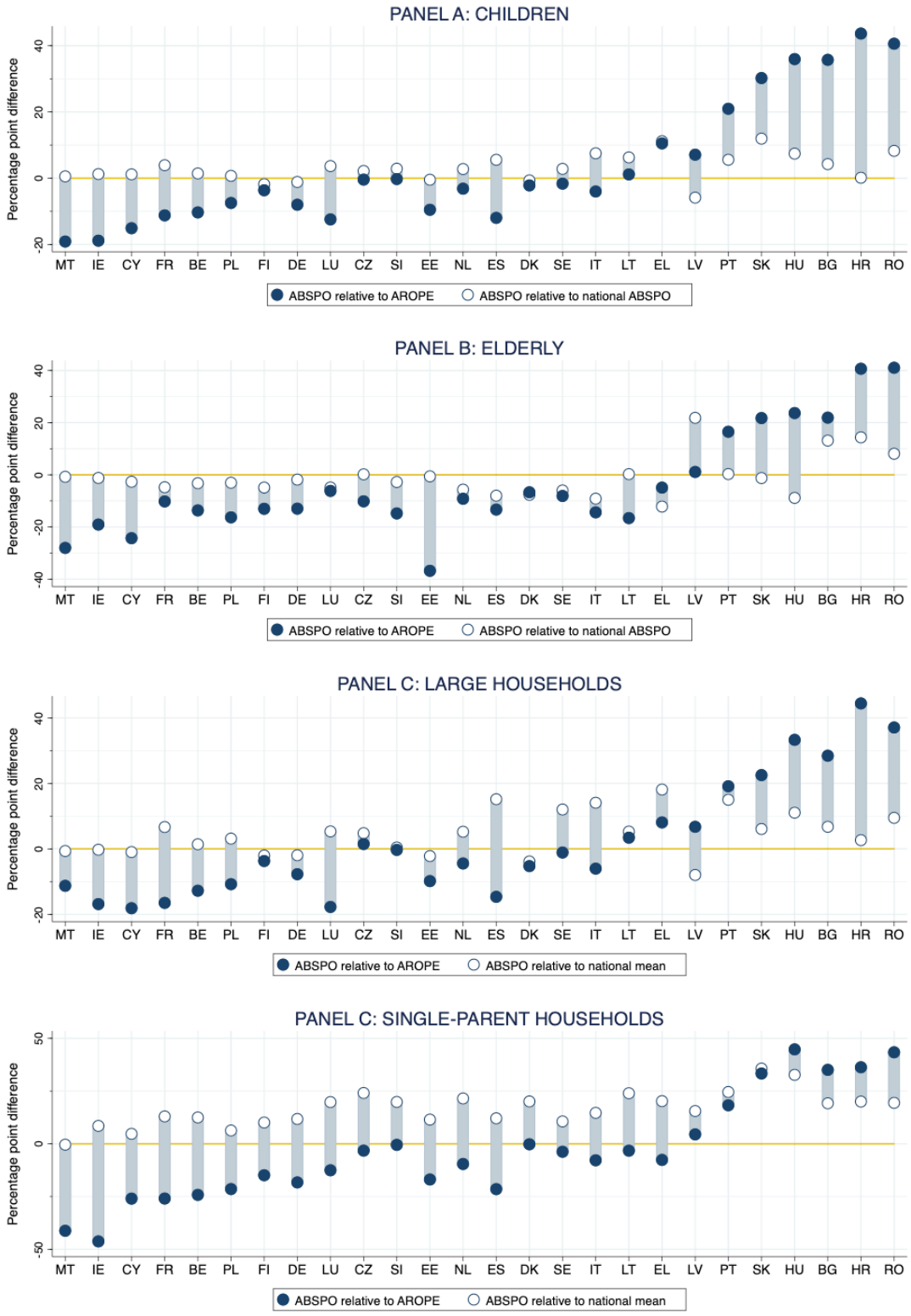
Figure 8.23. EU-wide poverty profiles based on different poverty indicators



Notes: Figures are based on ABSPO calculations using the food-based approach or AROP/AROPE calculations from EU-SILC microdata. They all refer to EU level values as of 2018. The classification of the relevant groups is consistent with the one used throughout the Report

Figure 8.24 breaks down the previous EU-wide figures for a country-level analysis for selected vulnerable groups. It presents the absolute (i.e. percentage point) difference of the relevant group-specific ABSPO poverty rate with respect to the corresponding AROPE rate and the national mean ABSPO value. For all population segments considered, the difference between ABSPO and AROPE figures are driven mainly by the overall gaps in the respective national poverty rates. However, the ordering of Member States in the respective panels also indicate the country-specific differences in this regard. For example, the incidence of absolute poverty among most vulnerable groups (such as children, elderly, large or single-parent households), when compared to the relevant AROPE figures, is particularly low in Luxembourg or Spain, and rather high in the Czech Republic or Slovenia. The ABSPO differences with respect to the national mean provide a somewhat cleaner picture and highlights considerable cross-country differences in the relative poverty position of these groups. Children are particularly vulnerable in Slovakia and Romania, the elderly in Croatia and Latvia, large households in Italy and Spain, and single-parent households in the Czech Republic, Lithuania and the Netherlands.

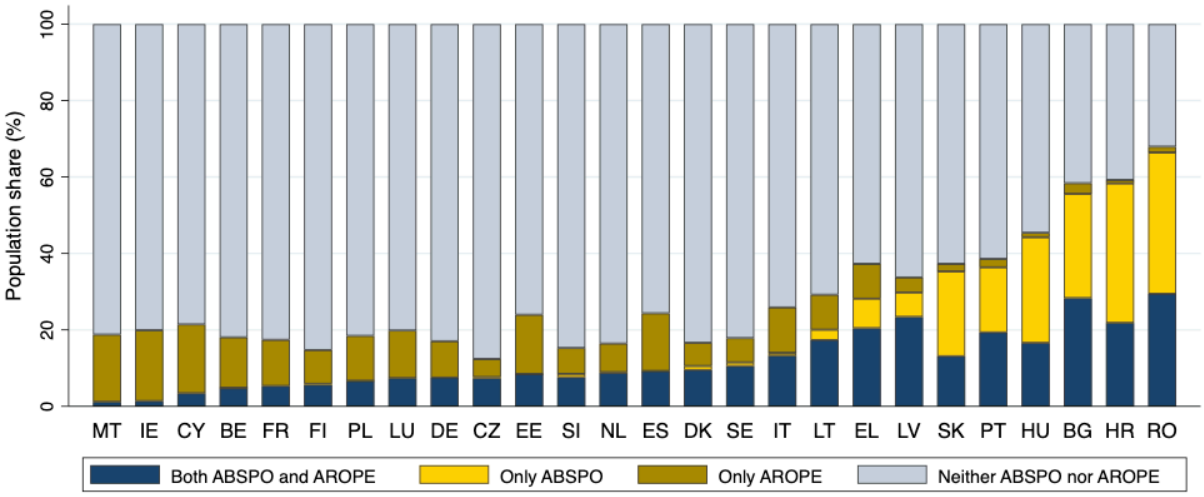
Figure 8.24. Relative incidence of ABSPO poverty among selected vulnerable groups by country



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. They represent differences in percentage point terms relative to the group-specific AROPE rate or the relevant national ABSPO rate. Children and elderly are those of age below 18 and above 65, respectively, large households are those with at least five members, while single-parent households include one working-age adult and at least one child below the age of 18. Austria is missing due to data unavailability.

Finally, we consider the degree of overlap between ABSPO and AROPE poor populations in a country. Rather than focusing on aggregate shares, this analysis allows us to assess to what extent the presented differences stem from different overall incidence of poverty, or its composition. **Figure 8.25** breaks down the overall population of EU countries according to their poverty status based on the ABSPO and AROPE indicators. It shows that, in most Member States, the larger ABSPO population in in most CEE countries entirely assimilates the smaller or AROPE population – and the opposite is true in most EU15 countries. The only Member States with substantial marginal populations in relation to both ABSPO and AROPE are Greece and Latvia, where around 20-30% of the respective populations are not part of the other segment. This indicates that the primary difference between the ABSPO and AROPE figures presented in the Report are due to differences in the calculated extent, rather than the focus or composition, of poverty.

Figure 8.25. The overlap between ABSPO and AROPE populations at the national level



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. Austria is missing due to data unavailability.

Overall, the empirical analysis presented in this section demonstrates that ABSPO estimates provide a series of new and relevant insights that enrich and complement the analysis of poverty based on existing EU indicators. The new absolute poverty measures prove particularly useful in highlighting the large differences across Member States in terms of households' capacity for adequate social participation, and also underscore the sensitivity of poverty and social exclusion to changes in the economic cycle. ABSPO estimates also reveal less substantial but equally thought-provoking differences in the regional and territorial differences in absolute poverty at the sub-national level, as well in terms of poverty gaps between various population segments and household types.

8.3. ABSPO indicators and alternative poverty concepts

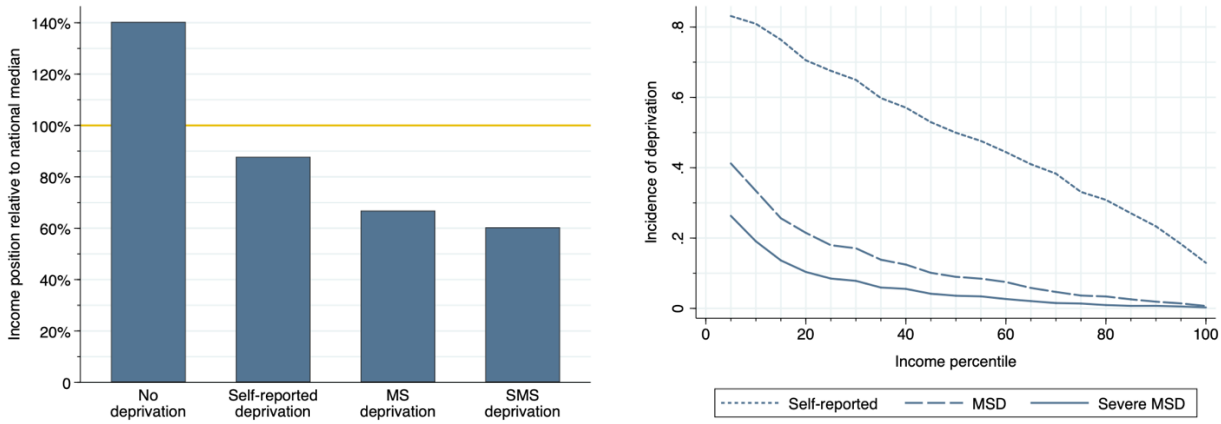
Following the comparison with the AROPE indicators, this section contextualises the ABSPO poverty measures in relation to alternative indicators. Specifically, these include a novel measure of absolute monetary deprivation that represents the statistically optimal level of minimum income needed to avoid material and social deprivation, as well as a set of subjective poverty lines based on households' perceived minimum financial needs. Using these as reference points, it becomes possible to assess the degree of overlap between monetary and non-monetary indicators of absolute poverty and social exclusion in the EU, and validity and adequacy of ABSPO poverty lines relative to households' prevailing views on the minimum acceptable level of income.

8.3.1. Absolute poverty and monetary deprivation

The first comparison features a novel measure of monetary deprivation calculated directly on the basis of households' self-reported material and social deprivation status as used for AROPE measurement. The main rationale for this comparison is the realisation that individual indicators of material and social deprivation target the same or similar capabilities and deprivation items that ABSPO modelling considers as individuals' and households' minimum needs (such as a healthy diet, adequate housing, spatial mobility, or various residual needs related to communication, leisure, financial security and social activities).[208] It is therefore reasonable to assume that an adequate ABSPO poverty line should broadly correspond to a level of (equivalised) income that allows households to escape deprivation in most of its forms and dimensions. We therefore propose a simple non-parametric method to derive absolute thresholds of monetary deprivation based on observed patterns of material and social deprivation patterns alone that can contextualise ABSPO poverty estimates.

Recent EU-SILC microdata from 2019 provide ample evidence that households' deprivation status and income situation are closely related. The left panel of **Figure 8.26** shows that, in a typical EU Member State, households' mean (equivalised) income strongly decreases with self-reported enforced lack in the number of deprivation: no deprivation (zero items), self-reported deprivation (minimum one item), material and social deprivation (minimum five items) and severe deprivation (minimum seven items) are associated with 140%, 88%, 67% and 60% of the national median, respectively. The right panel of **Figure 8.26** shows the same relationship from a different angle, and shows that all types of deprivation (i.e. self-reported, standard, severe) are disproportionately concentrated among low-income households. While close to 40% of households qualify on average as materially and socially deprived in the bottom (equivalised) income decile, the relevant figure is less than 3% among households in the highest national income brackets.

Figure 8.26. Relationship between households' material deprivation status and income position



Notes: Own calculations based on the 2019 cross-sectional wave of the EU-SILC. Figures represent EU level averages across all 27 Member States, and are either based on the official definition of material and social deprivation in the EU (MSD – material and social deprivation, SMSD – severe material and social deprivation) or denote households with no ("No deprivation") or at least one self-reported deprivation ("Self-reported deprivation"). Income position and income percentiles refer to equivalised disposable household income.

The income situation of deprived and non-deprived households is therefore very different from one another. The question is whether there exists a specific income level that separates these two groups with sufficient statistical accuracy. At the methodological level, the problem of finding such a threshold is similar to calibrating rating systems and credit scoring models by financial institutions for the purposes of discriminating between creditworthy and non-creditworthy borrowers. This latter subject has attracted a large scientific literature and produced several appropriate statistical measures and procedures (Engelmann, Hayden, and Tasche, 2003;

[208] For a more comprehensive and detailed presentation of the EU material and social deprivation indicators, see Section 2.1 of this Report and the dedicated Eurostat website: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Severe_material_and_social_deprivation_rate_(SMSD)&stable=0&redirect=no

Blochwitz et al., 2004; Basel Committee on Banking Supervision, 2001; Kraft, Kroisandt, and Müller, 2014). The most common among these are the Accuracy Ratio (AR) and the receiver operating characteristic (ROC) curve, but alternative metrics based on Bayesian methods (such as the error rate), entropy measures (such as the Kullback-Leibler distance), and statistical dispersion (such as the Gini coefficient) are also well-known examples (Basel Committee on Banking Supervision, 2005).

Using the most recent wave of the EU-SILC, we ran the necessary optimisation routines and calculated the discriminatory power associated with all of the aforementioned statistical measures. (See Menyhert (2022a) for further information and technical details). Among the competing approaches, the Bayesian error rate delivered the best statistical performance in terms of the correct assignment rate and various objective function properties. Regardless of the particular material deprivation concept (i.e. self-reported, standard, severe) used, this measure correctly classified the monetary deprivation status of the large majority of households in most Member States.[209] This suggests that, despite substantial individual heterogeneity in households' living conditions, it is possible to determine an income level that separates deprived from non-deprived households with sufficient statistical accuracy.[210]

The resulting monetary deprivation thresholds are presented alongside the (food-based) ABSPO poverty lines in **Figure 8.27** for 2020 by EU Member State. As expected, the level of deprivation thresholds in a country decreases substantially with the strictness of the deprivation concept used: while the EU average of self-reported deprivation thresholds is 1399 euro per month in equivalised terms, the corresponding values for MSD and SMSD deprivation thresholds amount only to 469 and 406 euro per month, respectively.[211] The cross-country variation in each three deprivation threshold is quite substantial, and attests to a rather loose statistical relationship between households' income position and their perceived level of material and social deprivation across Member States.[212]

In most EU countries, the ABSPO indicator occupies an intermediate position between the relevant income thresholds associated with material and social deprivation (MSD) and self-reported deprivation. In practical terms, this means that households living on the ABSPO poverty line may expect to afford a large majority (9-12) but not the totality of the 13 deprivation items considered in the official AROPE indicator. (Notable exceptions include Germany and Sweden where ABSPO poverty lines are statistically associated either with more extensive deprivation or no affordability issues, respectively.) This seems reasonable given the surprisingly high monetary thresholds associated with a complete lack of (self-reported) deprivation in certain Member States (such as Cyprus, Greece, Italy or Lithuania), as well as the more auxiliary character of the most prevalent deprivation items (i.e. ability to face unexpected expenses, affordability of one week annual holiday, possibility of replacing worn-out furniture).

Overall, these results suggest that ABSPO poverty lines represent a reasonably close monetary approximation to the minimum level of income that allows for the fulfilment of households' most basic material and social needs, as formulated by the AROPE deprivation indicators. They also show that, in a given EU Member State, there may exist quite a substantial range of income levels for which the above statement holds true, and slightly more (less) generous poverty lines may also qualify as appropriate. More generally, our analysis highlights that needs-based absolute monetary poverty lines may also be formulated on the foundation of SILC-based deprivation indicators, even though the related narrow information would likely compromise the robustness and cross-country comparability of the resulting poverty thresholds.

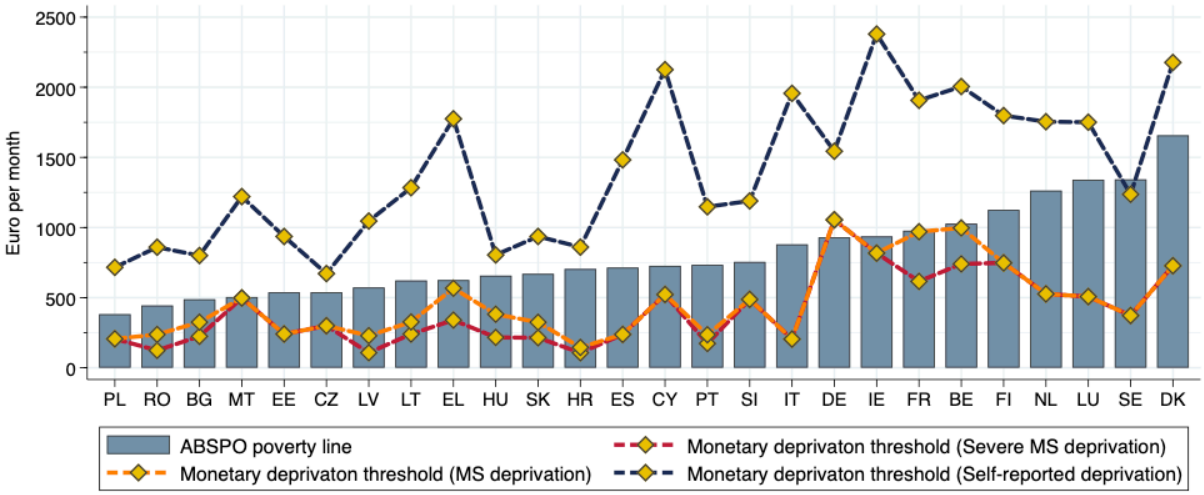
[209] Correct assignment in this case means that deprived households find themselves below the monetary threshold, while non-deprived households enjoy an income above the monetary threshold. The EU level average share of correct assignments are 73%, 88% and 94% for self-reported, standard and severe material and social deprivation, respectively. (Better assignment accuracy associated with stricter deprivation criteria is due to lower incidence of deprivation and its higher concentration in the lower tail of the distribution.)

[210] Note that the monetary deprivation thresholds presented in this Report are calculated at the national level using households' equivalised income. Regionally differentiated monetary deprivation thresholds tend to further improve assignment accuracy. See Menyhert (2022a) for further details.

[211] In countries where the MSD and SMSD rates are very low and very close to one another, the corresponding monetary deprivation thresholds may coincide (i.e. identify the same income percentile).

[212] Ceteris paribus, higher incidence of material and social deprivation translates into higher monetary deprivation thresholds. The exact level of these thresholds depends equally on the statistical properties of the income distribution, the patterns of material and social deprivation, as well as the inter-relations between these two.

Figure 8.27. ABSPO poverty lines and novel measures of monetary deprivation by country



Notes: Figures refer to 2020 and are based on own calculations using 2019 data (i.e. 2018 income reference period) from the EU-SILC and official HICP statistics by Eurostat. All poverty lines and deprivation thresholds are presented in equivalised terms. Deprivation concepts MSD and SMSD are based on official AROPE definitions, while self-reported deprivation stands for households with enforced lack of affordability for at least one deprivation item.

8.3.2. Absolute poverty and subjective poverty

As a second comparison, we contrast the resulting ABSPO poverty lines against subjective or so-called consensual poverty lines (Ravallion, 2012; United Nations, 2018). These focus on individuals' own perception of their material conditions, rather than using some socially constructed or objectivised assignment criteria (Walker, 1987). Survey-based approaches typically build on generic evaluative questions of subjective well-being (e.g. "Do you feel poor?", "How satisfied are you with your level of income?") or elicit respondents' own views on the minimum monetary needs to make ends meet. Subjective poverty indicators therefore represent an important benchmark to assess the adequacy and validity of ABSPO poverty measures from a consensual standpoint.

The measurement of subjective poverty is based on two different approaches: the so-called indirect (or objectivised) approach uses statistical methods to translate individuals' heterogeneous valuations into a single consensual poverty line (potentially by household characteristics), while the fully subjective approach takes respondents' valuations at face value.[213] Given the empirical observation that households' self-reported subjective minimum needs depend strongly on their disposable income, objectivised approaches have become more widely used – such as the Subjective Poverty Line (SPL) based on numerical income estimates and the Leyden Poverty Line (LPL) using categorical valuations, both proposed by Goedhart et al. (1977). Focusing on the SPL due to EU survey data availability, the standard statistical technique involves the so-called intersection method aimed at identifying those households where actual and perceived minimum income coincide.[214]

[213] To decide whether a particular household is poor or not, fully subjective methods simply compare its actual disposable income with its self-reported required minimum income or answer to similar evaluative questions (e.g. "Do you make ends meet with difficulty?")

[214] Formally, the SPL is derived from the (log-log) regression of perceived minimum income y_i^{min} on reported actual income y_i along with a set of household level control indicators D_{ij} (such as household size) at the individual household level:

$$\ln\left(y_i^{min}\right) = \alpha + \beta \ln(y_i) + \sum_{j=1}^{N} \gamma_j D_{ij}$$

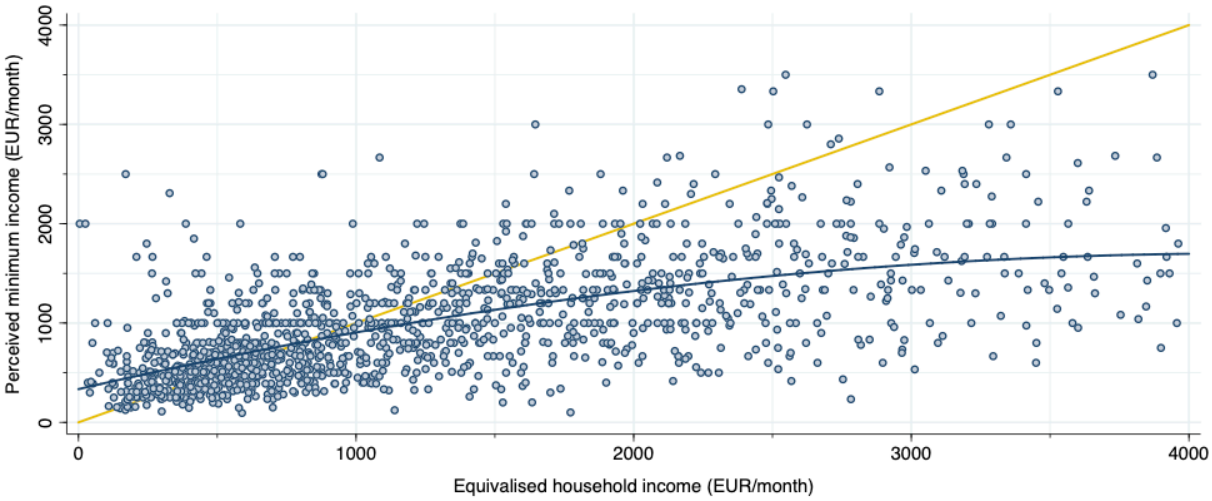
Based on the resulting parameter estimates and predicted minimum income levels, the SPL is then calculated in the following way for each modelled household type:

$$\ln(SPL_i) = \frac{\alpha + \sum_{j=1}^{N} \gamma_j D_{ij}}{1 - \beta}$$

For empirical analysis, we use the most recent 2019 wave of the EU-SILC. Specifically, the variable HS130 of the standard household file ask respondents to indicate the lowest net monthly income the household would need to make ends meet. Using a random European sample from 27 Member States, **Figure 8.28** provides a snapshot of the statistical relationship between household perceived minimum income and actual disposable income in equivalised terms. This shows that perceived minimum income increases with actual disposable income, but with a rather low propensity and in concave, partially decreasing fashion. Not surprisingly, households at the bottom end of the income distribution tend to report minimum income superior to the level of their actual income, while the majority of European citizens living above 1000 euro per month per person finds that they have more than the required minimum.

Using the intersection method based on a sparse regression specification (the one in equation 8.2, with D_{ij} as dummies for household size), we also derived the corresponding SPL indicators for all EU Member States. As **Figure 8.29** demonstrates, the monthly subjective poverty lines range from around 300 euros in Hungary to 2200 euros in Luxembourg, with a cross-country average of 960 euros. The corresponding subjective poverty rates, similarly to the patterns observed in relation to AROP or ABSPO indicators, are negatively correlated with the subjective poverty lines (i.e. the cross-country correlation is -0.17).

Figure 8.28. Empirical relationship between household income and perceived minimum income

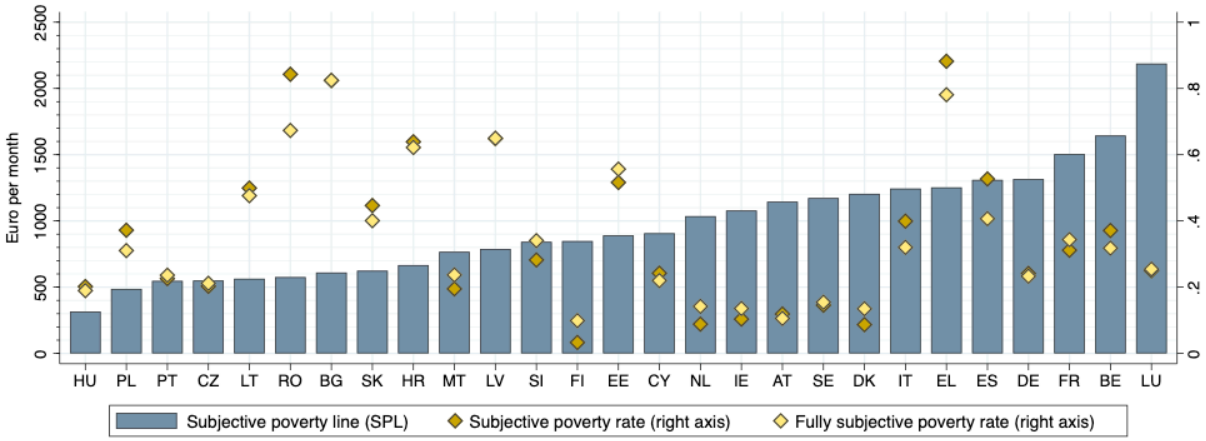


Notes: Figures refer to 2018 and are based on own calculations using 2019 data (i.e. 2018 income reference period) from the EU-SILC. All income figures are presented in equivalised terms, and are based on a pooled random sample from all EU Member States.

Importantly, the subjective poverty rates are rather high (i.e. 36% on average) and exhibit marked cross-country dispersion (i.e. with a standard deviation of 24 p.p.), even across countries of similar socio-economic development (e.g. 64% Croatia and 21% in Czech Republic, 87% Greece and 37% in Portugal). **Figure 8.29** also shows that the large dispersion of SPL rates is not an idiosyncratic feature of the method itself, but reflect differences in objective realities and households' subjective assessment of poverty: the fully subjective poverty rates are almost identical to the SPL rates (i.e. the average difference between the two approaches amounts to less than 1.2 percentage points), and in some cases point to even larger cross-country differences in poverty (i.e. consider the case of Greece or Romania, for example).

Note that the comparison of the resulting household-specific subjective poverty lines can be used to infer subjective equivalence scales. For further details, see Section 7.3.2 of this Report.

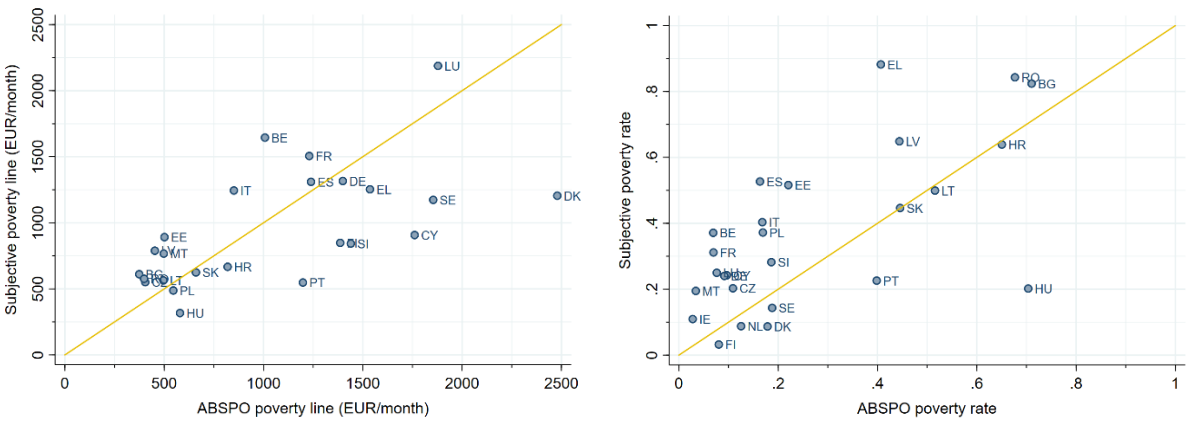
Figure 8.29. Subjective poverty indicators by country



Notes: Figures refer to 2018 and are based on own calculations using 2019 data (i.e. 2018 income reference period) from the EU-SILC. All subjective poverty lines are presented in equivalised terms.

Figure 8.30 presents the statistical relationship between ABSPO and subjective poverty indicators by country. The left panel shows that the respective poverty thresholds are positively correlated across countries (0.65) and broadly similar in levels. The right panel shows that the statistical correlation across ABSPO and subjective poverty rates (right panel) is equally strong (0.66) and that ABSPO poverty rates are broadly consistent with the rate of subjective poverty in Member States. Individual cases can nevertheless be very different, which points to the importance of considering both subjective and objective inputs when drawing needs-based absolute poverty thresholds.

Figure 8.30. ABSPO poverty indicators as compared to measures of subjective poverty



Notes: Figures are based on ABSPO calculations using the food-based approach and refer to 2018 values. Subjective poverty estimates are based on the 2019 cross-sectional wave (i.e. 2018 income reference period) of the EU-SILC. Austria is missing due to data unavailability.

CHAPTER 9.
ABSPO methodology for possible regular EU-wide measurement

The current chapter looks beyond the scope of ABSPO implementation and considers the methodological details and data requirements of rolling out the ABSPO methodology for the purposes of EU-wide poverty measurement. We review three areas in particular. The first concerns the requirements of a possible EU-wide roll-out of the piloted ABSPO methodology for cross-country comparable absolute poverty measurement. Second, we discuss the relevance of using the ABSPO methodology for regular poverty measurement in the EU. Third, we make a series of recommendations aimed at improving the existing European data architecture for increased comparability and robustness of a potential EU-wide absolute measure of poverty.

9.1. Requirements and methods of a possible EU-wide ABSPO roll-out

As a pilot project, ABSPO has developed three novel approaches to measuring absolute poverty in the EU based on individuals and households' minimum needs. All the aforementioned approaches target a common European living standard defined in terms of adequate social participation in the relevant national societies, and deliver comparable monetary poverty lines for a number of EU Member States. The main conceptual difference between the proposed measurement approaches concerns the way individuals' and households' minimum needs are determined: the budget-based approach uses piecemeal reference budget techniques to this end, the survey-based approach relies on citizens' subjective views and self-reported valuations as recorded in European household surveys, while the food-based approach applies statistical methods based on households' observed food/non-food expenditure patterns. These methodological differences also dictate the geographical scope and country coverage of ABSPO implementation, as well as the relevant data sources used. The detailed presentation of these measurement strategies is contained in Chapters 4, 5 and 6 of this Report, while the comparative analysis of the resulting ABSPO poverty lines and rates is accessible in Chapter 8.

Since all ABSPO poverty measures correspond to the same underlying concept of poverty, the question of which approach is more appropriate or suitable for a comprehensive EU-wide scale-up is a practical one. It directly concerns the main objective, time horizon and available financial resources of such an exercise: whether it foresees one-off or repeated measurement, focuses on overall poverty or its specific dimensions (such as housing poverty), anticipates statistical measurement or direct policy use (such as income adequacy assessment). Conditional on these, differences in various methodological aspects of ABSPO measurement – such as the scope and granularity of modelling, customisation potential, robustness and cross-country comparability – may become crucial factors in deciding which approach is worth pursuing for comprehensive EU-wide measurement.

Before discussing the related needs and required inputs for such a potential roll-out, it is worth highlighting that the various ABSPO strategies are not monolithic. To a certain extent, they use common inputs and data sources, and are constructed in a modular fashion that allows practitioners to mix different approaches and rely on various inter-changeable components. The number of possible combinations is particularly high regarding the food reference baskets and the associated pricing sources, which makes it possible to carefully balance between the various implementation objectives. Moreover, certain internal modifications to the presented ABSPO strategies are equally possible. These may involve the joint consideration of certain expenditure categories (such as transportation, health and residual ones) in the survey-based approach, or the separation of housing needs from generic non-food needs in the food-based approach. In fact, the ISTAT methodology itself may be considered as an intermediate solution between the two aforementioned (pure) ABSPO strategies. This potential for customisation highlights that any scaling-up or EU-wide application of ABSPO-based measurement can be tailor-made and attuned to the relevant objectives of the measurement exercise.

Scaling up of the ABSPO approaches

The strength and weaknesses of the ABSPO measurement approaches for the purposes of a potential EU-wide scale-up are context-specific and depend on the particular objectives of an EU-wide application. For a more structured discussion, we collected those modelling features that separate the different approaches and are likely to prove relevant for a broad type of potential applications. **Table 9.1** lists these attributes across five broad thematic categories (such as modelling scope, modelling granularity, normative control and subjective validity, robustness and cross-country comparability, resource needs and extension costs) and evaluates the performance of the piloted ABSPO measurement approaches in relation to each of them.

Given the primarily geographic character of the extension in question, the most important aspect concerns modelling scope. In this regard, the food-based approach clearly occupies the most advantageous position: it already covers all EU Member States (except for Austria) and delivers absolute poverty lines covering individuals' and households' minimum food and non-food needs in a comprehensive manner. The survey-based approach comes close second: while it only covers for ABSPO pilot countries in its standard form, marginal modifications to the calculation of the related food budgets (through the use of Eurostat average price data) allow for the same broad EU-wide coverage. Compared to these options, the budget-based approach is at a distinct disadvantage: not only is it piloted only for three Member States (Belgium, Finland, Hungary) as part of ABSPO implementation, it also relies on elements of the survey-based approach to deliver comprehensive poverty estimates.

The aforementioned differences in country coverage and expenditure scope naturally influence the resource requirements and financial costs associated with an EU-wide roll-out of the ABSPO methodology. The related operational needs are negligible in the case of survey-based and food-based approaches: all or most required inputs are already available, the involvement of external providers is unneeded, and the analytical modelling costs are minimal.[215] Compared to these, the systematic implementation of the budget-based approach across all Member States would require considerable financial and organisational investment: the cost of developing of 24 additional sets of new reference budgets and implementing approximately 100 different price collections and coordinating the work of two dozen national expert teams are substantial.[216] Naturally, the associated resource needs can be significantly reduced (for example, by using alternative readily-available pricing sources to monetise food baskets) but retaining or even strengthening the consensual character of the resulting reference budgets would likely further increase (rather than decrease) the implementation costs. In particular, participative methods and focus group discussions that are typically used for the subjective validation (and were foregone for ABSPO implementation due to the COVID-19 pandemic) represent one of the costlier components of reference budget construction.

Other important considerations may include the granularity of modelling, the scope for customisation and normative control, as well as the robustness and cross-country comparability of the resulting ABSPO-based poverty estimates. In these areas, the comparative advantage of the survey-based and food-based approaches is far from evident. For example, in the domain of piecemeal modelling, the budget-based approach tends to prevail on account of its detailed consideration of non-food minimum needs, the direct modelling of these across various household types, and the use of geographically disaggregated prices for both food and non-food expenditures. It may also score better due to the high degree of customisation and normative control it offers to practitioners to determine and socially validate the targeted living standard and its alignment with the detailed minimum needs and reference budgets considered. However, it can also make them highly context-specific and vulnerable to idiosyncratic considerations, against which algorithmic procedures and transparent data-driven methods of the survey-based and food-based approaches offer better insulation. The more systematic character of these latter strategies is reflected in the more robust and cross-country comparable poverty estimates they deliver.

[215] The biggest potential investment would concern the effort to secure appropriate, geographically disaggregated price data for all EU countries to monetise food reference baskets in the standard (non-simplified) version of the survey-based approach. Since the required information are not accessible by NSIs of most Member States, the use of relatively expensive price scanner data may become necessary in this case.

[216] Moreover, the reliance on ImPRovE/EURB reference baskets beyond the confines of the ABSPO project would also raise the issue of intellectual property rights with regard to the owners of these data at the Herman Deleeck Centre for Social Policy at the University of Antwerp.

Table 9.1. Comparison of ABSPO approaches from the perspective of EU-wide measurement

		BUDGET-BASED APPROACH	SURVEY-BASED APPROACH	FOOD-BASED APPROACH
MODELLING SCOPE	Country coverage	BE, FI, HU	BE, FI, HU, IT	EU27 (without AT)
	Expenditure categories	Food, Residual	All expenditures	All expenditures
GRANULARITY OF MODELLING	Detailed budgeting	Food and non-food needs	Food needs only	Food needs only
	Geographical differentiation	Food and non-food budgets	Food and non-food budgets	Non-food budgets only
	Household-level needs	Through direct modelling	Through direct modelling and equivalence scales	Through equivalence scales
NORMATIVE CONTROL & SUBJECTIVE VALIDITY	Link to targeted living standard	Direct	Indirect	Incidental
	Normative control	Large	Moderate	Limited
	Foundation of minimum needs	Expert involvement and participative methods	Self-reported survey data	Expenditure patterns
ROBUSTNESS & CROSS-COUNTRY COMPARABILITY	Algorithmic modelling	Limited	High	High
	Robustness of food budgets	Low	High	High
	Robustness of non-food budgets	Low	Moderate	Moderate
	Scope for improvement	Improvements in reference budget practices	Improvements in data architecture	Improvements in data architecture
RESOURCE NEEDS & EXTENSION COSTS	Availability of required inputs	No	Partly	Yes
	External support	Needed	Not needed	Not needed
	Financial needs	High	Zero	Zero
	Analytical needs	High	Low	Zero

All in all, the clear preference for most applications would be to pursue the survey-based or food-based ABSPO measurement approach (or a combination thereof) in case of an eventual EU-wide roll-out of the ABSPO methodology. For the purposes of either single measurement or regular poverty monitoring, these approaches already produce (or are capable of producing) absolute poverty estimates for all EU countries (with the exception of Austria) using readily available data.[217] Promoting the EU-wide implementation of (some variant of) the reference budget-based approach, on the other hand, seems justifiable with a particular emphasis on 'beyond-income' perspectives (such as the affordability of essential expenses, out-of-pocket costs of public goods and services) or the specific needs of vulnerable groups in mind.[218] This, however, would necessitate the mobilisation of extensive additional human and financial resources.

Potential improvements in data and measurement quality

A future measurement exercise aimed at the EU-wide roll-out of the ABSPO methodology would also present an opportunity for improving the quality of measurement. While the piloted ABSPO strategies are based on the careful consideration of existing data sources and methodologies, the production of most required new inputs and the

[217] Austria does not feature in the EU Household Budget Survey (HBS) and therefore the relevant minimum expenditure thresholds could not be derived in the standard ABSPO manner. For comprehensive EU-wide measurement, the only alternative in the short term would be to rely on national HBS microdata provided by Statistics Austria – see its official website for further details: http://www.statistik.at/web_en/statistics/PeopleSociety/social_statistics/consumption_expenditures/household_budget_survey_2019_2020/index.html

[218] For further details about the potential contribution of the use of such reference budget-based approaches for EU wide poverty measurement and social analysis, see Penne, Cornelis, and Storms (2020).

feasibility and sensitivity assessment of several alternative solutions, each of the three measurement approaches are liable to further improvements. Here below, we draw attention to the most pertinent measurement aspects that could benefit from further scholarly attention and methodological improvements.

In our view, the most apparent areas of measurement with significant methodological gaps exist in relation to reference budget construction as part of the budget-based measurement approach. One particular concern is the limited role played by participatory methods and focus group discussions in the development and validation of ABSPO reference baskets. These elements were cancelled due to the COVID-19 pandemic for ABSPO implementation, and influence the resulting estimates only through the validated ImPRovE/EURB reference baskets used as starting points for ABSPO updates and extensions. Barring implementation constraints, the preferred scope of focus group discussions may extend to areas that were not considered in the original ImPRovE/EURB exercise – such as (poor) households' shopping and purchasing patterns, the adequacy of proposed price collection methods, or the more holistic consideration of minimum needs across various individual and household types. The second potential area of improvement is the harmonisation of ABSPO reference budgets across countries. Additional coordination and guidance regarding the structure and contents of reference baskets, in particular, could go a long way in strengthening the consistency, cross-country comparability and price data compatibility of resulting minimum budgets. New insights and outputs produced by alternative ABSPO measurement strategies (e.g. nutritional food reference baskets, minimum residual expenditure thresholds, observed patterns of household expenditures in survey data) could serve as useful inputs or reference points to such harmonisation procedures.

Regarding the survey-based approach to ABSPO measurement, the most relevant methodological innovations may concentrate on the identification of new EU-level or harmonised data sources that can provide reliable information on households' minimum needs and subjective views on various thematic aspects of poverty and social exclusion.[219] An equally important area of inquiry concerns the joint analysis of households' living conditions and subjective well-being, expenditure data and financial situation at the micro-level for a more refined calculation of thematic and overall ABSPO poverty lines. In this regard, the experimental statistics and matching methods applied by Eurostat in relation to income, consumption and wealth (ICW) using the EU-SILC, EU-HBS and the ECB's Household Finance and Consumption Survey (HFCS) are likely to be of practical interest. The third important avenue for improvement is the thorough examination of cross-country comparability in relation to European survey dataset, especially as far as households' subjective valuations in the EU-SILC and their recorded expenditure patterns in the EU-HBS are concerned. These can help better explain the more counter-intuitive and seemingly idiosyncratic findings of survey-based ABSPO measurement.

With respect to the food-based statistical approach, the most pressing methodological issue concerns the better understanding of households' food consumption habits and the relationship of these to self-reported out-of-pocket expenditures in household budget survey data. ABSPO calculations have revealed that even modestly priced basic nutritional food reference baskets tend to imply relatively high rates of deprivation in comparison with self-reported food-related spending in national and European household surveys.[220] The likely candidate for this discrepancy is the considerable amount of food that individuals consume at their school, workplace or other social institutions, often for publicly subsidised rates or in exchange for non-cash instruments (e.g. meal tickets, food stamps, lunch vouchers). Given the relatively high non-food multipliers used in the food-based measurement approach, even small changes in the way minimum food needs are calculated or monetised can produce considerable movements in the resulting ABSPO poverty lines and rates.

Finally, another generic method to enhance the quality of the resulting ABSPO poverty lines is to rely on additional (primary or secondary) sources of information for contextualisation and potential posterior refinements. These may include the cross-country harmonisation of ABSPO outcomes by purely statistical means (e.g. data trimming), or through the use of reliable external data (e.g. international purchasing power parities) – and may take place either at the level of thematic or overall poverty lines. While this strategy is not pursued in the current Report, such ex post adjustments can be useful in limiting the potential idiosyncrasies associated with national budget survey data across Member States, and improve the consistency and reliability of absolute poverty measurement in the short and medium run.

[219] The updating of existing sources used for measurement may also be possible (see the impending availability of Eurobarometer SEB#495 microdata to replace the currently used SEB#406 survey for the modelling of minimum transportation needs in Section 5.4 of this Report).
[220] This was one of the reasons that prompted us to employ rather degressive economies of scale assumptions (see Section 5.2 of this Report) when calculating household-level food reference budgets, in order to ensure the appropriateness of resulting (overall) poverty lines and rates.

9.2. ABSPO use for regular measurement

With an EU-wide roll-out of the ABSPO methodology, the possibility of regular measurement and potential indicator use may arise. This section considers the technical and functional requirements, as well as COVID-19 related measurement implications of such an eventuality. We also explore the extent to which ABSPO measurement strategies may be further simplified for the purposes of robust social monitoring, should potential methodological or data-related limitations of the piloted methodologies were to be deemed prohibitively excessive.

9.2.1. Technical requirements of regular measurement

The most important technical aspect that separates regular measurement and monitoring from one-off singular computations is the requirement of regular updating of the absolute poverty lines. One may differentiate two types of updating. The first aims at ensuring that continual changes in living costs are appropriately reflected in the poverty lines, and calls for inflation-adjusted updating at relatively high frequencies. The second type of updating concerns the adjusting and re-consideration of individuals' and households' minimum needs and expenditure patterns over longer periods of time. We briefly review the particular features and best practices for each of these.

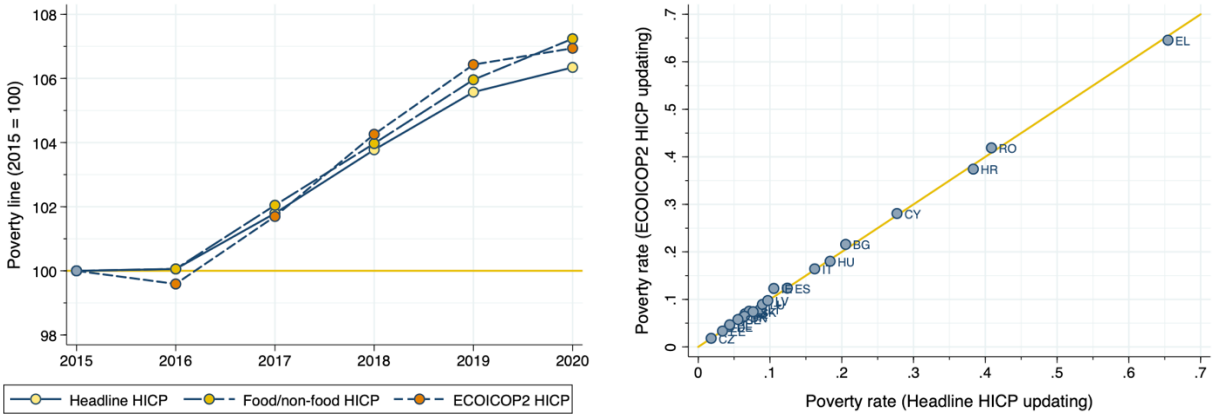
Yearly price updates

Most existing monetary poverty lines are updated on a yearly basis to reflect ongoing changes in price levels and the cost of living. This invariably involves the use of official HICP indices or inflation statistics and the appropriate uniform re-scaling of the poverty lines. Beside the issue of the preferred (harmonised or non-harmonised) consumer price index, the main technical question concerns whether the overall index or a set of item category-specific variants are best to use (Lakner et al. 2018). For ABSPO measurement, this latter solution would mean separate updating of the respective budget components associated with minimum food, non-food, housing, transportation and health needs.

Observed historical correlations between the time series of item class-specific and overall HCIP data are very high in most Member States. This, together with the observed stability of consumption weights across various household types, suggests that the choice between a single overall (ECOICOP0 level) and a set of item-specific (ECOICOP1 or ECOICOP2 level) indices is not highly consequential over shorter time horizons.[221] **Figure 9.1** below shows the effect of different updating methods as applied to the 2015 level of survey-based ABSPO poverty lines over a 5-year horizon. The left panel highlights that numerical differences across the updated poverty lines are rather minimal (i.e. less than one percentage point), especially if single year-on-year changes are considered. The right panel of **Figure 9.1** compares the effect of various updating methods on the resulting 2018 ABSPO poverty rates, and shows that the resulting marginal differences in the poverty lines are not large enough to qualitatively influence the stability of the associated poverty rates.

[221] The analysis of 2015 EU HBS data suggests that while households within the inter-quartile income range spend 63% of their total expenditure on food, housing and transportation, the same figures are 71.4% for households of the lowest income quartile.

