PARENTING ON A BUDGET: THE COST OF RAISING CHILDREN IN CHANGING FAMILY CONFIGURATIONS AND ITS POLICY IMPLICATIONS

Severin Rapp,
Olivier Thévenon

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Abstract

This paper examines how the diversity of family configurations and living arrangements impacts the cost of raising children in OECD European countries. It uses data from the European Household Budget Surveys and the European Surveys of Income and Living Conditions, including the 2021 ad hoc module on family arrangements. The analysis explores the impact of factors such as the number, age, and presence of 'non-resident' children on the cost of raising children. The paper highlights the complementary nature of information from household expenditure data and self-reported ability to make ends meet, especially in characterising the situation of particularly vulnerable households. For example, single-parent households in several countries struggle to make ends meet, reporting greater difficulties than the cost suggested with the share of household budgets estimated to be spent on children. Moreover, non-resident children, such as those in shared custody arrangements impose financial burdens on "non-custodial" households. Gathering more detailed information on family structures and living conditions is essential for accurately estimating the costs associated with children in shared or fully non-residential living arrangements. Additionally, this approach provides a clearer understanding of the impact of these arrangements on financial hardship, particularly for single-parent households.

Résumé

Ce document analyse l'impact de la diversité des configurations familiales sur le coût des enfants dans les pays européens de l'OCDE. Il s'appuie sur les données des enquêtes européennes sur le budget des ménages et des enquêtes européennes sur les revenus et les conditions de vie, incluant le module ad hoc de 2021 sur les arrangements familiaux. L'analyse explore l'influence de facteurs tels que le nombre, l'âge et la présence d'enfants « non-résidents » sur le coût de l'éducation des enfants. Le document met en lumière la complémentarité des informations issues des données sur les dépenses des ménages et du sentiment d'aisance financière, particulièrement pour caractériser la situation des ménages les plus vulnérables. Par exemple, dans plusieurs pays, les ménages monoparentaux éprouvent des difficultés financières plus importantes que ne le suggère le coût estimé de la part du budget des ménages consacrée aux enfants. De plus, les enfants non-résidents, tels que ceux faisant l'objet d'une garde partagée, imposent des charges financières aux ménages « non-gardiens ». La collecte d'informations plus détaillées sur les structures familiales et les conditions de vie est cruciale pour estimer avec précision les coûts associés aux enfants en situation de garde partagée ou de non-résidence totale. Cette approche permet également de mieux comprendre l'impact de ces arrangements sur les difficultés financières, en particulier pour les ménages monoparentaux.

Table of contents

Tables

Figures

Boxes

1 Introduction and main findings

The effectiveness of public transfers to households with dependent children critically rely on assessing households' living standards and risk of poverty, which depends on household income, composition, and family living arrangements. These characteristics are critical aspects of the cost of raising children, affecting households' living conditions and their well-being, and important behaviours such as fertility decisions and investments in childcare and education.

The changing demographic and social context are influencing the composition of households with children and how households allocate resources to raising children. This necessitates a re-evaluation of how family dynamics influence the cost of raising children, challenging traditional methods of estimating this cost. On one hand, declining fertility rates result in smaller families, with parents focusing their financial and time investments on fewer children. Parenthood is increasingly reliant on prospective parents, including women, securing stable employment and income (OECD, 2024[1]; Alderotti et al., 2021[2]). This trend leads to delayed childbearing, which often coincides with a greater financial capacity to afford raising children (van Wijk and Billari, 2024[3]). Additionally, growing competition in education and rising income inequality drive parents to invest more in their children's care and education (Doepke and Zilibotti, 2019[4]). Children are staying in the family home longer than in the past, which could influence how household spending on them evolves as they age. The dynamics of family formation, dissolution, and living arrangements have also changed significantly in recent decades, making it increasingly challenging to estimate the cost of children in a way that captures the complexity and diversity of family structures observed in OECD countries (Miho and Thévenon, 2020[5]; Hakovirta, Meyer and Haapanen, 2024[6]).