Figure 9.1. Potential effect of different price updating methods on ABSPO poverty lines and rates



Notes: Own calculations based on ABSPO survey-based poverty lines, official HICP data by Eurostat and EU-SILC microdata from the 2015-2019 cross-sectional waves. 2019 data from the EU-SILC. The figures in the left panel represent the EU average of national updated poverty lines for any given year. Updating method 'Headline HICP' uses the overall index, 'Food/non-food HICP' uses two different indices (for food and non-food) at the ECOICOP1 level, while 'ECOICOP2 HICP' uses separate indices for food, housing, transportation, health and residual budgets at ECOICOP2 level.

Periodic modelling updates

As a way of ensuring that not only living costs but also the underlying minimum needs remain valid over longer periods of time, the structure of reference budgets and expenditure thresholds also need periodic updating. For ABSPO measurement, this potentially means adjusting food reference baskets (to reflect changing food consumption habits), re-pricing minimum budgets (to reflect relative changes in consumer prices), and revising certain elements of the applied statistical procedures on the basis of newly released household survey data (e.g. expenditure patterns in EU-HBS data, living conditions in the EU-SILC). Many of these modelling updates are optional, as none of the aforementioned components exhibit strong fluctuations over time.[222] However, strong cyclical variations in economic activity (such as the 2008 financial and economic crisis) or other episodes of social distress (such as the COVID-19 pandemic) may make it expedient to revisit certain modelling aspects, especially the ones related to the survey-based statistical estimates of minimum non-food expenditure thresholds.

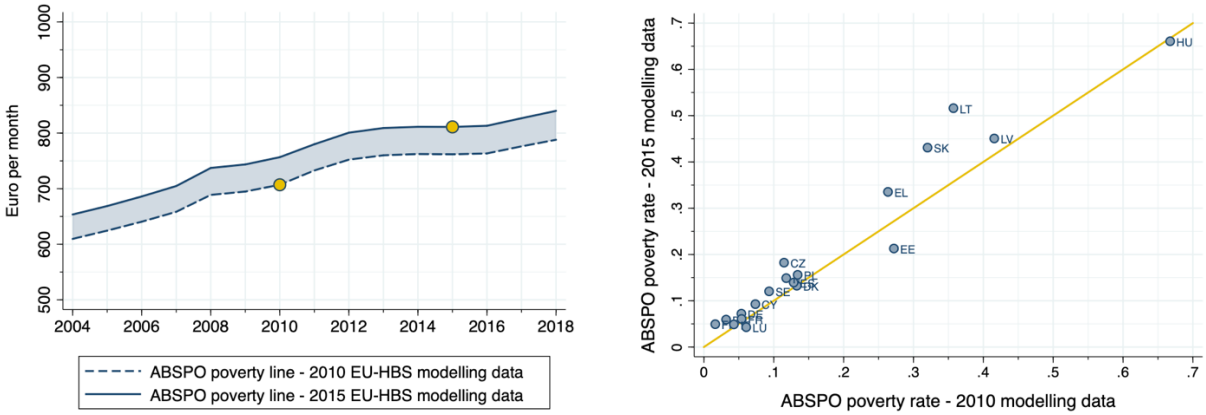
A reasonable periodicity for such structural updates would be around 10 years. More frequent modelling updates are hard to justify on altered circumstance alone, especially since those – depending on the scope and nature of the exercise - may require considerable financial and organisational resources (e.g. focus group discussions, access to harmonised price data, involvement of external experts or practitioners). The requirement to maintain the fixed standards of existing absolute poverty lines also calls for occasional and well-founded adjustments, as all modifications to the poverty indicator call for a retroactive re-calculation of all previous estimates for time-consistent measurement.

As an illustrative example, **Figure 9.2** shows the difference between the food-based ABSPO poverty indicators derived on the basis of 2010 and 2015 waves of the EU-HBS, respectively.[223] The left panel shows that, in a typical EU country, the (equivalised) ABSPO poverty line is approximately 50 euro per month higher based using modelling data from 2015 rather than 2010 – a non-negligible difference. Much of it is driven by the increased level of real household spending (and lower food expenditure shares) that characterised the mid-2010s as compared to the economic downturn of the earlier years. The right panel of **Figure 9.2** plots the corresponding ABSPO poverty rates for 2015 by country, and shows that the effects of structural updates can indeed be substantial and are far from uniform across the EU: 2015-based (updated) poverty rates are considerably higher than 2010-based ones in some

[222] The official methodology of ISTAT, for example, still relies in large part on parameters and measurement choices developed in the 2000s. For more details, see Grassi and Panuzzi (2009) and Cutillo, Raitano, and Siciliani (2020).
[223] The same nutritional food reference budgets were used for both calculations. The difference between the 2010 and 2015 model variants stem entirely from the different expenditure patterns featured in the subsequent EU-HBS waves.

of the Member States hit hardest by, and recovering from, the financial and economic crisis that started in 2008 (such as Greece, Lithuania and Slovakia).

Figure 9.2. Potential effect of an occasional modelling update on ABSPO poverty lines and rates



Notes: Own calculations based on ABSPO food-based poverty lines, official HICP data by Eurostat and microdata from the 2010 and 2015 EU-HBS waves. Figures in the left panel represent the EU average of (equivalised, HICP-adjusted) national ABSPO poverty lines as calculated separately for each calendar year. The scatterplot in the right panel features poverty rate estimates for 2015.

9.2.2. Potential COVID-19 implications for future ABSPO measurement

Major shifts in the socio-economic environment can take place for other reasons as well, and may challenge the way poverty and social exclusion are best measured under altered circumstances. The global COVID-19 pandemic, in particular, has exerted enormous pressure on European citizens and societies. The unfolding public health crisis, the lockdown and other mitigation measures, and the subsequent economic downturn have affected households' labour market status, financial position, living conditions and subjective well-being in sudden, impactful and unequal ways (Baena-Díez et al., 2020). Not only are these developments likely to have a substantial effect on the extent of poverty in the EU, they may also call for changes to the way it is measured, especially given the needs-based foundations of absolute indicators. In this sub-section, we briefly review the potential implications of the COVID-19 pandemic for sound absolute poverty measurement, and assess the applicability of the piloted ABSPO methodologies during post-pandemic times.

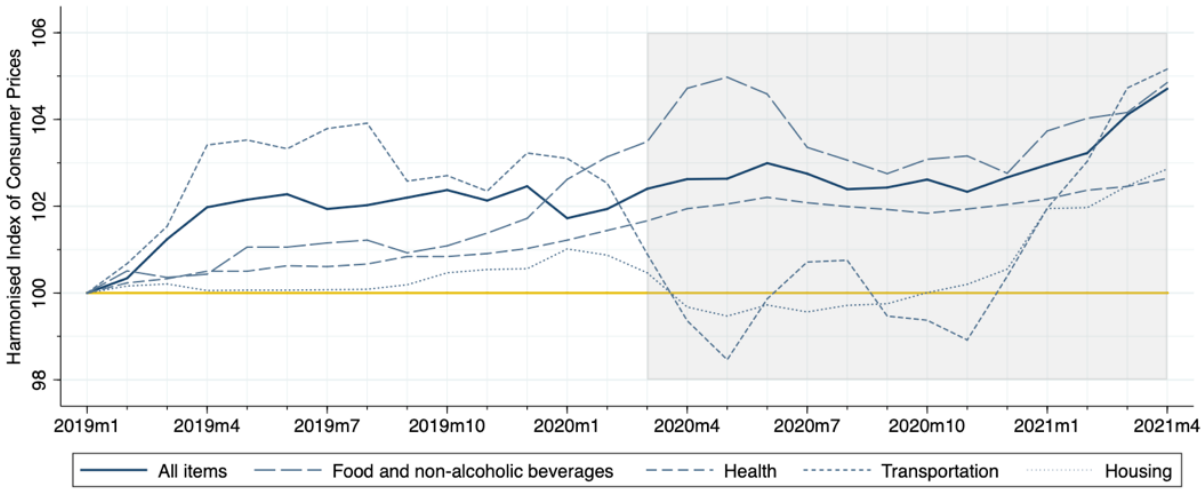
The main measurement issue concerns individuals' and households' potentially altered minimum needs. In particular, the imperative of social distancing, teleworking and on-line schooling, as well as the temporary closure of non-essential social activities can have far-reaching implications on what may reasonable considered essential purchases. Certain minimum needs have likely changed either in intensity (e.g. reduced transportation needs) or in form (e.g. ban on socio-cultural activities), while some previously unnecessary demands may have become indispensable (e.g. IT services for distance learning). The analysis by Cornelis, Penne, and Storms (2021) assesses the budgetary implications of these in Belgium and finds that the overall effect on the most households' reference budget is rather limited: the majority of basic expenditure needs have remained either unaffected (83%) or partially affected (11%) as a result of COVID-19 developments, while the remaining budget components have mostly dwindled. This suggests that prior characterisations of minimum needs likely remain valid even in the wake of the pandemic.

Another potential measurement aspect concerns the unconventional movements and trends in retail prices set off by the direct and indirect effects of the pandemic. For instance, a rise in food prices was widely documented in most EU Member States immediately after the imposition of lockdown restrictions in early 2020 (Akter, 2020). Harmonised consumer price data from Eurostat show that various product categories have indeed displayed rather different price developments since the onset of the COVID-19 pandemic (see **Figure 9.3** below). However, aggregate HICP indices have remained stable throughout, and specific ECOICOP price indices have also returned to

their longer-term trend values by early 2021. This suggests that the standard annual price updating foreseen by ABSPO implementation remain as valid a measurement practice as before.

A third potential source of adjustment relates to the purchasing behaviour of households. Temporary limits on shopping choices due to lockdown measures, adjustments in consumption patterns due to price movements or more permanent changes in one's lifestyle due to social distancing have the potential to change households' budget even in the absence of marked price developments. While these are typically hard to measure using household survey data, detailed household price scanner information on Italian households' food expenditures from 2019-2020 shows that official HCIP statistics provide a rather accurate measure of how households' actual expenditures have evolved over the same period.[224]

Figure 9.3. Harmonised Consumer Price Index by expenditure category over the COVID-19 period



Note: Own calculations based on official monthly HICP data by Eurostat, calculated as the average of relevant national figures across all 27 EU Member States.

Overall, our cursory analysis reveals that, despite the strong disruptions of the COVID-19 crisis to households' material conditions and living standards, absolute poverty lines derived on the basis of existing minimum needs, reference prices, and survey data sources retain their validity even under the new pandemic circumstances. For the purposes of regular future measurement, yearly price updates and periodic structural updates ensure that the ABSPO modelling framework is flexible enough to deliver robust absolute poverty indicators even in times of major socio-economic distress.

9.2.3. Functional requirements of potential indicator use

Regular measurement is a necessary but not sufficient condition for effective monitoring. The indicators used for this latter purpose share a series of common features and form an inter-related structure based on carefully designed complementarities. This sub-section offers a brief overview of the existing system of social indicators in the EU, and assesses how a potential ABSPO-based indicator could effectively complement it.

System of social indicators

In the domains of social protection and social inclusion, the Indicators Sub-group (ISG) of the Social Protection Committee (SPC) is responsible for the development of official EU-level indicators and indicator frameworks that monitor Member States' progress towards commonly agreed EU objectives. The ISG also provides analysis on social indicators, supports policy reviews conducted by the SPC, and contributes to the improvement of social statistics at

[224] This analysis was made possible and carried out by the AiMark Foundation.

EU level. Its reference document on the EU social indicators discusses in detail the existing monitoring framework and the relevant criteria for indicator selection (Social Protection Committee, 2015).

A key purpose of EU social indicators is to monitor progress towards a set of societal objectives that have been jointly agreed by EU Member States and the European Commission. Since the first set of objectives were agreed in 2001, these objectives have evolved over time and the associated indicators have gained further importance. In relation to poverty and social exclusion, four different indicator portfolios are set up (overarching, social inclusion, pensions, and health) that reflect their multi-dimensional character and highlight the possible entry points for effective policy intervention. Within these areas, indicator portfolios are set up thematically, and each portfolio is designed to cover all the key dimensions of common objectives with a small number of primary indicators. In each portfolio, there is a balanced set of commonly agreed indicators: primary EU indicators of social outcomes for the purposes of comparative assessment, and secondary national indicators without clear EU-wide or normative features.[225] These jointly support the reduction of the number of population at risk of poverty and social exclusion, as measured by the headline AROPE indicator, by at least 15 million by 2030.

Various elements of ABSPO poverty measurement may potentially be used to contextualise various sub-groups of agreed indicators. ABSPO poverty lines and rates, in particular, can complement the current set of 17 indicators based on various AROPE components, and help explore additional dimensions of poverty and social deprivation. ABSPO poverty estimates can also support the analysis of other (non-AROPE) indicators related to income inequality, pension adequacy, in-work poverty and child well-being across different indicator portfolios (Social Protection Committee, 2015).

A second potential contribution of ABSPO measurement may consist in providing monetary equivalents to certain non-monetary indicators. This is made possible by using some of these latter as direct inputs to determining households' minimum needs and quantifying the associated expenditure thresholds in the (survey-based) ABSPO measurement approach. In particular, the calculation of a minimum ABSPO housing budget is based on the overcrowding and housing deprivation indicators (SI-S6 and SI-S7, respectively), while the choice of the minimum health budget depends on the same SILC-based information as the indicator of self-perceived general health (HC-S2). Complementing these and other indicators with the minimum cost of fulfilling the underlying basic needs across countries (while also denoting the share of households that are unable to do so) can reveal useful information about potentially useful policy interventions that may bring about targeted improvements.

Finally, ABSPO results and outcomes can support the development of new indicators in selected portfolios, such as monetary measures of food poverty, housing inadequacy, social and material deprivation or subjective poverty. New ABSPO findings and insights on these and other domains can effectively support the more extensive coverage of such dimensions.

Individual indicators

Beside the systemic aspects of the social monitoring framework in the EU, individual indicators should also meet certain quality requirements:

- have a clear and accepted normative interpretation;
- be robust and statistically validated;
- provide a sufficient level of cross-country comparability based on internationally applied definitions and data collection standards;
- be built on available data in a timely manner and susceptible to revision;
- be responsive to policy interventions but not subject to manipulation.

In this context, ABSPO poverty measures may qualify as contextualisation tools or possibly as direct inputs to the development of legitimate social indicators in the EU. They are built on available reference budget and survey data, liable to regular price updating and periodic revisions, and are responsive to policy interventions. Importantly,

[225] Context information represents a third type of indicative background variables that are used to better frame the main indicators and understand the respective national contexts.

this is equally shared by several intermediate or derivative elements of the ABSPO modelling strategy (e.g. food reference budgets and thematic expenditure thresholds, regional poverty estimates, horizontal poverty profiles).

The ABSPO poverty measures nevertheless also share certain attributes that may limit their widespread appeal for indicator use or support in their current form. The first of these concern limitations in cross-country comparability due to the incomplete harmonisation of European household surveys, the EU-HBS in particular. The main data quality issues include different national sample sizes and sampling methods, missing or inconsistent geographical identifiers, and heterogeneous methods for imputed rent calculations, among others.[226] While many existing social indicators are also formulated on the basis of partial survey information, the calculation of ABSPO poverty indicators requires the combined use of different variables and data sources that may amplify the potential data related concerns. A second potential limitation of ABSPO measures stems from their reliance on a large number of different inputs, stakeholders and statistical procedures that may compromise the clear interpretation, perceived transparency, and acceptability of the resulting poverty estimates among policy-makers and non-expert users. The official use and widespread recognition of the (similarly complex) ISTAT methodology of absolute poverty measurement in Italy shows that these concerns can be successfully addressed – through the use of critical analysis, thorough deliberation and intensive social dialog. A potential third factor concerns the timeliness of the piloted ABSPO measures: while the continuous updating is ensured by the annual release of the cross-sectional EU-SILC microdata, the budget survey data required for modelling and detailed analysis is only available at five-year intervals with a considerable lag (i.e. the latest 2015 wave of EU-HBS microdata used for ABSPO calculations were released as recently as 2021). This may reduce the validity and legitimacy of ABSPO poverty estimates in times of major socio-economic change.

9.2.4. Potential simplifications for an ABSPO-type absolute indicator

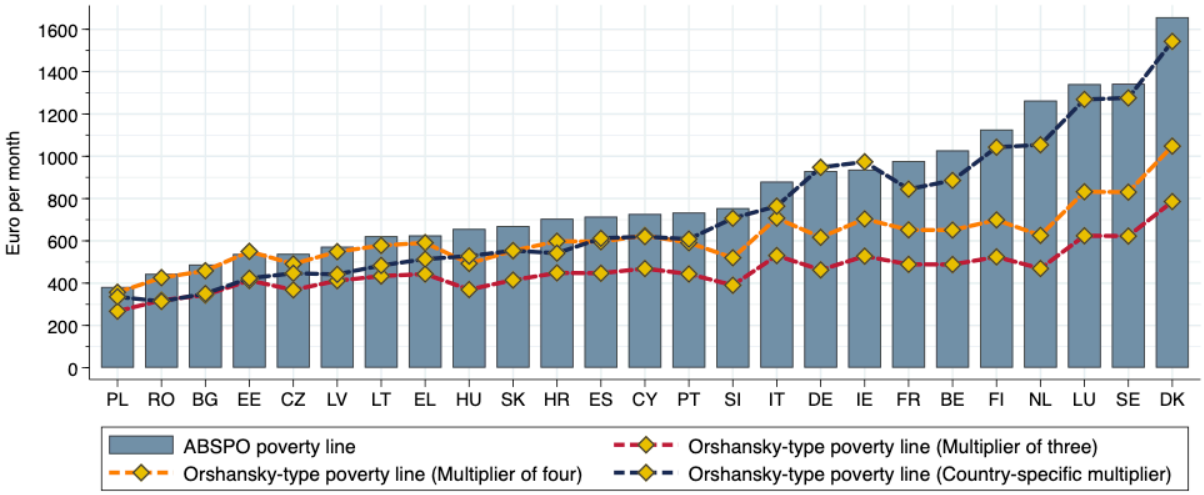
One possible way of circumventing some of the aforementioned limitations is to consider simplified versions of the ABSPO indicators. Given the centrality of minimum food needs in absolute poverty measurement and ABSPO modelling in particular, such simplified poverty lines could be calculated in direct proportion to existing food reference budgets. This eliminates the need to rely on reference budget practices and household survey microdata for the modelling of non-food needs, and avoids the potential idiosyncrasies, inconsistencies and data quality issues that this latter may involve. The most well-known example of simplified measures are the Orshansky thresholds used for poverty measurement in the United States for more than 50 years (Orshansky 1969; Blank 2008). They are calculated as three times the minimum food budget of the relevant household type, in accordance with the observed relative share of food-related expenditures in US households' total consumption.[227]

Figure 9.4 below presents the equivalised (food-based) ABSPO poverty lines in comparison to various Orshansky-type simplified measures based on the same nutritional ABSPO food budgets across Member States. It shows that the standard Orshansky threshold (based on a food-multiplier of three) are substantially lower than the corresponding ABSPO poverty lines in all EU countries, especially the ones with above-average ABSPO poverty lines. This is not surprising given the average level of food expenditure share across the EU, which amounts to 23.7% (24.6%) based on EU-HBS data from 2015 (2010). A modified Orshanky-type measure that relies on the multiplier of four (i.e. a rounded inverse of the EU level food expenditure share) does considerably better and is able to replicate the ABSPO poverty lines in most Central and Eastern European countries characterised by relatively low non-food expenditures, living costs and ABSPO poverty lines.

[226] A more detailed discussion of the cross-country comparability and compatibility of European household surveys, especially in relation to the EU-SILC and EU-HBS, is contained in Sections 7.5 and 9.3 of this Report.

[227] The observed mean food expenditure share was close to one third in the 1960s, but has since dropped below 20%. For a more details on this and its implications for measurement, see Section 2.3 of this Report and the relevant references therein.

Figure 9.4. Equivalised ABSPO poverty lines and Orshansky-type simplified measures by country



The large cross-country differences in ABSPO poverty lines and households' expenditure structure, however, make it also clear that no common Orshansky threshold can qualify as reasonable absolute poverty thresholds for all EU countries simultaneously.[228] For this reason, **Figure 9.4** also features an additional Orshansky-type indicator that uses country-specific multipliers, derived on the basis of national food expenditures shares and calculated relative to the standard ABSPO welfare aggregate. This leads to substantial improvements in the alignment with ABSPO poverty lines: the average gap between the two is less than 15% in relative terms, and is particularly small in EU15 countries with comparatively high poverty lines. The main reason for the high cross-country correlation is the relative stability of the food expenditure share within countries, as well as their strong influence on the resulting food/non-food budget ratio in the ABSPO food-based statistical poverty lines.

Even though the proximity between the ABSPO poverty lines and country-specific Orshansky thresholds does not necessarily translate into similar poverty rates in each Member State, this analysis shows that simplified measurement can offer a temporary, or even permanent, solution to producing robust and comparable absolute poverty measures in the presence of methodological or data-related uncertainties.[229] The simplified measures presented above trade off some of the accuracy and refinement of ABSPO measurement for increased transparency, simplicity and robustness. With new cross-country comparable ABSPO food reference baskets, harmonised Eurostat price data, and readily available aggregate food expenditure statistics in place, the implementation of such simplified indicators would be feasible at any time.[230]

9.3. Recommendations for future data collection and harmonisation

In the current chapter, we have considered the requirements of an EU-wide roll-out of the ABSPO methodology, and the potential improvements or simplifications that may enhance its usefulness for social indicator use and development. Our related analysis and suggestions so far were based on readily available national and European information sources and existing data architecture. However, given the central role of cross-country harmonised micro-level survey data for ABSPO implementation, it is also worth exploring how existing data collection protocols

[228] For more details on households' food and non-food expenditures, see Figure 6.3 in Section 6.2 of this Report and the related discussion.
[229] The relative gap in the corresponding national poverty rates is 32.7% on average and even exceeds 50% in a few Member States. This is driven by the sensitivity of poverty rates to changes in the poverty lines (especially in countries with relatively high poverty rates) in the first place, but also reflects the effects of using a single multiplier for all household types. (Note that the food-based statistical approach to ABSPO measurement uses a large number of household-specific multipliers to determine households' minimum non-food needs in a flexible manner. For more details, see the relevant discussion in Section 6.2 of this Report.)
[230] The aggregate food expenditure statistics in question can come from either national or European budget survey data. While these may lack complete harmonisation, many of the more problematic aspects are not involved in the derivation of national food expenditure shares.

and dissemination practices could be improved to support the needs of robust poverty measurement and monitoring across the EU.

This section briefly summarises the most important areas where improvements and increased future collaboration between national and European statistical authorities and governments would be most beneficial in our view. Our recommendations below stems from the measurement-related needs of a sound EU-wide application of one or more of the proposed ABSPO modelling strategies, and may not consider all related feasibility or viability constraints.

Cross-country harmonisation of European household surveys

Consistent international measurement requires the use of harmonised and comparable data sources across countries. ABSPO modelling is good example of the increasing need for multiple data sources and innovative data collection methods that require cross-domain integration of different sources. Currently, the production of European statistics on persons and households is governed by an assemblage of fragmented domain-specific regulations that often lack proper harmonisation.[231] For example, there are currently five legal bases for European social surveys, while two additional surveys are conducted on the basis of an informal agreements (such as the EU-HBS and the Harmonised European Time Use Survey). The main ongoing objective of Eurostat is therefore to consolidate and integrate European legislation on the production of statistics relating to persons and households in order to enable progressive methodological and organisational integration of statistical data collections. As from 2021, a new legal framework (called 'Integrated European Social Statistics' or IESS, based on Regulation 2019/1700) applies to the collection and compilation of household surveys in the EU, which will improve the consistency, timeliness and cross-country comparability of social statistics.

In the context of a potential ABSPO implementation, the main harmonisation needs appear in relation to the EU-SILC and the EU-HBS. These surveys represent the principal modelling and measurement tools for the analysis of absolute poverty. ABSPO analysis revealed a much bigger scope for harmonisation in relation to the EU-HBS in certain selected domains. These include population coverage which exhibits non-negligible variations across national files.[232] Another area concerns the ECOICOP categorisation of household expenditures by purpose, where further improvements are envisaged to ensure full consistency across more granular and less granular national data collection practices.[233] Harmonised accounting for detailed quantity information underlying household expenditures and home production would be equally beneficial for better understanding the effective unit and purchasing prices associated with household consumption.

Important further harmonisation areas include sample sizes and more general sampling aspects. Although the respective national HBS surveys are mostly based on probability sampling, quota selection was implemented in the Czech Republic and Germany. But even in the case of probability sampling, the procedure is not fully harmonised: in some countries, national population registers were used (Austria, Italy, Spain) that allowed for a more efficient and targeted selection, while in other sample of area units were used on the basis of Census or similar to identify the list of addresses/households to be used as the sampling frame (Bulgaria, Croatia or France). Large differences in the non-response rate are not unrelated to these choices, and can introduce systematic bias in poverty calculations (Eurostat 2020a). The comparability is further compromised by the use of different sampling techniques and tools, as well as the definition of households itself.[234] While all the countries define the household as a group of people sharing accommodation, common income and expenditure criteria is not that consistent across the countries (for instance Ireland does not consider the latter two, while, Ireland, Cyprus, Latvia or Malta do not

[231] For more details, see https://ec.europa.eu/eurostat/about/opportunities/consultations/iess

[232] In the 2010 wave of HBS, Belgium excluded German-speaking communities, Denmark excluded small islands, Germany excluded high income households (with a monthly net income above 18000 euro), while Sweden excluded households with very old household members (aged 79 or more), among others.

[233] In the Commission Decision on the Financing of the European Statistical Programme 2013-2020 and the adoption of the work programme for 2019 Management and support of European Statistical System classifications (including legislation), one of the activities foreseen was the revision of ECOICOP (European version of COICOP Classification of Individual Consumption According to Purpose).

[234] Some countries make a prominent use of household diaries, while other use a combination of household and individual diaries.

consider the common income criteria). In Italy and Romania, the definition is even more stringent: it is necessary that the household members have emotional or family ties. (Eurostat, 2020a).[235]

For poverty measurement purposes, the single most important item concerns the calculation of imputed rent. Housing typically represents the largest expenditure component, and the capacity to accurately account for related needs among tenants and homeowners alike is crucial for the cross-country comparability of ABSPO-type absolute poverty estimates. Different countries tend to employ different estimation methods and procedures that can substantially decrease the comparability of imputed rent calculations (Eurostat, 2009b).[236] Similar issues are present in relation to the EU-SILC, even though the imputed rent figures included there are often calculated in different ways. Relatively recent analysis have raised serious doubts about the applicability of SILC-based (and potentially HBS-based) imputed rent figures for consistent welfare analysis (V.-M. Törmälehto and Sauli, 2017).

Strengthening linkages across existing European survey data

The growing demand for the comprehensive measurement of households' socio-economic status, living conditions and subjective well-being at the micro level calls for the production of integrated social statistics. Various attempts have been made recently for the joint analysis of household income, consumption and wealth using existing data (Lamarche, Oehler, and Rioboo, 2020; Fischer and Strauss, 2021), and the new legal basis for European social statistics relating to persons and households is expected the generate further developments and opportunities in this and related areas (IESS Regulation 2019/1700). While the production of fully integrated household surveys that simultaneously cover all relevant socio-economic dimensions would bring tangible benefits for poverty measurement in the EU, new data collections and the overhaul of existing household surveys are unlikely due to budget constraints and significant reporting burden on respondents. For this reason, we focus here on less ambitious steps that may improve the consistency of absolute poverty estimates on the basis of the existing data infrastructure.

Some of these include areas of known quality issues (such as differences in sample design, data collection, non-response rates) that also hinder cross-country measurement within individual surveys (Atkinson, Guio, and Marlier, 2017). The harmonisation in these areas across national income and expenditure surveys would be highly beneficial. Using the same territorial classification of settlement type would represent another improvement. Currently, urban, intermediate, and rural areas in the EU-HBS are designated by population density alone (i.e. more than 500, 100-499, and less than 100 inhabitants/km2, respectively), while the relevant classification in the EU-SILC involves two separate criteria: population density and population size.[237]

More substantial are the needs to extend the overlap between the data scope of EU-HBS and EU-SILC surveys, and introduce certain linking variables beyond basic household characteristics and income.[238] Potential solutions include introducing certain variables on households' living conditions (e.g. health status, housing situation, subjective well-being) in the standard HBS data content. Alternatively, inserting questions on household expenditures (as part of a dedicated ad hoc module, for example) onto the SILC sample could be equally beneficial. These linkages would have the potential to help refine ABSPO estimates to a considerable degree, and could eliminate the need to use aggregate statistics, various distributional assumptions and multiple SILC-HBS data conversions to derive (survey-based) ABSPO poverty lines.[239]

[235] The reference person is not always defined in the same way: in certain countries, it is related to the notion of breadwinner (person contributing to most income, as in Denmark, Germany, Estonia), while in other countries it is more related to other attributes such as gender (the Czech Republic), economic/labour activity (Greece) or owner/renter of the place

[236] Self-assessment approach is based on information provided by the homeowners on the market rent they would pay if they were to rent their accommodation. Stratification: the sample is divided in homogeneous groups (tenants and homeowners together) of dwelling size: homeowners are assigned the average rent of the group. Regression based approaches: involve fitting a model using auxiliary variables which are assumed to be correlated to the amount of rent paid. User cost consists of the depreciation on the asset or durable (measured at current prices and not at historic cost) plus the capital, or interest, cost (Eurostat, 2009b).

[237] In the EU-SILC, densely populated areas are characterised by at least 1500 inhabitants/km2 and a minimum population of 50.000, while intermediate areas by at least 300 inhabitants/km2 and a minimum population of 5.000 – the rest are considered rural areas.

[238] In certain cases, existing common information could be further harmonised. For example, the age classification in the HBS is much coarser than in the EU-SILC, and features 5-year age brackets that may not always conform to researchers' or data users' particular needs. More granular (yearly) information on respondents' age could potentially increase the proximity and matching potential between the two surveys.

[239] For instance, having together both the housing conditions and deprivation, and the actual (or imputed) spending distribution would allow for a more accurate identification of the exact budget line that reflects the minimum adequate acceptable and adequate housing. We have also

A more ambitious recommendation calls for using the same population sample for collecting both the SILC-based and HBS-based data contents. Currently, these two surveys are integrated only in the Czech Republic and Hungary, and access to the latter has provided substantial benefits to selecting the right modelling approach and testing their robustness to various changes. The benefits of such modules would be substantial for the accuracy and credibility of the poverty thresholds.

Increased spatial disaggregation of survey data

Another area where poverty measurement could benefit from data improvements concerns the availability of more spatially disaggregated data. The usefulness of these are increasingly recognised by international policy makers intent on learning more about existing disparities within national societies and providing targeted support where it is needed the most (United Nations, 2020). Highly granular local and regional data can allow us to think of poverty measurement as constructing a map that is useful or reaching certain destinations or thread different routes. Analysis of poverty using such information and small area estimation (SAE) methods tend to reveal sizeable geographical differences in material standards, minimum living costs, and households' basic needs that are typically ignored by poverty indicators derived at the national level (Pratesi, 2016; Giusti, Masserini, and Pratesi, 2017; Biggeri et al., 2018).

In the context of ABSPO-based measurement, the main scope for improvement lies with the potential upgrading of existing national and European household surveys and consumer price data. In relation to household surveys, this mainly concern the availability of information at least at NUTS2 level (so that minimum needs and expenditure thresholds could be differentiated in most Member States), as well as the presence of this information in all Member States (including Austria and Germany).

The issue is more important in relation to consumer price surveys. One aspect concerns that national price statistics typically include the region of price collection but do not provide information on the settlement type. ABSPO analysis of price scanner data, however, seems to suggest that this is an equally important margin of differentiation, at least for specific countries and product categories. A second important aspect would be to systematically collect available national information and create regional price indices or scalers that could be used for calculating regional purchasing power parities. This could benefit reference budget pricing and the calculation of absolute poverty lines without the need to rely on hard-to-access national price statistics or other sources of item-level price information.

New data collection aimed at poverty measurement

Finally, ABSPO analysis also identified the need for new types of data collections that could support the more representative and more accurate measurement of poverty. In particular, two new types of data collections merit consideration. The first is to a develop new survey specifically focused on households with limited financial means (e.g. below-median or below-AROP equivalised income) and not necessarily living in private households. These may take the form of small-scale `satellite surveys' among population groups (such as travellers, homeless people, undocumented migrants) that are severely under-represented or excluded from traditional household surveys.[240] The resulting findings, in combination with official administrative data, could help contextualise standard SILC-based poverty estimates, and help determine the possible degree of underestimation of poverty based on standard survey-based estimates on a country-by-country basis.

The second type of new data collection should focus on households' minimum needs. Beside the questions on the ability to make ends meet, perceived minimum income and the unmet healthcare needs in the EU-SILC, no information is currently collected in a cross-country comparable way. In particular, households' views on (financial and non-financial) minimum needs across major expenditure categories would prove useful for both contextualising and improving the accuracy of ABSPO thematic expenditure thresholds (as derived in the survey-based approach). These can take the form of additional standard questions, singular ad hoc modules or, alternatively, separate Eurobarometer surveys could provide similarly useful information.

used the HU SILC-HBS to validate the results on the out-of-pocket health expenditure, given that SILC does provide some basic information on the general health, so that the distribution of health-related expenditures can be estimated for different health status.

[240] For further details and specific ideas on possible implementation strategies, see Nicaise, Schockaert, and Bircan (2019).

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Annexes

Annex A. ABSPO mixed-method reference baskets

Table A1.1. ABSPO food reference baskets by age and gender for Belgium

ECOICOP		Unit	Woman		Man		Child		
			Age 18-64	Age>64	Age 18-64	Age>64	Age 0-5	Age 6-11	Age 12-17
	Tap water	ml	1350.0	1350.0	1350.0	1350.0	500.0	1500.0	1350.0
01.1.1.1	Rice	g	10.0	10.0	10.0	10.0	0.0	10.0	10.0
01.1.1.2	Flour	g	4.9	4.9	4.9	4.9	0.0	4.9	4.9
01.1.1.2	Bread-crumbs	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.1.3	Bread, wholegrain	g	150.0	150.0	300.0	300.0	0.0	150.0	225.0
01.1.1.3	Bread, brown	g	0.0	0.0	0.0	0.0	70.0	0.0	0.0
01.1.1.3	Bread white	g	60.0	60.0	120.0	120.0	0.0	70.0	90.0
01.1.1.4	Children's cookie	g	0.0	0.0	0.0	0.0	12.0	0.0	0.0
01.1.1.4	Cake (type 1)	g	0.0	0.0	0.0	0.0	0.0	15.0	15.0
01.1.1.4	Cake (type 2)	g	0.0	0.0	0.0	0.0	0.0	5.0	5.0
01.1.1.4	Cake (type 3)	g	0.0	0.0	0.0	0.0	0.0	5.0	5.0
01.1.1.6	Pasta	g	10.0	10.0	10.0	10.0	0.0	10.0	10.0
01.1.1.7	Breakfast cereals, not sweetened	g	0.0	0.0	0.0	0.0	0.0	5.7	0.0
01.1.2.1	Meat, fatter	g	26.8	26.8	26.8	26.8	0.0	26.8	26.8
01.1.2.4	Meat, lean	g	17.9	17.9	17.9	17.9	25.0	17.9	17.9
01.1.2.7	Charchuterie (lean)	g	18.0	18.0	18.0	18.0	0.0	18.0	18.0
01.1.3.2	Fish, frozen	g	28.6	28.6	28.6	28.6	25.0	28.6	28.6
01.1.4.1	Full-cream milk	ml	0.0	0.0	0.0	0.0	500.1	0.0	0.0
01.1.4.2	Milk, semi-skimmed	ml	161.0	214.0	161.0	214.0	0.0	161.0	214.0
01.1.4.4	Yogurt, semi-skimmed	ml	161.0	214.0	161.0	214.0	0.0	161.0	214.0
01.1.4.4	Yoghurt drank	ml	43.0	57.0	43.0	57.0	0.0	43.0	57.0
01.1.4.4	Fruit yoghurt	ml	43.0	57.0	43.0	57.0	0.0	43.0	57.0
01.1.4.5	Cheese, middle course	g	6.0	11.0	6.0	11.0	10.0	0.0	11.0
01.1.4.5	Cheese, preferential	g	14.0	28.0	14.0	28.0	0.0	20.0	28.0
01.1.4.6	Chocolate milk	g	42.6	57.0	42.6	57.0	0.0	42.6	57.0
01.1.4.6	Pudding powder	g	4.9	4.9	4.9	4.9	0.0	4.9	4.9
01.1.4.7	Eggs	g	16.3	16.3	16.3	16.3	0.0	16.3	16.3
01.1.5.1	Spreadable fat	g	35.0	35.0	60.0	60.0	10.0	35.0	45.0
01.1.5.1	Cooking fat	g	15.0	15.0	15.0	15.0	15.0	15.0	15.0
01.1.6.1	Fresh fruit	g	230.8	288.5	230.8	288.5	192.3	171.8	343.6
01.1.6.3	Dried fruit and nuts	g	18.0	22.5	18.0	22.5	0.0	13.0	27.0
01.1.6.4	Canned fruit	g	18.0	22.5	18.0	22.5	0.0	13.0	27.0
01.1.6.4	Fruit puree	g	18.0	22.5	18.0	22.5	0.0	13.0	27.0
01.1.7.1	Fresh vegetables	g	188.9	188.9	188.9	188.9	104.2	172.2	188.9
01.1.7.2	Frozen unprepared vegetables	g	107.0	107.0	107.0	107.0	0.0	98.0	107.0
01.1.7.2	Frozen prepared vegetables	g	29.0	29.0	29.0	29.0	0.0	26.0	29.0
01.1.7.2	Broth: vegetables	g	1.3	1.3	1.3	1.3	0.0	1.3	1.3
01.1.7.3	Canned vegetables	g	29.0	29.0	29.0	29.0	0.0	26.0	29.0
01.1.7.4	Potatoes	g	193.3	193.3	261.1	261.1	83.3	196.7	226.7
01.1.8.1	Sugar, crystal	g	4.9	4.9	4.9	4.9	0.0	4.9	4.9
01.1.8.2	Jam	g	18.4	18.4	18.4	18.4	0.0	18.4	18.4
01.1.8.3	Choco	g	18.4	18.4	18.4	18.4	0.0	18.4	18.4
01.1.9.1	Cold sauces: mayonnaise	g	2.7	2.7	2.7	2.7	0.0	2.7	2.7
01.1.9.1	Cold sauces: ketchup	g	2.7	2.7	2.7	2.7	0.0	2.7	2.7
01.1.9.1	Vinegar	ml	32.9	32.9	32.9	32.9	0.0	32.9	32.9
01.1.9.2	Spices: peper	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.9.2	Spices: iodized salt	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.9.2	Spices: nutmeg	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.9.2	Spices: chicken	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.9.2	Spices: spaghetti	g	0.3	0.3	0.3	0.3	0.0	0.3	0.3
01.1.9.2	Spices: fish	g	0.2	0.2	0.2	0.2	0.0	0.2	0.2
01.2.1.1	Coffee	g	5.2	5.2	5.2	5.2	0.0	0.0	5.2
01.2.1.2	Tea	g	2.3	2.3	2.3	2.3	0.0	0.0	2.3
01.2.2.2	Light soft drinks	ml	140.0	140.0	140.0	140.0	0.0	0.0	140.0
01.2.2.3	Fruit juice	g	18.0	22.5	18.0	22.5	0.0	163.0	27.0
	Total food	g	1368.0	1477.1	1670.8	1779.8	546.8	1443.9	1723.5
	Total beverages	ml	1930.9	2064.9	1930.9	2064.9	1000.1	1940.9	2064.9
	Other functions of nutrition/healthy living								
	Physical activity	*Swimming, once/2weeks, all the individuals*							
	Kitchen equipment	*Household level items, based on household size*							
	Food on daytrip or holiday	*14 meals cooked, 1 meal out*							
	Food for celebrations	*Christmas, New Year, Easter, Birthdays, St. Nicholas (only households with children)*							
	Eating out	*6 times a year*							
	Take away food	*6 times a year*							
	Invite people at home	*4 relatives, 3 times a month*							

Notes: The figures represent daily food quantities in grams or millilitres. The above reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 of this Report for more details.

Table A1.2. ABSPO food reference baskets by age and gender for Finland

ECOICOP	Item	Unit	Woman		Man		Child		
			Age 18-64	Age>64	Age 18-64	Age>64	Age 0-5	Age 6-11	Age 12-17
	Tap water	ml	1495.9	1495.9	1495.9	1495.9	1146.8	1495.9	1495.9
01.1.1.1	Rice	g	26.1	26.2	28.5	26.2	11.4	18.0	20.8
01.1.1.2	Oat meal (dry weight)	g	28.5	28.5	28.5	28.5	21.4	24.9	28.5
01.1.1.2	Flour	g	3.0	2.8	3.4	2.8	1.1	1.7	2.0
01.1.1.2	Bread-crumbs	g	7.1	7.1	7.1	7.1	2.8	3.6	4.5
01.1.1.3	Bread, wholegrain(main dish meal)	g	17.1	17.1	17.1	17.1	7.1	10.7	13.9
01.1.1.3	Bread, wholegrain(day: breakfast, snack, side dish)	g	89.8	89.8	89.8	89.8	59.8	59.8	89.8
01.1.1.3	Bread white	g	29.9	29.9	29.9	29.9	27.4	29.9	29.9
01.1.1.3	Bread, rye & wheat	g	8.5	8.5	8.5	8.5	5.7	10.7	8.5
01.1.1.8	Potato flour	g	1.7	1.7	1.7	1.7	0.6	1.1	1.1
01.1.2.4	Meat, lean	g	112.5	111.1	120.5	111.1	51.3	69.5	83.7
01.1.2.7	Charchuterie (lean)	g	16.2	17.1	16.2	17.1	8.5	20.5	16.2
01.1.3.1	Fish, fresh	g	65.1	65.1	65.1	65.1	32.6	61.1	65.1
01.1.4.2	Milk, semi-skimmed	ml	39.2	38.9	44.9	38.9	11.0	148.2	17.9
01.1.4.2	Skimmed milk	ml	398.9	398.9	398.9	398.9	249.3	349.0	292.1
01.1.4.5	Cheese, middle course	g	22.8	23.1	52.7	23.1	4.3	29.5	14.2
01.1.4.5	Curdled milk	ml	199.5	199.5	199.5	199.5	99.7	0.0	199.5
01.1.4.6	Sour cream	ml	14.2	14.2	14.2	14.2	2.8	8.9	8.9
01.1.4.6	Cooking cream	ml	35.6	35.9	35.6	35.9	17.1	32.1	32.9
01.1.4.7	Eggs	g	28.2	28.2	28.2	28.2	4.9	5.9	24.6
01.1.5.1	Spreadable fat	g	39.1	36.3	34.1	36.3	17.7	22.6	36.6
01.1.5.4	Rapeseed oil	ml	6.6	6.5	6.6	6.5	3.2	5.8	5.8
01.1.6.1	Fresh fruit	g	498.6	498.6	632.9	498.6	306.8	390.0	498.6
01.1.6.2	Frozen berries	g	35.6	35.9	35.6	35.9	24.8	33.3	27.6
01.1.6.3	Nuts, without husk	g	19.9	19.9	19.9	19.9	0.0	19.9	19.9
01.1.7.1	Fresh vegetables	g	463.2	463.0	480.7	463.0	226.4	221.5	379.1
01.1.7.2	Frozen prepared vegetables	g	71.2	71.8	71.2	71.8	35.3	51.2	51.2
01.1.7.3	Prepared vegetable product	g	57.0	57.0	57.0	57.0	28.5	35.6	35.6
01.1.7.4	Potatoes	g	227.2	227.0	299.2	227.0	76.0	99.7	166.9
01.1.8.1	Sugar, crystal	g	3.4	3.6	3.4	3.6	0.7	2.4	2.4
01.1.8.2	Jam	g	5.7	5.7	5.7	5.7	1.1	3.6	3.6
01.1.9.1	Mustard	g	2.1	2.5	2.1	2.5	0.7	1.9	1.9
01.1.9.2	Spices: peper	g	0.6	0.6	0.6	0.6	0.0	0.4	0.4
01.1.9.2	Spices: iodized salt	g	1.9	1.6	1.9	1.6	0.8	1.7	1.7
01.1.9.9	Vegetable cube	g	1.6	1.6	1.6	1.6	0.3	1.0	1.0
01.2.1.1	Coffee	g	23.9	23.9	23.9	23.9	0.0	0.0	23.9
01.2.1.2	Tea	g	2.0	2.0	2.0	2.0	0.0	2.0	2.0
01.2.2.3	Fruit juice	ml	0.0	0.0	0.0	0.0	0.0	199.5	0.0
01.2.2.3	Lemon juice	ml	3.2	3.4	3.2	3.4	1.5	2.8	2.8
	Total food	g	1909.8	1907.2	2169.3	1907.2	957.9	1233.6	1655.2
	Total beverages	ml	2193.1	2193.2	2198.8	2193.2	1531.5	2242.2	2055.8
	Other functions of nutrition/healthy living								
	Physical activity	*Swimming, once/2weeks, all the individuals*							
	Kitchen equipment	*Household level items, based on household size*							
	Food on daytrip or holiday	*3 days per year*							
	Food for celebrations	*Easter, Midsummer festival, Christmas, New Year, Birthday*							
	Eating out	*3 times a year*							
	Take away food	*6 times a year*							
	Invite people at home	*Lumpsum defined, frequency not specified*							

Notes: The figures represent daily food quantities in grams or millilitres. The above reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 of this Report for more details.

Table A1.3. ABSPO food reference baskets by age and gender for Hungary

ECOICOP	Item	Unit	Woman Age 18-64	Woman Age>64	Man Age 18-64	Man Age>64	Child Age 0-5	Child Age 6-11	Child Age 12-17
	Tap water	ml	1500.2	1500.2	1500.2	1500.2	1350.1	1350.1	1350.1
01.1.1.1	**Rice**	g	19.0	20.0	30.0	20.0	15.0	17.0	17.0
01.1.1.2	**Bread-crumbs**	g	2.7	2.7	2.7	2.7	0.0	2.7	2.7
01.1.1.2	**Flour**	g	8.2	8.2	8.2	8.2	0.0	7.4	7.4
01.1.1.3	**Bread white**	g	155.0	155.0	175.0	155.0	100.0	150.0	150.0
01.1.1.3	**Bread, wholegrain (main dish meal)**	g	85.0	85.0	110.0	85.0	75.0	70.0	70.0
01.1.1.4	**Cake (type 1)**	g	0.0	0.0	0.0	0.0	5.0	0.0	0.0
01.1.1.4	**Cake (type 2)**	g	0.0	0.0	0.0	0.0	0.0	5.0	5.0
01.1.1.4	**Cake (type 3)**	g	0.0	0.0	0.0	0.0	0.0	5.0	5.0
01.1.1.6	**Pasta**	g	19.0	20.0	23.0	20.0	15.0	17.0	17.0
01.1.1.7	**Breakfast cereals, not sweetened**	g	0.0	0.0	0.0	0.0	5.0	5.7	0.0
01.1.2.1	**Meat, fatter**	g	68.8	60.0	51.3	60.0	0.0	46.3	46.3
01.1.2.4	**Meat, lean**	g	27.0	34.0	41.0	34.0	30.0	37.0	37.0
01.1.2.7	**Charchuterie (lean)**	g	10.0	10.0	20.0	10.0	7.0	10.0	10.0
01.1.3.1	**Fish, fresh**	g	15.7	15.7	28.6	15.7	11.4	14.3	14.3
01.1.4.2	**Milk, semi-skimmed**	ml	164.0	215.0	164.0	215.0	150.0	164.0	164.0
01.1.4.4	**Fruit yoghurt**	ml	22.0	25.0	16.0	25.0	0.0	20.0	20.0
01.1.4.4	**Yoghurt drank**	ml	16.0	21.0	16.0	21.0	0.0	15.0	15.0
01.1.4.5	**Cheese, middle course**	g	16.0	21.0	16.0	21.0	0.0	15.0	15.0
01.1.4.5	**Cheese, preferential**	g	2.0	3.0	2.0	3.0	15.0	2.0	2.0
01.1.4.6	**Chocolate milk**	ml	11.0	15.0	11.0	15.0	0.0	10.0	10.0
01.1.4.7	**Eggs**	g	18.2	18.2	18.2	18.2	0.0	17.0	17.0
01.1.5.1	**Cooking fat**	g	15.0	15.0	15.0	15.0	13.0	15.0	15.0
01.1.5.1	**Spreadable fat**	g	35.0	48.0	60.0	48.0	20.0	35.0	45.0
01.1.5.3	**Olive oil**	g	124.6	125.0	124.6	125.0	0.0	48.4	137.9
01.1.6.1	**Fresh fruit**	g	282.1	269.3	256.4	269.3	230.8	282.1	282.1
01.1.6.3	**Dried fruit**	g	5.0	5.0	5.0	5.0	5.0	5.0	5.0
01.1.6.4	**Fruit puree**	g	18.0	22.5	18.0	22.5	0.0	13.0	27.0
01.1.7.1	**Fresh vegetables**	g	305.6	319.5	347.3	319.5	152.8	284.8	284.8
01.1.7.2	**Broth: vegetables**	ml	1.3	1.3	1.3	1.3	0.0	1.3	1.3
01.1.7.2	**Frozen unprepared vegetables**	g	110.0	110.0	110.0	110.0	0.0	98.0	98.0
01.1.7.3	**Canned vegetables**	g	27.0	27.0	27.0	27.0	0.0	24.0	24.0
01.1.7.4	**Potatoes**	g	152.2	166.7	182.2	166.7	111.1	136.7	136.7
01.1.8.1	**Sugar, crystal**	g	8.0	8.0	8.0	8.0	0.0	7.0	7.0
01.1.8.2	**Jam**	g	19.0	14.0	14.0	14.0	0.0	17.0	17.0
01.1.9.1	**Cold sauces: ketchup**	g	5.5	5.5	5.5	5.5	0.0	5.0	5.0
01.1.9.1	**Cold sauces: mayonnaise**	g	5.5	5.5	5.5	5.5	0.0	5.0	5.0
01.1.9.1	**Vinegar**	ml	16.4	16.4	16.4	16.4	0.0	14.8	14.8
01.1.9.2	**Spices: fish**	g	1.6	1.6	1.6	1.6	0.0	1.0	1.0
01.1.9.2	**Spices: iodized salt**	g	0.6	0.6	0.6	0.6	0.0	0.5	0.5
01.1.9.2	**Spices: nutmeg**	g	0.6	0.6	0.6	0.6	0.0	0.4	0.4
01.1.9.2	**Spices: peper**	g	1.6	1.6	1.6	1.6	0.0	0.8	0.8
01.2.1.1	**Coffee**	g	11.0	11.0	11.0	11.0	0.0	0.0	8.0
01.2.1.2	**Tea**	g	2.1	2.0	2.1	2.0	0.0	0.0	2.1
01.2.1.3	**Cocoa Powder**	g	10.0	10.0	10.0	10.0	8.0	10.0	10.0
01.2.2.3	**Fruit juice**	ml	20.0	20.0	20.0	20.0	0.0	17.0	17.0
	Total food	g	1662.7	1700.3	1802.1	1700.3	819.2	1480.2	1598.1
	Total beverages	ml	1751.0	1814.0	1745.0	1814.0	1500.2	1592.3	1592.3
	Other functions of nutrition/healthy living								
	Physical activity	*Swimming, once/2weeks, all except child with age 0-5*							
	Kitchen equipment	*Household level items, based on household size*							
	Food on daytrip or holiday	*14 meals at home, 1 meal out*							
	Food for celebrations	*Christmas, New Year, Easter, Birthdays, St. Nicholas (only households with*							
	Eating out	*6 times a year*							
	Take away food	*6 times a year*							
	Invite people at home	*6 times a year*							

Notes: The figures represent daily food quantities in grams or millilitres. The above reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 of this Report for more details.

Table A1.4. ABSPO reference baskets for clothing by individual, household and item category

BELGIUM									
Individual items	**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age >64**	**Age >64**	**Lifespan (years)**	
Clothes category	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Accessories	11	12	6	8	11	11	12	1	10
Coat	4	4	0	5	5	4	4	3	10
Pants	8	0	9	10	0	8	0	1	3
Dress/skirts/pants	0	15	0	0	15	0	15	1	3
Shoes	7	7	4	8	8	7	7	1	10
Socks and leggings	22	27	22	22	27	22	27	1	2
Sport	4	4	0	4	4	4	4	1	2
Sweaters	8	8	12	10	7	8	8	1	3
Top	14	14	19	17	12	14	14	1	2
Underwear	18	22	5	17	22	18	22	1	2
Storage and maintenance	13	13	13	13	13	13	13	1	12

							Lifespan (years)	
Household items	**Any HH**	**Couple HH**	**HH with smaller children**	**HH with older children**	**HH with older adults**	**Large HH**	**Min**	**Max**
Storage and maintenance	4	7	7	7	7	14	5	15

FINLAND									
Individual items	**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age >64**	**Age >64**	**Lifespan (years)**	
Clothes category	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Accessories	13	16	15	15	15	13	16	1	10
Coats	5	5	3	3	3	5	5	3	10
Pants	6	4	8	8	10	6	4	1	3
Shirts	10	0	10	10	0	10	0	1	3
Dress/skirts/pants	0	6	0	0	6	0	6	1	10
Shoes	8	8	8	8	8	8	8	1	2
Socks and leggings	23	28	23	23	27	23	28	1	2
Sport	4	4	4	4	4	4	4	1	3
Sweater	6	6	6	6	6	6	6	1	2
Top	0	13	0	0	8	0	13	1	2
Underwear	20	23	20	20	18	20	23	1	2
Storage and maintenance	12	12	12	12	12	12	12	1	12

							Lifespan (years)	
Household items	**Any HH**	**Couple HH**	**HH with smaller children**	**HH with older children**	**HH with older adults**	**Large HH**	**Min**	**Max**
Storage and maintenance	6	6	8	8	4	10	0.5	24

HUNGARY									
Individual items	**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age >64**	**Age >64**	**Lifespan (years)**	
Clothes category	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Accessories	13	14	12	12	14	13	14	1	10
Coat	5	5	6	6	5	5	5	3	10
Pants	8	8	9	10	8	8	8	1	3
Shirts	2	2	0	2	2	2	2	1	3
Dress/skirts/pants	0	7	0	0	7	0	7	1	10
Shoes	6	8	8	9	9	6	8	1	2
Socks and leggings	17	20	22	17	20	17	20	1	2
Sport	4	4	0	4	4	4	4	1	3
Sweater	7	8	12	10	8	7	8	1	2
Top	12	12	21	17	12	12	12	1	2
Underwear	18	22	17	20	22	18	22	1	2
Storage and maintenance	14	14	14	14	14	14	14	1	12

							Lifespan (years)	
Household items	**Any HH**	**Couple HH**	**HH with smaller children**	**HH with older children**	**HH with older adults**	**Large HH**	**Min**	**Max**
Storage and maintenance	6	6	8	8	4	10	0.5	24

Notes: The figures represent reference item quantities in aggregate terms in units over a period of one year. The detailed monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 for more details.

Table A1.5. ABSPO reference baskets for personal care by individual type and item category

BELGIUM										
Individual items		**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age>64**	**Age>64**	**Lifespan (years)**	
Personal care category	unit	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Hair care	ml	480	480	480	480	480	480	480	1	1
Hand/Body hygiene	ml	2400	2400	2400	1500	2400	0	0	1	1
Oral hygiene	ml	2580	2580	180	2580	2580	2580	2580	1	1
Shaving	ml	800	0	0	0	0	0	0	1	1
Body hygiene	piece	10	10	6	7	10	12	12	1	5
Cosmetics and perfume	piece	0	100	0	0	100	0	100	1	3
Hair care	piece	6	6	6	8	8	6	6	1	5
Intimate hygiene women	piece	0	324	0	0	324	0	24	1	1
Oral hygiene	piece	388.2	388.2	23.2	388.2	388.2	388.2	388.2	1	5
Shaving	piece	25	7	0	0	6	0	7	1	5
Toilet paper	piece	48	48	48	48	48	48	48	1	15
Hair care	set	0	2	2	0	2	0	2	1	1

FINLAND										
Individual items		**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age>64**	**Age>64**	**Lifespan (years)**	
Personal care category	unit	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Body hygiene	ml	1700	2450	2500	1500	2450	1700	2450	1	1
Hair care	ml	480	480	480	480	480	480	480	1	1
Hand hygiene	ml	900	900	900	900	900	900	900	1	1
Oral hygiene	ml	180	180	0	180	180	180	180	1	1
Shaving	ml	800	0	0	0	0	800	0	1	1
Body hygiene	piece	10	10	6	7	10	10	10	1	5
Cosmetics and perfume	piece	1	115	0	0	115	1	115	1	3
Hair care	piece	6	6	8	8	8	6	6	1	5
Intimate hygiene women	piece	0	324	0	0	324	0	0	1	1
Oral hygiene	piece	2214.2	2214.2	2375	2195	2214.2	2214.2	2214.2	1	5
Shaving	piece	2	7	0	0	7	2	7	1	5
Toilet paper	piece	52	52	52	52	52	52	52	1	15
Hair care	set	0	15	10	0	15	0	15	1	1
Hand hygiene	set	0	0	0	0	0	0	0	5	5

HUNGARY										
Individual items		**Age 18-64**	**Age 18-64**	**Age 0-5**	**Age 6-11**	**Age 12-17**	**Age>64**	**Age>64**	**Lifespan (years)**	
Personal care category	unit	**Man**	**Woman**	**Child**	**Child**	**Child**	**Man**	**Woman**	**Min**	**Max**
Body hygiene	ml	1500	1500	1500	1500	1500	1500	1500	1	1
Hair care	ml	480	480	480	480	480	480	480	1	1
Hand hygiene	ml	900	500	0	900	900	200	200	1	1
Oral health	ml	2580	2580	180	2580	2580	2580	2580	1	1
Shaving	ml	800	0	0	0	0	800	0	1	1
Body hygiene	piece	10	10	6	10	10	10	10	1	5
Cosmetics and perfume	piece	1	115	0	0	114	1	115	1	3
Hair care	piece	6	6	6	8	8	6	6	1	5
Intimate hygiene women	piece	0	324	0	0	324	0	0	1	1
Oral hygiene	piece	369	369	4	369	369	369	369	1	5
Shaving	piece	25	7	0	0	7	25	7	1	12
Toilet paper	piece	48	48	48	48	48	48	48	1	15
Hair care	set	0	1	0	0	1	0	1	1	1

Notes: The figures represent reference item quantities in aggregate terms in units over a period of one year. The detailed monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 for more details.

Table A1.6 Structure of ABSPO reference baskets for rest and leisure, safe childhood and social participation

BELGIUM	
REST	Number of items
Accessories	4
Double bed and related items	8
Bed accessories	5
Single bed and related items	8
LEISURE	Number of items
Domestic leisure	6
Going out	3
Holiday	5
Organised leisure	3
SAFE CHILDHOOD	Number of items
Birthday party	16
Cultural activities	2
Day trip	2
Education	12
Mobile phone	2
Pocket money	1
Toys	8
Youth association	6
SOCIAL PARTICIPATION	Number of items
Cards and presents	5
Celebrations	1
Home decor and cheerfulness	9
Bureaucracy and citizenship	11
Computer and internet	2
Phone	2
Printer	4
Printer and camera	1

FINLAND	
REST	Number of items
Accessories	4
Double bed and related items	10
Bed accessories	5
Single bed and related items	9
LEISURE	Number of items
Domestic leisure	5
Going out	3
Holiday	5
Organised leisure	3
SAFE CHILDHOOD	Number of items
Birthday party	17
Cultural activities	2
Daily trip	4
Education	11
Mobile phone	2
Pocket money	1
Sauna	1
Toys	3
Youth association	6
SOCIAL PARTICIPATION	Number of items
Cards and presents	3
Home decor and cheerfulness	9
Bureaucracy and citizenship	2
Computer and internet	2
Phone and internet	2
Printer and camera	3
Stationary	10

HUNGARY	
REST	Number of items
Accessories	4
Double bed and related items	10
Bed accessories	5
Single bed and related items	9
LEISURE	Number of items
Domestic leisure	5
Going out	3
Holiday	5
Organised leisure	3
SAFE CHILDHOOD	Number of items
Birthday party	8
Cultural activities	4
Mobile phone	2
Pocket money	1
School equipment	13
School trip	3
Toys	3
SOCIAL PARTICIPATION	Number of items
Cards and presents	4
Home decor and cheerfulness	9
Bureaucracy and citizenship	1
Computer and internet	2
Pets	4
Phone and internet	2
Printer and camera	3
Stationary	10

Notes: The figures represent the structure of respective residual basket components in terms of the number of items featured over a period of one year. The detailed monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the reference budget-based approach. See Chapter 4 for more details.

Annex B. ABSPO nutritional food reference baskets

Table B1.1. Common European dietary reference values and auxiliary nutritional constraints used for ABSPO nutritional food reference basket development

Nutrient category	Nutrient	Reference type	Reference unit	Aged 1-3		Aged 4-6		Aged 7-10		Aged 11-14		Aged 15-17		Aged 18-24		Aged 25-49		Aged 50-69		Aged 70plus	
				Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
ENERGY	Energy	AR	kcal	995	923	1521	1417	1851	1726	2263	2048	2826	2253	2341	1887	2245	1803	2102	1708	1982	1624
CARBOHYDRATES	Dietary fibre	AR	g	10	10	14	14	16	16	19	19	21	21	25	25	25	25	25	25	25	25
	Total carbohydrates	RR	g	112 - 149	104 - 139	171 - 228	159 - 213	208 - 278	194 - 259	255 - 339	230 - 307	318 - 424	253 - 338	263 - 351	212 - 283	253 - 337	203 - 270	236 - 315	192 - 256	223 - 297	183 - 244
FATS	Alpha-linolenic acid (ALA)	AR	mg	553	513	845	787	1028	959	1257	1138	1570	1252	1300	1048	1247	1002	1168	949	1101	902
	Eicosapentaenoic / Docosahexaenoic acid (EPA, DHA)	AR	mg	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
	Linoleic acid (LA)	AR	g	4.4	4.1	6.8	6.3	8.2	7.7	10.1	9.1	12.6	10	10.4	8.4	10	8	9.3	7.6	8.8	7.2
	Total fat	RR	g	25 - 44	23 - 41	39 - 68	36 - 63	47 - 82	44 - 77	57 - 101	52 - 91	72 - 125	57 - 101	59 - 104	48 - 84	57 - 100	46 - 80	53 - 93	43 - 76	50 - 88	41 - 72
PROTEIN	Protein	AR	g	11.7	11.7	18.7	18.7	19.8	19.8	37.8	37.2	56.6	47	68.1	54.8	68.1	54.8	68.1	54.8	68.6	58.9
MINERALS	Calcium	AR / RR	mg	450	450	800	800	800	800	1150	1150	1150	1150	1000 - 2500	1000 - 2500	950 - 2500	950 - 2500	950 - 2500	950 - 2500	950 - 2500	950 - 2500
	Chloride	AR	mg	1700	1700	2000	2000	2600	2600	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100
	Copper	AR / UL	mg	0.7 / 1	0.7 / 1	1 / 2	1 /2	1 / 3	1 / 3	1.3 / 4	1.1 / 4	1.3 / 4	1.1 / 4	1.6 / 5	1.3 / 5	1.6 / 5	1.3 / 5	1.6 / 5	1.3 / 5	1.6 / 5	1.3 / 5
	Fluoride	AR / UL	mg	0.6 / 5	0.6 / 5	1 / 2.5	0.9 / 2.5	1.5 / 2.5	1.4 / 2.5	2.2 / 5	2.3 / 5	3.2 / 7	2.8 / 7	3.4 / 7	2.9 / 7	3.4 / 7	2.9 / 7	3.4 / 7	2.9 / 7	3.4 / 7	2.9 / 7
	Iodine	AR / UL	µg	90 / 200	90 / 200	90 / 250	90 / 250	90 / 300	90 / 300	120 / 450	120 / 450	130 / 500	130 / 500	150 / 600	150 / 600	150 / 600	150 / 600	150 / 600	150 / 600	150 / 600	150 / 600
	Iron	AR	mg	7	7	7	7	11	11	11	13	11	13	11	16	11	16	11	11	11	11
	Magnesium	AR	mg	170	170	230	230	230	230	300	250	300	250	350	300	350	300	350	300	350	300
	Manganese	AR	µg	500	500	1000	1000	1500	1500	2000	2000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	Phosphorus	AR	mg	250	250	440	440	440	440	640	640	640	640	550	550	550	550	550	550	550	550
	Potassium	AR	mg	800	800	1100	1100	1800	1800	2700	2700	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
	Sodium	AR	mg	1100	1100	1300	1300	1700	1700	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	Zinc	AR / UL	mg	4.3 / 7	4.3 / 7	5.5 / 10	5.5 / 10	7.4 / 13	7.4 / 13	10.7 / 18	10.7 / 18	14.2 / 22	11.9 / 22	12.9 / 25	10.1 / 25	12.9 / 25	10.1 / 25	12.9 / 25	10.1 / 25	12.9 / 25	10.1 / 25
VITAMINS	Biotin (B7)	AR	µg	20	20	25	25	25	25	35	35	35	35	40	40	40	40	40	40	40	40
	Cobalamin (vitamin B12)	AR	µg	2	2	2	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4
	Folate (B9)	AR	µg	120	120	140	140	200	200	270	270	330	330	330	330	330	330	330	330	330	330
	Niacin (B3)	AR	mg	6.7	6.2	10.2	9.5	12.4	11.6	15.2	13.7	18.9	15.1	15.7	12.6	15	12.1	14.1	11.4	13.3	10.9
	Pantothenic acid (B5)	AR	mg	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
	Riboflavin (B2)	AR	µg	600	600	700	700	1000	1000	1400	1400	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
	Thiamin (B1)	AR	µg	417	387	637	593	775	723	948	858	1183	943	980	790	940	755	880	715	830	680
	Vitamin A	AR / UL	µg	250 / 800	250 / 800	300/ 1100	300 / 1100	400 / 1500	400 / 1500	600 / 2000	600 / 2000	750 / 2600	650 / 2600	750 / 3000	650 / 3000	750 / 3000	650 / 3000	750 / 3000	650	750 / 3000	650
	Vitamin B6	AR / UL	mg	0.6 / 5	0.6 / 5	0.7 / 7	0.7 / 7	1 / 10	1 / 10	1.4 / 15	1.4 / 15	1.7 / 20	1.6 / 20	1.7 / 25	1.6 / 25	1.7 / 25	1.6 / 25	1.7 / 25	1.6 / 25	1.7 / 25	1.6 / 25
	Vitamin C	AR	mg	20	20	30	30	45	45	70	70	100	90	110	95	110	95	110	95	110	95
	Vitamin D	AR / UL	µg	15 / 50	15 / 50	15 / 50	15 / 50	15 / 50	15 / 50	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100	15 / 100
	Vitamin E as α-tocopherol	AR / UL	mg	6 / 100	6 / 100	9 / 120	9 / 120	9 / 160	9 / 160	13 / 220	13 / 220	13 /260	11 / 260	13 / 300	11 / 300	13 / 300	11 / 300	13 / 300	11 / 300	13/ 300	11 / 300
	Vitamin K as phylloquinone	AR	µg	12	12	20	20	30	30	45	45	65	65	70	70	70	70	70	70	70	70
AUXILIARY	Beverages	LL	ml	820	820	940	940	970	970	1170	1170	1530	1530	1470	1470	1410	1410	1230	1230	1310	1310
	Coffee and black tea	UL	ml	0	0	0	0	0	0	0	0	476	410	600	483	600	483	600	483	605	520
	Fruits and vegetables	RR	g	159 - 239	148 - 222	243 - 365	227 - 340	296 - 444	276 - 414	362 - 543	328 - 492	452 - 678	360 - 541	374 562	302 - 453	359 - 539	289 - 433	336 - 504	273 - 410	317 - 476	260 - 390
	Salt	UL	g	2	2	3	3	5	5	6	6	6	6	6	6	6	6	6	6	6	6
	Saturated fat	UL	g	11.1	10.3	16.9	15.7	20.6	19.2	25.1	22.8	31.4	25.0	26.0	20.9	24.9	20	23.4	19	22	18
	Sugar	UL	g	24.8	23.1	38.0	35.4	46.3	43.1	56.6	51.2	70.7	56.3	58.5	47.2	56.1	45.1	52.5	42.7	49.6	40.6

Notes: The respective figures represent daily intakes and constitute average reference values (AR), reference ranges (RR) as well as upper and lower limits (UL, LL) as provided by the EFSA dietary reference values for energy, carbohydrates, protein, minerals, vitamins, EFSA (2010). Auxiliary nutrient constraints and limits were introduced based on expert judgment using recommendations from the German Society for Nutrition et al. (2016), German society for nutrition (2021a), German Society for Nutrition (2021b)

In a few number of cases, the presented numbers do not correspond to the publicly available EFSA reference values. Since vitamin D is predominantly produced by the body's own synthesis, lower values have been used for the calculations. Also, since fluoride is not only taken in through food, but also through dental care products, the recommendation for fluoride was not taken into account in the calculations. Similarly, the EFSA reference values for molybdenum, selenium and choline were equally disregarded for modelling purposes, due to their absence in the German Food Composition Database (BLS, Bundeslebensmittelschlüssel Version 3.02)

Table B1.2. Reference food items used for ABSPO nutritional food reference basket development

ECOICOP	ECOICOP description	Selected food items
01111	Rice	Rice raw
01112	Flours and other cereals	Wheat flour
01113	Bread	White bread, brown bread
01114	Other bakery products	Shortbread biscuit, pound cake, croissant made with puff pastry
01115	Pizza and quiche	Pizza Margherita with pizza cheese
01116	Pasta products and couscous	Egg-free dry pasta
01117	Breakfast cereals	Muesli, corn flakes
01118	Other cereal products	Starch, deep-frozen puff pastry
01121	Beef and veal	Minced beef, goulash beef, beef steak
01122	Pork	Pork schnitzel, pork steak, minced pork
01123	Lamb and goat	Lamb chop raw
01124	Poultry	Turkey breast, chicken leg
01125	Other meats	Venison, deer, hare meet
01126	Edible offal	Veal liver, beef tongue
01127	Dried, salted or smoked meat	Pork bacon, pork ham, small sausages, salami, poultry mortadella
01128	Other meat preparations	Beef/pork patty, canned beef
01131	Fresh or chilled fish	Salmon, sliced Atlantic herring, sliced cod
01132	Frozen fish	Deep-frozen breaded fish fingers, deep frozen Alaska pollock
01133	Fresh or chilled seafood	Common mussel, crabs
01134	Frozen seafood	Deep-frozen common shrimp, deep-fried cuttlefish in beer batter
01135	Dried, smoked or salted fish and seafood	Smoked saithe/pollack, smoked mackarel
01136	Other preserved or processed fish and	Tuna canned in oil undrained
01141	Fresh whole milk	Cow's milk (3.5% fat)
01142	Fresh low fat milk	Cow's milk (1.5% fat)
01143	Preserved milk	Evaporated milk evaporated cream
01144	Yoghurt	Plain and fruit yogurt (3.5% fat)
01145	Cheese and curd	Semi-hard cheese, cream cheese, hard cheese
01146	Other milk products	Cream, milk drink
01147	Eggs	Chicken egg
01151	Butter	Butter
01152	Margarine and other vegetable fats	Margarine
01153	Olive oil	Olive oil
01154	Other edible oils	Sunflower oil, rapeseed oil
01155	Other edible animal fats	Animal oil
01161	Fresh or chilled fruit	Apple, banana, melon, orange, pineapple
01162	Frozen fruit	Deep-frozen strawberry, raspberry, mixed fruit
01163	Dried fruit and nuts	Sweet almond, hazelnut, walnuts, cashew nut
01164	Preserved fruit and fruit-based products	Canned peach, canned mixed fruit
01171	Fresh or chilled vegetables other than	Carrot, butterhead lettuce, onions, tomatoes
01172	Frozen vegetables other than potatoes and	Deep-frozen peas, broccoli, spinach
01173	Dried vegetables, other preserved or	Canned sweetcorn, canned kidney beans
01174	Potatoes	Raw potatoes, deep-frozen potato chips
01175	Crisps	Potato crisps (ready-to-eat)
01176	Other tubers and products of tuber	Batata (sweet potato)
01181	Sugar	Sugar white
01182	Jams, marmalades and honey	Marmalade, honey, hazelnut chocolate spread
01183	Chocolate	Milk chocolate
01184	Confectionery products	Fruit candy, gum drops
01185	Edible ices and ice cream	Dairy ice cream, sorbet
01186	Artificial sugar substitutes	Sweeteners
01191	Sauces, condiments	Tomato ketchup, vinegar
01192	Salt, spices and culinary herbs	Table salt, pepper
01194	Ready-made meals	Canned ravioli with meat filling with tomato sauce, rice dish
01199	Other food products n.e.c.	Instant vegetable broth
01211	Coffee	Coffee
01212	Tea	Herbal tea, black tea
01213	Cocoa and powdered chocolate	Cocoa powder drink
01221	Mineral or spring waters	Natural mineral water carbonated
01222	Soft drinks	Cola beverages caffeinated
01223	Fruit and vegetable juices	Orange juice

Notes: The selected items were taken from the German Food Composition Database. For more details, see Section 7.1 of this Report.

Table B2.1. ABSPO nutritional food reference baskets by age and gender for Austria

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	3.1	4.0	9.7	12.1	10.1	9.6	9.0	5.4	6.1	7.4	8.8	9.7	8.1	7.7	7.3	7.0
01.1.1.2	Flours and other cereals	26.9	40.9	50.0	142.6	104.4	99.1	55.7	43.8	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.1.3	Bread	72.7	65.5	120.0	99.9	82.8	79.4	104.0	105.1	99.0	134.5	198.2	162.4	149.0	140.6	164.4	156.8
01.1.1.4	Other bakery products	0.7	1.0	1.3	3.2	2.6	2.5	2.4	1.1	0.5	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.1.5	Pizza and quiche	9.3	7.1	13.0	10.8	8.9	8.6	8.0	7.6	9.2	6.6	7.8	8.6	7.2	6.9	6.5	6.2
01.1.1.6	Pasta products and couscous	88.1	99.5	122.9	102.3	84.7	81.3	94.4	91.0	15.2	10.9	13.0	14.3	11.9	11.4	10.8	10.3
01.1.1.7	Breakfast cereals	2.4	2.9	3.6	4.5	3.7	3.5	3.3	3.1	2.2	2.7	3.2	3.6	3.0	2.8	2.7	2.6
01.1.1.8	Other cereal products	1.4	2.2	5.3	6.6	5.5	5.2	4.9	2.3	3.3	4.0	4.8	5.3	4.4	4.2	4.0	3.8
01.1.2.1	Beef and veal	16.4	74.7	30.5	76.1	63.0	60.4	70.6	80.0	3.2	12.8	15.2	16.7	14.0	13.4	12.7	12.0
01.1.2.2	Pork	6.1	27.6	11.3	28.2	23.3	22.4	12.6	9.9	4.2	17.2	12.3	22.5	18.8	18.0	17.0	9.7
01.1.2.3	Lamb and goat	0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.2.4	Poultry	18.9	34.6	23.0	35.2	29.1	28.0	26.2	24.7	14.0	56.9	40.5	74.3	62.2	59.5	52.7	38.8
01.1.2.5	Other meats	1.0	1.3	1.5	1.9	1.6	1.5	1.4	1.3	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.2.6	Edible offal	0.2	0.5	0.8	1.0	0.9	0.8	0.8	0.7	0.2	0.6	0.5	0.8	0.7	0.7	0.6	0.6
01.1.2.7	Dried, salted or smoked meat	0.7	2.2	2.7	3.4	2.8	2.7	2.5	1.6	0.5	2.1	2.5	2.7	2.3	2.2	2.1	2.0
01.1.2.8	Other meat preparations	1.6	5.0	3.1	7.6	6.3	6.1	5.7	4.1	1.2	4.7	5.5	6.1	5.1	4.9	4.6	4.4
01.1.3.1	Fresh or chilled fish	14.2	10.8	13.2	16.5	13.6	13.1	13.4	14.1	19.7	14.1	22.5	18.4	15.4	14.8	14.9	15.0
01.1.3.2	Frozen fish	4.5	3.4	4.2	5.2	4.3	4.2	3.9	3.7	2.6	3.2	3.8	4.2	3.5	3.3	3.2	3.0
01.1.3.3	Fresh or chilled seafood	0.9	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.3.4	Frozen seafood	2.2	1.7	2.1	2.6	2.1	2.0	1.9	1.8	1.3	1.6	1.9	2.0	1.7	1.6	1.6	1.5
01.1.3.5	Dried, smoked or salted fish and seafood	0.7	0.9	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.8	0.8	0.8
01.1.3.6	Other preserved or processed fish or seafood	2.1	1.3	3.2	3.9	3.3	3.1	2.9	2.8	3.4	2.4	2.9	3.1	2.6	2.5	2.4	2.3
01.1.4.1	Fresh whole milk	237.1	221.8	343.5	286.0	240.7	227.2	258.3	279.2	196.7	140.9	234.1	183.9	159.2	147.2	156.9	184.8
01.1.4.2	Fresh low fat milk	21.3	24.3	29.7	24.7	20.5	19.7	18.4	26.0	21.1	15.1	18.4	19.7	16.5	15.8	15.0	14.2
01.1.4.3	Preserved milk	2.6	2.0	2.4	3.0	2.5	2.4	2.3	2.1	1.5	1.9	2.2	2.4	2.0	1.9	1.8	1.7
01.1.4.4	Yoghurt	48.2	36.7	67.2	56.0	46.3	44.5	41.6	39.3	47.7	34.2	56.8	44.6	37.4	35.7	33.8	32.2
01.1.4.5	Cheese and curd	18.2	10.6	23.4	32.4	27.0	25.7	17.4	11.4	9.6	18.4	25.2	25.8	21.6	20.7	19.6	15.4
01.1.4.6	Other milk products	0.7	1.1	1.3	3.2	2.7	2.6	2.4	1.1	0.5	2.0	2.4	2.6	2.2	2.1	2.0	1.9
01.1.4.7	Eggs	33.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	65.6	84.4	68.1	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.3	0.4	0.5	1.4	1.1	1.1	0.6	0.5	0.2	0.8	0.6	1.1	0.9	0.9	0.8	0.5
01.1.5.2	Margarine and other vegetable fats	0.2	0.3	0.3	0.8	0.6	0.6	0.6	0.3	0.3	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.1.5.3	Olive oil	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.5.4	Other edible oils	8.8	4.0	10.9	12.1	10.0	9.6	10.6	11.3	5.9	4.3	5.0	5.6	4.6	4.4	5.0	5.6
01.1.5.5	Other edible animal fats	0.3	0.5	0.6	1.5	1.3	1.2	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
01.1.6.1	Fresh or chilled fruit	230.9	279.1	347.8	426.1	352.9	338.5	316.9	303.7	218.1	269.2	319.5	351.5	294.4	281.3	266.4	251.7
01.1.6.2	Frozen fruit	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.6.3	Dried fruit and nuts	7.4	6.8	6.9	8.6	7.1	6.8	6.4	7.0	7.3	5.3	6.2	6.9	5.7	5.5	5.2	6.6
01.1.6.4	Preserved fruit and fruit-based products	4.4	9.7	6.6	16.5	13.6	13.1	12.2	5.8	0.8	1.0	1.2	1.3	1.1	1.1	1.0	0.9
01.1.7.1	other fresh or chilled vegetables	144.4	175.3	239.1	344.1	364.9	350.0	327.7	309.0	29.2	71.0	84.3	145.3	129.5	123.7	100.5	95.6
01.1.7.2	Other frozen vegetables	7.5	8.5	10.4	8.7	7.2	6.9	6.5	9.1	161.9	162.2	297.0	333.8	295.5	282.4	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	28.9	32.9	40.3	33.5	27.8	26.6	24.9	35.3	16.8	20.5	24.3	26.7	22.4	21.4	20.3	19.3
01.1.7.4	Potatoes	43.9	50.1	27.1	51.0	42.3	40.6	22.8	17.9	144.6	182.9	156.2	219.9	145.8	139.4	79.2	75.3
01.1.7.5	Crisps	2.0	2.0	2.4	6.0	5.0	4.8	4.5	2.1	3.0	3.7	4.3	4.8	4.0	3.8	3.6	3.4
01.1.7.6	Other tubers and products of tuber vegetables	1.8	5.4	6.5	8.2	6.8	6.5	6.1	5.7	1.2	5.0	3.6	6.5	5.5	5.2	4.9	4.7
01.1.8.1	Sugar	0.0	1.4	2.5	3.1	2.6	2.5	2.3	1.1	1.1	1.9	2.2	2.5	2.1	2.0	1.9	1.8
01.1.8.2	Jams, marmalades and honey	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.8.3	Chocolate	0.6	0.8	0.9	1.2	1.0	0.9	0.9	0.4	0.6	0.7	0.9	0.9	0.8	0.7	0.7	0.7
01.1.8.4	Confectionery products	1.2	1.4	1.7	2.2	1.8	1.7	1.6	0.8	1.1	1.3	1.6	1.7	1.4	1.4	1.3	1.2
01.1.8.5	Edible ices and ice cream	0.7	0.9	1.1	1.4	1.1	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	1.3	1.6	1.9	2.4	2.0	1.9	1.8	1.7	3.6	14.7	17.4	19.2	16.1	15.4	14.5	13.8
01.1.9.2	Salt, spices and culinary herbs	1.1	4.4	4.1	3.0	3.7	4.0	3.8	3.6	0.8	1.9	2.2	2.4	2.8	3.2	3.0	2.9
01.1.9.4	Ready-made meals	2.8	8.6	10.5	13.1	10.9	10.4	9.8	9.2	6.6	8.0	9.5	10.5	8.8	8.4	7.9	7.5
01.1.9.9	Other food products	0.5	0.8	1.0	1.7	2.0	1.9	1.8	1.7	0.4	1.5	1.1	1.2	1.6	1.5	1.5	1.4
01.2.1.1	Coffee	0.0	0.0	0.0	12.4	10.3	9.9	9.3	7.5	0.0	0.0	0.0	18.3	22.3	22.4	15.4	13.2
01.2.1.2	Tea	0.2	0.4	0.4	0.5	0.4	0.4	0.4	0.6	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.2.1.3	Cocoa and powdered chocolate	0.9	1.1	1.4	1.7	1.4	1.3	1.3	1.1	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.2.2.1	Mineral or spring waters	1122.4	1109.3	1402.9	1346.4	1195.1	1069.5	1306.4	1416.6	1121.9	1021.1	1381.0	1333.3	1154.8	1067.1	1170.7	1345.5
01.2.2.2	Soft drinks	11.8	14.4	17.6	22.0	18.2	17.5	16.4	7.7	11.0	13.4	15.9	17.5	14.7	14.0	13.3	12.6
01.2.2.3	Fruit and vegetable juices	66.4	102.0	57.3	103.9	86.0	82.5	51.1	72.8	62.0	75.6	85.0	98.6	82.6	78.9	74.8	49.6
Total beverage quantity		1201.7	1227.2	1479.6	1486.9	1311.5	1181.2	1384.8	1506.3	1196.1	1111.5	1483.6	1469.6	1276.0	1183.9	1275.5	1422.3
Total food quantity		1126.5	1381.1	1716.8	2021.8	1763.5	1691.3	1631.9	1595.2	1138.6	1344.7	1700.1	1889.2	1603.4	1530.7	1448.8	1399.2

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.2. ABSPO nutritional food reference baskets by age and gender for Belgium

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	2.0	2.5	3.0	3.8	3.1	3.0	2.8	1.3	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.1.2	Flours and other cereals	18.1	7.8	22.2	27.7	16.4	15.7	14.7	6.9	1.0	1.2	1.4	1.6	1.3	1.3	1.2	1.1
01.1.1.3	Bread	132.0	204.5	295.7	256.1	267.4	274.3	282.6	305.1	47.9	113.7	134.9	97.4	134.3	128.2	154.4	161.7
01.1.1.4	Other bakery products	2.9	7.0	8.6	17.8	14.8	14.1	7.9	6.2	5.9	10.9	12.9	14.2	11.9	11.4	10.8	6.1
01.1.1.5	Pizza and quiche	1.5	1.9	3.2	2.9	2.4	2.3	2.1	2.0	1.4	1.8	2.1	2.3	1.9	1.8	1.7	1.6
01.1.1.6	Pasta products and couscous	15.2	10.9	18.7	23.3	13.8	13.2	12.4	5.8	13.4	10.2	12.1	13.3	11.1	10.6	10.1	13.4
01.1.1.7	Breakfast cereals	2.9	3.5	2.6	5.3	4.4	4.2	4.0	3.7	2.7	3.2	3.9	4.2	3.6	3.4	3.2	4.3
01.1.1.8	Other cereal products	1.4	1.7	2.1	2.6	2.2	2.1	2.0	0.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.2.1	Beef and veal	6.8	38.6	20.2	58.5	34.9	33.5	35.4	44.3	6.3	7.6	9.0	9.9	8.3	8.0	7.5	4.3
01.1.2.2	Pork	4.0	4.9	3.6	7.5	6.2	5.9	5.6	4.6	3.8	4.6	5.4	6.0	5.0	4.8	4.5	2.6
01.1.2.3	Lamb and goat	0.9	1.1	0.8	1.6	1.4	1.3	1.2	1.2	0.8	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.1.2.4	Poultry	8.5	10.3	7.6	15.7	13.0	12.5	11.7	11.0	10.5	9.6	11.4	12.5	10.5	10.0	9.5	5.4
01.1.2.5	Other meats	1.1	1.3	1.6	2.0	1.7	1.6	1.5	1.4	1.0	1.2	1.5	1.6	1.4	1.3	1.2	1.2
01.1.2.6	Edible offal	0.1	0.6	0.4	0.9	0.7	0.7	0.6	0.9	0.2	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.2.7	Dried, salted or smoked meat	1.1	1.3	1.0	2.0	1.7	1.6	1.5	1.4	1.0	1.2	1.5	1.6	1.4	1.3	1.2	1.2
01.1.2.8	Other meat preparations	6.9	39.5	20.7	25.8	28.9	34.2	32.0	30.3	8.6	26.3	18.7	24.8	28.1	27.5	26.0	14.8
01.1.3.1	Fresh or chilled fish	16.1	19.6	17.6	29.9	24.8	23.8	22.2	31.5	3.9	4.7	5.6	6.1	5.1	4.9	4.6	3.0
01.1.3.2	Frozen fish	1.2	1.4	1.7	2.2	1.8	1.7	1.6	1.5	1.1	1.3	1.6	1.7	1.4	1.4	1.3	1.2
01.1.3.3	Fresh or chilled seafood	17.9	21.4	26.2	23.4	19.4	18.6	24.3	24.6	111.8	138.9	180.8	198.9	166.6	159.2	165.4	198.5
01.1.3.4	Frozen seafood	1.0	1.2	1.5	1.8	1.5	1.4	1.3	1.3	0.9	1.1	1.3	1.4	1.2	1.1	1.1	1.0
01.1.3.5	Dried, smoked or salted fish and seafood	0.8	1.0	0.7	1.5	1.3	1.2	1.1	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.3.6	Other preserved or processed fish or seafood	0.9	3.6	2.6	5.5	4.5	4.3	4.1	3.8	4.4	3.3	4.0	4.4	3.6	3.5	3.3	3.1
01.1.4.1	Fresh whole milk	19.6	14.0	24.0	21.4	17.7	17.0	15.9	22.5	10.7	13.1	15.5	17.1	14.3	13.7	12.9	12.3
01.1.4.2	Fresh low fat milk	227.3	227.8	278.5	285.0	221.6	197.4	250.2	261.4	235.8	195.5	315.4	255.2	218.1	204.3	216.6	245.8
01.1.4.3	Preserved milk	0.7	0.9	1.5	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.4.4	Yoghurt	18.1	12.9	22.1	19.8	16.4	15.7	14.7	13.9	15.8	12.1	14.3	15.7	13.2	12.6	11.9	11.4
01.1.4.5	Cheese and curd	34.1	19.9	48.5	37.1	35.8	34.4	31.1	15.2	17.3	27.7	34.1	36.6	32.6	31.2	29.5	16.8
01.1.4.6	Other milk products	1.2	1.5	1.1	2.3	1.9	1.8	1.7	0.8	1.2	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.4.7	Eggs	7.4	41.9	47.1	45.7	37.9	36.3	47.6	48.1	38.9	29.6	35.1	38.6	32.3	30.9	29.3	31.7
01.1.5.1	Butter	0.4	0.4	0.3	0.7	0.5	0.5	0.5	0.2	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.5.2	Margarine and other vegetable fats	0.3	0.4	0.3	0.6	0.5	0.4	0.4	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
01.1.5.3	Olive oil	1.3	1.0	1.2	2.5	2.1	2.0	1.9	0.9	2.0	1.5	1.8	2.0	1.7	1.6	1.5	0.9
01.1.5.4	Other edible oils	11.5	5.9	12.2	20.9	12.4	11.9	11.9	12.1	3.8	2.9	3.5	3.8	3.2	3.1	2.9	1.9
01.1.5.5	Other edible animal fats	0.5	1.3	1.6	3.2	2.7	2.6	2.4	1.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	237.1	288.6	352.8	440.6	364.9	350.0	327.7	309.0	223.0	272.5	323.5	355.8	298.0	284.8	269.7	255.9
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.6.3	Dried fruit and nuts	1.5	1.8	3.0	2.7	2.2	2.2	2.0	2.9	2.2	1.7	2.0	2.2	1.8	1.7	1.6	2.2
01.1.6.4	Preserved fruit and fruit-based products	1.4	1.6	2.0	2.5	2.1	2.0	1.9	1.8	1.3	1.5	1.8	2.0	1.7	1.6	1.5	1.4
01.1.7.1	other fresh or chilled vegetables	165.9	215.2	293.1	394.6	341.9	350.0	327.7	309.0	114.2	189.9	268.2	374.8	313.9	300.0	282.1	242.5
01.1.7.2	Other frozen vegetables	3.1	3.8	6.4	5.7	4.8	4.6	5.5	6.0	56.4	42.9	50.9	56.0	46.9	44.8	59.4	56.5
01.1.7.3	Other dried, preserved or processed vegetables	13.2	17.5	15.2	19.0	15.8	15.1	14.2	20.0	22.6	68.7	81.5	89.7	75.1	71.8	68.0	90.5
01.1.7.4	Potatoes	163.7	164.1	111.7	250.5	178.3	142.1	81.2	62.8	235.8	247.2	271.5	372.0	228.9	218.7	150.9	133.7
01.1.7.5	Crisps	2.2	2.7	2.0	4.1	3.4	3.3	3.1	1.4	3.3	2.5	3.0	3.3	2.7	2.6	2.5	2.4
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	2.0	2.5	3.0	3.7	3.1	3.0	2.8	1.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.8.2	Jams, marmalades and honey	3.7	4.5	3.3	6.9	5.7	5.4	5.1	2.4	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4
01.1.8.3	Chocolate	0.8	0.9	1.1	1.4	1.2	1.1	1.0	0.5	0.7	0.9	1.0	1.1	0.9	0.9	0.9	0.8
01.1.8.4	Confectionery products	3.5	4.1	4.5	6.4	5.3	5.1	2.9	2.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.8.5	Edible ices and ice cream	1.4	3.9	3.9	8.0	6.7	6.4	6.0	2.8	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1
01.1.9.1	Sauces, condiments	2.1	8.7	6.4	13.3	11.0	10.5	9.9	4.6	2.7	8.1	9.6	10.6	8.8	8.5	8.0	7.6
01.1.9.2	Salt, spices and culinary herbs	0.1	0.6	0.4	0.5	0.7	0.7	0.7	0.6	0.9	1.6	1.9	2.1	2.4	2.8	2.4	2.5
01.1.9.4	Ready-made meals	5.7	23.1	39.5	35.2	29.2	28.0	26.2	37.0	18.7	21.5	25.5	28.1	23.5	22.5	21.3	20.2
01.1.9.9	Other food products	0.1	0.5	0.4	0.5	0.7	0.7	0.6	0.6	0.2	0.5	0.6	0.7	0.6	0.5	0.5	0.3
01.2.1.1	Coffee	0.0	0.0	0.0	8.4	10.0	9.6	5.4	4.2	0.0	0.0	0.0	15.3	19.8	20.0	19.0	18.0
01.2.1.2	Tea	3.0	4.7	3.8	3.1	4.0	4.1	4.9	5.2	0.6	0.8	0.9	1.0	0.9	0.8	0.8	1.0
01.2.1.3	Cocoa and powdered chocolate	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.2.2.1	Mineral or spring waters	891.2	760.3	1092.3	1009.1	832.5	774.0	724.6	1025.2	1083.6	830.5	1145.7	1079.3	936.6	863.8	818.0	1089.2
01.2.2.2	Soft drinks	6.9	8.4	10.3	12.8	10.6	10.2	9.5	4.5	47.5	40.7	48.4	53.2	44.5	42.6	30.1	23.0
01.2.2.3	Fruit and vegetable juices	24.1	21.3	36.4	32.5	26.9	25.8	24.1	34.2	26.1	19.8	23.5	25.9	21.7	20.7	19.6	18.7
	Total beverage quantity	925.6	795.0	1143.2	1066.4	884.5	824.1	769.0	1073.7	1158.1	892.2	1219.0	1175.2	1023.9	948.3	887.9	1150.3
	Total food quantity	1173.7	1458.0	1750.4	2155.5	1794.7	1723.6	1671.3	1634.5	1241.1	1494.7	1882.9	2085.2	1730.6	1650.7	1592.6	1573.4

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.3. ABSPO nutritional food reference baskets by age and gender for Bulgaria