The majority of children across the OECD live with two parents in the same household – around 82% of those under 18 in 2023 – while 17% live with a single parent (OECD, 2024[7]). However, these figures vary widely, from less than 7% of children in Greece and Türkiye living in single-parent households to over 25% in France and the United States. Post-separation family arrangements have also evolved, with a significant number of children in shared custody, dividing their time between both parents' residences (Miho and Thévenon, 2020[5]; Zilincikova, 2021[8]).

Conventional estimates of the standard of living of households and the cost of children rely on relatively strong assumptions regarding household resources and characteristics. The influence of household structure is accounted for by applying "equivalence scales" to household income under the assumption that all household members pool and consume resources in the same manner – an assumption that is more likely to hold for married couples with children but becomes less likely when partners have higher education, the union is recent, and, in some countries, for cohabiting couples (Kasey et al., 2023[9]; Hiekel, Liefbroer and Poortman, 2014[10]; Evans and Gray, 2021[11]). Equivalence scales usually increase with the number of household members to reflect increasing needs of larger households (Henman et al., 2007[12]; Martin and Périvier, 2018[13]). Often, all adults and children identified as household members are treated similarly, although some equivalence scales make a distinction between children under 14 and adults. These assumptions can be questioned in several ways.

First, the conventional approach to equivalence scales does not consider potential differences in needs and budgetary constraints between single-parent and two-parent households. Single parents must cover the consumption needs of the children in their care, regardless of whether they receive a maintenance

allowance from the child(ren)'s other parent. Some evidence suggests that single-parent households report greater financial hardship than their counterparts in couple households.[1] For instance, according to the 2017 Family Budget Survey in France, single-parent households are twice as likely to report struggling financially or not managing to avoid getting into debt (39% compared to 20%) compared with all other household types (Pinel, Schweitzer and Virot, 2023[14]). The decline in income following a separation is a key driver of the heightened economic and financial challenges faced by single-parent families. However, reduced disposable income is not the only contributing factor, and single parents also report greater difficulties in making ends meet than childless couple households with otherwise same income and other characteristics because some economies of scale are not possible for them when the second person in the household is a child. For example, an adult couple may share a bedroom, which is an arrangement that is less suitable for an adult and an older child. A single parent has also less time available for domestic tasks compared to a two-parent household. This can lead to additional costs if tasks such as childcare or cooking, which would otherwise be handled domestically, need to be outsourced to the market.

Second, conventional estimates also do not specifically address the fact that some children may imply costs for parents if they split their time between two dwellings, as is frequently the case when children's custody is shared between parents after their separation. Indeed, shared custody arrangements may be associated to duplicated expenses like housing, furniture, and transportation but potentially more equitable sharing of clothing or food costs (Henman et al., 2007[12]; Martin and Périvier, 2018[13]). Evidence from French data also suggests that household expenditures on food or childcare is thus higher in single-parent households where children have their main residence (i.e., more than half the time) compared to single-parent households with children spending some time (i.e., half the time or less) in the home of the other parent (Pinel, Schweitzer and Virot, 2023[14]).

Third, even in the absence of official shared custody, non-resident children who spend less than half of their time in the one parent's household – such that they are usually not considered as household members – may still incur costs for that parent (we provide a detailed definition in Box 3). Parents may contribute to financing the cost of children through the payment of child alimony but may also bear additional expenses. For example, a parent may occasionally host a child or go on holiday with them. The cost to the parent will depend on the number of non-resident children in question, and possibly the presence of additional children from a new relationship. For example, in France, non-resident children have – all things being equal – a negative impact on self-reported living standards of the non-accommodating parents with at least two non-resident children. This suggests that the need for the non-accommodating parent to have an additional room to host their children is more pronounced when there are at least two children (Pinel, Schweitzer and Virot, 2023[14]; Martin and Périvier, 2018[13]).