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	54.1	41.2	73.2	62.9	52.1	50.0	37.1	45.2	1.2	1.5	1.7	1.9	1.6	1.5	2.0	45.2
01.1.1.2	Flours and other cereals	30.3	21.5	38.0	47.5	39.4	37.7	21.2	6.7	2.4	2.9	3.4	3.8	3.2	3.0	4.0	6.7
01.1.1.3	Bread	57.6	92.4	152.0	112.6	104.8	100.5	131.7	159.7	15.4	14.7	14.2	21.9	13.1	12.5	16.6	159.7
01.1.1.4	Other bakery products	0.4	1.4	0.8	2.1	1.7	1.7	1.6	0.3	1.0	1.3	1.5	1.7	1.4	1.3	1.8	0.3
01.1.1.5	Pizza and quiche	3.6	2.7	3.3	4.2	3.5	3.3	3.1	3.3	34.8	39.9	47.3	44.4	31.1	26.0	34.5	3.3
01.1.1.6	Pasta products and couscous	8.6	6.5	8.0	10.0	8.2	7.9	7.4	7.0	0.7	0.8	1.0	1.1	0.9	0.9	1.2	7.0
01.1.1.7	Breakfast cereals	0.7	0.8	1.0	1.3	1.1	1.0	1.0	0.9	0.6	0.8	0.9	1.0	0.9	0.8	1.1	0.9
01.1.1.8	Other cereal products	4.2	5.1	6.3	7.8	6.5	6.2	3.6	1.1	0.4	0.5	0.6	0.6	0.5	0.5	0.7	1.1
01.1.2.1	Beef and veal	0.8	2.3	2.8	3.6	2.9	2.8	2.6	4.5	1.8	2.2	2.6	2.8	2.4	2.3	1.3	4.5
01.1.2.2	Pork	7.1	21.6	13.2	33.0	27.3	26.2	14.7	23.1	1.7	2.0	2.4	2.6	2.2	2.1	1.2	23.1
01.1.2.3	Lamb and goat	0.5	1.6	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	0.9	1.7
01.1.2.4	Poultry	57.1	189.4	106.2	265.2	222.9	210.7	251.9	236.5	87.8	62.9	74.7	92.9	68.8	65.7	37.4	236.5
01.1.2.5	Other meats	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.2.6	Edible offal	0.2	0.6	0.7	0.8	0.7	0.7	0.6	0.9	3.4	5.6	6.6	10.9	14.3	14.5	8.3	0.9
01.1.2.7	Dried, salted or smoked meat	1.0	3.0	1.9	4.6	3.8	3.7	3.4	0.6	0.7	2.8	3.3	3.7	3.1	2.9	1.7	0.6
01.1.2.8	Other meat preparations	0.7	2.1	1.3	3.2	2.6	2.5	2.4	4.0	4.8	19.4	23.0	25.3	21.2	20.2	23.5	4.0
01.1.3.1	Fresh or chilled fish	9.8	12.0	14.7	18.3	15.2	14.5	15.1	15.3	19.6	16.2	19.2	21.1	17.7	16.9	22.4	15.3
01.1.3.2	Frozen fish	5.1	6.2	7.6	9.5	7.8	7.5	7.0	8.5	0.5	0.6	0.7	0.8	0.6	0.6	0.8	8.5
01.1.3.3	Fresh or chilled seafood	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
01.1.3.4	Frozen seafood	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4
01.1.3.5	Dried, smoked or salted fish and seafood	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	0.8	0.9	1.1	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.0	1.1	1.0	0.9	0.7	1.0
01.1.4.1	Fresh whole milk	55.6	42.3	77.6	64.6	53.5	51.3	48.1	62.2	55.1	39.5	74.9	51.5	43.1	41.2	45.1	62.2
01.1.4.2	Fresh low fat milk	17.3	13.1	24.1	20.0	16.6	15.9	14.9	25.3	235.8	287.1	340.7	374.8	313.9	300.0	284.1	25.3
01.1.4.3	Preserved milk	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4
01.1.4.4	Yoghurt	217.3	199.1	279.7	252.5	211.0	200.5	216.0	177.1	10.0	7.1	9.9	9.3	7.8	7.5	9.9	177.1
01.1.4.5	Cheese and curd	25.3	15.9	39.3	33.9	28.2	26.9	21.1	23.8	2.5	1.8	3.0	2.4	2.0	1.9	1.1	23.8
01.1.4.6	Other milk products	1.4	4.4	2.7	6.7	5.5	5.3	3.0	0.9	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.9
01.1.4.7	Eggs	52.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	23.6	95.7	100.0	81.5	100.0	100.0	80.7	100.0
01.1.5.1	Butter	0.1	0.2	0.1	0.3	0.3	0.3	0.3	0.0	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.0
01.1.5.2	Margarine and other vegetable fats	0.1	0.2	0.3	0.4	0.3	0.3	0.3	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1
01.1.5.3	Olive oil	0.4	1.2	0.8	1.9	1.6	1.5	0.9	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3
01.1.5.4	Other edible oils	10.8	5.7	13.4	14.4	12.0	11.5	11.3	12.9	10.2	12.0	10.8	20.0	12.0	11.5	11.4	12.9
01.1.5.5	Other edible animal fats	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.0
01.1.6.1	Fresh or chilled fruit	237.1	288.6	352.8	440.6	364.9	350.0	327.7	309.0	221.8	272.2	323.0	355.3	297.6	284.4	268.3	309.0
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.4
01.1.6.3	Dried fruit and nuts	4.1	3.1	3.8	4.7	3.9	3.8	4.9	0.9	4.0	2.9	3.4	3.8	3.2	3.0	4.0	0.9
01.1.6.4	Preserved fruit and fruit-based products	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.8	0.7	0.4	0.8
01.1.7.1	other fresh or chilled vegetables	136.9	181.3	256.6	367.9	364.9	350.0	327.7	309.0	6.5	26.4	12.6	34.5	28.9	27.6	15.7	309.0
01.1.7.2	Other frozen vegetables	0.8	1.0	1.2	1.5	1.3	1.2	1.1	1.1	105.5	41.8	152.1	124.9	109.7	104.8	139.0	1.1
01.1.7.3	Other dried, preserved or processed vegetables	80.9	86.2	112.8	94.0	77.8	74.6	97.8	118.6	189.4	287.1	326.6	313.5	313.9	300.0	254.9	118.6
01.1.7.4	Potatoes	83.9	105.6	65.0	209.4	133.5	128.1	71.9	22.6	235.8	287.1	340.7	374.8	313.9	300.0	284.1	22.6
01.1.7.5	Crisps	0.4	0.5	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.5	0.5	0.7	0.6
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.0	3.4	2.1	5.2	4.3	4.1	2.3	0.7	2.6	3.2	3.7	4.1	3.5	3.3	1.9	0.7
01.1.8.2	Jams, marmalades and honey	0.0	2.4	1.5	3.7	3.1	3.0	1.7	0.5	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.5
01.1.8.3	Chocolate	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4
01.1.8.4	Confectionery products	1.0	2.0	1.2	3.1	2.6	2.5	1.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
01.1.8.5	Edible ices and ice cream	0.0	2.4	1.5	3.7	3.1	3.0	2.8	0.5	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.7	1.4	5.8	6.9	7.6	6.4	6.1	8.1	0.7
01.1.9.2	Salt, spices and culinary herbs	1.4	4.0	3.6	4.0	5.0	5.3	4.5	3.8	1.2	3.1	3.9	3.8	4.7	5.0	5.5	3.8
01.1.9.4	Ready-made meals	2.1	4.5	5.5	6.9	5.7	5.5	5.1	8.7	4.8	4.2	5.0	5.5	4.6	4.4	5.9	8.7
01.1.9.9	Other food products	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.1	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	2.7	2.2	2.1	2.0	1.9	0.0	0.0	0.0	19.6	23.4	23.4	13.3	1.9
01.2.1.2	Tea	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3
01.2.1.3	Cocoa and powdered chocolate	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2
01.2.2.1	Mineral or spring waters	1193.3	1226.1	1490.2	1668.4	1483.5	1325.4	1519.8	1609.2	1157.9	1175.4	1419.4	1463.8	1348.7	1275.3	1265.9	1609.2
01.2.2.2	Soft drinks	4.4	5.4	3.5	8.3	6.8	6.6	6.1	5.8	41.5	58.2	69.0	98.0	63.6	60.8	34.5	5.8
01.2.2.3	Fruit and vegetable juices	11.8	14.4	8.8	21.9	18.1	17.4	16.3	21.5	11.0	13.4	15.9	17.5	14.6	14.0	18.5	21.5
Total beverage quantity		1209.8	1246.2	1502.9	1701.7	1511.0	1351.8	1544.5	1638.8	1210.6	1247.2	1504.6	1599.2	1450.6	1373.8	1332.6	1638.8
Total food quantity		1175.5	1483.1	1785.8	2237.6	1909.1	1830.7	1777.9	1704.3	1293.5	1558.8	1930.0	2014.6	1756.8	1681.2	1585.2	1704.3

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.4. ABSPO nutritional food reference baskets by age and gender for Croatia

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	7.6	4.6	11.3	14.1	11.6	11.2	10.5	9.9	7.0	8.6	5.1	11.2	9.4	9.0	8.5	4.8
01.1.1.2	Flours and other cereals	22.3	21.0	20.5	89.7	53.1	50.9	28.6	18.0	3.2	3.9	4.6	5.1	4.3	4.1	3.9	3.7
01.1.1.3	Bread	148.6	217.0	321.4	245.3	277.1	265.3	269.8	254.2	128.7	157.3	231.5	156.7	142.8	135.9	128.7	171.3
01.1.1.4	Other bakery products	0.1	0.8	0.8	2.5	2.0	2.0	1.1	0.7	1.2	1.5	1.8	2.0	1.6	1.6	1.5	1.4
01.1.1.5	Pizza and quiche	1.3	1.6	2.0	2.5	2.1	2.0	1.9	1.7	2.4	1.5	2.7	2.0	1.7	1.6	1.5	2.0
01.1.1.6	Pasta products and couscous	24.6	15.7	20.8	31.1	19.9	19.1	17.9	16.8	12.0	14.7	17.4	19.1	16.0	15.3	14.5	8.3
01.1.1.7	Breakfast cereals	2.0	2.4	3.0	3.7	3.1	2.9	2.7	2.6	1.9	2.3	2.7	2.9	2.5	2.4	2.2	2.1
01.1.1.8	Other cereal products	3.6	2.2	5.4	6.7	5.6	5.4	5.0	1.9	3.4	4.1	4.9	5.4	4.5	4.3	4.1	3.9
01.1.2.1	Beef and veal	2.8	50.2	16.4	51.1	42.4	40.6	53.3	57.4	11.4	13.9	8.2	18.1	15.2	14.5	13.7	10.1
01.1.2.2	Pork	2.4	28.9	14.1	44.2	36.6	35.1	19.7	12.4	2.2	2.7	3.2	3.5	2.9	2.8	2.7	2.5
01.1.2.3	Lamb and goat	1.5	1.8	2.2	2.7	2.3	2.2	2.0	1.9	1.4	1.7	2.0	2.2	1.8	1.7	1.6	1.6
01.1.2.4	Poultry	3.0	55.3	18.0	56.3	46.7	44.7	47.3	63.2	136.3	185.1	146.8	251.1	205.4	192.1	160.1	116.6
01.1.2.5	Other meats	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.2.6	Edible offal	0.1	0.8	0.8	2.4	2.0	1.9	1.8	2.7	0.1	1.1	0.9	1.9	1.6	1.6	1.5	1.4
01.1.2.7	Dried, salted or smoked meat	0.2	1.5	1.4	4.5	3.7	3.5	3.3	1.2	2.2	2.7	3.2	3.5	3.0	2.8	2.7	2.6
01.1.2.8	Other meat preparations	0.9	7.9	5.4	16.8	13.9	13.4	12.5	11.4	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.3.1	Fresh or chilled fish	14.1	8.4	13.2	25.6	21.2	20.4	20.1	17.3	23.0	14.7	26.3	19.3	16.1	15.4	15.7	15.8
01.1.3.2	Frozen fish	1.6	2.0	2.4	3.0	2.5	2.4	2.2	2.1	1.5	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.3.3	Fresh or chilled seafood	0.5	0.6	0.7	0.9	0.8	0.7	0.7	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.3.4	Frozen seafood	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.3.5	Dried, smoked or salted fish and seafood	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	1.4	1.7	2.1	2.6	2.1	2.1	1.9	1.8	1.3	1.6	1.9	2.1	1.7	1.6	1.6	1.5
01.1.4.1	Fresh whole milk	237.1	261.9	352.8	394.9	312.0	299.3	319.2	309.0	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.2	Fresh low fat milk	20.8	20.0	26.0	20.3	16.8	16.1	15.1	22.8	19.4	12.4	22.1	16.2	13.6	13.0	12.3	16.3
01.1.4.3	Preserved milk	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.1.4.4	Yoghurt	38.2	24.5	47.9	37.4	31.0	29.7	27.8	42.0	35.6	22.8	40.7	29.8	25.0	23.9	22.6	30.1
01.1.4.5	Cheese and curd	24.5	8.3	29.0	20.8	21.0	20.2	11.3	8.3	3.4	2.2	3.9	2.8	2.4	2.3	2.1	2.8
01.1.4.6	Other milk products	1.0	1.2	1.5	1.8	1.5	1.5	1.4	0.5	0.9	1.1	1.3	1.5	1.2	1.2	1.1	1.1
01.1.4.7	Eggs	49.0	96.1	100.0	97.8	81.0	77.7	100.0	100.0	8.8	95.7	59.8	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
01.1.5.2	Margarine and other vegetable fats	0.0	0.4	0.4	0.6	0.5	0.4	0.4	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
01.1.5.3	Olive oil	0.1	0.7	0.7	2.1	1.7	1.7	1.1	0.6	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.5.4	Other edible oils	10.1	5.3	12.7	16.1	13.3	12.8	12.2	12.3	9.0	6.1	5.5	8.0	6.7	6.4	7.2	7.6
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	233.6	224.5	292.8	320.0	189.3	181.5	235.4	256.5	223.1	271.7	320.5	354.7	297.1	283.9	268.9	255.7
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.6.3	Dried fruit and nuts	5.6	5.1	4.4	5.5	4.5	4.3	4.1	5.8	2.7	3.3	5.9	4.4	3.7	3.5	3.3	3.1
01.1.6.4	Preserved fruit and fruit-based products	0.6	0.7	0.9	1.1	0.9	0.9	0.9	0.8	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.7
01.1.7.1	other fresh or chilled vegetables	140.5	182.4	258.0	328.6	364.9	350.0	327.7	309.0	10.7	77.8	77.0	148.8	141.8	135.5	77.0	90.0
01.1.7.2	Other frozen vegetables	6.4	6.2	8.0	6.3	5.2	5.0	4.7	7.0	234.8	139.5	317.1	303.5	254.2	242.9	282.3	270.2
01.1.7.3	Other dried, preserved or processed vegetables	34.9	33.6	28.1	34.2	28.3	27.1	25.4	38.4	42.1	51.3	88.2	67.0	56.1	53.6	49.9	29.0
01.1.7.4	Potatoes	101.7	103.7	84.5	147.8	87.4	83.8	47.1	29.6	57.7	70.3	83.4	125.4	76.8	73.4	69.6	39.7
01.1.7.5	Crisps	0.5	0.7	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.7.6	Other tubers and products of tuber vegetables	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.7	0.6	0.9	0.7	0.7	0.7	0.6
01.1.8.1	Sugar	1.8	2.2	2.6	3.3	2.7	2.6	1.5	0.9	1.6	2.0	2.4	2.6	2.2	2.1	2.0	1.1
01.1.8.2	Jams, marmalades and honey	0.9	1.1	1.4	1.7	1.4	1.4	1.3	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.8.3	Chocolate	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.8.4	Confectionery products	1.6	2.0	2.4	3.1	2.5	2.4	2.3	0.9	1.5	1.9	2.2	2.4	2.0	1.9	1.8	1.2
01.1.8.5	Edible ices and ice cream	0.0	2.4	2.3	7.3	6.0	5.8	3.2	2.0	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	2.8	10.3	10.7	13.4	11.1	10.6	9.9	9.4	6.7	8.2	4.8	10.7	8.9	8.5	8.1	7.7
01.1.9.2	Salt, spices and culinary herbs	0.1	1.9	0.9	1.6	1.7	2.2	2.3	2.7	0.4	3.0	3.0	3.9	4.9	5.2	5.0	5.0
01.1.9.4	Ready-made meals	1.9	2.3	2.9	3.6	3.0	2.8	2.7	2.5	1.8	2.2	2.6	2.8	2.4	2.3	2.2	2.1
01.1.9.9	Other food products	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	20.6	27.1	27.2	25.7	26.1	0.0	0.0	0.0	17.7	21.8	21.9	20.8	23.2
01.2.1.2	Tea	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.8	0.2	0.4	0.3	0.6	0.5	0.4	0.4	0.6
01.2.1.3	Cocoa and powdered chocolate	0.4	0.5	0.6	0.8	0.7	0.6	0.6	0.6	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.2.2.1	Mineral or spring waters	956.7	919.4	1198.9	970.5	891.5	743.4	974.3	1050.2	1158.2	876.1	1449.7	1091.5	1012.3	873.6	1091.0	1101.5
01.2.2.2	Soft drinks	24.6	40.1	32.7	40.8	33.8	32.4	26.1	21.1	20.5	24.9	14.8	32.5	27.2	26.0	24.7	23.5
01.2.2.3	Fruit and vegetable juices	44.0	42.3	42.4	43.0	35.6	34.2	32.0	32.1	21.6	26.3	31.2	34.3	28.7	27.5	26.0	24.7
	Total beverage quantity	1026.0	1002.7	1275.2	1076.4	989.3	838.4	1059.2	1130.9	1200.8	928.2	1496.5	1177.2	1091.1	949.9	1163.3	1173.9
	Total food quantity	1155.8	1425.9	1738.7	2082.3	1742.6	1671.5	1664.7	1644.3	1242.2	1486.2	1856.1	2078.9	1754.6	1677.1	1573.9	1492.2

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.5. ABSPO nutritional food reference baskets by age and gender for Cyprus

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	6.9	8.4	10.2	12.8	10.6	10.2	6.1	3.6	6.4	7.8	9.3	10.2	8.5	8.2	7.7	7.4
01.1.1.2	Flours and other cereals	15.9	21.9	44.6	55.7	46.1	44.2	24.8	15.6	2.8	3.4	4.0	4.4	3.7	3.6	3.4	3.2
01.1.1.3	Bread	41.9	57.9	99.1	75.9	73.2	70.2	92.0	99.2	33.1	54.0	89.0	70.5	59.0	56.4	53.4	71.1
01.1.1.4	Other bakery products	1.6	3.9	2.9	6.0	5.0	4.8	2.7	1.7	3.0	3.7	4.4	4.8	4.0	3.8	3.6	3.5
01.1.1.5	Pizza and quiche	3.7	3.0	3.7	4.6	3.8	3.7	3.4	5.2	2.3	2.8	3.3	3.7	3.1	2.9	2.8	2.7
01.1.1.6	Pasta products and couscous	85.4	73.6	96.3	119.8	87.9	84.1	79.7	92.6	42.4	32.3	38.3	42.1	35.3	33.7	31.9	39.6
01.1.1.7	Breakfast cereals	3.0	7.3	8.9	11.1	9.2	8.8	8.2	12.4	5.6	6.8	8.0	8.8	7.4	7.1	6.7	6.4
01.1.1.8	Other cereal products	0.8	1.0	1.2	1.5	1.2	1.2	1.1	0.4	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.2.1	Beef and veal	2.5	3.1	3.8	4.7	3.9	3.7	3.5	5.3	2.4	2.9	3.4	3.7	3.1	3.0	2.8	2.7
01.1.2.2	Pork	14.1	34.4	25.3	52.6	43.5	41.8	39.1	59.0	10.5	32.1	38.1	41.9	35.1	33.5	31.8	30.2
01.1.2.3	Lamb and goat	2.9	7.1	8.7	10.8	8.9	8.6	8.0	12.1	5.4	6.6	7.8	8.6	7.2	6.9	6.5	6.2
01.1.2.4	Poultry	56.4	192.2	100.7	209.6	173.6	166.5	180.0	131.7	73.5	98.0	102.5	128.0	107.2	102.4	77.3	55.5
01.1.2.5	Other meats	0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6
01.1.2.6	Edible offal	0.3	0.7	0.9	1.1	0.9	0.9	0.8	1.3	0.2	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.2.7	Dried, salted or smoked meat	5.1	7.4	9.0	18.8	15.6	14.9	8.4	5.3	0.9	1.1	1.4	1.5	1.3	1.2	1.1	1.1
01.1.2.8	Other meat preparations	1.8	4.5	5.5	6.8	5.6	5.4	5.1	7.6	3.2	4.2	4.9	5.4	4.5	4.3	4.1	3.9
01.1.3.1	Fresh or chilled fish	15.8	19.3	23.6	29.4	24.4	23.4	19.2	17.8	12.1	14.7	17.5	19.2	16.1	15.4	15.6	15.9
01.1.3.2	Frozen fish	3.2	3.9	4.7	5.9	4.9	4.7	4.4	4.1	2.9	3.6	4.3	4.7	3.9	3.8	3.6	3.4
01.1.3.3	Fresh or chilled seafood	0.4	0.5	0.6	0.7	0.6	0.6	0.6	0.8	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4
01.1.3.4	Frozen seafood	1.6	1.9	2.3	2.9	2.4	2.3	2.2	3.3	1.5	1.8	2.1	2.3	1.9	1.9	1.8	1.7
01.1.3.5	Dried, smoked or salted fish and seafood	0.4	0.5	0.6	0.8	0.7	0.6	0.6	0.2	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.3.6	Other preserved or processed fish or seafood	1.7	4.2	5.2	6.4	5.3	5.1	4.8	1.8	5.2	3.9	4.7	5.1	4.3	4.1	3.9	3.7
01.1.4.1	Fresh whole milk	27.8	22.5	38.6	34.4	28.5	27.3	25.6	9.7	27.6	21.0	24.9	27.4	23.0	22.0	20.8	19.8
01.1.4.2	Fresh low fat milk	237.1	246.3	352.8	324.3	268.6	257.6	246.3	309.0	235.8	233.2	340.7	304.4	260.7	243.7	246.8	246.5
01.1.4.3	Preserved milk	4.6	3.8	6.2	5.7	4.7	4.6	4.3	1.6	2.9	3.5	4.2	4.6	3.8	3.7	3.5	3.3
01.1.4.4	Yoghurt	20.1	16.3	28.0	25.0	20.7	19.8	18.6	7.0	20.0	15.2	18.1	19.9	16.7	15.9	15.1	14.3
01.1.4.5	Cheese and curd	23.7	11.5	32.9	29.3	24.3	23.3	21.8	14.0	14.9	14.9	19.1	19.4	16.5	15.5	14.7	14.0
01.1.4.6	Other milk products	4.7	5.0	7.1	8.8	7.3	7.0	5.8	2.5	1.8	5.4	6.4	7.0	5.9	5.6	5.3	5.1
01.1.4.7	Eggs	50.7	77.4	67.6	84.5	70.0	67.1	87.9	94.8	54.1	77.0	89.5	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.2	0.3	0.4	0.5	0.4	0.4	0.3	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.5.2	Margarine and other vegetable fats	0.4	0.6	0.8	1.0	0.8	0.8	0.7	0.3	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.5
01.1.5.3	Olive oil	1.1	2.8	3.4	4.2	3.5	3.4	1.9	1.2	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4
01.1.5.4	Other edible oils	8.6	4.5	10.4	11.4	9.4	9.1	8.5	10.3	6.6	5.0	5.9	6.5	5.5	5.2	6.1	6.6
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	234.3	288.3	352.4	440.2	364.5	349.7	324.6	305.6	217.9	268.8	319.0	350.9	293.9	280.8	266.0	252.4
01.1.6.2	Frozen fruit	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.4
01.1.6.3	Dried fruit and nuts	7.5	6.1	7.5	9.3	7.7	7.4	9.7	10.5	7.5	5.7	6.8	7.4	6.2	6.0	5.6	5.9
01.1.6.4	Preserved fruit and fruit-based products	1.0	1.3	1.5	1.9	1.6	1.5	1.4	0.5	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.7.1	other fresh or chilled vegetables	137.3	191.5	274.3	371.1	364.9	350.0	327.7	309.0	52.8	96.5	114.6	192.5	174.7	168.1	121.7	92.9
01.1.7.2	Other frozen vegetables	7.8	6.4	7.8	9.7	8.0	7.7	10.1	10.9	137.7	151.5	243.3	293.6	247.1	235.0	260.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	37.0	32.9	36.7	45.9	38.0	36.4	47.7	51.5	23.0	28.0	33.2	36.6	30.6	29.3	27.7	26.4
01.1.7.4	Potatoes	67.4	56.8	56.1	86.7	71.8	68.9	38.7	24.3	134.1	209.4	193.8	238.4	180.6	170.6	157.2	103.8
01.1.7.5	Crisps	1.7	4.1	5.0	6.3	5.2	5.0	4.7	1.8	3.1	3.8	4.5	5.0	4.2	4.0	3.8	3.6
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.6	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.1	Sugar	1.4	1.7	2.1	2.6	2.1	2.0	1.9	0.7	1.3	1.6	1.9	2.1	1.7	1.6	1.6	1.5
01.1.8.2	Jams, marmalades and honey	0.4	3.7	2.7	5.7	4.7	4.5	4.2	1.6	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.8.3	Chocolate	0.5	0.6	0.7	0.9	0.8	0.7	0.7	0.3	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.8.4	Confectionery products	2.0	2.5	3.0	3.8	3.1	3.0	2.8	1.1	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.8.5	Edible ices and ice cream	5.6	6.8	5.0	10.4	8.6	8.3	4.6	2.9	0.5	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	3.5	8.5	10.4	13.0	10.8	10.3	9.7	3.7	6.5	7.9	9.4	10.4	8.7	8.3	7.9	7.5
01.1.9.2	Salt, spices and culinary herbs	0.8	1.9	2.3	1.8	2.4	2.3	2.9	3.3	2.1	5.1	5.4	5.4	6.4	6.6	6.3	6.0
01.1.9.4	Ready-made meals	1.5	1.8	2.3	2.8	2.3	2.2	2.1	2.0	1.4	1.7	2.0	2.2	1.9	1.8	1.7	1.6
01.1.9.9	Other food products	0.9	2.2	2.1	2.0	2.4	2.7	2.0	1.0	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	9.7	8.0	7.7	7.2	2.7	0.0	0.0	0.0	19.2	23.1	23.1	21.9	20.8
01.2.1.2	Tea	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.2.1.3	Cocoa and powdered chocolate	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.6
01.2.2.1	Mineral or spring waters	1139.8	1177.4	1426.3	1453.2	1308.6	1154.4	1359.7	1586.0	1088.8	892.1	1376.8	1081.9	923.1	865.9	966.1	1091.8
01.2.2.2	Soft drinks	7.4	9.0	11.0	13.7	11.3	10.9	10.2	3.8	6.9	8.4	9.9	10.9	9.1	8.7	8.3	7.9
01.2.2.3	Fruit and vegetable juices	66.3	53.8	58.3	82.2	68.1	65.3	61.1	23.1	65.9	50.2	59.6	65.5	54.9	52.4	49.7	47.2
	Total beverage quantity	1214.2	1241.2	1496.8	1560.2	1397.3	1239.4	1439.3	1616.8	1162.3	951.5	1447.4	1178.7	1011.1	951.1	1046.8	1168.6
	Total food quantity	1156.7	1466.4	1779.7	2183.8	1866.8	1790.8	1713.9	1664.0	1171.8	1444.4	1797.1	2011.6	1704.3	1626.1	1539.3	1448.3

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.6. ABSPO nutritional food reference baskets by age and gender for Czech Republic

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	6.0	6.4	12.1	9.8	8.1	7.8	6.8	2.1	6.0	6.0	12.1	7.8	6.6	6.3	8.3	10.7
01.1.1.2	Flours and other cereals	42.1	6.4	21.1	48.5	40.2	38.5	21.6	10.2	42.1	42.1	21.1	45.8	32.5	31.0	33.1	48.4
01.1.1.3	Bread	4.8	4.1	9.7	6.3	5.2	5.0	4.7	4.4	4.8	4.8	9.7	6.3	5.3	5.0	6.7	8.6
01.1.1.4	Other bakery products	4.5	3.8	1.6	5.9	4.8	4.7	2.6	1.2	4.5	4.5	1.6	5.8	4.9	4.7	2.7	0.4
01.1.1.5	Pizza and quiche	0.6	0.1	1.1	0.2	0.1	0.1	0.1	0.1	0.6	0.6	1.1	0.7	0.6	0.6	0.5	0.5
01.1.1.6	Pasta products and couscous	12.0	92.1	24.3	142.1	117.3	112.5	147.5	164.6	12.0	12.0	24.3	15.7	13.1	12.6	16.7	21.5
01.1.1.7	Breakfast cereals	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.5
01.1.1.8	Other cereal products	0.8	0.7	0.9	1.0	0.9	0.8	0.8	0.7	0.8	0.8	0.9	1.0	0.9	0.8	0.5	0.1
01.1.2.1	Beef and veal	5.6	75.2	2.0	63.8	52.8	50.7	57.9	56.0	5.6	5.6	2.0	7.3	6.1	5.8	7.7	10.0
01.1.2.2	Pork	23.4	2.0	8.3	3.1	2.5	2.4	2.3	2.2	23.4	23.4	8.3	30.6	25.6	24.5	14.6	2.2
01.1.2.3	Lamb and goat	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.2.4	Poultry	3.0	2.6	1.1	3.9	3.2	3.1	2.9	2.8	3.0	3.0	1.1	3.9	3.3	3.1	3.0	2.8
01.1.2.5	Other meats	0.7	0.8	0.9	1.2	1.0	1.0	0.9	0.9	0.7	0.7	0.9	1.0	0.8	0.8	1.0	1.3
01.1.2.6	Edible offal	4.0	1.6	3.5	4.8	9.5	9.5	8.0	8.6	4.0	4.0	3.5	7.7	9.8	10.3	13.7	17.7
01.1.2.7	Dried, salted or smoked meat	3.1	2.7	1.1	4.1	3.4	3.2	3.0	2.8	3.1	3.1	1.1	4.0	3.4	3.2	1.8	0.3
01.1.2.8	Other meat preparations	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.8	1.0
01.1.3.1	Fresh or chilled fish	39.7	33.2	39.6	50.7	42.0	40.3	52.8	57.4	39.7	39.7	39.6	51.8	43.4	41.5	40.3	39.1
01.1.3.2	Frozen fish	2.0	0.2	2.3	0.3	0.2	0.2	0.2	0.2	2.0	2.0	2.3	2.6	2.2	2.1	1.2	0.2
01.1.3.3	Fresh or chilled seafood	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.7	0.5	0.4	0.4	0.3	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.6	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.6	0.6	0.2	0.7	0.6	0.6	0.3	0.1
01.1.3.6	Other preserved or processed fish or seafood	0.3	0.3	0.1	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.4	0.4	0.3	0.2	0.0
01.1.4.1	Fresh whole milk	16.4	17.6	33.1	26.8	22.2	21.3	27.9	32.0	16.4	16.4	33.1	21.4	17.9	17.1	17.3	15.2
01.1.4.2	Fresh low fat milk	263.9	288.6	340.7	416.7	359.0	331.0	327.7	309.0	263.9	263.9	340.7	374.8	293.1	274.5	284.1	270.2
01.1.4.3	Preserved milk	2.5	2.6	5.0	4.0	3.3	3.2	4.2	4.8	2.5	2.5	5.0	3.2	2.7	2.6	2.4	2.3
01.1.4.4	Yoghurt	30.0	53.8	60.6	49.4	40.9	39.3	51.4	58.9	30.0	30.0	60.6	43.6	32.8	31.4	39.6	45.9
01.1.4.5	Cheese and curd	1.6	1.4	3.3	2.1	1.8	1.7	2.2	2.6	1.6	1.6	3.3	2.1	1.8	1.7	2.3	1.5
01.1.4.6	Other milk products	3.3	2.9	6.7	4.4	3.6	3.5	3.3	3.1	3.3	3.3	6.7	4.4	3.7	3.5	2.0	0.3
01.1.4.7	Eggs	16.8	18.0	23.6	24.6	22.8	21.9	28.6	32.8	16.8	16.8	23.6	21.9	18.4	17.6	23.3	30.0
01.1.5.1	Butter	0.9	0.7	0.3	1.1	0.9	0.9	0.8	0.8	0.9	0.9	0.3	1.1	0.9	0.9	0.5	0.1
01.1.5.2	Margarine and other vegetable fats	1.3	1.1	0.5	1.7	1.4	1.3	1.2	0.7	1.3	1.3	0.5	1.7	1.4	1.3	0.8	0.1
01.1.5.3	Olive oil	1.2	1.3	0.4	1.9	1.6	1.5	1.4	0.4	1.2	1.2	0.4	1.5	1.3	1.2	0.7	0.1
01.1.5.4	Other edible oils	0.9	2.9	0.3	5.9	4.9	4.7	2.8	1.2	0.9	0.9	0.3	1.2	1.0	0.9	0.5	0.1
01.1.5.5	Other edible animal fats	0.8	2.1	0.3	3.2	2.6	2.5	1.4	0.7	0.8	0.8	0.3	1.1	0.9	0.9	0.5	0.1
01.1.6.1	Fresh or chilled fruit	222.5	257.9	261.7	378.3	313.3	300.5	277.1	253.2	222.5	222.5	261.7	295.7	249.9	238.8	223.1	202.1
01.1.6.2	Frozen fruit	0.5	0.5	0.6	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.5	0.5	0.6	0.8
01.1.6.3	Dried fruit and nuts	48.5	32.8	63.7	65.6	54.1	52.1	55.2	61.8	48.5	48.5	63.7	58.1	46.4	44.3	46.8	56.5
01.1.6.4	Preserved fruit and fruit-based products	4.6	4.9	1.6	7.5	6.2	6.0	3.4	1.6	4.6	4.6	1.6	6.0	5.0	4.8	2.7	0.4
01.1.7.1	other fresh or chilled vegetables	36.3	215.8	23.0	329.5	285.3	287.7	327.7	309.0	36.3	36.3	23.0	50.6	70.6	67.5	89.4	115.4
01.1.7.2	Other frozen vegetables	169.2	4.9	340.7	7.5	6.2	5.9	7.8	8.9	169.2	169.2	340.7	296.7	313.9	300.0	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	1.3	1.1	2.6	1.7	1.4	1.3	1.2	1.2	1.3	1.3	2.6	1.7	1.4	1.3	1.8	2.3
01.1.7.4	Potatoes	287.1	262.5	340.7	332.0	263.1	252.8	142.0	82.3	287.1	287.1	340.7	374.8	313.9	300.0	251.4	167.2
01.1.7.5	Crisps	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.1	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.1	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	2.6	0.6	0.9	3.4	2.8	2.7	1.5	0.7	2.6	2.6	0.9	3.4	2.8	2.7	1.5	0.2
01.1.8.2	Jams, marmalades and honey	0.4	0.4	0.3	0.6	0.5	0.4	0.2	0.4	0.4	0.4	0.3	0.5	0.5	0.4	0.2	0.0
01.1.8.3	Chocolate	0.5	5.2	1.1	7.9	6.5	6.3	3.5	3.7	0.5	0.5	1.1	0.7	0.6	0.6	0.3	0.0
01.1.8.4	Confectionery products	0.4	0.3	0.4	0.5	0.4	0.4	0.2	0.1	0.4	0.4	0.4	0.5	0.4	0.4	0.2	0.0
01.1.8.5	Edible ices and ice cream	1.5	1.6	1.8	2.5	2.0	2.0	1.1	0.5	1.5	1.5	1.8	2.0	1.6	1.6	0.9	0.1
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.7	0.6	0.6	0.5	0.5	0.0	0.0	0.0	0.6	0.5	0.5	0.3	0.0
01.1.9.1	Sauces, condiments	2.0	1.7	2.4	2.6	2.2	2.1	1.7	1.8	2.0	2.0	2.4	2.6	2.2	2.1	1.2	1.9
01.1.9.2	Salt, spices and culinary herbs	7.1	7.1	9.3	8.5	9.0	9.2	9.2	9.2	7.1	7.1	9.3	8.5	9.1	9.2	9.5	9.9
01.1.9.4	Ready-made meals	1.4	1.5	2.8	2.2	1.9	1.8	1.7	1.6	1.4	1.4	2.8	1.8	1.5	1.4	1.9	2.4
01.1.9.9	Other food products	0.5	0.4	0.2	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.2	0.6	0.5	0.5	0.3	0.0
01.2.1.1	Coffee	0.0	0.0	0.0	0.5	0.4	0.4	0.4	0.4	0.0	0.0	0.0	13.6	17.9	18.2	10.3	1.6
01.2.1.2	Tea	1.1	1.0	0.4	4.7	5.9	5.9	4.0	4.7	1.1	1.1	0.4	1.4	1.2	1.2	1.6	2.0
01.2.1.3	Cocoa and powdered chocolate	0.5	0.6	0.6	0.9	0.7	0.7	0.4	0.2	0.5	0.5	0.6	0.7	0.6	0.6	0.7	1.0
01.2.2.1	Mineral or spring waters	1124.2	1139.8	1444.0	1477.3	1255.6	1204.4	1179.0	1217.8	1124.2	1124.2	1444.0	1549.4	1403.1	1326.2	1220.8	1448.5
01.2.2.2	Soft drinks	4.3	3.7	1.5	5.6	4.6	4.4	2.5	1.2	4.3	4.3	1.5	5.6	4.7	4.5	2.5	0.4
01.2.2.3	Fruit and vegetable juices	18.6	20.0	34.9	30.5	25.2	24.2	13.6	6.4	18.6	18.6	34.9	24.3	20.3	19.4	11.0	17.5
	Total beverage quantity	1148.7	1165.0	1481.5	1519.4	1292.5	1240.0	1199.9	1230.6	1148.7	1148.7	1481.5	1595.0	1447.8	1370.0	1247.0	1471.1
	Total food quantity	1281.3	1426.6	1661.2	2043.8	1716.5	1648.6	1603.1	1501.5	1281.3	1281.3	1661.2	1779.8	1558.9	1485.8	1445.1	1362.5

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.7. ABSPO nutritional food reference baskets by age and gender for Denmark

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	5.9	7.2	8.8	10.9	9.1	8.7	8.1	4.7	5.5	6.7	7.9	8.7	7.3	7.0	6.6	6.3
01.1.1.2	Flours and other cereals	14.1	17.2	21.0	26.2	21.7	20.8	19.5	9.2	21.0	16.0	19.0	20.9	17.5	16.7	15.8	15.1
01.1.1.3	Bread	12.4	7.9	9.7	12.1	10.0	9.6	9.0	8.5	35.8	69.0	95.1	90.0	75.4	72.1	73.5	90.9
01.1.1.4	Other bakery products	1.8	2.2	1.6	3.4	2.8	2.7	2.5	2.4	1.7	2.1	2.5	2.7	2.3	2.2	2.0	1.9
01.1.1.5	Pizza and quiche	8.0	5.1	8.8	7.8	6.5	6.2	5.8	5.5	3.9	4.8	5.7	6.2	5.2	5.0	4.7	4.5
01.1.1.6	Pasta products and couscous	118.3	108.4	174.0	168.8	137.6	131.5	138.4	139.9	8.3	10.1	12.0	13.2	11.1	10.6	10.0	9.5
01.1.1.7	Breakfast cereals	0.7	7.9	9.7	12.1	10.1	9.6	9.0	8.5	6.1	7.4	8.8	9.7	8.1	7.7	7.3	7.0
01.1.1.8	Other cereal products	4.3	5.2	6.4	8.0	6.6	6.4	6.0	5.6	4.0	4.9	5.8	6.4	5.3	5.1	4.8	4.6
01.1.2.1	Beef and veal	31.4	40.4	28.0	58.3	46.1	46.3	52.9	57.6	13.0	15.8	18.7	20.6	17.2	16.5	15.6	14.8
01.1.2.2	Pork	14.0	12.2	8.9	18.6	15.4	14.7	13.8	13.0	9.3	11.3	13.5	14.8	12.4	11.8	11.2	10.7
01.1.2.3	Lamb and goat	1.6	1.9	2.3	2.9	2.4	2.3	2.2	2.0	1.5	1.8	2.1	2.3	1.9	1.9	1.8	1.7
01.1.2.4	Poultry	44.4	28.5	20.9	43.5	36.0	34.5	32.3	15.2	21.8	26.5	31.5	34.7	29.0	27.7	26.3	25.0
01.1.2.5	Other meats	0.5	0.6	0.7	0.9	0.8	0.7	0.7	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.2.6	Edible offal	0.1	0.7	0.8	1.0	0.8	0.8	0.7	0.7	0.2	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.2.7	Dried, salted or smoked meat	1.6	1.9	2.4	3.0	2.5	2.4	2.2	2.1	1.5	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.2.8	Other meat preparations	2.7	4.2	5.2	6.4	5.3	5.1	4.8	4.5	3.6	10.9	13.0	14.3	12.0	11.4	10.8	10.3
01.1.3.1	Fresh or chilled fish	5.7	15.2	18.6	23.3	19.3	18.5	17.3	16.3	8.4	10.3	12.2	13.4	11.2	10.7	10.5	9.9
01.1.3.2	Frozen fish	1.1	1.4	1.7	2.1	1.7	1.7	1.6	1.5	1.0	1.3	1.5	1.7	1.4	1.3	1.3	1.2
01.1.3.3	Fresh or chilled seafood	2.6	1.7	2.1	2.6	2.1	2.1	1.9	1.8	1.3	1.6	1.9	2.1	1.7	1.7	1.6	1.5
01.1.3.4	Frozen seafood	1.5	1.0	1.2	1.5	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.3.5	Dried, smoked or salted fish and seafood	3.6	2.3	2.8	3.5	2.9	2.8	2.6	2.5	1.8	2.1	2.5	2.8	2.3	2.2	2.1	2.0
01.1.3.6	Other preserved or processed fish or seafood	1.2	1.4	1.7	2.2	1.8	1.7	1.6	1.5	17.5	13.3	15.8	17.4	14.5	13.9	15.4	17.5
01.1.4.1	Fresh whole milk	70.4	70.1	120.0	107.1	88.7	85.1	79.6	69.5	85.9	65.4	77.6	85.4	71.5	68.3	64.7	61.5
01.1.4.2	Fresh low fat milk	237.1	183.7	327.9	292.6	250.3	232.4	236.3	271.1	199.3	151.7	252.0	198.0	169.1	158.5	159.7	192.8
01.1.4.3	Preserved milk	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.4.4	Yoghurt	25.0	30.4	22.4	46.4	38.5	36.9	34.5	16.3	23.3	28.4	33.7	37.0	31.0	29.6	28.1	26.7
01.1.4.5	Cheese and curd	15.9	19.3	33.0	29.5	24.4	23.4	22.2	20.7	8.2	15.4	20.6	23.5	19.7	18.8	17.0	14.3
01.1.4.6	Other milk products	1.4	1.7	2.1	2.7	2.2	2.1	2.0	1.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.4.7	Eggs	100.0	92.7	79.7	100.0	83.7	80.3	86.9	92.8	38.9	95.7	89.7	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.1	0.7	0.5	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.5.2	Margarine and other vegetable fats	0.4	2.9	3.2	6.7	5.5	5.3	3.7	2.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.5.3	Olive oil	0.2	2.7	3.3	4.1	3.4	3.3	3.0	1.4	2.5	2.5	3.0	3.3	2.7	2.6	2.5	2.4
01.1.5.4	Other edible oils	5.3	3.8	10.7	9.8	8.1	7.8	7.8	6.8	0.8	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.5.5	Other edible animal fats	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	226.4	272.0	342.6	415.3	343.9	329.9	308.8	284.4	209.4	261.7	310.6	341.7	286.1	273.5	259.0	246.1
01.1.6.2	Frozen fruit	1.9	2.3	2.8	3.5	2.9	2.8	2.6	2.4	1.7	2.1	2.5	2.8	2.3	2.2	2.1	2.0
01.1.6.3	Dried fruit and nuts	14.0	20.7	15.2	31.6	26.2	25.1	23.5	29.0	14.7	11.2	13.3	14.6	12.2	11.7	11.1	10.7
01.1.6.4	Preserved fruit and fruit-based products	1.0	1.2	1.5	1.8	1.5	1.5	1.4	1.3	0.9	1.1	1.3	1.5	1.2	1.2	1.1	1.1
01.1.7.1	other fresh or chilled vegetables	117.4	180.4	205.5	275.4	228.1	218.8	286.7	289.7	36.7	84.4	79.6	145.9	122.2	116.8	88.9	84.5
01.1.7.2	Other frozen vegetables	15.7	10.1	17.2	15.4	12.7	12.2	11.4	16.2	173.3	155.0	293.1	337.3	289.9	270.0	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	49.1	39.6	48.4	60.5	50.1	48.0	51.0	63.6	27.7	36.9	43.8	48.2	40.4	38.6	36.5	34.8
01.1.7.4	Potatoes	9.4	114.9	84.3	175.4	145.2	139.3	78.2	61.5	174.3	225.9	221.6	266.8	205.5	195.1	164.0	117.3
01.1.7.5	Crisps	0.3	3.9	4.7	5.9	4.9	4.7	4.4	4.2	3.0	3.6	4.3	4.7	4.0	3.8	3.6	3.4
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.1.8.1	Sugar	1.0	1.2	0.9	1.9	1.5	1.5	1.4	1.1	0.9	1.1	1.3	1.5	1.2	1.2	1.1	1.1
01.1.8.2	Jams, marmalades and honey	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.5
01.1.8.3	Chocolate	0.7	0.8	1.0	1.3	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.8.4	Confectionery products	0.8	1.0	0.7	1.5	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.8.5	Edible ices and ice cream	1.0	1.3	1.5	1.9	1.6	1.5	1.4	1.4	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	1.3	1.6	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	1.4	1.4
01.1.9.2	Salt, spices and culinary herbs	0.4	4.9	5.5	4.5	5.7	6.0	5.6	6.2	1.5	3.3	3.6	3.6	4.5	4.8	4.6	4.4
01.1.9.4	Ready-made meals	1.4	1.7	2.0	2.5	2.1	2.0	1.9	1.8	1.3	1.6	1.8	2.0	1.7	1.6	1.5	1.5
01.1.9.9	Other food products	1.6	1.2	1.4	1.7	1.5	1.4	1.3	1.3	0.4	1.1	1.3	1.1	1.2	1.1	1.1	1.0
01.2.1.1	Coffee	0.0	0.0	0.0	20.5	27.0	27.1	25.4	24.0	0.0	0.0	0.0	17.6	21.7	21.8	20.7	19.7
01.2.1.2	Tea	0.4	0.7	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.2.1.3	Cocoa and powdered chocolate	1.2	0.8	0.8	1.2	1.0	0.9	0.9	0.8	0.6	0.7	0.9	0.9	0.8	0.8	0.7	0.7
01.2.2.1	Mineral or spring waters	865.7	776.4	949.3	881.5	728.9	672.7	881.6	890.9	1043.7	833.0	1288.9	1037.1	885.6	830.1	1049.8	1046.7
01.2.2.2	Soft drinks	19.4	23.6	28.9	36.1	29.9	28.7	26.8	12.7	7.6	9.3	11.0	12.2	10.2	9.7	9.2	8.8
01.2.2.3	Fruit and vegetable juices	58.2	103.5	110.7	136.8	111.2	108.7	61.0	48.0	57.3	83.5	99.1	109.0	91.3	87.3	82.6	56.4
	Total beverage quantity	944.8	905.1	1090.5	1076.7	898.6	838.6	996.3	976.9	1109.6	927.0	1400.4	1177.5	1010.1	950.1	1163.5	1132.6
	Total food quantity	1177.7	1342.6	1679.3	2023.8	1682.6	1608.4	1596.4	1557.8	1180.0	1376.9	1739.4	1917.6	1616.7	1538.5	1464.8	1422.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.8. ABSPO nutritional food reference baskets by age and gender for Estonia

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	3.2	4.2	1.0	6.5	5.4	5.1	4.8	4.5	3.2	3.9	4.7	5.2	4.3	4.1	3.9	3.7
01.1.1.2	Flours and other cereals	1.6	10.2	5.0	33.8	25.9	24.8	23.2	17.4	1.6	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.1.3	Bread	30.3	132.4	326.8	160.8	187.8	180.1	198.3	213.6	30.3	20.5	37.8	32.1	23.1	21.4	28.4	32.8
01.1.1.4	Other bakery products	2.3	3.1	3.8	4.7	3.9	3.7	2.1	1.3	2.3	2.9	3.4	3.7	3.1	3.0	2.8	2.7
01.1.1.5	Pizza and quiche	1.3	1.8	3.9	2.7	2.2	2.1	2.0	1.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.1.6	Pasta products and couscous	7.6	9.9	12.1	15.1	12.5	12.0	11.2	16.9	7.6	9.2	10.9	16.9	10.1	9.6	9.6	14.8
01.1.1.7	Breakfast cereals	2.4	3.1	2.8	4.7	3.9	3.7	3.5	3.3	2.4	2.9	3.4	3.7	3.1	3.0	2.8	4.6
01.1.1.8	Other cereal products	0.6	3.9	9.5	11.8	9.8	9.4	8.8	3.3	0.6	0.7	0.9	0.9	0.8	0.8	0.7	0.7
01.1.2.1	Beef and veal	1.8	2.4	3.0	3.7	3.1	2.9	2.7	4.1	1.8	2.3	2.7	2.9	2.5	2.4	2.2	2.1
01.1.2.2	Pork	17.1	22.4	5.5	34.1	28.3	27.1	25.4	24.0	17.1	20.8	15.7	27.2	22.8	21.8	12.4	5.9
01.1.2.3	Lamb and goat	0.7	1.0	1.2	1.5	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.2.4	Poultry	36.7	19.8	24.2	30.2	25.0	24.0	22.5	33.9	36.7	44.7	53.1	69.8	48.9	46.8	26.6	12.6
01.1.2.5	Other meats	0.9	1.2	1.4	1.8	1.5	1.4	1.3	1.3	0.9	1.1	1.3	1.4	1.2	1.1	1.1	1.0
01.1.2.6	Edible offal	1.6	1.2	0.6	3.1	3.1	3.0	2.8	4.3	1.6	4.0	4.8	7.9	10.1	10.5	9.9	14.6
01.1.2.7	Dried, salted or smoked meat	1.6	2.1	2.6	3.2	2.7	2.6	2.4	2.3	1.6	2.0	2.3	2.6	2.2	2.1	2.0	1.9
01.1.2.8	Other meat preparations	3.9	57.7	14.1	77.0	71.7	70.0	75.5	73.4	3.9	4.8	5.7	6.3	5.3	5.0	4.8	4.5
01.1.3.1	Fresh or chilled fish	10.2	15.7	12.8	16.0	13.2	12.7	16.6	17.9	10.2	12.5	23.6	16.3	13.6	13.0	13.4	14.4
01.1.3.2	Frozen fish	0.6	0.8	1.0	1.3	1.1	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.3.3	Fresh or chilled seafood	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	3.1	3.4	0.8	5.2	4.3	4.1	3.9	3.7	3.1	3.2	3.8	4.2	3.5	3.3	3.2	2.0
01.1.3.6	Other preserved or processed fish or seafood	1.5	9.8	12.0	15.0	12.4	11.9	11.1	4.2	1.5	9.1	10.8	11.9	10.0	9.5	9.0	8.6
01.1.4.1	Fresh whole milk	28.8	23.8	45.9	31.9	26.4	25.3	23.7	35.8	28.8	19.5	33.8	25.4	21.3	20.3	19.3	18.3
01.1.4.2	Fresh low fat milk	235.8	288.6	352.8	426.9	361.5	339.1	327.7	309.0	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.9	1.2	2.7	1.9	1.5	1.5	1.4	1.3	0.9	1.1	1.4	1.5	1.2	1.2	1.1	1.1
01.1.4.4	Yoghurt	31.5	22.8	50.3	34.9	28.9	27.7	17.3	26.4	31.5	21.3	40.4	27.8	23.3	22.2	21.1	20.0
01.1.4.5	Cheese and curd	13.5	4.3	9.5	6.6	5.5	5.2	4.9	4.6	13.5	11.3	21.4	14.7	12.9	11.8	11.2	6.3
01.1.4.6	Other milk products	0.8	2.8	12.2	8.5	7.0	6.7	3.8	2.4	0.8	5.2	6.1	6.7	5.6	5.4	5.1	1.5
01.1.4.7	Eggs	53.4	52.8	100.0	100.0	92.9	89.2	100.0	100.0	53.4	95.7	58.7	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.3	0.6	0.8	1.0	0.8	0.8	0.5	0.3	0.3	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.5.2	Margarine and other vegetable fats	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.2	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3
01.1.5.3	Olive oil	0.1	1.5	1.8	2.2	1.8	1.8	1.6	0.6	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
01.1.5.4	Other edible oils	10.7	5.2	6.5	12.5	10.3	9.9	9.1	11.2	10.7	8.8	8.9	13.8	8.9	7.9	8.1	7.6
01.1.5.5	Other edible animal fats	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	222.1	262.9	350.7	440.6	364.9	350.0	327.7	308.1	222.1	270.5	321.0	353.2	295.8	282.7	267.7	252.0
01.1.6.2	Frozen fruit	0.4	0.5	0.6	0.8	0.7	0.6	0.6	0.6	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.6.3	Dried fruit and nuts	3.2	4.1	9.1	6.3	5.2	5.0	4.7	7.1	3.2	3.8	4.6	5.0	4.2	4.0	3.8	6.2
01.1.6.4	Preserved fruit and fruit-based products	1.0	1.4	1.7	2.1	1.7	1.6	1.5	1.4	1.0	1.3	1.5	1.6	1.4	1.3	1.2	1.2
01.1.7.1	other fresh or chilled vegetables	13.4	193.8	267.5	308.5	255.5	245.1	321.2	309.0	13.4	32.7	38.8	64.0	89.4	85.4	48.5	23.1
01.1.7.2	Other frozen vegetables	135.1	2.9	6.4	4.4	3.7	3.5	3.3	3.1	135.1	82.3	199.9	176.3	184.2	176.0	233.4	269.5
01.1.7.3	Other dried, preserved or processed vegetables	134.1	24.7	25.4	25.1	20.8	19.9	18.7	17.6	134.1	261.2	252.0	213.2	178.5	170.6	127.3	96.6
01.1.7.4	Potatoes	230.9	255.1	119.0	369.0	218.7	209.4	133.9	73.9	230.9	287.1	340.7	374.8	313.9	300.0	284.1	265.1
01.1.7.5	Crisps	1.5	2.0	2.4	3.0	2.5	2.4	2.2	0.8	1.5	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.7.6	Other tubers and products of tuber vegetables	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.8.1	Sugar	1.6	2.1	0.5	3.2	2.6	2.5	2.4	1.5	1.6	1.9	2.3	2.5	2.1	2.0	1.9	0.5
01.1.8.2	Jams, marmalades and honey	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.3	Chocolate	0.6	0.8	1.7	1.2	1.0	0.9	0.9	0.8	0.6	0.7	0.9	0.9	0.8	0.8	0.7	0.7
01.1.8.4	Confectionery products	0.6	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.8.5	Edible ices and ice cream	0.6	0.8	1.0	1.3	1.1	1.0	1.0	0.9	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	8.8	6.9	1.7	10.6	8.8	8.4	7.9	3.0	8.8	10.7	12.8	14.0	11.7	11.2	10.6	10.1
01.1.9.2	Salt, spices and culinary herbs	0.9	1.6	0.4	1.4	1.4	1.9	1.8	2.3	0.9	2.9	3.8	4.1	5.2	5.5	6.0	6.9
01.1.9.4	Ready-made meals	1.7	21.9	48.3	33.5	27.7	26.6	24.9	23.5	1.7	2.0	2.4	2.7	2.2	2.1	2.0	1.9
01.1.9.9	Other food products	0.4	0.6	0.2	0.6	0.8	0.8	0.4	0.3	0.4	0.6	0.7	0.6	0.6	0.6	0.6	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	15.5	20.1	20.5	17.6	16.9	0.0	0.0	0.0	16.4	20.7	20.9	19.8	11.3
01.2.1.2	Tea	0.5	2.3	1.6	1.7	2.0	1.9	2.5	2.7	0.5	0.6	0.7	0.8	0.7	0.7	0.6	1.0
01.2.1.3	Cocoa and powdered chocolate	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2
01.2.2.1	Mineral or spring waters	1132.3	895.9	1314.3	946.6	782.5	724.4	941.8	1023.4	1132.3	860.8	1391.4	1304.9	993.7	878.7	967.4	1345.4
01.2.2.2	Soft drinks	15.5	41.1	10.1	62.8	50.2	49.9	28.0	17.6	15.5	18.8	22.4	24.6	20.6	19.7	18.7	5.3
01.2.2.3	Fruit and vegetable juices	22.6	29.5	40.5	45.0	37.2	35.7	29.2	31.5	22.6	27.5	32.6	35.9	30.0	28.7	27.2	25.8
	Total beverage quantity	1171.1	969.1	1366.8	1072.0	892.4	832.8	1019.4	1092.4	1171.1	908.0	1447.4	1382.9	1066.0	948.9	1033.9	1389.1
	Total food quantity	1264.0	1494.8	1866.6	2274.7	1876.6	1793.6	1766.8	1681.9	1264.0	1564.4	1891.9	2006.4	1754.8	1681.1	1582.5	1497.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.9. ABSPO nutritional food reference baskets by age and gender for Finland

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	6.7	8.2	10.0	12.5	10.4	9.9	6.5	3.5	6.3	7.6	5.4	10.0	8.3	8.0	7.6	7.2
01.1.1.2	Flours and other cereals	16.1	13.3	24.0	30.0	24.8	23.8	13.4	8.4	1.5	1.8	1.3	2.4	2.0	1.9	1.8	1.7
01.1.1.3	Bread	96.3	117.2	200.6	120.9	149.0	142.2	178.5	200.9	58.1	52.9	87.8	69.0	57.8	55.2	70.0	74.6
01.1.1.4	Other bakery products	0.6	2.6	1.9	4.0	3.3	3.2	3.0	1.1	2.0	2.4	1.7	3.2	2.7	2.5	2.4	2.3
01.1.1.5	Pizza and quiche	20.9	14.9	25.6	22.8	18.9	18.1	17.0	16.0	19.5	13.9	23.2	18.2	15.2	14.6	13.8	19.7
01.1.1.6	Pasta products and couscous	8.9	10.8	13.2	16.5	13.6	13.1	12.2	11.5	8.3	10.1	7.2	13.1	11.0	10.5	9.9	14.2
01.1.1.7	Breakfast cereals	3.1	3.8	4.6	5.7	4.8	4.6	4.3	4.0	2.9	3.5	2.5	4.6	3.8	3.7	3.5	5.0
01.1.1.8	Other cereal products	3.3	4.0	4.9	6.1	5.1	4.8	4.5	1.7	3.1	3.7	4.4	4.9	4.1	3.9	3.7	3.5
01.1.2.1	Beef and veal	2.3	9.3	6.8	14.2	11.8	11.3	14.8	15.9	7.1	8.7	6.2	11.3	9.5	9.1	8.6	5.3
01.1.2.2	Pork	2.9	11.6	8.5	17.7	14.7	14.1	13.2	12.4	8.9	10.8	7.7	14.1	11.8	11.3	10.7	5.1
01.1.2.3	Lamb and goat	0.6	0.7	0.8	1.1	0.9	0.8	0.8	0.7	0.5	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.1.2.4	Poultry	31.7	179.8	94.2	196.1	161.6	155.8	162.6	140.7	71.2	86.7	102.8	113.1	94.7	90.6	85.8	40.8
01.1.2.5	Other meats	2.5	3.0	3.7	4.6	3.8	3.7	3.4	3.2	2.3	2.8	3.5	3.7	3.1	3.0	2.8	2.7
01.1.2.6	Edible offal	0.2	0.7	0.8	1.0	0.8	0.8	0.7	0.7	0.1	0.6	0.4	0.8	0.7	0.6	0.6	0.6
01.1.2.7	Dried, salted or smoked meat	0.9	3.5	2.6	5.4	4.5	4.3	4.0	3.8	2.7	3.3	2.4	4.3	3.6	3.4	3.3	3.1
01.1.2.8	Other meat preparations	3.5	14.3	10.5	21.8	18.0	17.3	16.2	24.4	3.3	13.3	9.5	17.4	14.5	13.9	13.2	6.3
01.1.3.1	Fresh or chilled fish	29.8	29.4	44.4	55.4	45.9	44.0	48.3	42.6	14.8	13.7	22.8	17.9	15.0	14.3	14.6	17.8
01.1.3.2	Frozen fish	0.8	0.9	1.1	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.0	1.1	1.0	0.9	0.9	0.8
01.1.3.3	Fresh or chilled seafood	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.3.5	Dried, smoked or salted fish and seafood	2.5	3.1	3.7	4.7	3.9	3.7	3.5	3.3	2.3	2.8	2.0	3.7	3.1	3.0	2.8	2.7
01.1.3.6	Other preserved or processed fish or seafood	2.8	3.5	4.2	5.3	4.4	4.2	3.9	3.7	2.6	3.2	2.4	4.2	3.5	3.4	3.2	3.0
01.1.4.1	Fresh whole milk	29.5	21.1	36.1	32.2	26.7	25.6	24.0	22.6	27.5	19.7	32.7	25.7	21.5	20.6	19.5	18.5
01.1.4.2	Fresh low fat milk	237.1	262.1	352.8	349.6	271.6	259.2	270.2	293.3	235.8	263.6	340.7	344.2	294.5	275.4	278.8	253.8
01.1.4.3	Preserved milk	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.6	0.5	0.4	0.4	0.4	0.4
01.1.4.4	Yoghurt	6.7	4.8	8.2	7.3	6.1	5.8	5.5	5.2	4.4	4.5	7.5	5.9	4.9	4.7	4.4	4.2
01.1.4.5	Cheese and curd	23.7	10.2	29.1	18.6	21.5	20.6	16.0	9.8	4.3	3.1	5.2	4.1	3.4	3.2	3.1	2.9
01.1.4.6	Other milk products	4.3	5.3	4.7	8.1	6.7	6.4	6.0	2.3	4.1	4.9	8.2	6.4	5.4	5.2	4.9	4.6
01.1.4.7	Eggs	11.2	29.1	35.6	44.4	36.8	35.3	46.3	49.9	32.1	77.0	69.2	100.0	100.0	100.0	100.0	90.1
01.1.5.1	Butter	0.3	1.1	0.8	1.6	1.4	1.3	1.2	0.5	0.6	1.0	0.7	1.3	1.1	1.0	1.0	0.9
01.1.5.2	Margarine and other vegetable fats	0.2	0.8	1.0	1.3	1.0	1.0	0.9	0.4	0.6	0.8	0.5	1.0	0.8	0.8	0.8	0.7
01.1.5.3	Olive oil	1.2	1.4	1.7	2.2	1.8	1.7	1.6	0.6	1.1	1.3	0.9	1.7	1.4	1.4	1.3	1.2
01.1.5.4	Other edible oils	9.0	4.7	9.5	11.9	9.8	9.4	9.4	9.3	6.0	4.3	3.1	5.6	4.7	4.5	4.9	5.5
01.1.5.5	Other edible animal fats	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	235.0	278.9	346.2	425.9	352.7	338.3	316.7	301.9	217.8	268.9	316.7	351.1	294.1	281.0	266.1	250.6
01.1.6.2	Frozen fruit	0.8	1.0	1.2	1.5	1.2	1.2	1.1	1.0	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.6.3	Dried fruit and nuts	4.6	5.6	6.9	8.6	7.1	6.8	6.4	9.6	7.3	5.2	8.7	6.9	5.7	5.5	5.2	7.4
01.1.6.4	Preserved fruit and fruit-based products	2.9	10.6	7.8	16.2	13.4	12.9	12.1	4.5	0.8	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.1.7.1	other fresh or chilled vegetables	162.6	219.7	292.6	399.6	364.9	350.0	327.7	309.0	41.7	101.6	120.6	191.3	182.6	176.9	114.0	102.9
01.1.7.2	Other frozen vegetables	9.1	6.5	11.2	10.0	8.3	7.9	10.4	11.2	177.4	151.1	273.9	304.2	257.3	243.4	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	10.5	12.4	15.2	18.9	15.7	15.0	19.7	21.3	9.5	11.6	19.2	15.1	12.6	12.1	11.4	16.3
01.1.7.4	Potatoes	182.8	159.8	147.5	328.5	197.9	189.8	106.6	67.0	169.8	268.0	281.4	315.5	244.3	231.4	176.7	173.1
01.1.7.5	Crisps	1.1	4.5	5.3	6.9	5.7	5.5	5.1	3.9	3.5	4.2	7.0	5.5	4.6	4.4	4.2	4.0
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	1.0	1.2	1.4	1.8	1.5	1.4	1.3	0.5	0.9	1.1	0.8	1.4	1.2	1.1	1.1	1.0
01.1.8.2	Jams, marmalades and honey	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3
01.1.8.3	Chocolate	0.7	0.8	1.0	1.3	1.1	1.0	1.0	0.9	0.6	0.8	1.3	1.0	0.9	0.8	0.8	0.7
01.1.8.4	Confectionery products	0.9	1.1	1.3	1.6	1.3	1.3	1.2	1.1	0.8	1.0	1.1	1.3	1.1	1.0	1.0	0.9
01.1.8.5	Edible ices and ice cream	1.4	1.7	2.1	2.7	2.2	2.1	2.0	1.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
01.1.9.1	Sauces, condiments	2.4	9.9	12.1	15.1	12.5	12.0	11.2	10.6	7.6	9.2	10.9	12.0	10.1	9.6	9.1	8.7
01.1.9.2	Salt, spices and culinary herbs	0.2	0.7	0.6	1.0	0.8	0.8	0.8	1.1	1.0	2.6	3.8	3.0	3.7	4.0	3.8	5.5
01.1.9.4	Ready-made meals	21.6	26.3	44.0	40.2	33.3	31.9	29.9	45.1	34.3	24.5	40.8	32.0	26.8	25.6	24.3	23.1
01.1.9.9	Other food products	0.6	2.3	1.7	2.1	2.5	2.8	2.3	1.6	0.5	2.1	1.5	2.1	2.3	2.2	2.1	1.0
01.2.1.1	Coffee	0.0	0.0	0.0	11.7	14.8	15.4	10.9	9.7	0.0	0.0	0.0	12.5	16.3	16.6	15.8	15.0
01.2.1.2	Tea	3.3	2.4	4.1	2.4	3.0	2.9	3.8	4.1	0.4	1.4	1.0	1.6	1.6	1.5	1.4	1.7
01.2.1.3	Cocoa and powdered chocolate	0.6	0.7	0.8	1.1	0.9	0.8	0.8	0.7	0.5	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.2.2.1	Mineral or spring waters	814.4	816.4	998.2	925.1	830.0	707.3	857.5	901.1	1145.5	837.2	1341.0	1093.1	932.4	874.8	828.5	1181.9
01.2.2.2	Soft drinks	20.8	25.4	18.6	38.7	32.1	30.8	28.8	10.9	4.7	5.7	4.1	7.5	6.3	6.0	5.7	5.4
01.2.2.3	Fruit and vegetable juices	54.0	59.3	57.2	90.5	75.0	71.9	54.0	63.5	36.3	44.2	73.5	57.8	48.4	46.2	43.8	41.6
	Total beverage quantity	893.1	904.2	1078.9	1069.5	955.8	829.2	955.9	990.0	1187.5	889.2	1420.4	1173.2	1005.6	945.9	895.8	1246.2
	Total food quantity	1199.3	1520.2	1846.3	2309.4	1909.3	1830.6	1750.6	1688.0	1211.7	1481.0	1857.9	2063.4	1757.3	1676.2	1587.7	1470.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.10. ABSPO nutritional food reference baskets by age and gender for France

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	7.5	9.2	11.2	14.0	11.6	11.1	10.4	9.8	7.0	8.5	10.1	11.2	9.3	8.9	8.5	8.0
01.1.1.2	Flours and other cereals	107.5	103.1	148.9	234.2	164.9	158.1	128.5	94.8	16.9	20.6	23.4	26.8	22.5	21.5	20.3	19.3
01.1.1.3	Bread	27.1	20.6	35.2	31.4	26.0	25.0	23.4	30.9	25.2	19.2	22.8	25.1	21.0	20.1	26.6	28.9
01.1.1.4	Other bakery products	2.2	1.7	1.2	2.6	2.2	2.1	1.9	1.7	1.3	1.6	1.9	2.1	1.7	1.7	1.6	1.5
01.1.1.5	Pizza and quiche	1.1	0.9	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.8	0.8	0.8
01.1.1.6	Pasta products and couscous	39.7	41.0	51.7	46.2	38.2	36.7	34.3	45.3	17.2	21.0	24.9	27.4	22.9	21.9	22.2	31.6
01.1.1.7	Breakfast cereals	0.8	0.9	1.1	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.0	1.1	0.9	0.9	0.9	0.8
01.1.1.8	Other cereal products	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.2.1	Beef and veal	12.2	52.1	27.3	56.8	47.1	45.2	52.8	55.5	45.7	74.6	53.1	97.4	81.6	77.9	44.3	28.1
01.1.2.2	Pork	4.8	5.9	4.3	9.0	7.4	7.1	6.7	6.3	4.5	5.5	6.5	7.2	6.0	5.7	5.4	5.2
01.1.2.3	Lamb and goat	0.6	1.9	1.4	2.9	2.4	2.3	2.1	2.0	1.4	1.7	2.1	2.3	1.9	1.8	1.7	1.6
01.1.2.4	Poultry	19.5	14.8	10.9	22.7	18.8	18.0	16.9	15.9	11.4	13.8	16.4	18.1	15.1	14.5	13.7	9.0
01.1.2.5	Other meats	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.2.6	Edible offal	0.5	0.6	0.7	0.9	0.8	0.7	0.7	0.7	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.2.7	Dried, salted or smoked meat	1.8	5.5	4.0	8.4	6.9	6.7	6.2	3.5	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.2.8	Other meat preparations	1.2	3.7	2.7	5.7	4.7	4.5	4.2	4.0	2.8	3.5	4.1	4.5	3.8	3.6	3.4	3.3
01.1.3.1	Fresh or chilled fish	4.7	13.5	23.1	20.6	17.0	16.3	15.3	15.9	12.8	15.5	18.4	20.3	17.0	16.2	16.4	19.5
01.1.3.2	Frozen fish	5.1	6.2	7.6	9.5	7.9	7.5	7.1	6.7	4.8	5.8	6.9	7.6	6.3	6.1	5.7	5.5
01.1.3.3	Fresh or chilled seafood	2.1	1.6	2.0	2.5	2.1	2.0	1.8	1.7	1.2	1.5	1.8	2.0	1.7	1.6	1.5	1.4
01.1.3.4	Frozen seafood	8.2	6.2	10.6	9.5	7.9	7.5	7.1	9.3	6.8	5.8	6.9	7.6	6.3	6.1	5.7	5.5
01.1.3.5	Dried, smoked or salted fish and seafood	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	0.8	1.0	1.3	1.6	1.3	1.2	1.2	1.1	0.8	1.0	1.1	1.2	1.0	1.0	0.9	0.9
01.1.4.1	Fresh whole milk	10.0	12.1	20.8	18.5	15.4	14.7	13.8	13.0	9.3	11.3	18.8	14.8	12.4	11.8	11.2	10.7
01.1.4.2	Fresh low fat milk	231.0	222.8	300.8	277.3	235.8	213.2	279.4	263.5	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.4.4	Yoghurt	31.3	23.8	40.7	36.3	30.1	28.9	27.0	25.5	24.9	22.2	36.9	29.0	24.3	23.2	22.0	20.9
01.1.4.5	Cheese and curd	39.3	33.5	64.7	63.8	52.0	50.7	38.1	37.9	15.3	11.7	19.4	15.2	14.4	12.2	12.9	12.2
01.1.4.6	Other milk products	0.6	1.8	1.3	2.8	2.3	2.2	2.1	2.0	1.4	1.7	2.0	2.2	1.9	1.8	1.7	1.6
01.1.4.7	Eggs	96.4	100.0	64.1	100.0	92.7	88.9	100.0	94.5	78.6	95.4	100.0	100.0	100.0	100.0	100.0	90.1
01.1.5.1	Butter	0.2	0.6	0.4	0.9	0.7	0.7	0.6	0.4	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.5.2	Margarine and other vegetable fats	1.1	2.9	2.4	5.0	4.2	4.0	2.9	2.1	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.5.3	Olive oil	1.1	3.4	2.5	5.2	4.3	4.1	3.8	2.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.5.4	Other edible oils	9.8	7.9	16.6	20.2	16.7	16.1	15.9	16.2	8.8	10.9	8.5	14.2	11.9	11.4	10.8	10.7
01.1.5.5	Other edible animal fats	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	178.5	190.1	232.4	207.3	171.7	164.7	215.9	203.6	182.5	155.4	258.1	202.8	169.9	162.3	215.2	233.9
01.1.6.2	Frozen fruit	2.6	3.2	3.9	4.9	4.0	3.9	3.6	3.4	2.4	3.0	3.5	3.9	3.3	3.1	2.9	2.8
01.1.6.3	Dried fruit and nuts	1.7	3.7	4.5	5.6	4.7	4.5	4.2	5.3	2.8	3.4	4.1	4.5	3.8	3.6	3.4	5.2
01.1.6.4	Preserved fruit and fruit-based products	4.4	5.4	4.0	8.2	6.8	6.5	6.1	5.8	4.1	5.0	6.0	6.6	5.5	5.3	5.0	4.7
01.1.7.1	other fresh or chilled vegetables	81.2	61.8	105.7	94.3	78.1	74.9	80.2	92.6	8.0	24.2	28.7	31.6	26.5	25.3	24.0	9.1
01.1.7.2	Other frozen vegetables	5.3	4.0	6.8	6.1	5.1	4.9	4.5	6.0	178.4	162.6	270.1	212.2	177.7	169.9	225.2	244.8
01.1.7.3	Other dried, preserved or processed vegetables	95.7	288.6	352.8	264.4	364.3	350.0	327.7	309.0	83.0	227.1	192.3	296.5	248.3	237.3	160.4	135.6
01.1.7.4	Potatoes	15.0	63.8	33.4	69.5	57.6	55.2	51.7	54.4	192.4	240.1	315.3	329.0	257.4	244.8	224.7	186.7
01.1.7.5	Crisps	0.3	0.9	0.7	1.4	1.1	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.7	0.9	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.8.2	Jams, marmalades and honey	0.0	1.1	0.8	1.7	1.4	1.3	1.3	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.8.3	Chocolate	0.0	0.7	0.5	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.8.4	Confectionery products	0.0	4.6	3.4	7.0	5.8	5.6	3.1	3.0	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4
01.1.8.5	Edible ices and ice cream	0.0	5.9	4.3	9.0	7.5	7.2	6.7	3.8	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.4	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.3	0.3	0.2	0.2	0.2
01.1.9.1	Sauces, condiments	3.5	10.7	13.1	16.3	13.5	13.0	12.2	11.5	8.2	10.0	11.8	13.0	10.9	10.4	9.9	9.4
01.1.9.2	Salt, spices and culinary herbs	0.6	1.8	2.2	1.7	1.8	2.2	2.2	2.5	1.9	4.3	5.8	4.6	5.7	6.0	6.4	7.1
01.1.9.4	Ready-made meals	1.4	1.5	1.9	2.3	1.9	1.9	1.7	1.6	1.2	1.4	1.7	1.9	1.6	1.5	1.4	1.3
01.1.9.9	Other food products	0.7	1.2	0.9	1.7	1.5	1.4	1.3	1.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
01.2.1.1	Coffee	0.0	0.0	0.0	6.1	6.8	6.6	6.1	3.5	0.0	0.0	0.0	16.8	21.1	21.2	13.2	7.6
01.2.1.2	Tea	3.2	5.4	4.8	3.5	4.6	4.7	4.8	5.4	0.5	0.6	0.4	0.7	0.6	0.6	0.6	0.5
01.2.1.3	Cocoa and powdered chocolate	1.2	0.9	0.7	1.4	1.2	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.2.2.1	Mineral or spring waters	678.7	608.5	883.8	823.1	684.4	626.3	586.3	774.2	1112.7	1127.9	1390.6	1479.2	1344.3	1270.0	1202.7	1425.0
01.2.2.2	Soft drinks	10.8	32.8	24.1	50.1	41.5	39.8	37.2	21.1	25.1	30.6	35.5	39.9	33.4	32.0	30.3	28.8
01.2.2.3	Fruit and vegetable juices	118.3	78.6	135.3	181.2	144.1	144.0	105.8	114.3	37.8	46.0	54.6	60.1	50.3	48.1	45.6	43.3
	Total beverage quantity	812.1	726.3	1048.5	1065.4	882.6	822.4	741.3	919.4	1176.8	1205.9	1482.2	1597.9	1450.7	1372.7	1293.2	1506.1
	Total food quantity	1062.4	1352.1	1636.7	1719.9	1556.4	1481.7	1535.1	1475.2	1208.0	1487.3	1837.3	1932.2	1619.7	1550.2	1510.4	1436.9

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.11. ABSPO nutritional food reference baskets by age and gender for Germany

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	3.3	4.7	5.8	7.2	6.0	5.7	5.4	5.1	3.6	4.4	5.2	5.8	4.8	4.6	4.4	4.1
01.1.1.2	Flours and other cereals	1.1	8.2	22.2	20.7	17.2	16.5	15.4	8.7	10.4	12.7	15.0	16.5	13.9	13.2	12.5	11.9
01.1.1.3	Bread	161.6	194.6	279.5	226.7	243.6	232.3	239.4	242.4	69.4	55.9	87.8	69.0	57.8	55.2	73.2	69.6
01.1.1.4	Other bakery products	0.1	1.2	1.5	1.8	1.5	1.5	1.4	0.8	0.9	1.1	1.3	1.5	1.2	1.2	1.1	1.1
01.1.1.5	Pizza and quiche	8.2	7.4	9.0	8.0	6.7	6.4	6.0	5.6	6.5	4.9	5.8	6.4	5.4	5.1	4.9	4.6
01.1.1.6	Pasta products and couscous	21.6	16.0	27.3	34.1	20.2	19.4	18.1	17.1	19.6	14.9	24.7	19.4	16.3	15.6	14.7	19.6
01.1.1.7	Breakfast cereals	0.8	9.3	6.8	14.2	11.8	11.3	10.6	10.0	7.1	8.7	10.3	11.3	9.5	9.1	8.6	11.4
01.1.1.8	Other cereal products	0.3	3.2	4.0	5.0	4.1	3.9	3.7	3.5	2.5	3.0	3.6	3.9	3.3	3.2	3.0	2.8
01.1.2.1	Beef and veal	3.0	50.8	26.6	55.4	45.8	44.0	57.2	54.4	7.4	9.1	6.5	11.8	9.9	9.5	9.0	10.1
01.1.2.2	Pork	1.4	24.4	12.8	26.6	22.0	21.1	19.8	18.6	5.3	16.2	11.6	21.2	17.7	17.0	16.1	12.1
01.1.2.3	Lamb and goat	0.6	0.8	1.0	1.2	1.0	1.0	0.9	0.8	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.2.4	Poultry	1.2	18.4	10.4	21.6	17.9	17.1	16.1	21.2	10.8	13.2	15.6	17.2	14.4	13.8	13.0	12.4
01.1.2.5	Other meats	0.9	1.1	1.4	1.7	1.4	1.4	1.3	1.2	0.9	1.1	1.3	1.4	1.2	1.1	1.0	1.0
01.1.2.6	Edible offal	0.1	0.6	0.9	1.5	1.2	1.2	1.1	1.0	0.3	0.9	0.6	1.2	1.0	0.9	0.9	0.8
01.1.2.7	Dried, salted or smoked meat	0.3	4.1	3.0	6.3	5.2	5.0	4.7	2.7	2.9	3.9	2.7	5.0	4.2	4.0	3.8	3.6
01.1.2.8	Other meat preparations	0.5	5.9	4.3	9.0	7.5	7.2	6.7	6.3	1.8	5.5	3.9	7.2	6.0	5.8	5.5	5.2
01.1.3.1	Fresh or chilled fish	17.6	15.8	17.2	17.2	14.3	13.7	14.2	14.6	19.4	14.7	23.4	19.3	16.1	15.4	15.6	15.9
01.1.3.2	Frozen fish	4.6	2.9	3.6	4.5	3.7	3.6	3.3	3.2	2.2	2.7	3.2	3.6	3.0	2.9	2.7	2.6
01.1.3.3	Fresh or chilled seafood	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.1.3.4	Frozen seafood	0.8	0.5	0.6	0.8	0.7	0.6	0.6	0.6	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.3.5	Dried, smoked or salted fish and seafood	2.8	2.1	2.2	2.7	2.2	2.2	2.0	1.9	1.4	1.7	2.0	2.2	1.8	1.7	1.6	1.6
01.1.3.6	Other preserved or processed fish or seafood	3.3	2.1	2.6	3.3	2.7	2.6	2.4	2.3	2.6	2.0	2.4	2.6	2.2	2.1	2.0	1.9
01.1.4.1	Fresh whole milk	101.0	90.6	110.7	98.8	81.8	78.5	73.5	86.8	79.2	60.3	100.2	78.7	65.9	63.0	60.0	75.8
01.1.4.2	Fresh low fat milk	170.7	153.1	187.2	172.6	144.9	132.7	173.9	164.0	134.9	110.4	170.5	134.0	115.5	107.3	142.2	135.2
01.1.4.3	Preserved milk	4.9	3.2	4.0	4.8	4.0	3.8	3.6	3.4	2.4	3.0	3.5	3.9	3.2	3.1	2.9	2.8
01.1.4.4	Yoghurt	61.4	32.2	67.4	60.1	49.8	47.7	44.7	42.2	48.2	36.7	61.0	47.9	40.1	38.3	36.3	34.5
01.1.4.5	Cheese and curd	12.4	14.0	39.8	33.0	29.7	28.2	21.2	22.0	15.0	16.3	26.5	21.3	18.3	17.1	16.2	15.4
01.1.4.6	Other milk products	0.2	1.8	2.2	4.6	3.8	3.6	3.4	1.9	0.9	2.8	3.1	3.6	3.0	2.9	2.8	1.6
01.1.4.7	Eggs	22.2	63.8	85.2	100.0	100.0	100.0	100.0	100.0	49.2	73.6	68.1	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.1	0.8	0.9	1.9	1.6	1.5	1.4	0.8	0.4	1.2	0.8	1.5	1.3	1.2	0.7	0.7
01.1.5.2	Margarine and other vegetable fats	0.1	0.6	0.7	1.4	1.2	1.1	1.0	0.6	0.3	0.9	0.6	1.1	0.9	0.9	0.8	0.5
01.1.5.3	Olive oil	0.2	1.1	1.4	2.9	2.4	2.3	2.1	1.2	1.4	1.8	2.1	2.3	1.9	1.8	1.7	1.0
01.1.5.4	Other edible oils	7.4	4.5	10.0	14.1	9.5	9.2	10.1	9.8	6.1	4.6	5.4	6.1	5.1	4.8	5.6	5.7
01.1.5.5	Other edible animal fats	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.6.1	Fresh or chilled fruit	108.2	167.3	345.1	425.8	352.6	338.2	316.6	235.4	209.1	259.3	307.7	338.5	283.5	270.9	256.6	244.1
01.1.6.2	Frozen fruit	0.9	1.1	1.3	1.7	1.4	1.3	1.2	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	0.9
01.1.6.3	Dried fruit and nuts	11.8	10.6	9.3	11.6	9.6	9.2	8.6	11.3	10.2	7.8	9.2	10.1	8.5	8.1	7.7	10.2
01.1.6.4	Preserved fruit and fruit-based products	0.7	5.2	6.4	13.2	11.0	10.5	9.8	5.6	6.6	8.1	9.6	10.5	8.8	8.4	8.0	4.6
01.1.7.1	other fresh or chilled vegetables	167.9	209.0	260.1	353.3	269.0	258.0	241.6	309.0	42.3	77.3	91.7	138.5	138.8	134.6	125.0	118.9
01.1.7.2	Other frozen vegetables	13.4	12.0	14.7	13.1	10.9	10.4	9.8	12.9	156.3	175.5	297.4	362.8	313.2	297.5	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	1.2	1.1	0.9	1.2	1.0	0.9	0.9	0.8	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.7
01.1.7.4	Potatoes	191.1	171.4	89.8	261.7	154.8	148.5	85.9	78.7	154.1	287.1	278.8	340.0	264.7	251.1	197.4	158.7
01.1.7.5	Crisps	8.9	5.7	4.2	8.7	7.2	6.9	6.4	3.6	4.3	5.3	3.8	6.9	5.8	5.5	5.2	4.7
01.1.7.6	Other tubers and products of tuber vegetables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.8.1	Sugar	0.0	0.8	1.6	2.0	1.7	1.6	1.5	0.9	1.0	1.2	1.5	1.6	1.4	1.3	1.2	1.2
01.1.8.2	Jams, marmalades and honey	0.0	1.0	1.2	1.5	1.3	1.2	1.1	1.0	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.8.3	Chocolate	1.0	1.3	0.9	1.9	1.6	1.5	1.4	0.8	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.8.4	Confectionery products	0.0	1.0	1.3	2.7	2.2	2.1	2.0	1.1	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.8.5	Edible ices and ice cream	0.0	1.9	2.3	4.8	4.0	3.8	3.6	2.0	0.0	2.9	3.5	3.8	3.2	3.1	2.9	1.7
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	0.3	4.2	5.2	6.5	5.4	5.2	4.8	4.5	3.3	4.0	4.7	5.2	4.3	4.1	3.9	3.7
01.1.9.2	Salt, spices and culinary herbs	0.2	2.6	1.8	2.3	2.6	3.0	3.1	3.2	1.8	4.3	6.3	5.6	4.7	4.5	4.3	5.7
01.1.9.4	Ready-made meals	0.9	6.3	12.8	15.9	13.2	12.7	11.9	11.2	8.0	9.7	11.6	12.7	10.6	10.2	9.6	9.2
01.1.9.9	Other food products	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.2.1.1	Coffee	0.0	0.0	0.0	229.0	290.5	303.1	283.8	238.2	0.0	0.0	0.0	232.4	302.0	310.0	176.1	167.5
01.2.1.2	Tea	271.1	342.6	418.9	246.6	309.5	296.9	300.0	367.0	54.4	165.5	117.9	177.4	181.0	172.9	163.8	218.1
01.2.1.3	Cocoa and powdered chocolate	0.1	1.1	1.4	1.7	1.4	1.4	1.3	1.2	0.9	1.1	1.2	1.4	1.2	1.1	1.0	1.0
01.2.2.1	Mineral or spring waters	901.5	808.6	988.6	916.6	774.2	700.6	918.2	866.0	1124.5	1035.4	1352.3	1500.8	1362.4	1287.3	1216.8	1283.5
01.2.2.2	Soft drinks	1.4	17.6	12.9	26.9	22.3	21.4	20.0	11.3	13.5	16.4	19.5	21.5	18.0	17.2	16.3	9.3
01.2.2.3	Fruit and vegetable juices	48.0	65.9	67.7	110.9	91.1	88.1	56.7	46.7	29.7	43.7	31.3	57.0	47.7	45.6	26.0	24.7
	Total beverage quantity	1222.1	1235.9	1489.5	1531.7	1489.0	1411.4	1580.0	1530.3	1222.9	1262.1	1522.2	1990.4	1912.2	1834.1	1600.0	1704.0
	Total food quantity	1122.3	1343.0	1711.9	2092.8	1715.6	1642.2	1576.1	1538.6	1116.1	1337.7	1703.2	1873.0	1600.6	1528.8	1476.1	1405.3

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.12. ABSPO nutritional food reference baskets by age and gender for Greece

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	19.0	14.5	17.7	22.1	18.3	17.6	9.9	4.7	11.1	13.5	16.0	17.6	14.8	14.1	13.4	12.7
01.1.1.2	Flours and other cereals	21.8	10.9	12.3	25.4	21.0	20.1	11.3	5.3	1.3	1.5	1.8	2.0	1.7	1.6	1.5	1.5
01.1.1.3	Bread	103.2	136.5	229.2	195.4	189.8	181.7	214.3	260.4	63.5	89.6	125.4	117.0	98.6	93.7	115.6	118.1
01.1.1.4	Other bakery products	0.5	1.5	1.1	2.3	1.9	1.9	1.7	0.5	1.2	1.4	1.7	1.9	1.6	1.5	1.4	1.3
01.1.1.5	Pizza and quiche	4.8	3.7	6.3	5.6	4.7	4.5	4.2	3.9	2.8	3.4	4.1	4.5	3.8	3.6	3.4	3.2
01.1.1.6	Pasta products and couscous	42.4	32.3	55.3	67.5	40.8	39.2	29.8	10.4	39.6	30.1	35.7	39.3	32.9	31.5	29.8	28.3
01.1.1.7	Breakfast cereals	3.5	4.3	3.2	6.6	5.5	5.2	4.9	4.6	3.3	4.0	4.8	5.2	4.4	4.2	4.0	3.8
01.1.1.8	Other cereal products	0.9	1.1	1.4	1.8	1.5	1.4	1.3	0.6	0.9	1.1	1.3	1.4	1.2	1.1	1.1	1.0
01.1.2.1	Beef and veal	12.8	54.4	28.5	59.4	49.2	47.2	61.8	70.8	10.1	30.7	21.9	40.1	33.6	32.1	30.4	17.3
01.1.2.2	Pork	7.2	22.0	16.2	33.7	27.9	26.7	21.4	7.1	7.8	20.6	24.4	26.8	22.5	21.5	20.3	11.6
01.1.2.3	Lamb and goat	2.3	7.1	5.2	10.8	9.0	8.6	8.8	12.9	5.4	6.6	7.8	8.6	7.2	6.9	6.5	6.2
01.1.2.4	Poultry	12.6	38.3	28.1	58.5	48.5	46.5	43.5	58.8	29.3	35.7	42.4	46.6	39.1	37.3	35.4	33.6
01.1.2.5	Other meats	0.8	1.0	1.2	1.5	1.2	1.2	1.1	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.2.6	Edible offal	0.2	0.7	0.5	1.1	0.9	0.8	0.8	1.3	0.2	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.1.2.7	Dried, salted or smoked meat	2.9	6.9	6.5	13.6	11.3	10.8	6.1	2.9	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.2.8	Other meat preparations	1.3	3.9	2.9	6.0	5.0	4.8	4.5	4.2	3.0	3.7	4.4	4.8	4.0	3.8	3.6	3.5
01.1.3.1	Fresh or chilled fish	22.2	32.2	39.9	49.2	40.8	39.1	51.2	58.7	18.4	21.8	25.9	28.5	23.8	22.8	24.1	21.7
01.1.3.2	Frozen fish	2.4	2.9	3.5	4.4	3.6	3.5	3.3	3.1	2.2	2.7	3.2	3.5	2.9	2.8	2.7	2.5
01.1.3.3	Fresh or chilled seafood	1.1	1.3	1.6	2.0	1.6	1.6	1.5	1.4	1.0	1.2	1.4	1.6	1.3	1.3	1.2	1.1
01.1.3.4	Frozen seafood	1.6	1.9	3.3	3.0	2.5	2.4	2.2	2.1	1.5	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.3.5	Dried, smoked or salted fish and seafood	0.7	0.8	1.0	1.3	1.1	1.0	1.0	0.9	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.3.6	Other preserved or processed fish or seafood	0.5	1.6	1.2	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.8	1.9	1.6	1.5	1.5	1.4
01.1.4.1	Fresh whole milk	190.9	186.2	248.6	221.8	183.8	176.2	230.9	264.5	235.8	229.1	340.7	317.9	268.3	256.3	257.6	270.2
01.1.4.2	Fresh low fat milk	34.0	25.8	44.2	39.5	32.7	31.3	41.1	47.0	31.7	24.1	29.1	31.5	26.3	25.2	23.8	28.2
01.1.4.3	Preserved milk	8.4	6.4	11.0	9.8	8.1	7.8	7.3	6.9	4.9	6.0	7.1	7.8	6.5	6.2	5.9	5.6
01.1.4.4	Yoghurt	28.0	21.3	36.4	32.5	26.9	25.8	24.2	22.8	26.1	19.8	23.5	25.9	21.7	20.7	19.6	18.7
01.1.4.5	Cheese and curd	28.9	18.1	42.3	37.2	33.1	31.7	20.3	8.4	7.0	6.3	7.5	8.2	6.9	6.6	6.2	5.9
01.1.4.6	Other milk products	1.7	5.1	3.7	7.8	6.5	6.2	5.3	1.6	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.1.4.7	Eggs	9.3	11.3	8.3	17.2	14.3	13.7	17.9	20.5	23.3	71.0	59.5	92.7	77.6	74.2	70.3	78.3
01.1.5.1	Butter	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
01.1.5.2	Margarine and other vegetable fats	0.1	0.4	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.1.5.3	Olive oil	0.7	2.2	1.6	3.4	2.8	2.7	1.5	0.7	1.7	2.1	2.5	2.7	2.3	2.2	2.1	2.0
01.1.5.4	Other edible oils	11.5	7.7	14.8	17.3	14.3	13.8	13.4	13.2	10.1	7.7	9.1	10.1	8.4	8.1	8.7	9.2
01.1.5.5	Other edible animal fats	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	237.1	288.6	352.8	440.6	364.9	350.0	327.7	309.0	223.0	271.6	322.4	354.6	297.0	283.8	268.8	255.6
01.1.6.2	Frozen fruit	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	4.6	3.5	4.3	5.4	4.4	4.3	5.6	6.4	2.7	3.3	3.9	4.3	3.6	3.4	3.2	3.1
01.1.6.4	Preserved fruit and fruit-based products	0.7	0.9	1.1	1.3	1.1	1.0	1.0	0.9	0.7	0.8	1.0	1.0	0.9	0.8	0.8	0.8
01.1.7.1	other fresh or chilled vegetables	150.5	217.6	301.4	399.7	364.9	350.0	327.7	309.0	24.1	73.4	63.5	95.9	80.3	76.7	72.7	69.1
01.1.7.2	Other frozen vegetables	19.8	21.1	25.7	23.0	19.0	18.2	23.9	27.4	202.2	191.7	340.7	374.8	313.9	300.0	284.1	270.2
01.1.7.3	Other dried, preserved or processed vegetables	59.7	196.4	171.5	128.5	177.4	170.1	152.5	139.0	43.8	53.3	63.3	69.6	58.3	55.7	52.7	50.2
01.1.7.4	Potatoes	84.3	109.4	62.8	178.0	108.2	103.8	58.3	27.5	127.3	177.7	168.3	191.3	155.7	148.8	95.1	80.5
01.1.7.5	Crisps	0.6	0.8	0.6	1.2	1.0	0.9	0.9	0.8	0.6	0.7	0.9	0.9	0.8	0.8	0.7	0.7
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	1.1	1.3	1.6	2.0	1.6	1.6	1.5	0.4	1.0	1.2	1.4	1.6	1.3	1.3	1.2	1.1
01.1.8.2	Jams, marmalades and honey	0.0	5.2	3.8	8.0	6.6	6.3	3.6	1.7	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.8.3	Chocolate	0.0	2.9	2.1	4.5	3.7	3.5	2.0	0.9	2.2	2.7	3.2	3.6	3.0	2.8	2.7	1.6
01.1.8.4	Confectionery products	4.1	5.0	6.1	7.7	6.4	6.1	3.4	1.6	3.5	4.2	5.0	5.5	4.6	4.4	3.6	2.4
01.1.8.5	Edible ices and ice cream	0.0	3.2	2.3	4.9	4.0	3.9	3.6	1.0	2.4	3.0	3.5	3.9	3.3	3.1	2.9	2.8
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
01.1.9.1	Sauces, condiments	1.4	4.2	5.1	6.4	5.3	5.1	4.8	4.5	3.2	3.9	4.6	5.1	4.3	4.1	3.9	3.7
01.1.9.2	Salt, spices and culinary herbs	0.5	1.4	1.1	1.3	1.3	1.8	1.6	1.2	1.6	3.4	3.7	3.7	4.6	5.0	4.7	4.5
01.1.9.4	Ready-made meals	1.3	1.6	2.0	2.5	2.1	2.0	1.9	1.7	1.2	1.5	1.8	2.0	1.7	1.6	1.5	1.4
01.1.9.9	Other food products	0.3	0.8	0.6	0.7	1.0	0.9	0.9	0.8	0.4	1.3	1.6	1.3	1.5	1.4	1.3	1.2
01.2.1.1	Coffee	0.0	0.0	0.0	5.6	4.7	4.5	4.2	4.0	0.0	0.0	0.0	18.3	22.4	22.4	20.8	20.2
01.2.1.2	Tea	0.1	0.4	0.3	0.5	0.4	0.4	0.6	0.6	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.2.1.3	Cocoa and powdered chocolate	0.3	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
01.2.2.1	Mineral or spring waters	1154.3	1172.1	1431.8	1526.3	1375.9	1212.5	1135.1	1353.2	1100.0	887.2	1391.0	1093.0	996.4	874.8	1100.4	1103.1
01.2.2.2	Soft drinks	23.9	29.1	21.4	44.5	36.8	35.3	19.8	9.4	22.3	27.1	32.2	35.4	29.7	28.4	26.9	22.9
01.2.2.3	Fruit and vegetable juices	32.2	24.5	42.0	37.5	31.0	29.8	39.0	44.7	18.8	22.9	27.1	29.9	25.0	23.9	22.6	21.5
	Total beverage quantity	1210.8	1226.5	1495.9	1615.0	1449.4	1282.9	1199.1	1412.2	1141.6	937.9	1451.2	1177.5	1074.2	950.2	1171.4	1168.3
	Total food quantity	1145.2	1529.6	1823.5	2177.9	1885.2	1808.4	1770.7	1738.6	1188.3	1436.5	1800.4	1977.1	1655.7	1582.3	1497.3	1442.9

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.13. ABSPO nutritional food reference baskets by age and gender for Hungary

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	7.7	9.4	11.5	14.4	11.9	11.4	6.4	2.0	7.2	8.8	10.4	11.4	9.6	9.2	8.7	8.2
01.1.1.2	Flours and other cereals	26.4	22.6	47.6	59.4	49.2	47.2	26.5	8.3	3.0	3.6	4.3	4.7	4.0	3.8	3.6	3.4
01.1.1.3	Bread	92.4	59.2	72.4	90.4	74.8	71.8	94.1	114.1	90.7	131.5	153.5	114.4	95.8	91.6	86.7	115.5
01.1.1.4	Other bakery products	1.6	1.9	2.4	2.9	2.4	2.3	1.3	0.4	1.5	1.8	2.1	2.3	2.0	1.9	1.8	1.7
01.1.1.5	Pizza and quiche	1.4	1.6	2.0	2.5	2.1	2.0	1.9	1.8	1.3	1.5	1.8	2.0	1.7	1.6	1.5	1.4
01.1.1.6	Pasta products and couscous	78.4	83.1	123.0	177.6	107.1	100.8	115.9	127.6	13.2	20.4	19.1	21.0	17.6	16.8	15.9	15.1
01.1.1.7	Breakfast cereals	1.2	1.5	1.8	2.2	1.8	1.8	1.7	1.6	1.1	1.4	1.6	1.8	1.5	1.4	1.3	1.3
01.1.1.8	Other cereal products	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.2.1	Beef and veal	2.1	2.6	3.2	4.0	3.3	3.2	4.2	5.0	2.0	2.4	2.9	3.2	2.7	2.5	2.4	2.3
01.1.2.2	Pork	28.5	34.7	42.4	53.0	43.9	42.1	39.4	37.1	21.9	32.3	38.4	42.2	35.4	33.8	32.0	27.0
01.1.2.3	Lamb and goat	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.2.4	Poultry	57.4	227.3	79.9	204.1	167.3	162.1	162.7	162.3	90.0	71.1	90.8	140.6	117.8	112.6	89.7	60.8
01.1.2.5	Other meats	0.5	0.6	0.7	0.9	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.2.6	Edible offal	0.3	1.2	2.0	3.8	5.2	5.0	6.0	6.8	1.5	3.0	3.5	4.7	5.8	6.2	5.9	5.6
01.1.2.7	Dried, salted or smoked meat	3.5	4.2	5.1	6.4	5.3	5.1	2.9	0.9	3.2	3.9	4.7	5.1	4.3	4.1	3.9	3.7
01.1.2.8	Other meat preparations	3.8	4.7	5.7	7.1	5.9	5.6	7.4	9.0	3.6	4.3	5.2	5.7	4.7	4.5	4.3	4.1
01.1.3.1	Fresh or chilled fish	19.9	21.6	24.9	21.6	16.1	15.4	16.3	17.1	22.6	22.8	19.2	21.2	17.7	16.9	17.1	17.2
01.1.3.2	Frozen fish	0.9	1.1	1.3	1.7	1.4	1.3	1.2	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.3.3	Fresh or chilled seafood	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	0.9	1.1	1.3	1.6	1.4	1.3	1.2	1.1	0.8	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.1.4.1	Fresh whole milk	104.0	66.6	130.3	101.7	84.2	80.8	45.4	14.3	86.7	31.1	88.2	81.1	67.9	64.9	61.5	58.5
01.1.4.2	Fresh low fat milk	237.1	255.4	321.8	311.1	223.1	199.5	242.0	283.9	235.8	248.3	340.7	298.1	226.6	209.0	210.3	211.3
01.1.4.3	Preserved milk	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.4.4	Yoghurt	13.5	16.5	20.1	25.1	20.8	20.0	11.2	3.5	12.6	15.4	18.2	20.0	16.8	16.0	15.2	14.4
01.1.4.5	Cheese and curd	14.5	5.4	26.4	16.6	22.9	22.0	20.6	19.4	7.3	7.3	17.4	19.1	16.0	15.3	14.5	13.8
01.1.4.6	Other milk products	1.0	3.5	5.7	16.5	14.7	14.1	7.9	2.5	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.4.7	Eggs	21.8	50.0	66.4	75.5	100.0	100.0	100.0	100.0	33.7	47.8	89.1	95.3	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.5.2	Margarine and other vegetable fats	0.7	0.8	1.0	1.2	1.0	1.0	0.5	0.2	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.5.3	Olive oil	1.1	1.4	1.7	2.1	1.7	1.6	0.9	0.3	1.8	1.3	1.5	1.6	1.4	1.3	1.2	1.2
01.1.5.4	Other edible oils	11.4	7.7	15.2	10.9	12.5	12.0	12.4	12.6	9.7	9.0	8.8	9.1	7.6	7.3	7.8	8.5
01.1.5.5	Other edible animal fats	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.6.1	Fresh or chilled fruit	115.3	164.1	352.8	388.1	364.9	350.0	327.7	309.0	221.3	135.8	322.4	354.7	297.1	283.9	268.9	255.7
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	5.1	3.3	4.0	5.0	4.2	4.0	5.2	6.3	4.3	3.1	3.6	4.0	3.3	3.2	3.0	2.9
01.1.6.4	Preserved fruit and fruit-based products	0.8	1.0	1.3	1.6	1.3	1.3	1.2	1.1	0.8	1.0	1.1	1.3	1.1	1.0	1.0	0.9
01.1.7.1	other fresh or chilled vegetables	156.6	197.6	243.1	307.3	339.6	349.2	327.7	309.0	39.8	80.7	95.8	126.4	172.5	168.7	123.6	110.3
01.1.7.2	Other frozen vegetables	9.7	6.8	8.1	9.5	7.8	7.5	9.9	12.0	122.2	114.8	156.2	232.8	251.0	239.9	276.5	270.2
01.1.7.3	Other dried, preserved or processed vegetables	15.9	17.4	20.0	21.8	12.9	12.4	16.2	19.7	7.8	11.3	11.3	12.4	10.4	10.0	9.4	9.0
01.1.7.4	Potatoes	53.5	110.7	79.6	99.5	82.4	79.0	44.4	14.0	129.7	254.3	201.2	267.9	188.6	177.1	160.2	120.0
01.1.7.5	Crisps	0.7	0.9	1.1	1.3	1.1	1.0	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.8	0.8	0.8
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.0	2.9	1.5	4.7	3.9	3.7	2.1	0.7	2.4	2.9	3.4	3.8	3.1	3.0	2.8	2.2
01.1.8.2	Jams, marmalades and honey	2.7	3.2	3.5	4.9	4.1	3.9	2.2	0.7	2.5	3.0	3.6	3.9	3.3	3.1	3.0	2.8
01.1.8.3	Chocolate	3.2	3.9	4.8	6.0	5.0	4.8	2.7	0.8	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.4	Confectionery products	1.5	2.5	3.1	3.8	3.2	3.0	1.7	0.5	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.8.5	Edible ices and ice cream	2.8	3.4	4.1	5.1	4.3	4.1	2.3	0.7	2.6	3.1	3.7	4.1	3.4	3.3	3.1	3.0
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	6.5	7.9	9.7	12.1	10.0	9.6	5.4	7.7	6.1	7.4	8.8	9.7	8.1	7.7	7.3	7.0
01.1.9.2	Salt, spices and culinary herbs	0.9	4.9	5.7	4.7	5.7	5.9	5.7	5.3	1.4	4.0	4.3	4.8	5.8	6.1	5.8	5.5
01.1.9.4	Ready-made meals	1.3	1.6	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	1.4	1.4
01.1.9.9	Other food products	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.5	0.1	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.2.1.1	Coffee	0.0	0.0	0.0	8.9	7.3	7.0	4.0	1.2	0.0	0.0	0.0	17.9	22.0	22.1	20.9	19.9
01.2.1.2	Tea	0.3	0.4	0.5	0.6	0.5	0.5	0.7	0.8	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.2.1.3	Cocoa and powdered chocolate	0.8	0.9	1.2	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.0	1.1	1.0	0.9	0.9	0.8
01.2.2.1	Mineral or spring waters	1151.8	1175.6	1420.0	1467.3	1215.2	1165.6	1423.6	1577.8	1155.5	1180.0	1424.9	1103.6	941.3	883.3	947.8	1113.8
01.2.2.2	Soft drinks	5.5	6.7	8.3	10.3	8.5	8.2	4.6	7.2	6.2	7.6	9.0	9.9	8.3	7.9	7.5	7.2
01.2.2.3	Fruit and vegetable juices	30.2	36.8	41.5	56.2	46.5	44.6	25.1	12.4	28.2	34.3	40.7	44.8	37.5	35.8	33.9	32.3
	Total beverage quantity	1188.7	1220.5	1471.4	1544.7	1279.3	1227.1	1459.0	1600.4	1191.0	1223.2	1476.1	1177.9	1010.5	950.5	1011.5	1174.3
	Total food quantity	1112.2	1422.4	1765.5	2099.6	1839.1	1777.4	1692.9	1628.8	1200.5	1301.9	1750.7	1945.9	1717.3	1640.1	1561.6	1475.5

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.14. ABSPO nutritional food reference baskets by age and gender for Ireland

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	5.7	6.9	8.5	10.6	8.8	8.4	7.9	7.4	5.3	6.5	7.7	8.4	7.1	6.8	6.4	6.1
01.1.1.2	Flours and other cereals	16.9	12.3	23.5	31.4	26.0	24.9	23.3	11.0	1.6	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.1.3	Bread	69.6	94.5	168.1	90.0	124.2	119.1	116.9	115.9	19.1	17.4	20.6	22.7	19.0	18.2	17.2	16.4
01.1.1.4	Other bakery products	1.1	2.0	2.4	5.0	4.2	4.0	3.4	1.8	2.5	3.1	3.6	4.0	3.4	3.2	3.0	2.9
01.1.1.5	Pizza and quiche	12.2	9.3	15.9	14.2	11.8	11.3	10.6	10.0	7.1	8.7	10.3	11.3	9.5	9.1	8.6	8.2
01.1.1.6	Pasta products and couscous	100.2	78.9	103.0	161.6	100.0	95.7	89.6	84.5	32.8	25.0	40.0	45.5	27.3	26.1	27.5	32.9
01.1.1.7	Breakfast cereals	8.4	12.4	9.1	19.0	15.7	15.1	14.1	13.3	31.7	59.8	64.9	71.4	60.4	57.1	54.1	44.9
01.1.1.8	Other cereal products	4.6	5.5	6.8	8.5	7.0	6.7	6.3	3.0	4.2	5.2	6.1	6.8	5.7	5.4	5.1	4.9
01.1.2.1	Beef and veal	5.9	18.0	13.2	27.5	22.8	21.8	28.6	28.9	26.7	65.9	83.6	115.1	88.9	85.0	70.5	46.4
01.1.2.2	Pork	4.9	5.9	4.3	9.0	7.5	7.2	6.7	6.3	4.5	5.5	6.6	7.2	6.0	5.8	5.5	5.2
01.1.2.3	Lamb and goat	3.0	3.6	2.7	5.6	4.6	4.4	4.1	3.9	2.8	3.4	4.0	4.4	3.7	3.5	3.4	3.2
01.1.2.4	Poultry	18.5	79.0	41.4	86.2	71.4	68.4	64.1	90.7	86.2	69.0	81.9	90.1	75.4	72.1	68.3	64.9
01.1.2.5	Other meats	0.5	0.6	0.7	0.9	0.7	0.7	0.7	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5
01.1.2.6	Edible offal	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.2.7	Dried, salted or smoked meat	1.7	2.1	1.5	3.2	2.6	2.5	2.4	2.2	1.6	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.2.8	Other meat preparations	8.5	25.7	19.1	39.7	32.0	31.5	29.5	20.9	3.4	4.2	4.9	5.4	4.5	4.3	4.1	3.9
01.1.3.1	Fresh or chilled fish	15.0	18.3	22.4	27.9	23.1	22.2	20.8	19.0	10.8	13.1	15.6	17.1	14.3	13.7	14.1	14.1
01.1.3.2	Frozen fish	0.8	0.9	1.1	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.0	1.1	0.9	0.9	0.9	0.8
01.1.3.3	Fresh or chilled seafood	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.8	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.3.5	Dried, smoked or salted fish and seafood	0.8	1.0	1.3	1.6	1.3	1.2	1.2	1.1	0.8	1.0	1.1	1.3	1.1	1.0	1.0	0.9
01.1.3.6	Other preserved or processed fish or seafood	6.8	5.0	10.1	12.6	10.4	10.0	9.4	8.8	3.8	7.7	9.1	10.1	8.4	8.0	7.6	7.2
01.1.4.1	Fresh whole milk	237.1	179.4	336.7	300.4	251.6	238.6	203.5	212.1	88.5	76.9	126.7	100.4	88.6	80.4	76.1	100.3
01.1.4.2	Fresh low fat milk	99.9	106.4	130.1	116.1	96.1	92.2	120.8	122.1	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	2.1	2.5	3.1	3.9	3.2	3.1	2.9	2.7	1.9	2.4	2.8	3.1	2.6	2.5	2.3	2.2
01.1.4.4	Yoghurt	24.7	18.8	32.2	28.7	23.8	22.8	21.4	20.1	14.4	17.5	20.8	22.9	19.2	18.3	17.4	16.5
01.1.4.5	Cheese and curd	12.5	9.5	16.3	14.5	12.0	11.6	10.8	9.7	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.4.6	Other milk products	2.8	5.0	6.2	12.8	10.6	10.2	5.7	4.5	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.4.7	Eggs	28.3	68.3	55.7	74.5	61.7	59.1	74.3	78.3	78.6	95.7	100.0	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.2	0.8	0.6	1.2	1.0	0.9	0.9	0.4	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.7
01.1.5.2	Margarine and other vegetable fats	0.5	0.6	0.4	0.9	0.8	0.7	0.7	0.3	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.5.3	Olive oil	1.3	1.6	1.2	2.4	2.0	1.9	1.8	0.8	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1
01.1.5.4	Other edible oils	8.5	5.0	10.9	12.7	10.5	10.1	9.7	10.7	5.8	5.3	6.3	7.0	5.8	5.6	5.8	6.9
01.1.5.5	Other edible animal fats	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	234.1	284.9	352.5	435.1	360.3	345.6	323.5	305.2	218.1	265.6	315.3	346.8	290.5	277.6	262.9	250.9
01.1.6.2	Frozen fruit	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	4.8	5.8	5.4	8.9	7.3	7.0	6.6	6.2	4.4	5.4	6.4	7.1	5.9	5.6	5.3	5.1
01.1.6.4	Preserved fruit and fruit-based products	4.1	5.0	3.7	7.6	6.3	6.0	5.7	5.3	3.8	4.6	5.5	6.1	5.1	4.9	4.6	3.5
01.1.7.1	other fresh or chilled vegetables	142.7	197.9	232.3	260.1	215.4	206.6	270.8	273.6	8.2	10.0	11.9	13.1	11.0	10.5	9.9	9.4
01.1.7.2	Other frozen vegetables	3.5	4.3	5.3	6.6	5.5	5.2	4.9	4.6	174.3	137.0	227.6	184.9	149.8	143.1	180.6	180.5
01.1.7.3	Other dried, preserved or processed vegetables	38.7	66.0	57.6	71.9	59.6	57.1	53.5	75.7	87.6	209.5	251.6	209.0	291.7	278.8	219.0	199.5
01.1.7.4	Potatoes	20.3	72.7	45.4	94.5	78.3	75.1	42.2	33.1	84.4	89.9	76.2	117.4	71.6	67.1	63.5	60.4
01.1.7.5	Crisps	1.4	4.3	3.2	6.6	5.5	5.2	4.9	2.3	3.3	4.0	4.8	5.3	4.4	4.2	4.0	3.8
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.8	0.9	0.7	1.4	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.8.2	Jams, marmalades and honey	0.7	0.9	0.6	1.4	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.8.3	Chocolate	0.8	1.0	0.7	1.5	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.9
01.1.8.4	Confectionery products	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.5
01.1.8.5	Edible ices and ice cream	1.0	1.2	1.5	1.9	1.6	1.5	1.4	1.3	0.9	1.1	1.4	1.5	1.3	1.2	1.1	1.1
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	6.9	21.1	15.5	32.2	26.7	25.6	24.0	22.6	6.5	19.7	17.1	25.7	21.5	20.6	17.9	11.1
01.1.9.2	Salt, spices and culinary herbs	0.8	2.3	2.2	2.2	2.5	2.9	3.1	3.4	0.8	1.5	2.2	2.0	2.2	2.7	2.6	2.7
01.1.9.4	Ready-made meals	4.3	5.3	6.4	8.0	6.7	6.4	6.0	5.6	4.0	4.9	5.8	6.4	5.4	5.1	4.9	4.6
01.1.9.9	Other food products	0.2	0.6	0.8	0.7	0.8	0.8	0.7	0.7	0.2	0.6	0.7	0.7	0.7	0.6	0.6	0.6
01.2.1.1	Coffee	0.0	0.0	0.0	3.4	3.2	3.0	2.9	1.3	0.0	0.0	0.0	11.5	14.9	15.3	14.5	13.8
01.2.1.2	Tea	3.8	4.4	4.8	4.1	5.4	5.4	5.4	5.8	1.4	1.7	2.0	1.8	1.8	1.8	1.7	1.6
01.2.1.3	Cocoa and powdered chocolate	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.2.2.1	Mineral or spring waters	737.5	736.1	960.3	891.4	811.1	680.5	891.9	901.3	910.5	874.1	1305.4	1141.3	1005.7	913.4	1128.7	1151.8
01.2.2.2	Soft drinks	13.6	41.2	30.3	63.0	52.2	50.1	40.8	22.1	5.7	6.9	8.2	9.1	7.6	7.3	6.9	6.5
01.2.2.3	Fruit and vegetable juices	30.2	39.3	48.0	100.0	82.8	79.4	44.6	40.2	5.0	6.1	7.2	8.0	6.7	6.4	6.0	5.7
	Total beverage quantity	785.3	821.4	1043.9	1062.4	955.1	818.9	986.0	971.1	922.9	889.2	1323.3	1172.1	1037.2	944.5	1158.2	1179.8
	Total food quantity	1170.9	1457.8	1786.4	2069.8	1732.9	1660.6	1647.6	1638.8	1275.3	1548.4	1900.9	1973.4	1741.4	1663.0	1573.1	1504.8

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.15. ABSPO nutritional food reference baskets by age and gender for Italy

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	8.4	6.1	12.5	15.6	13.0	12.4	11.6	4.4	11.8	9.5	11.3	12.5	10.4	10.0	9.4	9.0
01.1.1.2	Flours and other cereals	15.4	21.4	43.5	54.4	45.0	43.2	24.3	15.3	4.1	3.3	3.9	4.3	3.6	3.5	3.3	3.1
01.1.1.3	Bread	33.0	52.6	64.4	64.4	66.6	63.8	66.9	90.2	22.1	52.1	58.2	64.1	53.7	51.3	48.6	52.1
01.1.1.4	Other bakery products	2.1	2.5	3.1	3.8	3.2	3.0	2.9	1.1	2.9	2.3	2.8	3.1	2.6	2.4	2.3	2.2
01.1.1.5	Pizza and quiche	18.3	14.9	25.4	22.7	18.8	18.0	16.9	15.9	17.1	13.8	16.4	18.1	15.1	14.5	13.7	16.6
01.1.1.6	Pasta products and couscous	118.2	105.4	122.2	182.9	126.5	121.2	113.5	109.8	75.3	85.5	82.9	97.9	67.2	63.8	62.6	57.5
01.1.1.7	Breakfast cereals	2.7	3.2	3.9	4.9	4.1	3.9	3.7	3.5	2.5	3.0	3.6	3.9	3.3	3.1	3.0	2.8
01.1.1.8	Other cereal products	1.5	1.8	2.2	2.8	2.3	2.2	2.1	0.8	2.1	1.7	2.0	2.2	1.8	1.8	1.7	1.6
01.1.2.1	Beef and veal	15.3	52.3	27.4	57.0	47.2	45.3	55.4	61.4	55.4	80.9	134.0	176.1	145.9	140.9	117.4	90.0
01.1.2.2	Pork	5.0	17.2	9.0	18.7	15.5	14.9	13.9	5.3	9.4	11.4	13.6	14.9	12.5	11.9	11.3	10.8
01.1.2.3	Lamb and goat	1.2	1.5	1.9	2.3	1.9	1.8	1.7	1.6	1.2	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.2.4	Poultry	27.4	46.8	24.5	51.0	42.3	40.5	37.9	35.8	33.9	31.1	37.0	40.7	34.1	32.6	30.8	29.3
01.1.2.5	Other meats	0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.2.6	Edible offal	0.6	0.7	0.9	1.1	0.9	0.9	0.8	1.2	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.2.7	Dried, salted or smoked meat	8.4	20.5	15.0	31.3	25.5	24.8	14.0	8.8	0.8	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.2.8	Other meat preparations	1.8	4.4	5.4	6.8	5.6	5.4	5.0	4.7	1.7	4.1	4.9	5.4	4.5	4.3	4.1	3.9
01.1.3.1	Fresh or chilled fish	20.7	25.2	30.9	38.5	31.9	30.6	40.1	43.3	20.4	16.6	19.7	21.7	18.1	17.3	16.4	15.6
01.1.3.2	Frozen fish	5.7	6.9	8.4	10.5	8.7	8.4	7.8	7.4	5.3	6.4	7.6	8.4	7.0	6.7	6.4	6.0
01.1.3.3	Fresh or chilled seafood	1.6	1.9	2.4	3.0	2.5	2.4	2.2	2.1	0.7	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.3.4	Frozen seafood	1.3	1.6	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	1.5	1.4
01.1.3.5	Dried, smoked or salted fish and seafood	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.3.6	Other preserved or processed fish or seafood	3.7	3.6	7.1	8.9	7.4	7.1	6.6	6.2	3.6	5.4	6.4	7.1	5.9	5.7	5.4	5.1
01.1.4.1	Fresh whole milk	50.5	41.0	70.2	62.6	51.9	49.7	46.6	70.3	47.1	38.2	48.0	49.9	41.8	39.9	37.8	36.0
01.1.4.2	Fresh low fat milk	179.4	189.2	249.1	222.2	186.8	176.5	218.9	249.4	235.8	258.7	340.7	337.7	288.6	270.3	284.1	270.2
01.1.4.3	Preserved milk	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.4.4	Yoghurt	22.8	18.5	31.4	28.2	23.4	22.4	21.0	19.8	21.2	17.2	20.5	22.5	18.9	18.0	17.1	16.2
01.1.4.5	Cheese and curd	30.4	14.9	40.9	37.8	31.3	30.0	26.5	26.5	6.1	7.4	12.3	9.7	8.1	7.7	7.3	8.7
01.1.4.6	Other milk products	2.4	5.7	4.2	8.8	7.3	7.0	6.5	2.5	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.4.7	Eggs	22.0	37.5	32.7	40.9	33.9	32.5	42.6	45.9	34.9	85.1	100.0	100.0	93.0	88.9	93.0	100.0
01.1.5.1	Butter	0.4	1.0	0.7	1.5	1.2	1.2	1.1	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.5.2	Margarine and other vegetable fats	0.6	1.5	1.1	2.3	1.9	1.9	1.7	0.7	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
01.1.5.3	Olive oil	1.8	1.3	2.6	3.3	2.7	2.6	2.5	0.9	2.5	2.0	2.4	2.6	2.2	2.1	2.0	1.9
01.1.5.4	Other edible oils	9.3	5.5	11.5	13.9	11.5	11.1	11.3	11.4	8.5	9.7	8.2	9.0	7.6	7.2	7.5	7.4
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	237.0	287.4	352.8	440.6	364.9	350.0	327.6	306.5	219.8	269.0	319.3	351.2	294.1	281.1	266.2	253.2
01.1.6.2	Frozen fruit	0.4	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.4
01.1.6.3	Dried fruit and nuts	3.2	5.1	4.8	5.9	4.9	4.7	4.4	6.7	4.5	3.6	4.3	4.7	4.0	3.8	3.6	3.4
01.1.6.4	Preserved fruit and fruit-based products	2.6	3.2	3.9	4.9	4.1	3.9	3.6	3.4	2.1	3.0	3.6	3.9	3.3	3.1	3.0	2.8
01.1.7.1	other fresh or chilled vegetables	143.5	212.8	290.1	390.3	364.9	350.0	327.7	309.0	12.8	15.6	18.5	20.4	17.0	16.3	15.4	14.7
01.1.7.2	Other frozen vegetables	5.6	9.6	8.4	10.5	8.7	8.3	10.9	11.7	160.1	110.0	257.6	202.4	169.5	162.0	188.0	204.3
01.1.7.3	Other dried, preserved or processed vegetables	61.0	207.8	241.7	136.0	187.7	180.0	165.4	154.6	99.8	243.2	215.0	249.5	265.9	254.1	206.1	170.5
01.1.7.4	Potatoes	22.7	38.7	33.8	42.2	35.0	33.5	31.4	11.8	31.7	25.8	30.6	33.6	28.2	26.9	25.5	24.3
01.1.7.5	Crisps	1.8	2.2	2.7	3.3	2.8	2.6	2.5	2.3	2.5	2.0	2.4	2.7	2.2	2.1	2.0	1.9
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.1	Sugar	1.4	1.7	2.1	2.6	2.2	2.1	1.9	0.7	1.3	1.6	1.9	2.1	1.7	1.7	1.6	1.5
01.1.8.2	Jams, marmalades and honey	3.8	4.7	3.8	7.1	5.9	5.7	3.2	2.0	2.1	1.7	2.1	2.3	1.9	1.8	1.7	1.6
01.1.8.3	Chocolate	0.6	3.8	2.8	5.8	4.8	4.6	2.6	1.6	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.4	Confectionery products	2.0	2.5	3.0	3.8	3.1	3.0	2.0	1.1	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.8.5	Edible ices and ice cream	0.0	5.6	6.9	14.3	11.9	11.4	6.4	4.0	0.7	0.9	1.0	1.1	1.0	0.9	0.9	0.8
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	3.6	4.4	5.3	6.7	5.5	5.3	5.0	4.7	1.7	4.1	4.8	5.3	4.5	4.3	4.0	3.8
01.1.9.2	Salt, spices and culinary herbs	1.3	2.7	2.8	2.8	3.3	3.7	3.5	3.3	1.8	2.9	4.1	3.4	4.2	4.5	4.3	4.1
01.1.9.4	Ready-made meals	2.7	3.3	4.0	5.0	4.1	4.0	3.7	3.5	2.5	3.0	3.6	4.0	3.3	3.2	3.0	2.9
01.1.9.9	Other food products	0.2	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.2.1.1	Coffee	0.0	0.0	0.0	7.4	6.2	5.9	5.5	5.2	0.0	0.0	0.0	16.4	20.7	20.9	13.5	18.8
01.2.1.2	Tea	0.6	0.7	0.8	1.0	0.9	0.8	1.1	1.2	0.3	0.6	0.7	0.8	0.7	0.7	0.6	0.6
01.2.1.3	Cocoa and powdered chocolate	0.7	0.9	1.0	1.3	1.1	1.0	1.0	0.9	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.2.2.1	Mineral or spring waters	1126.5	1144.7	1378.8	1448.9	1281.0	1151.0	1077.5	1024.4	1132.1	1114.4	1350.9	1470.2	1337.4	1262.8	1195.9	1208.4
01.2.2.2	Soft drinks	11.4	13.9	17.0	21.2	17.5	16.8	15.7	5.9	24.1	51.1	56.8	66.7	55.2	53.4	38.9	29.2
01.2.2.3	Fruit and vegetable juices	28.5	34.7	42.5	53.1	43.9	42.1	55.2	59.5	39.9	32.4	38.4	42.3	35.4	33.9	32.1	30.5
	Total beverage quantity	1167.7	1194.9	1440.1	1532.9	1350.5	1217.7	1156.0	1097.1	1197.0	1199.3	1447.8	1597.5	1450.3	1372.4	1281.7	1288.2
	Total food quantity	1107.8	1505.6	1829.9	2092.3	1841.1	1764.1	1713.7	1679.3	1177.2	1446.5	1822.3	1917.1	1662.4	1584.9	1524.4	1449.3

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.16. ABSPO nutritional food reference baskets by age and gender for Latvia

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	0.9	5.5	6.7	8.4	6.9	6.6	6.2	5.9	6.7	5.1	6.1	6.7	5.6	5.3	5.1	1.9
01.1.1.2	Flours and other cereals	3.6	8.7	26.7	46.6	27.6	26.4	24.8	9.3	2.7	2.0	2.4	2.7	2.2	2.1	2.0	0.8
01.1.1.3	Bread	151.1	211.6	315.5	251.7	274.1	262.3	249.3	247.9	58.8	89.1	100.2	92.4	77.4	73.9	98.0	106.5
01.1.1.4	Other bakery products	0.4	0.9	2.9	3.6	3.0	2.8	1.6	1.0	0.7	2.2	2.6	2.8	2.4	2.3	2.2	0.8
01.1.1.5	Pizza and quiche	3.2	2.1	2.6	3.3	2.7	2.6	2.4	2.3	2.6	2.0	2.4	2.6	2.2	2.1	2.0	1.9
01.1.1.6	Pasta products and couscous	12.4	8.4	10.2	12.8	10.6	10.1	9.5	9.0	10.2	7.8	9.3	10.2	8.5	8.1	7.7	11.7
01.1.1.7	Breakfast cereals	0.9	5.3	6.5	8.1	6.7	6.4	6.0	5.7	8.3	25.2	29.9	32.9	27.6	26.3	26.5	38.0
01.1.1.8	Other cereal products	1.0	1.3	1.5	1.9	1.6	1.5	1.4	1.3	1.0	1.2	1.4	1.5	1.3	1.2	1.2	0.4
01.1.2.1	Beef and veal	0.5	3.2	3.9	4.9	4.0	3.9	3.6	5.4	1.0	3.0	3.5	3.9	3.2	3.1	2.9	1.1
01.1.2.2	Pork	6.0	36.4	17.8	55.6	46.0	44.1	50.4	51.0	1.1	3.4	4.0	4.4	3.7	3.5	3.4	1.3
01.1.2.3	Lamb and goat	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.5	0.2	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.1.2.4	Poultry	10.3	100.5	30.7	95.9	79.4	76.2	99.9	107.6	5.3	16.1	19.1	21.0	17.6	16.8	15.9	6.0
01.1.2.5	Other meats	1.9	2.3	2.8	3.5	2.9	2.8	2.6	2.5	111.8	186.8	147.8	169.6	136.2	130.2	74.0	46.9
01.1.2.6	Edible offal	0.7	1.8	2.2	4.2	4.8	5.5	6.2	7.0	4.1	6.2	7.4	9.8	12.7	13.0	17.3	18.8
01.1.2.7	Dried, salted or smoked meat	0.7	4.0	4.9	6.2	5.1	4.9	4.6	1.7	1.2	3.8	4.5	4.9	4.1	3.9	3.7	1.4
01.1.2.8	Other meat preparations	2.2	13.3	6.5	12.2	16.8	16.1	15.1	17.4	0.4	1.2	1.5	1.6	1.4	1.3	1.2	1.2
01.1.3.1	Fresh or chilled fish	12.8	11.2	12.8	16.0	13.2	12.7	12.9	12.2	16.9	20.9	17.7	18.2	15.3	14.6	16.3	21.0
01.1.3.2	Frozen fish	2.0	2.5	3.0	3.8	3.1	3.0	2.8	4.0	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.3.3	Fresh or chilled seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4
01.1.3.4	Frozen seafood	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.7	4.6	5.6	7.0	5.8	5.5	5.2	4.9	0.2	0.4	0.5	0.6	0.5	0.4	0.4	0.4
01.1.3.6	Other preserved or processed fish or seafood	0.9	5.7	7.0	8.7	7.2	6.9	6.5	6.1	1.8	5.3	6.3	7.0	5.8	5.6	5.3	8.0
01.1.4.1	Fresh whole milk	237.1	235.5	352.8	351.2	278.4	265.9	239.5	246.8	84.0	32.0	113.8	83.4	69.9	66.8	65.5	86.3
01.1.4.2	Fresh low fat milk	93.7	101.3	123.9	96.7	80.1	76.8	100.7	108.5	235.8	276.5	340.7	362.7	307.3	289.0	284.1	270.2
01.1.4.3	Preserved milk	1.2	0.8	1.0	1.2	1.0	1.0	0.9	0.9	1.0	0.8	0.9	1.0	0.8	0.8	0.7	0.7
01.1.4.4	Yoghurt	20.5	13.8	22.7	21.1	17.5	16.8	15.7	14.8	17.0	12.9	15.3	16.9	14.1	13.5	12.8	4.9
01.1.4.5	Cheese and curd	10.7	2.9	14.1	11.0	9.1	8.7	7.6	3.1	18.1	9.4	22.3	24.5	20.9	19.6	18.6	19.5
01.1.4.6	Other milk products	5.2	2.2	6.3	8.5	7.0	6.8	3.8	2.4	1.7	3.6	5.4	6.8	5.7	5.4	5.1	2.0
01.1.4.7	Eggs	42.2	71.6	93.8	88.0	98.1	94.1	100.0	100.0	31.4	47.8	85.7	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.1	0.5	0.6	0.8	0.6	0.6	0.5	0.2	0.2	0.5	0.6	0.6	0.5	0.5	0.5	0.2
01.1.5.2	Margarine and other vegetable fats	0.1	0.4	0.4	0.5	0.4	0.4	0.4	0.2	0.1	0.3	0.4	0.4	0.4	0.3	0.3	0.1
01.1.5.3	Olive oil	0.4	0.9	2.6	3.3	2.7	2.6	1.5	0.9	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.5.4	Other edible oils	11.0	5.9	11.3	16.6	10.8	10.4	10.8	11.2	12.2	8.4	9.1	12.1	10.2	9.7	9.9	8.5
01.1.5.5	Other edible animal fats	0.1	0.7	0.8	1.0	0.9	0.8	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
01.1.6.1	Fresh or chilled fruit	211.4	142.9	279.6	305.6	180.8	173.4	215.8	244.9	221.2	135.7	322.0	354.2	296.7	283.5	268.5	253.4
01.1.6.2	Frozen fruit	0.9	0.9	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.9	0.8	1.2
01.1.6.3	Dried fruit and nuts	5.2	3.5	4.3	5.4	4.4	4.3	4.0	3.8	4.3	3.3	3.9	4.3	3.6	3.4	3.2	4.9
01.1.6.4	Preserved fruit and fruit-based products	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.3
01.1.7.1	other fresh or chilled vegetables	135.1	172.1	227.4	290.1	364.9	350.0	327.7	309.0	45.5	62.4	87.1	129.9	136.5	130.5	173.0	170.8
01.1.7.2	Other frozen vegetables	3.0	2.1	2.5	3.1	2.6	2.5	2.3	2.2	2.5	1.9	2.3	2.5	2.1	2.0	1.9	2.9
01.1.7.3	Other dried, preserved or processed vegetables	44.1	47.7	41.3	45.5	37.7	36.1	33.8	51.1	121.8	287.1	340.7	259.8	313.9	300.0	234.7	215.8
01.1.7.4	Potatoes	192.1	163.1	97.7	277.9	164.4	157.7	88.6	55.7	162.4	185.4	160.1	226.0	138.1	129.2	114.0	82.5
01.1.7.5	Crisps	0.2	1.0	1.2	1.5	1.3	1.2	1.1	1.1	0.3	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.0	2.8	3.4	4.3	3.6	3.4	3.2	3.0	3.4	2.6	3.1	3.4	2.9	2.7	1.6	1.0
01.1.8.2	Jams, marmalades and honey	0.0	0.8	0.9	1.2	1.0	0.9	0.9	0.8	0.0	0.7	0.8	0.9	0.8	0.7	0.7	0.3
01.1.8.3	Chocolate	0.9	0.6	0.7	0.9	0.7	0.7	0.7	0.6	0.0	0.5	0.6	0.7	0.6	0.6	0.5	0.2
01.1.8.4	Confectionery products	0.0	4.6	3.0	7.0	5.8	5.6	5.2	2.0	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.2
01.1.8.5	Edible ices and ice cream	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.8	0.0	0.7	0.9	1.0	0.8	0.8	0.7	0.3
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	0.4	2.4	3.0	3.7	3.1	2.9	2.7	2.6	0.7	2.3	2.7	2.9	2.5	2.4	2.2	0.8
01.1.9.2	Salt, spices and culinary herbs	0.3	1.7	0.9	1.6	1.7	2.1	2.5	2.5	1.1	1.9	1.9	2.6	3.0	3.4	3.2	2.8
01.1.9.4	Ready-made meals	2.1	1.4	1.7	2.1	1.8	1.7	1.6	1.5	1.1	1.3	1.6	1.7	1.4	1.4	1.3	1.2
01.1.9.9	Other food products	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
01.2.1.1	Coffee	0.0	0.0	0.0	5.6	6.1	5.9	3.3	2.1	0.0	0.0	0.0	20.1	23.8	23.8	13.7	8.6
01.2.1.2	Tea	2.3	4.0	2.5	3.6	4.8	4.8	5.3	5.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
01.2.1.3	Cocoa and powdered chocolate	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.2.2.1	Mineral or spring waters	926.2	821.8	1225.2	1079.3	910.7	759.7	951.9	1046.9	1119.1	1080.6	1471.3	1112.0	953.9	890.0	1180.0	1282.6
01.2.2.2	Soft drinks	32.3	21.9	26.7	33.4	27.7	26.5	24.8	23.4	22.6	17.2	20.4	22.4	18.8	18.0	10.2	6.5
01.2.2.3	Fruit and vegetable juices	29.0	19.6	24.0	29.9	24.8	23.8	22.2	27.5	24.0	18.3	21.7	23.9	20.0	19.1	18.1	27.5
	Total beverage quantity	990.0	867.4	1278.6	1152.1	974.3	820.9	1007.8	1105.8	1165.9	1116.3	1513.6	1178.7	1016.7	951.1	1222.2	1325.4
	Total food quantity	1232.4	1416.6	1773.0	2110.2	1807.1	1733.0	1687.6	1676.7	1205.2	1466.9	1896.8	2000.3	1767.8	1687.4	1595.0	1504.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.17. ABSPO nutritional food reference baskets by age and gender for Lithuania

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	5.6	3.9	8.3	10.3	8.6	8.2	7.7	7.2	5.6	0.6	0.7	0.8	0.7	0.7	0.6	0.6
01.1.1.2	Flours and other cereals	54.3	22.5	40.9	96.3	71.8	54.6	30.7	14.5	54.3	4.2	5.0	5.5	4.6	4.4	4.2	4.0
01.1.1.3	Bread	141.6	227.1	319.5	246.8	268.5	277.6	277.1	271.0	141.6	7.9	9.4	10.3	8.7	8.3	7.8	7.5
01.1.1.4	Other bakery products	0.1	1.1	0.7	1.7	1.4	1.4	0.8	0.4	0.1	1.1	1.3	1.4	1.2	1.1	1.1	1.0
01.1.1.5	Pizza and quiche	0.7	0.9	1.7	1.4	1.1	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.1.6	Pasta products and couscous	8.8	5.7	10.4	8.6	7.2	6.9	6.4	6.1	8.8	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.1.7	Breakfast cereals	2.9	3.5	4.3	5.4	4.5	4.3	4.0	3.8	2.9	86.3	102.5	114.3	93.3	90.2	86.2	87.9
01.1.1.8	Other cereal products	0.5	3.1	3.7	9.3	7.7	7.4	4.2	2.0	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5
01.1.2.1	Beef and veal	1.7	2.1	1.3	3.2	2.7	2.6	3.3	3.8	1.7	2.0	2.3	2.6	2.1	2.1	1.9	1.8
01.1.2.2	Pork	2.6	31.4	19.2	48.0	39.7	38.1	35.7	10.4	2.6	2.9	3.5	3.8	3.2	3.1	2.9	2.8
01.1.2.3	Lamb and goat	0.3	0.3	0.2	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.2.4	Poultry	5.1	93.5	38.1	133.2	78.8	75.6	99.1	113.5	5.1	145.5	172.7	240.1	161.9	152.1	116.1	82.2
01.1.2.5	Other meats	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4
01.1.2.6	Edible offal	0.0	0.5	0.3	0.8	0.6	0.6	0.6	0.5	0.0	5.2	6.2	10.2	13.4	13.6	12.9	7.4
01.1.2.7	Dried, salted or smoked meat	0.2	2.0	1.2	3.1	2.6	2.5	2.3	0.7	0.2	1.9	2.2	2.5	2.1	2.0	1.9	1.8
01.1.2.8	Other meat preparations	2.1	18.6	15.5	23.9	28.6	30.8	32.0	46.2	2.1	4.2	5.0	5.5	4.6	4.4	4.2	4.0
01.1.3.1	Fresh or chilled fish	8.6	8.3	12.4	12.7	10.5	10.1	11.3	12.0	8.6	8.8	10.6	11.5	9.6	9.2	8.7	8.3
01.1.3.2	Frozen fish	10.7	11.2	8.0	20.0	16.5	15.8	17.1	23.8	10.7	5.7	6.8	7.4	6.2	6.0	5.6	5.4
01.1.3.3	Fresh or chilled seafood	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	3.6	2.2	5.5	4.6	4.4	2.5	1.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	0.4	2.2	2.7	6.8	5.6	5.4	5.1	3.4	0.4	20.8	15.0	16.3	22.8	21.8	24.8	26.9
01.1.4.1	Fresh whole milk	237.1	281.8	352.8	344.4	289.3	261.1	286.2	290.6	237.1	66.5	126.3	91.6	72.7	69.5	75.8	87.6
01.1.4.2	Fresh low fat milk	18.5	11.9	21.7	18.1	15.0	14.4	18.8	21.6	18.5	280.8	340.7	374.8	313.9	293.4	284.1	270.2
01.1.4.3	Preserved milk	0.5	0.6	1.2	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.6
01.1.4.4	Yoghurt	29.3	18.8	34.5	28.7	23.8	22.8	21.3	34.2	29.3	1.8	2.1	2.3	1.9	1.8	1.7	1.6
01.1.4.5	Cheese and curd	26.8	9.0	31.9	27.3	22.6	21.7	12.2	5.8	26.8	11.3	18.1	14.7	12.4	11.8	15.6	14.9
01.1.4.6	Other milk products	0.2	1.0	1.2	2.9	2.4	2.3	1.3	0.6	0.2	1.8	2.1	2.3	2.0	1.9	1.8	1.7
01.1.4.7	Eggs	72.4	100.0	98.7	100.0	100.0	100.0	100.0	100.0	72.4	95.7	100.0	95.6	100.0	100.0	97.8	99.7
01.1.5.1	Butter	0.0	0.3	0.3	0.8	0.7	0.7	0.4	0.2	0.0	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.5.2	Margarine and other vegetable fats	0.0	0.3	0.2	0.4	0.4	0.3	0.2	0.1	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3
01.1.5.3	Olive oil	0.1	0.5	0.7	1.7	1.4	1.3	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
01.1.5.4	Other edible oils	9.0	4.0	10.8	17.2	10.2	9.8	10.2	9.9	9.0	2.2	2.6	2.9	2.4	2.3	2.2	2.1
01.1.5.5	Other edible animal fats	0.0	0.2	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.1
01.1.6.1	Fresh or chilled fruit	235.7	282.0	344.8	401.9	237.7	228.0	268.7	299.6	235.7	271.1	321.8	354.0	296.5	283.3	268.3	255.2
01.1.6.2	Frozen fruit	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.6.3	Dried fruit and nuts	6.7	5.2	7.9	6.6	5.4	5.2	4.9	7.8	6.7	4.0	4.8	5.2	4.4	4.2	4.0	3.8
01.1.6.4	Preserved fruit and fruit-based products	0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6
01.1.7.1	other fresh or chilled vegetables	136.0	189.3	276.4	372.9	364.9	350.0	327.7	309.0	136.0	21.2	37.8	51.0	58.1	55.5	52.5	30.0
01.1.7.2	Other frozen vegetables	0.7	0.9	1.7	1.4	1.2	1.1	1.0	1.0	0.7	40.1	104.5	96.2	80.6	77.0	83.8	97.1
01.1.7.3	Other dried, preserved or processed vegetables	45.5	43.7	53.5	44.5	36.9	35.4	46.3	53.1	45.5	261.2	339.6	224.9	313.9	300.0	273.3	262.4
01.1.7.4	Potatoes	75.1	77.8	31.7	110.9	65.6	62.9	35.3	16.7	75.1	145.0	148.1	204.2	125.1	116.7	110.5	101.9
01.1.7.5	Crisps	0.5	0.6	0.4	0.9	0.7	0.7	0.7	0.2	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.8.1	Sugar	3.2	1.9	3.2	5.9	4.9	4.7	2.6	1.2	3.2	3.6	4.3	4.7	4.0	3.8	3.1	2.0
01.1.8.2	Jams, marmalades and honey	0.5	0.6	0.4	0.9	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.8.3	Chocolate	0.4	0.5	0.3	0.7	0.6	0.6	0.5	0.2	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.8.4	Confectionery products	2.1	2.6	3.2	4.0	3.3	3.1	1.8	0.8	2.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.8.5	Edible ices and ice cream	0.0	2.4	3.0	7.4	6.1	5.9	3.3	1.6	0.0	0.5	0.5	0.6	0.5	0.5	0.4	0.4
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	1.2	21.8	8.9	18.7	18.4	17.7	16.5	15.6	1.2	13.4	15.9	15.7	14.6	14.0	13.2	12.6
01.1.9.2	Salt, spices and culinary herbs	0.1	0.7	0.4	0.6	0.9	0.8	0.8	0.8	0.1	0.8	0.9	1.5	1.6	2.0	2.2	2.3
01.1.9.4	Ready-made meals	1.0	1.3	1.5	1.9	1.6	1.5	1.4	1.4	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.9.9	Other food products	0.0	0.2	0.1	0.3	0.3	0.3	0.3	0.2	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	5.2	5.6	5.3	3.0	1.4	0.0	0.0	0.0	20.2	23.9	23.9	13.6	12.9
01.2.1.2	Tea	1.9	6.1	3.0	3.7	4.9	4.9	5.4	5.8	1.9	0.0	0.1	0.1	0.0	0.0	0.0	0.0
01.2.1.3	Cocoa and powdered chocolate	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.2.2.1	Mineral or spring waters	974.4	607.4	1144.8	987.9	814.9	757.2	949.5	1066.1	974.4	1252.5	1510.9	1573.9	1423.6	1345.8	1318.8	1436.5
01.2.2.2	Soft drinks	19.8	19.8	36.4	30.3	25.1	24.1	22.5	6.4	19.8	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.2.2.3	Fruit and vegetable juices	37.0	23.7	43.5	36.2	30.0	28.8	26.9	25.4	37.0	2.2	2.6	2.9	2.4	2.3	2.2	2.1
	Total beverage quantity	1033.3	657.3	1227.9	1063.6	880.7	820.5	1007.6	1105.3	1033.3	1256.8	1516.0	1599.7	1452.2	1374.2	1336.7	1453.5
	Total food quantity	1151.1	1503.8	1784.8	2163.4	1780.4	1704.6	1708.6	1697.9	1151.1	1527.6	1924.4	1986.9	1749.3	1666.4	1578.8	1495.8

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.18. ABSPO nutritional food reference baskets by age and gender for Luxembourg

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	9.0	5.5	13.4	16.7	13.9	13.3	12.4	5.9	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.1.2	Flours and other cereals	18.2	11.1	21.1	33.8	28.0	26.8	15.1	11.8	1.7	2.1	2.4	2.7	2.3	2.2	2.0	1.9
01.1.1.3	Bread	35.0	54.2	109.3	63.9	80.7	77.4	72.5	102.6	4.6	14.0	16.6	18.3	15.3	14.6	19.4	23.7
01.1.1.4	Other bakery products	2.8	3.7	2.7	5.6	4.6	4.4	4.1	2.0	2.8	3.4	4.1	4.5	3.7	3.6	2.0	0.6
01.1.1.5	Pizza and quiche	15.2	12.4	21.2	18.9	15.6	15.0	14.0	13.2	36.2	27.6	49.1	36.0	33.8	28.8	38.2	46.7
01.1.1.6	Pasta products and couscous	111.5	117.3	143.5	206.8	148.4	142.3	133.2	106.8	46.9	35.7	42.4	46.6	39.1	37.3	49.5	60.5
01.1.1.7	Breakfast cereals	2.9	8.3	7.3	9.1	7.5	7.2	6.8	6.4	3.2	5.5	6.6	7.2	6.1	5.8	7.7	9.4
01.1.1.8	Other cereal products	1.5	1.8	2.2	2.7	2.2	2.1	2.0	0.9	1.4	1.7	2.0	2.2	1.8	1.7	1.6	1.6
01.1.2.1	Beef and veal	13.2	48.3	23.6	49.2	40.7	39.1	45.2	51.7	27.6	60.1	49.9	108.9	89.9	87.8	49.9	15.8
01.1.2.2	Pork	7.5	13.6	6.7	13.9	11.5	11.0	10.3	5.5	7.0	8.5	10.1	11.1	9.3	8.9	5.0	1.6
01.1.2.3	Lamb and goat	1.3	1.6	2.0	2.5	2.1	2.0	1.8	1.7	1.2	1.5	1.8	2.0	1.7	1.6	0.9	1.4
01.1.2.4	Poultry	19.0	38.7	24.5	39.4	32.6	31.3	29.3	41.5	19.8	24.1	28.6	31.4	26.3	25.2	14.3	4.5
01.1.2.5	Other meats	1.4	1.7	2.1	2.7	2.2	2.1	2.0	1.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.2.6	Edible offal	0.3	0.7	0.9	1.1	0.9	0.9	0.8	1.2	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.2.7	Dried, salted or smoked meat	1.8	2.2	2.7	3.4	2.8	2.7	2.5	2.4	1.7	2.1	2.5	2.7	2.3	2.2	1.2	0.4
01.1.2.8	Other meat preparations	8.6	31.3	15.3	31.9	26.4	25.3	23.7	22.4	1.6	1.9	2.3	2.5	2.1	2.0	1.2	1.8
01.1.3.1	Fresh or chilled fish	15.4	18.4	22.5	28.1	23.3	22.4	20.9	29.6	0.8	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.1.3.2	Frozen fish	2.5	3.0	3.7	4.6	3.8	3.7	3.4	3.2	2.3	2.8	3.3	3.7	3.1	2.9	2.8	2.7
01.1.3.3	Fresh or chilled seafood	1.3	1.6	2.0	2.5	2.0	1.9	1.8	2.6	77.3	61.5	109.6	80.4	67.3	64.3	85.3	104.3
01.1.3.4	Frozen seafood	1.5	1.9	2.3	2.8	2.3	2.3	2.1	2.0	1.4	1.7	2.1	2.3	1.9	1.8	1.7	1.6
01.1.3.5	Dried, smoked or salted fish and seafood	1.8	2.2	2.6	3.3	2.7	2.6	2.5	2.3	1.7	2.0	2.4	2.6	2.2	2.1	1.2	1.9
01.1.3.6	Other preserved or processed fish or seafood	3.4	4.2	10.2	12.8	10.6	10.2	9.5	9.0	1.4	4.3	5.1	5.7	4.7	4.5	2.6	0.8
01.1.4.1	Fresh whole milk	56.2	45.6	78.0	69.6	57.7	55.3	51.8	48.8	55.9	42.5	75.7	59.8	46.5	44.4	44.6	17.9
01.1.4.2	Fresh low fat milk	172.8	195.8	240.0	214.1	180.0	170.1	187.7	210.7	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.9	1.1	1.4	1.7	1.4	1.3	1.3	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.1.4.4	Yoghurt	27.8	22.6	38.6	34.5	28.5	27.4	25.6	12.1	1.7	2.1	2.5	2.7	2.3	2.2	2.1	2.0
01.1.4.5	Cheese and curd	30.3	12.4	40.1	37.9	31.2	30.1	27.0	26.1	2.0	1.9	3.4	2.5	2.1	2.0	1.9	1.8
01.1.4.6	Other milk products	1.7	2.1	2.6	3.2	2.7	2.6	2.4	1.1	1.6	2.0	2.3	2.6	2.2	2.1	2.0	1.9
01.1.4.7	Eggs	26.7	68.3	55.7	69.5	57.6	55.2	72.4	73.2	78.3	95.7	100.0	100.0	100.0	100.0	99.9	100.0
01.1.5.1	Butter	0.3	0.8	0.6	1.2	1.0	1.0	0.9	0.4	0.6	0.7	0.9	1.0	0.8	0.8	0.4	0.1
01.1.5.2	Margarine and other vegetable fats	1.2	1.5	2.2	4.6	3.8	3.6	2.0	1.6	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.5.3	Olive oil	0.5	0.6	0.8	1.0	0.8	0.8	0.7	0.6	0.5	0.6	0.7	0.8	0.6	0.6	0.3	0.5
01.1.5.4	Other edible oils	9.2	3.8	9.4	11.6	9.6	9.2	9.7	9.0	4.0	4.8	5.7	6.3	5.3	5.0	3.9	2.7
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	234.2	282.1	348.6	435.4	360.6	345.8	323.8	304.4	217.2	264.5	313.9	345.3	289.2	276.4	260.6	246.7
01.1.6.2	Frozen fruit	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.1.6.3	Dried fruit and nuts	5.0	9.2	7.5	9.4	7.8	7.4	7.0	9.8	5.8	7.0	8.3	9.2	7.7	7.3	9.7	11.9
01.1.6.4	Preserved fruit and fruit-based products	3.6	4.4	5.4	6.7	5.5	5.3	5.0	2.3	3.4	4.1	4.8	5.3	4.5	4.3	2.4	0.8
01.1.7.1	other fresh or chilled vegetables	151.5	202.1	280.4	376.7	364.9	350.0	327.7	309.0	128.0	117.6	167.9	153.5	128.6	122.9	112.8	103.8
01.1.7.2	Other frozen vegetables	1.9	2.3	2.8	3.5	2.9	2.8	2.6	3.7	7.5	9.1	16.2	11.9	10.0	9.5	12.6	15.4
01.1.7.3	Other dried, preserved or processed vegetables	28.8	52.6	56.8	53.5	44.3	42.5	55.7	56.3	94.3	287.1	306.9	278.3	313.9	300.0	284.1	270.2
01.1.7.4	Potatoes	35.0	63.9	31.3	65.1	53.9	51.7	43.4	22.8	181.2	209.1	234.5	292.0	201.0	191.0	160.7	135.6
01.1.7.5	Crisps	2.7	3.3	4.0	5.0	4.2	4.0	3.8	1.8	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.3
01.1.8.1	Sugar	0.8	0.9	1.1	1.4	1.2	1.1	1.1	0.5	0.7	0.9	1.0	1.1	0.9	0.9	0.5	0.8
01.1.8.2	Jams, marmalades and honey	0.8	1.0	1.2	1.5	1.2	1.2	1.1	0.5	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.9
01.1.8.3	Chocolate	0.0	4.1	3.3	6.9	5.7	5.5	3.1	2.4	0.7	0.8	1.0	1.1	0.9	0.8	0.8	0.8
01.1.8.4	Confectionery products	0.8	1.0	1.2	1.5	1.3	1.2	1.1	0.5	0.8	0.9	1.1	1.2	1.0	1.0	0.6	0.9
01.1.8.5	Edible ices and ice cream	0.0	3.8	5.6	11.6	9.6	9.2	5.2	4.1	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.7
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	3.6	4.4	5.4	6.7	5.6	5.3	5.0	2.4	5.0	15.1	18.0	19.8	16.6	15.8	14.1	14.3
01.1.9.2	Salt, spices and culinary herbs	1.6	3.9	3.6	3.6	4.4	4.7	4.4	2.2	1.2	2.2	2.4	2.9	3.4	3.8	4.1	3.8
01.1.9.4	Ready-made meals	5.8	7.0	8.6	10.7	8.9	8.5	8.0	7.5	5.4	6.5	11.6	8.5	7.1	6.8	6.5	6.2
01.1.9.9	Other food products	0.2	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.1	0.4	0.5	0.6	0.5	0.5	0.3	0.4
01.2.1.1	Coffee	0.0	0.0	0.0	11.0	9.1	8.8	8.2	3.9	0.0	0.0	0.0	15.8	21.0	21.1	12.0	3.8
01.2.1.2	Tea	0.5	0.6	0.8	1.0	0.8	0.8	1.0	1.0	0.5	0.6	0.3	0.8	0.6	0.6	0.6	0.7
01.2.1.3	Cocoa and powdered chocolate	0.8	1.0	1.2	1.5	1.2	1.2	1.1	0.5	0.7	0.9	1.1	1.2	1.0	0.9	1.2	0.8
01.2.2.1	Mineral or spring waters	1061.4	1096.7	1333.1	1315.1	1180.2	1044.7	1226.8	1292.2	1140.6	1161.9	1447.1	1543.3	1383.6	1307.6	1252.2	1498.6
01.2.2.2	Soft drinks	7.9	9.7	11.8	14.8	12.2	11.7	11.0	5.2	7.4	9.0	10.7	11.8	9.9	9.4	5.4	1.7
01.2.2.3	Fruit and vegetable juices	101.2	92.0	99.4	128.6	106.5	102.1	97.4	135.3	26.0	31.7	28.5	41.3	34.6	33.1	43.9	53.6
	Total beverage quantity	1171.8	1199.9	1446.3	1471.9	1310.1	1169.2	1345.4	1438.1	1175.2	1204.0	1487.7	1614.2	1450.6	1372.7	1315.3	1559.3
	Total food quantity	1080.1	1386.0	1679.6	2006.1	1723.2	1651.0	1597.2	1543.5	1278.4	1632.0	1971.2	2063.2	1781.1	1704.5	1604.1	1498.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.19. *ABSPO nutritional food reference baskets by age and gender for Malta*

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	7.6	9.2	11.3	14.1	11.7	11.2	10.5	4.9	7.1	8.6	10.2	11.2	9.4	9.0	8.5	8.1
01.1.1.2	Flours and other cereals	5.2	12.7	13.0	32.4	26.8	25.7	14.5	11.4	1.6	2.0	2.3	2.6	2.2	2.1	2.0	1.9
01.1.1.3	Bread	90.5	77.5	145.2	72.5	100.1	96.0	97.0	127.2	49.7	73.8	87.6	96.4	80.7	77.1	73.0	73.4
01.1.1.4	Other bakery products	2.6	3.1	3.8	4.8	3.9	3.8	3.5	1.7	2.4	2.9	3.4	3.8	3.2	3.0	2.9	2.7
01.1.1.5	Pizza and quiche	0.8	1.0	1.2	1.5	1.3	1.2	1.1	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.1.6	Pasta products and couscous	73.4	71.7	92.1	157.1	95.8	91.4	85.6	69.5	58.9	59.2	58.7	79.3	50.0	46.9	44.4	42.2
01.1.1.7	Breakfast cereals	2.5	10.3	6.3	15.7	13.0	12.5	11.7	11.0	7.9	9.6	11.4	12.5	10.5	10.0	9.5	9.0
01.1.1.8	Other cereal products	2.6	3.2	3.9	4.8	4.0	3.8	3.6	2.9	2.4	2.9	3.5	3.8	3.2	3.1	2.9	2.8
01.1.2.1	Beef and veal	5.3	29.9	13.0	32.6	27.0	25.9	33.1	34.3	16.3	19.9	23.6	26.0	21.8	20.8	19.7	18.7
01.1.2.2	Pork	3.8	21.3	13.2	23.7	19.6	18.8	17.6	16.6	11.9	14.5	17.2	18.9	15.8	15.1	14.3	13.6
01.1.2.3	Lamb and goat	1.1	1.3	1.6	2.0	1.7	1.6	1.5	1.4	1.0	1.2	1.5	1.6	1.4	1.3	1.2	1.2
01.1.2.4	Poultry	47.1	86.7	75.7	94.6	78.3	75.1	70.3	85.3	94.9	124.8	147.9	162.9	136.6	130.4	107.3	79.9
01.1.2.5	Other meats	4.7	7.9	6.9	8.7	7.2	6.9	6.4	6.1	4.3	5.3	6.3	6.9	5.8	5.5	5.2	5.0
01.1.2.6	Edible offal	0.3	1.4	0.9	2.2	1.8	1.7	1.6	2.3	0.4	1.3	1.6	1.7	1.4	1.4	1.3	1.2
01.1.2.7	Dried, salted or smoked meat	4.9	15.3	12.2	24.8	23.9	24.3	13.6	10.7	1.5	1.9	2.2	2.4	2.0	2.0	1.8	1.8
01.1.2.8	Other meat preparations	2.4	9.6	11.8	14.7	12.2	11.7	10.9	10.3	3.0	9.0	10.7	11.7	9.8	9.4	8.9	8.5
01.1.3.1	Fresh or chilled fish	24.8	30.1	36.9	46.0	38.1	36.6	36.1	48.4	10.6	13.0	15.4	16.9	14.2	13.5	13.9	13.9
01.1.3.2	Frozen fish	2.6	3.2	3.9	4.8	4.0	3.8	3.6	3.4	2.4	3.0	3.5	3.9	3.2	3.1	2.9	2.8
01.1.3.3	Fresh or chilled seafood	1.2	1.5	1.8	2.3	1.9	1.8	1.7	1.6	1.1	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.3.4	Frozen seafood	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4
01.1.3.5	Dried, smoked or salted fish and seafood	0.4	0.5	0.6	0.8	0.7	0.6	0.6	0.6	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.3.6	Other preserved or processed fish or seafood	1.9	4.6	9.3	11.6	9.6	9.2	8.6	8.1	6.8	7.1	8.4	9.2	7.7	7.4	7.0	7.5
01.1.4.1	Fresh whole milk	20.3	14.5	26.6	22.2	18.3	17.6	16.5	15.5	11.1	13.5	16.1	17.7	14.8	14.1	13.4	12.7
01.1.4.2	Fresh low fat milk	237.1	269.4	352.8	351.6	298.5	275.9	296.9	309.0	235.8	228.4	332.5	298.2	255.4	238.7	232.1	238.5
01.1.4.3	Preserved milk	9.6	6.9	12.6	10.5	8.7	8.4	7.8	7.4	5.3	6.4	7.6	8.4	7.0	6.7	6.4	6.0
01.1.4.4	Yoghurt	24.0	17.2	31.5	26.2	21.7	20.8	19.5	18.4	16.4	16.0	19.0	20.9	17.5	16.7	15.8	15.1
01.1.4.5	Cheese and curd	25.8	18.1	33.8	28.2	23.3	22.4	20.9	19.9	16.6	17.2	20.4	22.4	19.2	18.0	17.0	16.2
01.1.4.6	Other milk products	11.3	4.8	9.8	12.3	10.2	9.8	9.1	4.3	5.0	6.1	7.2	8.0	6.7	6.4	6.0	5.7
01.1.4.7	Eggs	13.5	13.6	14.9	14.8	12.2	11.7	15.4	15.6	45.0	95.7	89.8	100.0	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.3	1.4	0.8	2.1	1.7	1.6	1.5	0.7	0.3	0.4	0.5	0.6	0.5	0.4	0.4	0.4
01.1.5.2	Margarine and other vegetable fats	0.8	2.0	2.0	5.1	4.2	4.0	3.3	1.8	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.5.3	Olive oil	0.7	1.7	1.8	4.4	3.7	3.5	3.3	1.6	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.5.4	Other edible oils	8.6	6.2	10.7	15.7	13.0	12.5	11.0	10.2	5.2	4.0	4.7	5.2	4.3	4.2	4.9	5.2
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	230.1	285.9	349.6	436.6	361.6	346.8	324.7	301.7	215.1	266.6	316.4	348.0	291.5	278.6	263.8	250.9
01.1.6.2	Frozen fruit	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.6.3	Dried fruit and nuts	11.7	8.4	10.2	12.8	10.6	10.2	9.5	13.5	10.3	7.8	9.3	10.2	8.5	8.2	7.7	7.3
01.1.6.4	Preserved fruit and fruit-based products	1.1	1.4	1.7	2.1	1.7	1.7	1.6	1.5	1.0	1.3	1.5	1.7	1.4	1.3	1.3	1.2
01.1.7.1	other fresh or chilled vegetables	147.1	195.5	289.0	362.7	353.9	350.0	327.7	309.0	31.2	78.0	78.1	124.1	103.9	99.3	75.3	53.7
01.1.7.2	Other frozen vegetables	12.0	12.1	15.8	13.2	10.9	10.5	13.7	13.8	159.8	124.6	250.5	271.1	227.1	217.0	240.3	270.2
01.1.7.3	Other dried, preserved or processed vegetables	51.5	87.8	114.9	95.7	79.3	76.0	99.6	100.7	36.2	110.3	130.9	92.3	120.6	115.2	93.1	64.8
01.1.7.4	Potatoes	51.1	87.1	65.5	95.0	78.7	75.5	70.7	33.3	50.4	61.4	72.9	80.2	67.1	64.2	60.8	57.8
01.1.7.5	Crisps	1.3	1.6	2.0	2.5	2.1	2.0	1.8	1.7	1.2	1.5	1.8	2.0	1.7	1.6	1.5	1.4
01.1.7.6	Other tubers and products of tuber vegetables	1.1	1.3	1.6	2.0	1.6	1.6	1.5	1.4	1.0	1.2	1.4	1.6	1.3	1.3	1.2	1.1
01.1.8.1	Sugar	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.5	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.8.2	Jams, marmalades and honey	0.4	2.5	1.5	3.8	3.1	3.0	2.3	1.3	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.8.3	Chocolate	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.8.4	Confectionery products	1.8	2.2	1.3	3.3	2.8	2.6	1.5	1.2	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3
01.1.8.5	Edible ices and ice cream	3.9	4.8	5.8	7.3	6.0	5.8	5.4	2.6	3.7	4.5	5.3	5.8	4.9	4.7	4.4	4.2
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	4.2	17.1	10.5	26.2	21.7	20.8	11.7	9.2	5.3	16.0	19.0	20.9	17.5	16.7	15.8	15.0
01.1.9.2	Salt, spices and culinary herbs	0.8	3.1	2.6	2.8	3.4	3.7	3.5	3.3	1.5	3.1	3.7	3.5	4.4	4.7	4.5	4.2
01.1.9.4	Ready-made meals	4.2	5.1	6.2	7.8	6.4	6.2	5.8	5.4	3.9	4.7	5.6	6.2	5.2	4.9	4.7	4.5
01.1.9.9	Other food products	0.1	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.2.1.1	Coffee	0.0	0.0	0.0	4.3	4.3	4.1	2.3	1.8	0.0	0.0	0.0	14.1	18.6	18.8	17.8	17.0
01.2.1.2	Tea	3.1	6.0	3.3	3.9	5.1	5.2	5.5	5.7	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.2.1.3	Cocoa and powdered chocolate	1.0	1.2	1.5	1.8	1.5	1.5	1.4	0.6	0.9	1.1	1.3	1.5	1.2	1.2	1.1	1.1
01.2.2.1	Mineral or spring waters	856.0	609.2	1124.0	970.6	800.6	743.4	696.0	656.4	1081.0	822.7	1323.7	1074.1	916.6	859.7	1077.9	1084.0
01.2.2.2	Soft drinks	10.4	12.6	15.5	19.3	16.0	15.3	14.4	6.8	20.6	25.1	29.8	32.7	27.4	26.2	24.8	23.6
01.2.2.3	Fruit and vegetable juices	40.7	42.3	47.5	64.5	53.4	51.3	48.0	67.9	32.4	39.4	46.8	51.4	43.1	41.2	39.0	29.5
	Total beverage quantity	911.2	671.3	1191.8	1064.4	881.0	820.8	767.5	739.2	1135.7	889.3	1402.8	1175.2	1008.0	948.1	1161.6	1156.1
	Total food quantity	1162.2	1476.5	1844.0	2142.9	1845.7	1771.8	1722.8	1665.6	1151.6	1437.2	1819.8	1932.1	1668.7	1593.0	1505.8	1438.6

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.20. ABSPO nutritional food reference baskets by age and gender for the Netherlands

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	4.0	5.2	5.8	7.9	6.6	6.3	3.6	0.6	4.0	4.8	5.8	6.3	5.3	5.1	4.8	4.6
01.1.1.2	Flours and other cereals	1.2	6.9	1.7	21.2	17.5	16.8	7.9	1.5	1.2	1.5	1.7	1.9	1.6	1.5	1.5	1.4
01.1.1.3	Bread	57.6	12.0	73.5	18.3	15.2	14.5	13.6	12.8	57.6	57.8	73.5	60.6	45.8	43.1	57.2	58.3
01.1.1.4	Other bakery products	2.5	3.3	3.6	5.0	4.2	4.0	1.9	0.4	2.5	3.1	3.6	4.0	3.4	3.2	3.0	2.9
01.1.1.5	Pizza and quiche	5.5	0.4	7.0	0.6	0.5	0.5	0.5	0.5	5.5	4.0	7.0	5.2	4.3	4.1	3.9	3.7
01.1.1.6	Pasta products and couscous	7.0	98.5	10.2	188.4	154.6	148.1	168.6	182.9	7.0	9.9	10.2	11.2	9.4	9.0	8.5	12.1
01.1.1.7	Breakfast cereals	3.4	0.4	5.0	0.7	0.6	0.5	0.5	0.5	3.4	4.2	5.0	5.5	4.6	4.4	4.1	3.9
01.1.1.8	Other cereal products	1.0	1.2	1.4	1.9	1.6	1.5	1.4	1.3	1.0	1.2	1.4	1.5	1.3	1.2	1.1	1.1
01.1.2.1	Beef and veal	8.4	53.9	20.1	54.8	45.4	43.6	43.8	46.1	8.4	33.9	20.1	44.3	37.1	35.4	30.5	16.0
01.1.2.2	Pork	7.7	10.1	11.1	15.4	12.7	12.2	11.4	5.6	7.7	9.4	11.1	12.3	10.3	9.8	9.3	8.8
01.1.2.3	Lamb and goat	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.2.4	Poultry	16.1	31.5	23.3	32.1	26.6	25.5	23.9	22.5	16.1	19.6	23.3	25.6	21.4	20.5	19.4	9.2
01.1.2.5	Other meats	0.4	0.6	0.6	0.9	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.2.6	Edible offal	0.1	0.6	0.3	0.9	0.8	0.7	0.7	1.2	0.1	0.6	0.3	0.7	0.6	0.6	0.6	0.5
01.1.2.7	Dried, salted or smoked meat	1.0	1.2	1.4	1.9	1.6	1.5	1.4	1.3	1.0	1.2	1.4	1.5	1.3	1.2	1.1	1.1
01.1.2.8	Other meat preparations	11.6	1.5	16.8	2.3	1.9	1.8	1.7	1.6	11.6	14.2	16.8	18.5	15.5	14.8	14.0	13.3
01.1.3.1	Fresh or chilled fish	18.2	32.3	21.1	51.6	42.8	41.0	57.6	68.8	18.2	14.6	21.1	19.1	16.0	15.3	15.5	18.7
01.1.3.2	Frozen fish	2.4	3.1	3.4	4.7	3.9	3.7	3.5	3.3	2.4	2.9	3.4	3.8	3.1	3.0	2.8	2.7
01.1.3.3	Fresh or chilled seafood	0.7	1.0	1.1	1.5	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.3.4	Frozen seafood	0.3	0.4	0.4	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.2	0.3	0.3	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	3.3	0.4	4.7	0.7	0.5	0.5	0.5	0.5	3.3	4.0	4.7	5.2	4.3	4.2	3.9	3.7
01.1.4.1	Fresh whole milk	15.9	18.3	20.3	18.6	15.4	14.8	20.8	24.8	15.9	11.4	20.3	14.9	12.4	11.9	11.3	10.7
01.1.4.2	Fresh low fat milk	235.8	288.6	340.7	440.6	364.9	350.0	327.7	309.0	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.3	0.4	0.4	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.3
01.1.4.4	Yoghurt	2.7	33.3	2.5	33.9	28.1	26.9	31.7	44.4	2.7	2.1	2.5	2.7	2.3	2.2	2.0	1.9
01.1.4.5	Cheese and curd	13.6	8.3	17.4	8.5	7.0	6.7	9.4	11.3	13.6	9.8	17.4	12.7	10.7	10.2	9.7	10.1
01.1.4.6	Other milk products	2.1	13.9	3.1	42.4	35.1	33.7	15.8	3.0	2.1	2.6	3.1	3.4	2.8	2.7	2.6	2.4
01.1.4.7	Eggs	23.6	11.2	75.3	11.4	9.4	9.0	12.7	15.1	23.6	83.3	75.3	100.0	100.0	100.0	100.0	90.1
01.1.5.1	Butter	0.3	1.8	0.4	5.6	4.7	4.5	2.1	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3
01.1.5.2	Margarine and other vegetable fats	0.6	0.8	0.9	1.3	1.1	1.0	1.0	0.1	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.5.3	Olive oil	0.1	0.7	0.1	2.0	1.7	1.6	0.8	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
01.1.5.4	Other edible oils	3.6	0.7	3.8	2.3	1.9	1.8	0.8	0.2	3.6	3.2	3.8	4.2	3.5	3.4	3.9	3.0
01.1.5.5	Other edible animal fats	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	202.5	248.9	299.2	372.2	308.2	295.7	265.4	240.6	202.5	252.5	299.2	331.5	281.5	270.0	255.7	236.0
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	23.5	42.0	27.5	72.1	59.7	57.2	67.7	75.6	23.5	22.8	27.5	27.9	19.5	17.6	16.7	23.0
01.1.6.4	Preserved fruit and fruit-based products	0.4	4.8	0.5	7.3	6.0	5.8	2.7	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.7.1	other fresh or chilled vegetables	50.5	242.8	121.5	431.6	364.9	350.0	327.7	309.0	50.5	122.9	121.5	234.1	223.9	214.0	144.4	96.7
01.1.7.2	Other frozen vegetables	175.1	3.3	269.9	4.8	3.9	3.8	5.3	6.3	175.1	121.3	269.9	250.7	209.9	200.6	248.3	270.2
01.1.7.3	Other dried, preserved or processed vegetables	14.0	1.8	20.2	2.8	2.3	2.2	2.1	2.0	14.0	17.0	20.2	22.2	18.6	17.8	16.9	22.6
01.1.7.4	Potatoes	216.2	214.7	316.2	218.6	181.0	173.6	81.3	15.3	216.2	287.1	316.2	374.8	313.9	300.0	250.2	216.7
01.1.7.5	Crisps	0.7	0.9	1.1	1.4	1.2	1.2	1.1	1.0	0.7	0.9	1.1	1.2	1.0	0.9	0.9	0.8
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	0.4	0.5	0.6	0.8	0.7	0.6	0.6	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.8.2	Jams, marmalades and honey	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.8.3	Chocolate	0.6	0.8	0.9	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.7	0.7
01.1.8.4	Confectionery products	0.6	0.8	0.9	1.3	1.1	1.0	1.0	0.1	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.8.5	Edible ices and ice cream	0.6	0.8	0.9	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	0.8	1.0	1.1	1.5	1.3	1.2	1.1	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.9.2	Salt, spices and culinary herbs	1.6	6.3	5.3	7.3	8.1	8.3	7.8	6.6	1.6	4.7	5.3	5.3	6.4	6.7	6.3	6.6
01.1.9.4	Ready-made meals	23.1	1.8	29.4	2.7	2.2	2.1	2.0	1.9	23.1	16.5	29.4	21.6	18.1	17.3	16.3	15.5
01.1.9.9	Other food products	0.4	0.8	0.9	1.2	1.0	1.0	0.9	0.8	0.4	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.2.1.1	Coffee	0.0	0.0	0.0	4.0	4.0	3.9	1.8	0.3	0.0	0.0	0.0	16.1	20.5	20.7	19.6	18.6
01.2.1.2	Tea	0.2	3.1	0.4	3.9	5.2	5.2	5.6	6.0	0.2	0.7	0.4	0.9	0.7	0.7	0.7	0.6
01.2.1.3	Cocoa and powdered chocolate	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.2.2.1	Mineral or spring waters	1170.9	914.4	1431.3	996.2	930.0	763.8	944.2	1039.1	1170.9	861.1	1431.3	1103.1	1019.8	882.9	1021.1	1192.8
01.2.2.2	Soft drinks	7.5	9.7	10.8	14.9	12.3	11.8	6.5	1.0	7.5	9.1	10.8	11.9	9.9	9.5	9.0	8.6
01.2.2.3	Fruit and vegetable juices	27.3	28.3	39.4	43.3	35.8	34.4	48.3	57.7	27.3	33.2	39.4	43.4	36.3	34.7	32.9	31.2
	Total beverage quantity	1205.9	955.8	1482.1	1062.7	987.6	819.3	1006.7	1104.4	1205.9	904.3	1482.1	1175.6	1087.5	948.6	1083.4	1252.0
	Total food quantity	1163.7	1416.9	1776.1	2110.0	1755.5	1684.2	1538.7	1427.9	1163.7	1442.0	1776.1	2022.6	1735.0	1662.5	1560.8	1448.6

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.21. ABSPO nutritional food reference baskets by age and gender for Poland

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	4.1	1.5	6.1	7.6	6.3	6.0	5.6	2.7	3.8	4.6	5.5	6.0	5.1	4.8	4.6	1.7
01.1.1.2	Flours and other cereals	19.4	7.1	28.9	54.2	29.9	28.7	21.6	12.7	1.8	2.2	2.6	2.9	2.4	2.3	2.2	3.0
01.1.1.3	Bread	137.8	207.5	306.4	280.8	259.7	247.8	250.4	242.5	36.4	28.9	34.4	41.1	28.5	27.3	36.1	39.3
01.1.1.4	Other bakery products	1.9	0.7	2.8	1.7	2.9	2.8	2.6	1.2	1.7	2.1	2.5	2.8	2.3	2.2	2.1	0.8
01.1.1.5	Pizza and quiche	0.7	1.0	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.8	0.8	1.2
01.1.1.6	Pasta products and couscous	8.6	3.2	12.9	24.1	13.3	12.8	11.9	11.3	8.2	9.8	11.6	12.8	10.7	10.2	13.6	14.8
01.1.1.7	Breakfast cereals	3.0	3.7	4.5	5.6	4.6	4.4	4.2	3.9	2.8	3.4	4.0	4.5	3.7	3.6	3.4	5.1
01.1.1.8	Other cereal products	1.4	1.7	2.1	2.6	2.2	2.1	2.0	1.8	1.3	1.6	1.9	2.1	1.8	1.7	1.6	0.6
01.1.2.1	Beef and veal	2.3	2.8	3.4	4.2	3.5	3.4	3.1	4.5	2.1	2.6	3.1	3.4	2.8	2.7	2.6	2.4
01.1.2.2	Pork	3.0	63.0	13.6	84.2	46.8	44.9	57.5	59.5	8.5	34.5	24.3	45.1	37.8	36.1	20.5	13.0
01.1.2.3	Lamb and goat	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.2.4	Poultry	16.8	45.1	67.4	42.1	69.7	66.8	87.6	88.5	39.9	40.5	48.1	52.9	44.3	42.4	24.1	15.3
01.1.2.5	Other meats	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.2.6	Edible offal	0.6	2.2	2.6	5.5	8.6	8.7	7.2	6.9	2.2	3.6	4.3	7.0	8.9	9.4	8.9	10.6
01.1.2.7	Dried, salted or smoked meat	4.0	1.5	6.0	4.0	6.2	5.9	5.5	5.2	3.7	4.6	5.4	5.9	5.0	4.8	4.5	1.7
01.1.2.8	Other meat preparations	0.7	2.7	10.9	6.8	11.3	10.8	10.1	14.3	2.0	8.3	9.9	10.9	9.1	8.7	8.2	3.1
01.1.3.1	Fresh or chilled fish	18.1	19.8	20.7	25.2	14.7	14.1	14.7	15.4	13.4	15.3	28.7	20.0	16.7	16.0	16.6	17.6
01.1.3.2	Frozen fish	2.6	5.4	3.8	4.8	4.0	3.8	3.6	3.6	2.4	2.9	3.5	3.8	3.2	3.1	2.9	2.8
01.1.3.3	Fresh or chilled seafood	0.2	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	2.5	5.2	3.7	4.6	3.8	3.7	3.5	3.3	4.0	2.8	3.4	3.7	3.1	3.0	2.8	1.1
01.1.3.6	Other preserved or processed fish or seafood	0.8	1.7	1.3	0.8	1.3	1.2	1.2	1.1	0.8	1.0	1.1	1.2	1.0	1.0	0.9	0.9
01.1.4.1	Fresh whole milk	80.9	35.7	69.6	39.6	65.6	62.9	58.9	27.8	67.5	48.3	91.8	63.1	52.9	50.5	47.8	18.2
01.1.4.2	Fresh low fat milk	237.1	288.6	352.8	381.9	233.3	212.3	257.5	281.2	235.8	232.7	340.7	337.0	261.8	243.2	247.0	270.2
01.1.4.3	Preserved milk	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.4.4	Yoghurt	11.7	4.3	17.4	10.8	18.0	17.2	16.1	15.2	18.5	13.2	15.7	17.3	14.5	13.8	13.1	19.9
01.1.4.5	Cheese and curd	22.6	7.2	35.8	18.4	30.5	29.2	21.2	17.6	13.8	10.9	17.1	14.2	11.9	11.4	10.8	6.0
01.1.4.6	Other milk products	0.8	0.3	1.2	0.8	1.3	1.2	1.2	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.4
01.1.4.7	Eggs	23.4	50.3	74.8	62.9	100.0	100.0	100.0	100.0	40.9	95.7	52.5	100.0	100.0	100.0	98.6	100.0
01.1.5.1	Butter	0.6	0.2	1.0	0.6	1.0	0.9	0.9	0.8	0.2	0.7	0.9	0.9	0.8	0.8	0.7	0.3
01.1.5.2	Margarine and other vegetable fats	0.8	0.3	1.2	0.8	1.3	1.2	1.2	0.5	0.2	0.9	1.1	1.2	1.0	1.0	0.9	0.4
01.1.5.3	Olive oil	1.1	0.4	1.6	2.0	1.7	1.6	1.5	0.7	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
01.1.5.4	Other edible oils	12.3	8.0	14.5	12.4	14.3	13.7	13.0	13.3	12.2	11.1	11.8	17.1	10.8	10.4	10.5	10.2
01.1.5.5	Other edible animal fats	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1
01.1.6.1	Fresh or chilled fruit	169.1	141.4	176.9	216.7	183.0	175.5	201.8	232.4	223.1	271.7	322.5	354.8	297.1	283.9	268.9	255.0
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	2.4	4.9	3.5	6.6	3.6	3.5	3.3	3.1	2.2	2.7	3.2	3.5	2.9	2.8	2.6	4.0
01.1.6.4	Preserved fruit and fruit-based products	1.2	1.4	1.7	2.2	1.8	1.7	1.6	1.5	1.1	1.3	1.6	1.7	1.4	1.4	1.3	0.5
01.1.7.1	other fresh or chilled vegetables	147.8	181.0	224.8	283.6	250.0	248.7	298.2	309.0	26.6	43.1	51.2	84.5	117.9	112.7	64.0	40.6
01.1.7.2	Other frozen vegetables	3.6	7.4	5.3	10.0	5.5	5.3	5.0	7.0	102.6	93.2	217.5	191.2	200.4	191.5	253.9	270.2
01.1.7.3	Other dried, preserved or processed vegetables	30.8	33.6	41.1	45.2	25.0	24.0	22.4	31.7	100.8	196.3	222.4	160.2	134.2	128.2	91.6	78.7
01.1.7.4	Potatoes	179.2	245.7	111.4	331.1	183.2	175.3	98.5	77.4	235.8	287.1	340.7	374.8	310.3	293.5	267.7	270.2
01.1.7.5	Crisps	1.3	1.6	2.0	2.5	2.1	2.0	1.9	1.7	1.3	1.5	1.8	2.0	1.7	1.6	1.5	2.3
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.1	0.4	0.2	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	2.5	0.9	3.7	4.6	3.8	3.6	2.7	1.6	2.3	2.8	3.3	3.7	3.1	2.9	2.8	1.1
01.1.8.2	Jams, marmalades and honey	2.5	2.7	3.8	4.7	3.9	3.7	3.5	1.6	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.8.3	Chocolate	1.0	1.2	1.5	1.8	1.5	1.5	1.4	1.3	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4
01.1.8.4	Confectionery products	0.5	0.7	0.8	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.2
01.1.8.5	Edible ices and ice cream	5.4	2.0	8.2	5.1	8.5	8.1	4.6	3.6	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.3
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	2.2	2.6	3.2	4.0	3.3	3.2	3.0	2.8	2.0	2.5	2.9	3.2	2.7	2.6	2.4	2.3
01.1.9.2	Salt, spices and culinary herbs	0.2	2.5	0.8	1.6	2.1	2.5	2.6	2.8	1.4	3.6	4.4	4.5	5.8	6.0	6.4	7.4
01.1.9.4	Ready-made meals	1.3	1.5	1.9	2.3	1.9	1.9	1.7	1.6	1.2	1.4	1.7	1.9	1.6	1.5	1.4	1.3
01.1.9.9	Other food products	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.8	0.9	1.0	0.8	0.8	0.8	0.3
01.2.1.1	Coffee	0.0	0.0	0.0	7.1	5.8	5.6	5.3	2.5	0.0	0.0	0.0	13.1	17.2	17.5	13.0	6.3
01.2.1.2	Tea	3.0	1.9	4.7	3.3	4.8	4.9	4.9	5.6	0.3	1.3	1.5	1.5	1.4	1.3	1.3	1.9
01.2.1.3	Cocoa and powdered chocolate	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.5
01.2.2.1	Mineral or spring waters	890.2	969.6	988.9	1306.2	747.5	691.8	647.6	898.4	1131.4	1061.5	1291.3	1485.0	1350.3	1274.6	1142.3	1330.6
01.2.2.2	Soft drinks	5.9	71.4	26.2	111.6	89.6	86.6	48.7	38.2	39.3	47.9	49.8	62.5	51.2	50.0	47.4	18.0
01.2.2.3	Fruit and vegetable juices	21.4	26.1	31.9	39.8	33.0	31.6	29.6	27.9	20.0	24.3	28.8	31.7	26.6	25.4	24.1	36.6
	Total beverage quantity	920.8	1069.3	1052.2	1468.6	881.1	820.9	736.4	973.0	1191.2	1135.3	1371.8	1594.2	1447.0	1369.2	1228.3	1393.9
	Total food quantity	1173.3	1405.2	1662.3	2018.1	1640.8	1574.6	1621.1	1621.0	1230.3	1497.1	1908.1	1972.6	1727.4	1646.5	1557.0	1498.3

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.22. ABSPO nutritional food reference baskets by age and gender for Portugal

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	18.3	13.3	27.2	47.5	28.1	27.0	20.9	11.9	1.7	2.1	2.5	2.7	2.3	2.2	2.1	1.9
01.1.1.2	Flours and other cereals	12.3	9.0	18.2	26.4	18.9	18.1	10.2	8.0	1.1	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.1.3	Bread	115.7	147.6	234.3	179.0	194.2	186.0	209.9	221.3	95.7	162.4	165.1	171.3	156.5	149.1	173.0	176.6
01.1.1.4	Other bakery products	1.4	1.8	2.1	2.7	2.2	2.1	2.0	0.9	1.3	1.6	1.9	2.1	1.8	1.7	1.6	1.5
01.1.1.5	Pizza and quiche	3.8	2.7	3.3	4.1	3.4	3.3	3.1	2.9	2.1	2.5	3.0	3.3	2.7	2.6	2.5	2.4
01.1.1.6	Pasta products and couscous	11.1	13.5	16.5	20.6	17.1	16.4	15.3	7.2	19.6	12.6	20.9	23.0	13.7	13.1	12.4	5.9
01.1.1.7	Breakfast cereals	2.1	5.6	6.8	8.5	7.1	6.8	6.4	6.0	4.3	5.2	6.2	6.8	5.7	5.4	5.2	4.9
01.1.1.8	Other cereal products	0.7	0.9	1.1	1.4	1.2	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.2.1	Beef and veal	5.1	29.2	15.3	31.8	26.3	25.3	32.6	33.5	3.3	35.3	28.8	52.8	44.2	42.3	32.4	19.0
01.1.2.2	Pork	9.5	38.4	28.1	58.6	48.5	46.5	43.6	29.3	2.9	35.8	25.6	46.7	39.1	37.4	35.4	16.8
01.1.2.3	Lamb and goat	1.6	2.0	2.4	3.0	2.5	2.4	2.2	2.1	1.5	1.8	2.2	2.4	2.0	1.9	1.8	1.7
01.1.2.4	Poultry	58.5	99.8	65.1	108.8	90.1	86.4	80.9	114.5	123.7	99.8	118.4	173.2	109.1	104.3	59.2	47.0
01.1.2.5	Other meats	3.8	4.6	5.6	7.1	5.8	5.6	5.2	4.9	3.5	4.3	5.1	5.6	4.7	4.5	4.3	4.1
01.1.2.6	Edible offal	0.4	0.9	1.3	2.2	1.8	1.8	1.7	2.3	0.1	1.4	1.6	1.8	1.5	1.4	1.3	1.3
01.1.2.7	Dried, salted or smoked meat	2.8	10.0	8.4	11.8	14.5	13.9	12.1	6.1	0.9	1.1	1.3	1.4	1.2	1.1	1.1	1.0
01.1.2.8	Other meat preparations	2.1	6.5	7.9	9.8	8.2	7.8	7.3	6.9	0.5	6.0	4.3	7.9	6.6	6.3	6.0	2.8
01.1.3.1	Fresh or chilled fish	40.9	29.3	35.8	44.8	37.1	35.6	33.3	22.4	2.2	2.7	3.2	3.6	3.0	2.9	2.7	2.6
01.1.3.2	Frozen fish	4.1	5.0	6.1	7.7	6.4	6.1	5.7	5.4	3.8	4.7	5.6	6.1	5.1	4.9	4.6	4.4
01.1.3.3	Fresh or chilled seafood	3.7	4.5	5.5	6.9	5.7	5.5	5.1	7.2	111.3	68.2	188.9	89.1	124.3	118.8	127.5	150.2
01.1.3.4	Frozen seafood	2.6	3.1	3.8	4.8	4.0	3.8	3.6	3.3	2.4	2.9	3.5	3.8	3.2	3.0	2.9	2.7
01.1.3.5	Dried, smoked or salted fish and seafood	2.0	2.4	3.0	3.7	3.1	3.0	2.8	2.6	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.1
01.1.3.6	Other preserved or processed fish or seafood	2.1	5.2	10.3	12.8	10.6	10.2	9.5	9.0	5.5	5.5	3.9	5.9	6.0	5.7	5.4	5.1
01.1.4.1	Fresh whole milk	18.4	13.1	22.5	20.1	16.6	15.9	14.9	14.1	19.1	12.3	14.5	16.0	13.4	12.8	12.1	11.5
01.1.4.2	Fresh low fat milk	237.1	236.0	352.8	317.2	262.8	252.0	275.6	309.0	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	1.2	1.2	1.5	1.8	1.5	1.4	1.4	1.3	0.9	1.1	1.3	1.4	1.2	1.2	1.1	1.0
01.1.4.4	Yoghurt	66.9	47.9	82.0	73.1	60.6	58.1	32.6	25.6	3.7	4.5	5.3	5.8	4.9	4.7	4.4	4.2
01.1.4.5	Cheese and curd	14.9	6.4	18.2	15.2	13.5	12.9	12.1	11.4	20.8	15.9	26.1	15.0	17.4	16.6	16.2	17.2
01.1.4.6	Other milk products	4.3	4.7	6.4	7.9	6.6	6.3	5.9	2.8	4.0	4.8	5.8	6.3	5.3	5.1	4.8	4.6
01.1.4.7	Eggs	14.0	62.4	95.1	86.5	71.7	68.7	90.1	91.0	29.3	71.3	84.6	93.1	77.9	74.5	90.6	100.0
01.1.5.1	Butter	0.8	0.9	1.2	1.4	1.2	1.1	1.1	0.5	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.5.2	Margarine and other vegetable fats	0.9	2.2	2.7	5.7	4.7	4.5	2.5	2.0	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3
01.1.5.3	Olive oil	1.3	1.6	2.0	2.5	2.0	1.9	1.8	0.9	2.3	1.5	1.8	2.0	1.6	1.6	1.5	0.7
01.1.5.4	Other edible oils	9.6	4.1	8.2	10.5	8.7	8.3	8.2	8.8	2.2	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.5.5	Other edible animal fats	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	237.1	288.6	352.8	440.6	364.9	350.0	327.7	309.0	220.7	270.8	321.4	353.6	296.1	283.0	268.0	254.9
01.1.6.2	Frozen fruit	0.6	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.6
01.1.6.3	Dried fruit and nuts	3.3	2.5	3.1	3.8	3.2	3.0	2.8	4.0	3.6	2.3	2.8	3.0	2.6	2.4	2.3	2.2
01.1.6.4	Preserved fruit and fruit-based products	2.0	2.5	3.0	3.8	3.1	3.0	2.8	2.6	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.7.1	other fresh or chilled vegetables	156.5	194.6	245.7	332.8	364.9	350.0	327.7	309.0	154.0	176.0	246.4	365.6	288.4	275.6	246.5	179.8
01.1.7.2	Other frozen vegetables	2.6	3.1	3.8	4.8	4.0	3.8	3.6	5.0	2.4	2.9	3.5	3.8	3.2	3.1	2.9	2.8
01.1.7.3	Other dried, preserved or processed vegetables	22.1	22.2	19.4	24.2	20.0	19.2	18.0	25.4	11.9	103.2	103.6	113.9	159.0	152.0	158.4	205.3
01.1.7.4	Potatoes	117.0	142.3	81.4	217.2	128.5	123.2	69.2	54.4	114.3	102.5	121.7	133.9	80.1	76.5	43.6	41.6
01.1.7.5	Crisps	2.0	2.5	3.0	3.7	3.1	3.0	2.8	2.0	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.1.7.6	Other tubers and products of tuber vegetables	1.3	2.2	2.7	3.3	2.8	2.6	2.5	2.3	1.7	2.0	2.4	2.7	2.2	2.1	2.0	1.9
01.1.8.1	Sugar	0.0	2.0	1.5	3.1	2.5	2.4	2.3	1.1	2.9	1.9	2.2	2.4	2.0	2.0	1.9	0.9
01.1.8.2	Jams, marmalades and honey	1.2	1.5	1.8	2.2	1.9	1.8	1.7	1.6	1.1	1.4	1.6	1.8	1.5	1.4	1.4	1.3
01.1.8.3	Chocolate	3.5	2.5	3.1	3.8	3.2	3.1	2.9	1.3	1.9	2.3	2.7	3.0	2.5	2.4	2.3	1.7
01.1.8.4	Confectionery products	1.4	1.7	1.3	2.6	2.2	2.1	2.0	0.9	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.8.5	Edible ices and ice cream	4.3	5.2	4.6	8.0	6.6	6.3	5.9	2.8	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	2.3	2.9	3.5	4.4	3.6	3.5	3.2	3.1	0.6	2.7	3.2	3.5	2.9	2.8	2.6	2.5
01.1.9.2	Salt, spices and culinary herbs	0.7	3.1	2.0	2.5	3.0	3.3	2.9	2.9	0.2	1.5	1.8	2.0	2.2	2.7	2.2	1.6
01.1.9.4	Ready-made meals	4.6	5.6	6.8	8.5	7.0	6.8	6.3	6.0	4.3	5.2	6.2	6.8	5.7	5.4	5.1	4.9
01.1.9.9	Other food products	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1
01.2.1.1	Coffee	0.0	0.0	0.0	6.0	5.0	4.8	4.5	4.2	0.0	0.0	0.0	18.4	22.4	22.4	21.3	20.2
01.2.1.2	Tea	0.1	0.3	0.4	0.5	0.4	0.4	0.4	0.6	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
01.2.1.3	Cocoa and powdered chocolate	0.7	0.9	1.1	1.3	1.1	1.1	1.0	0.9	0.7	0.8	1.0	1.1	0.9	0.8	0.8	0.8
01.2.2.1	Mineral or spring waters	1195.1	1178.5	1437.8	1528.4	1376.8	1214.1	1334.2	1147.2	1138.2	898.2	1408.9	1521.9	1008.4	886.1	1102.8	1197.1
01.2.2.2	Soft drinks	9.4	11.5	14.1	17.6	14.5	13.9	13.1	9.9	4.6	5.6	6.7	7.3	6.2	5.9	5.6	5.3
01.2.2.3	Fruit and vegetable juices	8.9	36.0	26.4	55.0	45.6	43.7	40.9	57.9	52.4	33.6	42.9	43.9	36.7	35.1	33.3	40.0
	Total beverage quantity	1214.2	1227.3	1479.8	1608.8	1443.4	1278.0	1394.0	1220.8	1196.2	938.6	1459.8	1592.9	1074.9	950.7	1164.0	1263.6
	Total food quantity	1236.5	1501.6	1841.2	2217.0	1912.3	1834.3	1746.0	1711.2	1233.3	1541.8	1906.6	2136.5	1830.8	1749.7	1648.0	1574.7

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.23. ABSPO nutritional food reference baskets by age and gender for Romania

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	10.3	3.8	6.1	19.1	15.8	15.2	14.2	5.4	1.0	1.2	1.4	1.5	1.3	1.2	1.2	5.4
01.1.1.2	Flours and other cereals	10.6	8.7	14.2	61.9	36.6	35.1	19.7	12.4	2.4	2.9	3.5	3.9	3.2	3.1	3.7	12.4
01.1.1.3	Bread	165.5	197.1	331.0	263.2	288.3	275.6	251.2	262.4	31.5	27.5	30.4	26.7	22.1	21.1	28.0	262.4
01.1.1.4	Other bakery products	0.1	0.9	1.1	1.4	1.2	1.1	1.1	0.4	0.7	0.9	1.0	1.1	1.0	0.9	0.9	0.4
01.1.1.5	Pizza and quiche	1.0	1.2	1.5	1.8	1.5	1.5	1.4	2.1	1.8	1.1	1.3	1.5	1.2	1.2	1.1	2.1
01.1.1.6	Pasta products and couscous	11.3	7.2	8.9	11.1	9.2	8.8	8.2	3.1	5.5	6.7	8.0	8.8	7.4	7.1	9.4	3.1
01.1.1.7	Breakfast cereals	1.2	1.5	1.8	2.3	1.9	1.8	1.7	1.6	1.1	1.4	1.6	1.8	1.5	1.4	1.9	1.6
01.1.1.8	Other cereal products	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.3	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.3
01.1.2.1	Beef and veal	5.4	6.6	8.1	10.1	8.4	8.0	10.5	11.3	51.6	85.1	67.8	94.6	79.2	75.7	43.0	11.3
01.1.2.2	Pork	2.0	28.4	11.9	37.2	30.8	29.5	16.6	10.4	1.9	2.3	2.7	3.0	2.5	2.4	2.2	10.4
01.1.2.3	Lamb and goat	1.8	2.1	2.6	3.3	2.7	2.6	2.4	2.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	2.3
01.1.2.4	Poultry	86.6	228.2	117.6	286.9	169.7	162.8	210.9	223.4	2.7	3.3	3.9	4.3	3.6	3.4	3.2	223.4
01.1.2.5	Other meats	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.9	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.9
01.1.2.6	Edible offal	0.3	1.2	1.9	3.6	5.0	4.8	4.5	6.8	1.1	5.5	6.5	10.7	14.0	14.3	8.1	6.8
01.1.2.7	Dried, salted or smoked meat	0.2	2.1	1.0	3.2	2.6	2.5	2.4	0.9	1.6	1.9	2.3	2.5	2.1	2.0	1.9	0.9
01.1.2.8	Other meat preparations	0.5	5.8	2.9	8.9	7.4	7.1	6.6	10.0	4.5	5.4	6.5	7.1	6.0	5.7	4.9	10.0
01.1.3.1	Fresh or chilled fish	23.8	22.8	25.7	24.4	20.2	19.4	16.2	15.8	9.1	16.7	19.8	21.8	18.2	17.4	23.1	15.8
01.1.3.2	Frozen fish	6.1	7.4	9.1	11.3	9.4	9.0	8.4	6.1	0.6	0.7	0.8	0.9	0.8	0.7	0.7	6.1
01.1.3.3	Fresh or chilled seafood	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.4
01.1.3.4	Frozen seafood	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.6	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.6
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.1
01.1.3.6	Other preserved or processed fish or seafood	0.2	0.9	1.2	1.4	1.2	1.1	1.1	0.4	0.7	0.9	1.0	1.1	1.0	0.9	0.9	0.4
01.1.4.1	Fresh whole milk	214.8	213.2	269.2	288.3	174.1	166.9	207.6	204.6	89.2	94.3	179.0	128.3	110.4	98.5	120.4	204.6
01.1.4.2	Fresh low fat milk	72.7	79.2	91.2	71.2	58.9	56.5	74.1	79.9	235.8	287.1	340.7	374.8	313.9	300.0	284.1	79.9
01.1.4.3	Preserved milk	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4
01.1.4.4	Yoghurt	14.7	9.4	18.4	14.4	11.9	11.4	10.7	4.0	7.2	8.8	10.4	11.5	9.6	9.2	8.7	4.0
01.1.4.5	Cheese and curd	22.6	8.5	38.2	27.7	36.0	34.5	19.4	17.1	2.2	2.7	3.2	3.5	2.9	2.8	2.6	17.1
01.1.4.6	Other milk products	0.4	1.3	2.2	6.7	5.6	5.4	3.0	1.9	0.3	0.4	0.5	0.5	0.4	0.4	0.4	1.9
01.1.4.7	Eggs	5.7	42.0	58.9	63.1	87.1	83.6	100.0	100.0	100.0	95.7	100.0	90.7	100.0	100.0	80.6	100.0
01.1.5.1	Butter	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1
01.1.5.2	Margarine and other vegetable fats	0.0	0.3	0.3	0.4	0.4	0.3	0.3	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1
01.1.5.3	Olive oil	0.1	0.4	0.6	1.9	1.5	1.5	1.4	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
01.1.5.4	Other edible oils	12.2	7.4	14.3	15.6	12.9	12.4	11.9	12.4	11.5	13.2	15.7	22.7	14.4	13.8	14.6	12.4
01.1.5.5	Other edible animal fats	0.2	0.4	0.2	0.7	0.6	0.5	0.5	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
01.1.6.1	Fresh or chilled fruit	237.1	238.6	352.8	375.7	263.0	252.3	297.3	309.0	224.9	273.9	325.1	357.6	299.5	286.2	270.6	309.0
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.5	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.5
01.1.6.3	Dried fruit and nuts	1.9	1.2	1.5	1.8	1.5	1.5	1.4	2.1	0.9	1.1	1.3	1.5	1.2	1.2	1.6	2.1
01.1.6.4	Preserved fruit and fruit-based products	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.3	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.3
01.1.7.1	other fresh or chilled vegetables	164.1	202.7	249.1	314.3	357.7	350.0	327.7	309.0	8.6	31.3	20.1	38.2	43.0	41.1	23.4	309.0
01.1.7.2	Other frozen vegetables	1.9	1.2	1.5	1.9	1.6	1.5	1.4	2.1	136.4	35.0	136.8	114.1	95.6	91.3	121.1	2.1
01.1.7.3	Other dried, preserved or processed vegetables	16.4	17.9	20.6	22.5	13.3	12.7	11.9	18.0	194.9	287.1	334.2	374.8	313.9	300.0	265.1	18.0
01.1.7.4	Potatoes	104.5	113.8	81.9	143.1	84.7	81.2	45.6	28.7	213.1	287.1	340.7	374.8	309.2	293.1	284.1	28.7
01.1.7.5	Crisps	0.4	0.5	0.7	0.8	0.7	0.7	0.6	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.2
01.1.7.6	Other tubers and products of tuber vegetables	0.0	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.5
01.1.8.1	Sugar	2.1	2.5	3.1	3.8	3.2	3.0	2.8	1.1	1.9	2.3	2.8	3.0	2.5	2.4	1.4	1.1
01.1.8.2	Jams, marmalades and honey	2.0	2.4	1.9	3.7	3.1	2.9	2.8	1.0	0.2	0.2	0.3	0.3	0.2	0.2	0.2	1.0
01.1.8.3	Chocolate	1.4	1.7	0.9	2.7	2.2	2.1	1.2	0.7	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.7
01.1.8.4	Confectionery products	2.4	2.9	3.6	4.4	3.7	3.5	3.3	1.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	1.2
01.1.8.5	Edible ices and ice cream	0.0	1.8	0.9	2.8	2.3	2.2	2.1	0.8	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.8
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	0.4	4.4	5.4	6.7	5.6	5.3	5.0	1.9	3.4	4.1	4.9	5.4	4.5	4.3	4.1	1.9
01.1.9.2	Salt, spices and culinary herbs	0.1	2.6	0.8	1.6	1.6	2.1	2.3	2.8	0.7	3.8	4.6	4.2	5.3	5.6	6.0	2.8
01.1.9.4	Ready-made meals	1.2	1.4	1.7	2.2	1.8	1.7	1.6	1.5	1.1	1.3	1.6	1.7	1.4	1.4	1.3	1.5
01.1.9.9	Other food products	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1
01.2.1.1	Coffee	0.0	0.0	0.0	6.6	5.5	5.2	4.9	1.9	0.0	0.0	0.0	19.6	23.4	23.4	13.3	1.9
01.2.1.2	Tea	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3
01.2.1.3	Cocoa and powdered chocolate	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.2.2.1	Mineral or spring waters	1162.7	1155.9	1432.7	1572.7	1390.9	1217.5	1440.1	1603.1	1159.5	1184.8	1436.4	1498.4	1361.3	1285.4	1278.5	1603.1
01.2.2.2	Soft drinks	38.6	80.0	57.5	71.8	59.5	57.1	32.1	20.2	43.3	52.7	56.7	68.8	56.7	55.1	31.3	20.2
01.2.2.3	Fruit and vegetable juices	8.1	9.9	12.1	15.1	12.5	12.0	11.2	16.6	7.6	9.2	10.9	12.0	10.1	9.6	9.1	16.6
	Total beverage quantity	1209.7	1246.1	1502.7	1666.8	1468.8	1292.2	1488.7	1642.1	1210.6	1247.1	1504.5	1599.2	1451.8	1373.8	1332.6	1642.1
	Total food quantity	1209.0	1488.2	1771.4	2135.8	1752.2	1687.1	1717.8	1679.9	1354.9	1598.4	1987.2	2106.5	1799.4	1716.1	1630.0	1679.9

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.24. ABSPO nutritional food reference baskets by age and gender for Slovakia

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	10.3	5.0	7.7	19.1	15.8	15.2	9.9	5.4	6.0	7.3	8.6	9.5	8.0	7.6	7.2	6.9
01.1.1.2	Flours and other cereals	24.2	11.8	18.0	63.0	37.2	35.7	20.1	12.6	2.3	2.7	3.3	3.6	3.0	2.9	2.7	2.6
01.1.1.3	Bread	134.6	227.1	277.1	167.0	196.5	187.1	203.4	222.3	79.0	100.6	119.4	87.6	73.4	70.1	88.5	88.4
01.1.1.4	Other bakery products	0.2	1.2	1.8	4.6	3.8	3.6	3.4	1.3	2.3	1.4	3.3	3.6	3.1	2.9	2.8	2.6
01.1.1.5	Pizza and quiche	0.8	1.5	1.7	1.4	1.2	1.1	1.1	1.0	0.7	0.9	1.4	1.1	1.0	0.9	0.9	0.8
01.1.1.6	Pasta products and couscous	10.8	13.2	23.3	20.1	16.7	16.0	15.0	14.1	10.1	17.2	14.6	16.1	13.4	12.9	12.2	16.2
01.1.1.7	Breakfast cereals	2.4	3.0	1.8	4.5	3.8	3.6	3.4	3.2	2.3	2.8	3.3	3.6	3.0	2.9	2.7	3.7
01.1.1.8	Other cereal products	2.3	1.1	3.4	4.2	3.5	3.3	3.1	1.2	2.1	2.6	3.0	3.3	2.8	2.7	2.5	2.4
01.1.2.1	Beef and veal	3.7	7.1	4.7	6.8	5.6	5.4	5.1	7.6	3.4	4.2	4.9	5.4	4.5	4.3	4.1	3.9
01.1.2.2	Pork	26.0	50.6	19.3	48.3	40.0	38.4	35.9	33.9	7.3	29.5	17.5	38.5	32.2	30.8	29.2	16.6
01.1.2.3	Lamb and goat	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.2.4	Poultry	10.6	127.3	78.6	255.9	162.6	156.0	185.9	174.9	68.8	78.2	72.0	109.3	91.6	87.5	82.9	47.3
01.1.2.5	Other meats	1.2	2.4	1.8	2.3	1.9	1.8	1.7	1.6	1.1	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.2.6	Edible offal	0.3	1.5	2.4	3.5	4.9	4.7	4.4	6.6	1.3	2.7	3.2	4.3	5.2	5.7	5.4	3.8
01.1.2.7	Dried, salted or smoked meat	3.3	1.6	2.5	6.2	5.1	4.9	4.6	4.3	0.9	3.8	4.5	4.9	4.1	3.9	3.7	2.1
01.1.2.8	Other meat preparations	4.8	2.9	4.4	10.9	9.0	8.7	8.1	12.2	1.6	6.6	7.9	8.7	7.3	6.9	6.6	3.8
01.1.3.1	Fresh or chilled fish	17.3	17.7	20.3	18.8	14.0	13.5	16.8	14.6	20.1	21.6	25.6	18.8	15.7	15.0	15.2	18.5
01.1.3.2	Frozen fish	2.3	4.4	5.1	4.2	3.5	3.4	3.2	3.0	2.1	2.6	3.1	3.4	2.8	2.7	2.6	2.4
01.1.3.3	Fresh or chilled seafood	0.2	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4
01.1.3.6	Other preserved or processed fish or seafood	8.6	9.1	10.4	8.7	7.2	6.9	6.4	6.1	7.4	3.8	6.3	6.9	5.8	5.5	5.2	5.1
01.1.4.1	Fresh whole milk	53.7	13.8	63.1	52.5	43.5	41.7	39.1	36.8	44.8	16.0	57.1	41.9	35.1	33.5	31.7	30.2
01.1.4.2	Fresh low fat milk	237.1	283.5	340.5	299.4	238.5	225.2	226.9	278.6	235.8	271.2	340.7	350.9	271.7	252.1	258.0	268.6
01.1.4.3	Preserved milk	0.7	0.9	1.6	1.3	1.1	1.0	1.0	0.9	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.4.4	Yoghurt	26.8	8.0	36.5	30.4	25.1	24.1	22.6	18.2	25.9	18.5	33.0	24.2	20.3	19.4	18.3	17.4
01.1.4.5	Cheese and curd	19.5	7.8	27.8	27.2	25.2	23.8	19.7	8.4	14.0	5.6	19.9	14.6	12.2	11.7	11.1	6.6
01.1.4.6	Other milk products	1.9	0.9	1.4	3.6	2.9	2.8	2.6	2.5	1.8	2.2	2.6	2.8	2.4	2.3	2.2	2.0
01.1.4.7	Eggs	20.3	54.0	70.4	75.5	100.0	100.0	100.0	100.0	32.0	47.8	58.7	95.5	100.0	100.0	100.0	90.1
01.1.5.1	Butter	0.6	0.3	0.4	1.0	0.8	0.8	0.8	0.7	0.2	0.3	0.4	0.8	0.7	0.7	0.6	0.6
01.1.5.2	Margarine and other vegetable fats	0.5	0.3	0.4	1.0	0.8	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.5.3	Olive oil	1.1	0.5	0.8	2.0	1.7	1.6	1.5	0.6	1.7	1.2	1.5	1.6	1.4	1.3	1.2	0.7
01.1.5.4	Other edible oils	7.7	3.3	10.4	11.8	9.8	9.4	9.0	9.2	7.6	7.1	7.0	7.1	5.9	5.7	6.0	7.2
01.1.5.5	Other edible animal fats	1.8	0.9	2.6	3.3	2.7	2.6	1.5	0.9	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	234.8	139.2	176.4	440.6	364.9	350.0	327.7	307.6	219.5	135.2	318.3	353.1	295.7	282.6	267.7	252.9
01.1.6.2	Frozen fruit	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	7.5	7.7	8.8	7.3	6.1	5.8	5.4	8.2	6.2	6.7	8.0	5.8	4.9	4.7	4.4	5.9
01.1.6.4	Preserved fruit and fruit-based products	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.7.1	other fresh or chilled vegetables	154.1	193.2	238.3	306.9	285.1	273.5	327.7	309.0	45.1	91.5	108.6	143.4	196.2	191.3	133.4	103.4
01.1.7.2	Other frozen vegetables	7.9	8.1	9.3	7.7	6.4	6.2	5.8	8.7	114.8	109.4	168.2	223.6	239.1	228.5	264.2	270.2
01.1.7.3	Other dried, preserved or processed vegetables	20.2	20.7	23.7	24.0	16.4	15.7	14.7	22.2	9.9	12.1	14.3	15.7	13.2	12.6	11.9	15.9
01.1.7.4	Potatoes	114.2	134.4	154.0	179.5	106.2	101.9	57.2	36.0	175.3	287.1	268.4	326.5	237.7	224.1	164.7	170.2
01.1.7.5	Crisps	1.3	2.5	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	1.5	1.4
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.1	0.2	0.5	0.4	0.4	0.4	0.3	0.2	0.1	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	1.7	0.8	2.6	3.2	2.6	2.5	2.4	0.9	1.6	2.0	2.3	2.5	2.1	2.0	1.9	1.1
01.1.8.2	Jams, marmalades and honey	3.6	4.4	4.1	6.7	5.5	5.3	4.0	1.9	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.8.3	Chocolate	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.8.4	Confectionery products	0.0	2.0	3.0	7.6	6.3	6.0	3.4	2.1	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.4
01.1.8.5	Edible ices and ice cream	2.4	1.2	1.8	4.5	3.8	3.6	3.4	3.2	2.3	2.8	3.3	3.6	3.0	2.9	2.7	2.6
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01.1.9.1	Sauces, condiments	1.0	5.1	7.8	19.5	16.2	15.5	8.7	5.5	4.2	11.9	14.1	15.6	13.0	12.4	11.8	11.2
01.1.9.2	Salt, spices and culinary herbs	0.2	1.7	1.5	2.3	2.6	3.0	3.0	3.0	1.5	4.4	4.7	5.0	6.0	6.3	6.0	6.4
01.1.9.4	Ready-made meals	6.6	3.2	4.9	12.3	10.2	9.7	9.1	8.6	6.2	3.7	13.3	9.8	8.2	7.8	7.4	7.0
01.1.9.9	Other food products	0.0	0.2	0.2	0.6	0.5	0.5	0.4	0.3	0.1	0.4	0.4	0.5	0.4	0.4	0.3	0.3
01.2.1.1	Coffee	0.0	0.0	0.0	6.1	5.1	4.9	4.6	4.3	0.0	0.0	0.0	15.7	20.2	20.4	19.3	15.6
01.2.1.2	Tea	0.6	0.8	0.5	1.2	1.0	0.9	0.9	1.3	0.6	0.7	0.4	0.9	0.8	0.8	0.7	0.7
01.2.1.3	Cocoa and powdered chocolate	0.9	1.1	1.3	1.7	1.4	1.3	1.2	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	1.0
01.2.2.1	Mineral or spring waters	1115.8	1100.9	1427.5	1455.1	1266.5	1155.9	1361.1	1446.3	1136.5	1156.9	1440.5	1117.2	952.6	894.1	846.8	1127.4
01.2.2.2	Soft drinks	22.7	44.2	16.9	42.2	34.9	33.5	31.3	11.8	7.7	9.4	11.1	12.2	10.3	9.8	9.3	8.8
01.2.2.3	Fruit and vegetable juices	19.5	38.0	29.0	36.3	30.0	28.8	27.0	25.4	18.2	22.1	26.3	28.9	24.2	23.1	21.9	20.8
	Total beverage quantity	1159.6	1185.0	1475.2	1542.5	1338.9	1225.3	1426.1	1490.4	1163.8	1190.1	1479.6	1176.4	1009.2	949.2	899.0	1174.4
	Total food quantity	1193.9	1390.8	1683.3	2189.4	1823.8	1748.7	1735.5	1706.2	1175.3	1334.2	1757.4	1984.9	1755.7	1676.9	1588.8	1506.1

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.25. ABSPO nutritional food reference baskets by age and gender for Slovenia

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	7.1	5.2	10.5	13.1	10.9	10.4	9.8	5.5	0.7	0.8	1.0	1.0	0.9	0.8	0.8	0.8
01.1.1.2	Flours and other cereals	55.2	40.3	64.2	143.5	86.3	81.4	45.7	43.1	5.1	6.3	7.4	8.2	6.8	6.5	6.2	5.9
01.1.1.3	Bread	69.2	83.5	153.3	102.1	116.5	111.7	139.9	138.1	40.8	47.0	89.2	61.4	51.4	49.1	54.6	61.9
01.1.1.4	Other bakery products	1.8	1.3	2.6	3.3	2.7	2.6	2.4	1.4	1.7	2.0	2.4	2.6	2.2	2.1	2.0	1.9
01.1.1.5	Pizza and quiche	2.0	2.4	2.9	3.7	3.0	2.9	2.7	2.6	1.8	2.2	3.2	2.9	2.4	2.3	2.2	2.4
01.1.1.6	Pasta products and couscous	49.9	75.6	66.0	82.5	68.3	65.5	61.7	61.2	16.5	20.1	23.9	26.3	22.0	21.1	19.9	26.5
01.1.1.7	Breakfast cereals	1.7	2.8	2.5	3.1	2.6	2.5	2.3	2.2	1.6	1.9	2.2	2.5	2.1	2.0	1.9	1.8
01.1.1.8	Other cereal products	1.6	1.9	2.3	2.9	2.4	2.3	2.2	1.2	1.5	1.8	2.1	2.3	2.0	1.9	1.8	1.7
01.1.2.1	Beef and veal	35.2	62.3	32.7	68.0	56.3	54.0	59.5	66.7	10.9	66.3	31.5	86.6	72.5	69.3	43.6	37.4
01.1.2.2	Pork	13.2	22.6	17.3	24.6	20.4	19.5	18.3	10.4	1.2	1.5	1.8	2.0	1.6	1.6	1.5	1.4
01.1.2.3	Lamb and goat	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.2.4	Poultry	21.6	36.9	32.2	40.2	33.3	32.0	29.9	39.5	20.2	24.6	29.2	32.1	26.9	25.7	24.3	13.9
01.1.2.5	Other meats	0.5	0.6	0.7	0.9	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.2.6	Edible offal	0.5	1.0	1.9	2.4	2.0	1.9	1.8	2.4	2.2	5.5	6.5	10.7	13.9	14.3	13.5	12.9
01.1.2.7	Dried, salted or smoked meat	2.3	7.0	5.1	10.7	8.8	8.5	7.9	4.5	1.8	2.1	2.5	2.8	2.3	2.2	2.1	2.0
01.1.2.8	Other meat preparations	4.4	18.7	9.8	20.4	16.9	16.2	15.2	11.2	10.2	12.5	14.8	16.3	13.6	13.0	12.3	11.1
01.1.3.1	Fresh or chilled fish	13.3	10.7	13.1	16.3	13.5	13.0	13.9	16.0	9.0	11.0	13.0	14.4	12.0	11.5	11.1	11.1
01.1.3.2	Frozen fish	1.4	1.7	2.1	2.6	2.1	2.1	1.9	2.5	1.3	1.6	1.9	2.1	1.7	1.6	1.6	1.5
01.1.3.3	Fresh or chilled seafood	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.3.4	Frozen seafood	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	4.4	3.2	6.5	8.1	6.7	6.4	6.0	7.9	12.9	15.7	9.4	20.5	17.2	16.4	17.5	17.6
01.1.4.1	Fresh whole milk	91.7	41.9	119.4	106.5	88.2	84.6	79.2	44.8	96.2	65.0	123.5	102.7	75.8	68.0	87.5	85.7
01.1.4.2	Fresh low fat milk	237.1	250.5	322.5	287.7	242.1	228.6	221.5	278.0	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.8	0.9	1.1	1.4	1.2	1.1	1.1	0.6	0.7	0.9	1.0	1.1	0.9	0.9	0.9	0.8
01.1.4.4	Yoghurt	21.3	15.6	31.7	39.6	32.8	31.5	29.5	16.7	7.6	9.3	17.7	12.1	10.2	9.7	9.2	12.3
01.1.4.5	Cheese and curd	15.6	8.4	22.9	21.3	17.6	16.9	15.8	15.1	5.8	4.1	7.8	5.4	4.5	4.3	4.1	5.4
01.1.4.6	Other milk products	2.1	1.5	3.1	3.9	3.2	3.1	2.9	1.6	2.0	2.4	2.8	3.1	2.6	2.5	2.4	2.3
01.1.4.7	Eggs	39.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	66.0	92.1	100.0	86.1	100.0	100.0	100.0	100.0
01.1.5.1	Butter	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.5.2	Margarine and other vegetable fats	1.2	2.3	2.8	5.8	4.8	4.6	2.6	2.4	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.3
01.1.5.3	Olive oil	2.1	1.6	3.2	3.9	3.3	3.1	2.9	1.7	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.5.4	Other edible oils	9.0	4.7	10.2	12.0	10.0	9.6	9.9	9.2	6.6	5.9	6.7	7.7	6.4	6.1	5.8	5.5
01.1.5.5	Other edible animal fats	1.2	1.2	1.5	3.1	2.6	2.5	2.3	1.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	234.2	282.2	348.5	435.3	360.5	345.8	323.7	303.5	218.3	265.8	315.4	347.0	290.6	277.7	263.0	247.6
01.1.6.2	Frozen fruit	0.4	0.4	0.5	0.7	0.5	0.5	0.5	0.6	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.1.6.3	Dried fruit and nuts	6.0	10.2	8.9	11.1	9.2	8.8	8.3	10.9	5.6	6.8	8.1	8.9	7.4	7.1	6.7	8.9
01.1.6.4	Preserved fruit and fruit-based products	2.7	3.3	4.1	5.1	4.2	4.1	3.8	2.2	2.6	3.1	3.7	4.1	3.4	3.3	3.1	2.9
01.1.7.1	other fresh or chilled vegetables	142.0	180.0	232.5	328.5	316.9	304.0	327.7	309.0	10.8	19.5	9.3	25.5	21.4	20.4	19.3	18.0
01.1.7.2	Other frozen vegetables	2.1	3.6	3.2	3.9	3.3	3.1	2.9	3.9	103.0	46.8	149.1	129.0	123.4	112.0	148.5	141.3
01.1.7.3	Other dried, preserved or processed vegetables	38.1	40.6	35.5	44.3	36.7	35.2	32.9	43.5	147.3	287.1	332.8	256.0	307.7	300.0	241.7	230.2
01.1.7.4	Potatoes	37.0	63.0	55.0	68.7	56.9	54.6	51.1	28.9	199.9	205.4	226.5	302.6	195.2	182.9	173.2	131.5
01.1.7.5	Crisps	1.3	1.6	2.0	2.4	2.0	1.9	1.8	1.0	1.2	1.5	1.8	2.0	1.6	1.6	1.5	1.4
01.1.7.6	Other tubers and products of tuber vegetables	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.1	Sugar	1.4	1.0	2.1	2.6	2.2	2.1	1.9	1.1	1.3	1.6	1.9	2.1	1.7	1.7	1.6	1.5
01.1.8.2	Jams, marmalades and honey	2.6	3.2	3.3	4.9	4.1	3.9	2.2	2.1	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.8.3	Chocolate	0.7	0.9	1.1	1.3	1.1	1.1	1.0	0.6	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.8.4	Confectionery products	1.6	1.2	2.4	2.9	2.4	2.3	2.2	1.2	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.1.8.5	Edible ices and ice cream	0.0	3.9	4.8	10.0	8.3	8.0	4.8	4.2	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	8.6	14.6	12.7	15.9	13.2	12.6	11.8	6.7	8.0	9.7	11.5	12.7	10.6	10.2	9.6	9.1
01.1.9.2	Salt, spices and culinary herbs	1.1	3.6	2.9	3.0	3.7	4.0	3.6	3.0	0.5	1.7	1.7	2.4	2.9	3.2	3.1	3.9
01.1.9.4	Ready-made meals	1.3	1.6	1.9	2.4	2.0	1.9	1.8	1.7	1.2	1.5	1.7	1.9	1.6	1.5	1.4	1.4
01.1.9.9	Other food products	0.3	0.5	1.0	1.1	1.0	1.0	0.9	0.5	0.1	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.2.1.1	Coffee	0.0	0.0	0.0	7.8	6.5	6.2	5.8	3.3	0.0	0.0	0.0	18.0	22.0	22.1	14.6	12.0
01.2.1.2	Tea	0.3	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.2.1.3	Cocoa and powdered chocolate	0.6	0.7	0.8	1.1	0.9	0.8	0.8	0.4	0.5	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.2.2.1	Mineral or spring waters	1153.0	1121.7	1423.5	1465.0	1302.9	1163.8	1375.9	1438.6	1137.1	1157.6	1410.0	1494.4	1357.2	1282.2	1214.3	1389.1
01.2.2.2	Soft drinks	6.0	8.8	9.0	11.2	9.3	8.9	8.3	4.7	49.4	60.1	59.6	78.5	65.6	62.8	49.8	33.9
01.2.2.3	Fruit and vegetable juices	29.1	72.9	38.2	79.5	65.8	63.1	51.7	78.1	4.0	4.9	5.8	6.3	5.3	5.1	4.8	4.6
	Total beverage quantity	1189.1	1204.6	1472.0	1565.2	1385.9	1243.4	1443.0	1525.7	1191.3	1223.6	1476.6	1598.6	1451.2	1373.3	1284.5	1440.5
	Total food quantity	1189.6	1423.7	1769.4	2081.6	1790.3	1716.9	1675.0	1615.6	1264.7	1546.8	1913.9	1990.5	1741.0	1661.6	1590.1	1498.2

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.26. *ABSPO nutritional food reference baskets by age and gender for Spain*

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	9.9	12.0	14.7	18.3	15.2	14.6	13.6	12.9	9.2	11.2	13.3	14.6	12.2	11.7	7.8	4.2
01.1.1.2	Flours and other cereals	79.4	88.1	118.4	166.9	119.9	113.3	94.7	67.4	7.2	8.7	10.3	11.4	9.5	9.1	8.6	3.3
01.1.1.3	Bread	28.5	21.7	26.5	33.2	27.5	26.3	24.7	23.3	16.6	20.2	24.0	26.4	22.1	21.2	28.0	30.5
01.1.1.4	Other bakery products	2.0	2.5	3.0	3.8	3.1	3.0	2.8	2.7	1.9	2.3	2.8	3.0	2.5	2.4	2.3	0.9
01.1.1.5	Pizza and quiche	0.8	0.9	1.1	1.4	1.2	1.1	1.0	1.0	0.7	0.9	1.0	1.1	0.9	0.9	0.8	0.8
01.1.1.6	Pasta products and couscous	20.3	24.8	30.3	37.8	31.3	30.0	28.1	37.1	83.8	117.4	105.5	133.1	88.2	81.8	84.7	90.4
01.1.1.7	Breakfast cereals	0.8	1.0	1.2	1.5	1.2	1.2	1.1	1.1	0.8	0.9	1.1	1.2	1.0	1.0	0.9	0.9
01.1.1.8	Other cereal products	0.7	0.8	1.0	1.3	1.1	1.0	1.0	0.9	0.6	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.2.1	Beef and veal	15.9	19.4	14.2	29.6	24.5	23.5	30.8	29.1	7.5	9.2	10.9	12.0	10.0	9.6	9.1	4.5
01.1.2.2	Pork	12.8	15.6	15.6	23.8	19.7	18.9	17.7	16.7	5.4	13.4	15.9	17.5	14.7	14.0	13.3	5.0
01.1.2.3	Lamb and goat	2.1	2.5	3.1	3.8	3.2	3.1	2.9	2.7	1.9	2.3	2.8	3.1	2.6	2.5	2.3	2.2
01.1.2.4	Poultry	37.8	28.8	35.2	43.9	36.4	34.9	32.7	43.1	2.2	2.7	3.2	3.5	2.9	2.8	2.7	2.5
01.1.2.5	Other meats	12.3	9.4	11.5	14.3	11.8	11.4	10.6	14.0	109.3	157.4	151.1	166.2	139.2	133.0	75.6	47.9
01.1.2.6	Edible offal	4.2	6.3	9.3	11.6	15.2	15.4	15.7	15.8	4.8	7.4	8.8	11.6	15.2	15.4	14.6	5.6
01.1.2.7	Dried, salted or smoked meat	1.9	5.8	7.1	8.8	7.3	7.0	6.6	6.2	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5
01.1.2.8	Other meat preparations	1.3	3.9	4.8	6.0	4.9	4.7	4.4	4.2	3.0	3.6	4.3	4.8	4.0	3.8	3.6	3.4
01.1.3.1	Fresh or chilled fish	7.5	22.7	27.8	34.7	28.8	27.6	25.8	14.6	16.0	21.2	24.0	18.9	15.8	15.1	15.3	16.9
01.1.3.2	Frozen fish	7.8	9.5	11.6	14.5	12.0	11.6	10.8	10.2	7.3	8.9	10.5	11.6	9.7	9.3	8.8	8.4
01.1.3.3	Fresh or chilled seafood	1.1	1.3	1.6	2.1	1.7	1.6	1.5	1.4	1.0	1.3	1.5	1.6	1.4	1.3	1.2	1.2
01.1.3.4	Frozen seafood	8.6	6.6	8.0	10.0	8.3	7.9	7.4	7.0	5.0	6.1	7.2	8.0	6.7	6.4	6.0	5.7
01.1.3.5	Dried, smoked or salted fish and seafood	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
01.1.3.6	Other preserved or processed fish or seafood	0.9	1.1	1.3	1.7	1.4	1.3	1.2	1.2	0.8	1.0	1.2	1.3	1.1	1.1	1.0	0.9
01.1.4.1	Fresh whole milk	79.1	60.2	103.0	91.9	76.1	73.0	68.4	64.5	73.7	39.1	99.9	73.3	61.4	58.6	55.5	84.5
01.1.4.2	Fresh low fat milk	237.1	192.7	328.1	292.7	246.1	232.5	236.7	263.7	235.8	287.1	340.7	374.8	313.9	300.0	284.1	270.2
01.1.4.3	Preserved milk	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.7	0.9	1.0	0.8	0.8	0.7	0.7
01.1.4.4	Yoghurt	36.1	36.4	56.8	55.5	46.0	44.1	41.3	23.4	30.2	23.0	34.1	30.0	25.1	24.0	22.7	21.6
01.1.4.5	Cheese and curd	13.4	14.9	25.6	22.8	18.9	18.1	17.0	16.0	18.3	7.0	24.8	18.2	15.2	14.6	17.0	15.9
01.1.4.6	Other milk products	1.7	2.1	2.5	3.2	2.6	2.5	2.4	2.2	1.6	1.9	2.3	2.5	2.1	2.0	1.9	1.8
01.1.4.7	Eggs	58.7	77.4	60.5	96.5	100.0	100.0	93.6	100.0	31.4	47.8	65.2	100.0	100.0	100.0	100.0	95.2
01.1.5.1	Butter	0.4	1.3	0.9	1.9	1.6	1.5	1.4	0.8	0.4	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.5.2	Margarine and other vegetable fats	1.2	1.4	1.7	2.2	1.8	1.7	1.6	0.9	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
01.1.5.3	Olive oil	1.6	2.0	2.4	3.0	2.5	2.4	2.3	1.8	1.5	1.9	2.2	2.4	2.0	1.9	1.8	0.7
01.1.5.4	Other edible oils	3.9	5.8	7.1	8.8	7.3	7.0	6.6	7.3	9.5	6.5	7.7	10.3	8.6	8.3	9.0	8.4
01.1.5.5	Other edible animal fats	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.6.1	Fresh or chilled fruit	203.6	247.8	313.9	378.4	313.4	300.6	288.5	273.4	204.4	167.1	298.7	328.6	275.1	263.0	249.0	236.5
01.1.6.2	Frozen fruit	5.7	6.9	8.5	10.6	8.8	8.4	7.9	7.4	5.3	6.5	7.7	8.4	7.1	6.7	6.4	6.1
01.1.6.3	Dried fruit and nuts	26.3	32.0	32.8	48.9	40.5	38.8	30.7	30.3	9.8	11.4	11.0	12.1	10.1	9.7	9.2	13.9
01.1.6.4	Preserved fruit and fruit-based products	7.7	9.4	6.9	14.3	11.8	11.4	9.2	6.0	7.2	8.7	10.4	11.4	9.6	9.1	8.6	3.3
01.1.7.1	other fresh or chilled vegetables	22.4	13.7	20.1	41.8	34.6	33.2	31.1	29.3	8.4	12.8	15.8	33.3	27.9	26.7	35.4	38.4
01.1.7.2	Other frozen vegetables	6.8	8.2	10.1	12.6	10.4	10.0	10.9	12.4	18.5	18.8	44.6	49.1	41.1	39.3	52.1	56.6
01.1.7.3	Other dried, preserved or processed vegetables	151.6	276.3	352.8	276.5	263.7	252.9	327.7	309.0	141.5	287.1	340.7	283.0	313.9	300.0	284.1	270.2
01.1.7.4	Potatoes	23.7	28.9	35.3	44.1	36.5	35.1	32.8	34.7	22.1	26.9	32.0	35.2	29.5	28.2	22.9	25.4
01.1.7.5	Crisps	1.9	5.9	7.2	8.9	7.4	7.1	6.6	6.3	4.5	5.5	6.5	7.1	6.0	5.7	5.4	5.1
01.1.7.6	Other tubers and products of tuber vegetables	1.8	5.4	5.7	8.2	6.8	6.5	6.1	5.8	1.6	2.5	5.9	6.5	5.5	5.2	5.0	7.5
01.1.8.1	Sugar	0.7	0.9	1.1	1.4	1.1	1.1	1.0	1.0	0.7	0.8	1.0	1.1	0.9	0.9	0.8	0.8
01.1.8.2	Jams, marmalades and honey	0.0	3.4	2.5	5.1	4.3	4.1	2.3	2.2	2.6	3.1	3.7	4.1	3.4	3.3	2.7	1.2
01.1.8.3	Chocolate	2.9	3.9	2.8	5.9	4.9	4.7	3.5	2.5	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3
01.1.8.4	Confectionery products	1.9	2.3	2.8	3.5	2.9	2.8	2.6	2.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5
01.1.8.5	Edible ices and ice cream	0.0	6.0	4.4	9.1	7.5	7.2	6.8	3.8	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.8	0.7	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.5	0.5	0.5	0.5
01.1.9.1	Sauces, condiments	5.2	15.7	19.2	20.5	19.9	19.0	17.8	16.8	9.3	14.6	17.4	19.1	16.0	15.3	14.5	13.8
01.1.9.2	Salt, spices and culinary herbs	1.3	3.4	3.5	3.6	4.5	4.8	4.3	4.3	1.2	2.7	2.7	2.9	3.5	3.9	3.7	4.4
01.1.9.4	Ready-made meals	1.3	1.6	2.0	2.5	2.0	2.0	1.8	1.7	1.2	1.5	1.8	2.0	1.6	1.6	1.5	1.4
01.1.9.9	Other food products	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.2.1.1	Coffee	0.0	0.0	0.0	6.8	5.6	5.4	5.1	4.8	0.0	0.0	0.0	16.1	20.5	20.7	11.7	22.8
01.2.1.2	Tea	0.6	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.2.1.3	Cocoa and powdered chocolate	2.8	2.5	1.8	3.7	3.1	3.0	2.8	2.6	1.9	2.3	2.7	3.0	2.5	2.4	2.3	2.2
01.2.2.1	Mineral or spring waters	1142.2	1128.6	1395.7	1460.5	1300.4	1160.2	1359.0	1434.2	1133.5	998.8	1393.1	1304.0	1193.4	1043.7	1257.5	1157.5
01.2.2.2	Soft drinks	7.7	9.4	11.5	14.4	11.9	11.4	10.7	10.1	7.2	8.8	10.4	11.4	9.6	9.2	8.7	5.8
01.2.2.3	Fruit and vegetable juices	13.4	36.0	26.4	55.0	45.6	43.7	47.1	54.0	26.5	32.3	38.4	42.2	35.3	33.8	32.0	20.1
	Total beverage quantity	1166.7	1177.2	1436.3	1541.5	1367.5	1224.6	1425.4	1506.5	1169.7	1042.8	1445.4	1377.7	1262.1	1110.4	1312.9	1209.1
	Total food quantity	1155.8	1352.0	1769.4	1946.8	1662.4	1594.7	1600.3	1544.6	1128.9	1386.6	1783.6	1875.2	1646.8	1577.2	1486.6	1424.6

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

Table B2.24. ABSPO nutritional food reference baskets by age and gender for Sweden

ECOICOP	ECOICOP label	Men								Women							
		4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+	4-6	7-10	11-14	15-17	18-24	25-49	50-69	70+
01.1.1.1	Rice	6.7	8.2	10.0	12.5	10.3	9.9	9.3	3.5	6.3	7.6	9.1	10.0	8.3	8.0	7.6	7.2
01.1.1.2	Flours and other cereals	15.0	18.3	22.4	28.0	23.2	22.2	12.5	7.8	14.0	17.1	20.3	22.3	18.7	17.8	16.9	16.1
01.1.1.3	Bread	25.3	17.1	20.9	26.1	21.6	20.7	19.4	18.3	14.9	15.9	18.9	20.8	17.4	16.7	22.1	24.0
01.1.1.4	Other bakery products	2.7	3.3	2.0	5.0	4.1	4.0	2.4	1.4	2.5	3.1	3.6	4.0	3.3	3.2	3.0	2.9
01.1.1.5	Pizza and quiche	1.1	0.7	0.9	1.1	0.9	0.9	0.8	0.8	0.6	0.7	0.8	0.9	0.7	0.7	0.7	0.6
01.1.1.6	Pasta products and couscous	125.7	161.3	194.0	270.6	199.8	190.8	173.7	166.0	33.8	29.4	36.9	38.4	32.1	30.7	40.7	44.3
01.1.1.7	Breakfast cereals	0.6	0.8	0.9	1.2	1.0	0.9	0.9	0.8	0.6	0.7	0.9	0.9	0.8	0.8	0.7	0.7
01.1.1.8	Other cereal products	0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6
01.1.2.1	Beef and veal	2.9	17.6	10.8	26.9	22.3	21.4	28.0	30.2	5.7	6.9	8.2	9.1	7.6	7.2	6.9	6.5
01.1.2.2	Pork	12.9	15.7	9.6	24.0	19.9	19.1	23.2	26.9	12.0	14.7	17.4	19.1	16.0	15.3	14.5	5.5
01.1.2.3	Lamb and goat	0.7	0.8	1.0	1.2	1.0	1.0	0.9	0.9	0.6	0.8	0.9	1.0	0.8	0.8	0.8	0.7
01.1.2.4	Poultry	23.8	16.1	9.8	24.5	20.3	19.5	25.5	27.5	17.4	21.2	25.2	27.7	23.2	22.2	21.0	8.0
01.1.2.5	Other meats	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4
01.1.2.6	Edible offal	0.4	0.5	0.6	0.8	0.6	0.6	0.6	0.9	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4
01.1.2.7	Dried, salted or smoked meat	3.3	4.6	2.8	7.0	5.8	5.5	5.2	3.8	3.5	4.2	5.0	5.5	4.6	4.4	4.2	4.0
01.1.2.8	Other meat preparations	0.5	3.1	3.8	4.7	3.9	3.7	3.5	5.3	2.4	2.9	3.4	3.7	3.1	3.0	2.8	2.7
01.1.3.1	Fresh or chilled fish	5.0	11.0	13.5	16.9	14.0	13.4	14.2	14.0	4.3	5.3	6.3	6.9	5.8	5.5	5.2	5.0
01.1.3.2	Frozen fish	3.4	4.0	4.9	6.1	5.1	4.9	4.6	4.3	3.1	3.7	4.5	4.9	4.1	3.9	3.7	3.5
01.1.3.3	Fresh or chilled seafood	3.5	2.3	2.9	3.6	3.0	2.8	2.7	4.0	50.7	51.0	60.6	66.6	55.8	53.3	50.5	72.2
01.1.3.4	Frozen seafood	7.6	5.2	6.3	7.9	6.5	6.3	5.9	8.8	3.9	4.8	5.7	6.3	5.3	5.0	4.8	4.5
01.1.3.5	Dried, smoked or salted fish and seafood	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.3.6	Other preserved or processed fish or seafood	0.7	0.9	1.0	1.3	1.1	1.0	1.0	0.9	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.7
01.1.4.1	Fresh whole milk	41.0	35.6	65.3	54.3	45.0	43.2	40.4	38.1	27.2	33.2	39.4	43.3	36.3	34.7	32.8	31.2
01.1.4.2	Fresh low fat milk	187.5	115.4	232.5	193.6	169.3	153.8	201.6	217.3	235.8	263.1	340.7	343.5	294.1	274.9	265.9	260.7
01.1.4.3	Preserved milk	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
01.1.4.4	Yoghurt	23.5	17.2	52.4	43.7	36.2	34.7	32.5	30.6	2.2	2.7	3.2	3.5	2.9	2.8	2.6	2.5
01.1.4.5	Cheese and curd	39.2	52.0	64.4	72.8	60.4	57.8	47.1	43.4	18.4	24.1	29.3	32.6	27.5	26.1	24.7	23.5
01.1.4.6	Other milk products	0.9	5.3	3.2	8.1	6.7	6.4	3.6	2.3	1.2	1.4	1.7	1.8	1.5	1.5	1.4	1.3
01.1.4.7	Eggs	100.0	86.9	98.5	100.0	100.0	100.0	100.0	100.0	78.6	95.7	100.0	100.0	100.0	100.0	74.9	36.0
01.1.5.1	Butter	0.1	0.5	0.3	0.7	0.6	0.6	0.5	0.2	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.4
01.1.5.2	Margarine and other vegetable fats	0.2	1.0	0.6	1.6	1.3	1.3	1.2	0.4	0.8	1.0	1.2	1.3	1.1	1.0	1.0	0.9
01.1.5.3	Olive oil	0.3	1.8	1.1	2.7	2.2	2.1	2.0	0.8	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
01.1.5.4	Other edible oils	9.6	9.4	17.0	21.5	17.8	17.1	17.4	16.9	6.3	7.7	9.1	10.0	8.4	8.0	7.6	7.9
01.1.5.5	Other edible animal fats	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1
01.1.6.1	Fresh or chilled fruit	202.8	137.1	251.5	209.4	173.4	166.3	155.7	146.9	98.0	119.3	141.6	155.8	130.4	124.7	165.3	179.6
01.1.6.2	Frozen fruit	4.5	5.5	6.7	8.3	6.9	6.6	6.2	5.8	4.2	5.1	6.0	6.6	5.6	5.3	5.0	4.8
01.1.6.3	Dried fruit and nuts	3.0	3.6	4.4	5.5	4.6	4.4	4.1	6.2	9.8	11.9	14.1	15.6	13.0	12.4	16.5	17.9
01.1.6.4	Preserved fruit and fruit-based products	1.5	1.9	2.3	2.9	2.4	2.3	2.1	2.0	1.4	1.8	2.1	2.3	1.9	1.8	1.7	1.6
01.1.7.1	other fresh or chilled vegetables	31.9	21.6	26.4	32.9	27.3	26.1	24.5	36.9	16.5	20.1	23.8	26.2	22.0	21.0	19.9	7.6
01.1.7.2	Other frozen vegetables	16.5	11.2	14.8	17.1	14.2	13.6	17.8	19.2	140.2	106.7	177.3	139.3	116.7	111.5	143.0	160.7
01.1.7.3	Other dried, preserved or processed vegetables	133.8	288.6	352.8	288.7	324.7	311.5	327.7	309.0	94.9	271.2	290.1	258.4	313.9	300.0	246.7	221.3
01.1.7.4	Potatoes	6.4	39.0	23.8	59.5	49.3	47.3	37.5	32.2	204.2	245.4	286.3	365.2	257.4	243.9	186.0	177.2
01.1.7.5	Crisps	0.4	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.4
01.1.7.6	Other tubers and products of tuber vegetables	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
01.1.8.1	Sugar	0.4	1.2	1.8	2.2	1.8	1.8	1.6	0.6	1.1	1.3	1.6	1.8	1.5	1.4	1.3	1.3
01.1.8.2	Jams, marmalades and honey	0.0	1.5	1.5	3.8	3.1	3.0	2.8	1.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2
01.1.8.3	Chocolate	0.1	0.7	0.8	1.0	0.9	0.8	0.8	0.3	0.5	0.6	0.8	0.8	0.7	0.7	0.6	0.6
01.1.8.4	Confectionery products	1.1	1.4	1.7	2.1	1.7	1.7	1.6	0.6	1.1	1.3	1.5	1.7	1.4	1.3	1.3	1.2
01.1.8.5	Edible ices and ice cream	1.2	1.4	1.7	2.1	1.8	1.7	1.6	0.6	1.1	1.3	1.6	1.7	1.4	1.4	1.3	1.2
01.1.8.6	Artificial sugar substitutes	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
01.1.9.1	Sauces, condiments	1.5	1.8	2.2	2.8	2.3	2.2	2.1	2.0	14.0	17.1	20.3	22.3	18.7	17.9	16.9	16.1
01.1.9.2	Salt, spices and culinary herbs	0.5	2.5	2.8	2.6	3.1	3.5	3.4	4.0	1.1	2.0	2.7	2.6	3.0	3.4	3.2	4.6
01.1.9.4	Ready-made meals	1.0	1.3	1.6	1.9	1.6	1.5	1.4	1.4	1.0	1.2	1.4	1.5	1.3	1.2	1.2	1.1
01.1.9.9	Other food products	0.6	0.8	1.0	1.1	1.0	1.0	0.9	0.9	0.3	1.0	1.2	1.4	1.1	1.1	1.0	1.0
01.2.1.1	Coffee	0.0	0.0	0.0	20.2	26.5	26.7	25.0	25.6	0.0	0.0	0.0	17.2	21.4	21.5	20.3	19.4
01.2.1.2	Tea	0.8	0.8	1.0	0.7	0.7	0.7	0.8	0.9	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5
01.2.1.3	Cocoa and powdered chocolate	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
01.2.2.1	Mineral or spring waters	690.0	653.2	855.7	747.2	617.2	565.9	741.8	799.5	1055.2	834.9	1334.3	1048.5	895.7	839.2	1059.6	1206.9
01.2.2.2	Soft drinks	29.3	107.8	92.1	162.8	133.2	129.3	72.6	45.7	43.4	52.9	62.8	69.0	57.2	55.3	51.2	31.7
01.2.2.3	Fruit and vegetable juices	139.9	132.5	122.1	144.5	119.6	114.8	118.0	133.1	25.7	31.2	37.1	40.8	34.2	32.7	30.9	29.4
	Total beverage quantity	860.4	894.7	1071.3	1075.9	897.8	837.8	958.5	1005.2	1125.0	920.0	1435.2	1176.7	1009.4	949.5	1162.9	1288.2
	Total food quantity	1052.9	1140.0	1554.3	1616.4	1427.2	1364.0	1375.0	1348.6	1139.7	1430.6	1729.9	1793.2	1574.6	1501.3	1432.4	1374.7

Notes: The figures represent daily food quantities in grams or millilitres. The relevant monthly reference baskets are used for the calculation of ABSPO poverty thresholds in the survey-based and food-based modelling approach. See Chapters 5, 6 and 7 of this Report for more details.

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