The above examples suggest that household budget needs vary greatly according to household composition and family living arrangements. They also indicate that residential and caregiving arrangements need to be considered to ensure that income support for households matches their needs. Ultimately, these arrangements can affect the living standards of households and children, potentially heightening their vulnerability to poverty and economic insecurity (Miho and Thévenon, 2020[5]; Ben Jelloul and Cusset, 2015[15]).

Conducting such detailed analysis of the cost of raising children is valuable for guiding income transfer policies aimed at households for several reasons. Firstly, it helps shed light on the extent to which income transfers to households with children compensate parents for the costs of raising children and effectively combat family and child poverty. This requires measures of the cost of children, or "equivalence scales",

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[1] Furthermore, the risk of non-payment of maintenance by the separated parent creates significant economic insecurity for low-income single parents, leading them to potentially limit the amount they spend on their children as a precautionary measure (Miho and Thévenon, 2020[5]; Hakovirta, Meyer and Haapanen, 2024[6]). More generally, the evidence suggests that the potential of child maintenance payments to reduce poverty among single-parent households is limited (Nieuwenhuis, 2021[57]).

reflecting children's impact on household living standards, which can vary according to the number of children, their age, and family living arrangements. This information can subsequently be integrated into the estimation of the poverty rates to better gauge overall poverty risk and identify the types of households most vulnerable to poverty. Additionally, insights into the characteristics of households that influence the cost of raising children (such as their number, age, family situation, and income level) are useful for adjusting the parameters of the benefits targeting households with children. Eventually, the cost of children may also be an interesting statistic for (prospective) parents.

This paper examines how family structures influence the cost of raising children,[2] focusing on household expenditures and challenges in making ends meet. This analysis is conducted for OECD European countries with available comparable data, using the *European Household Budget Surveys (EU-HBS)* and the *EU Statistics on Income and Living Conditions* (EU-SILC). While the former provides detailed expenditure data that allows to estimate models of consumer demand that are rooted in standard economic theory, the latter offers self-reported information on financial strain and detailed information on household structure, non-resident relatives and family living arrangements. We analyse how the cost of raising children differs between couple- and single-parent households, as well as how it varies by the number and age of children, as well as with households' income. EU-SILC 2021 data on family living arrangements makes possible a first assessment of whether a child living apart from a parent ("non-resident child") creates additional financial burdens for that parent. Considering these issues is essential for accurately assessing the disparities in living standards among households and children, as well as their vulnerability to poverty and to economic insecurity. It is also crucial for determining the most effective strategies for designing financial assistance programmes for households with children, encompassing measures tied to taxation, social benefits, or child support arrangements following family dissolution.

In line with standard economic theory (see Box 1 in Section 3), the cost of a child is defined here as the **estimated relative additional income that a household with children must receive to maintain the same standard of living as a childless household with identical characteristics**. To accommodate the differences in the nature of the data, we implement an expenditure-based approach to child cost measurement,[3] as well as a methodology that capitalises on self-reported measures of economic well-being. While the two-tiered approach suggests a broader range of plausible estimates of the cost of children than any single one approach, the paper argues that both approaches contribute important insights to the debate around the cost of children.

Section 2 describes the methodology used to generate these estimates, while the results are summarised in Section 3. The concluding section (Section 4) discusses how these findings, along with other research on the cost of children, can be used to strengthen policies that support families with children. As background information, the annex presents an overview of family configurations and living arrangements in the OECD European countries included in the analysis Annex B).

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[2] This study considers dependent children when referring to children. These are all household members who are neither the reference person nor their spouse. Children are individuals either below the age of 16 or between 17 and 24 if they are in education. Moreover, we consider offspring of household members who live in other households as children if they are below the age of 18.

[3] Using the term "cost of raising children" when relying on expenditure data can be misleading, as the terminology risks conflating two distinct concepts: the minimum necessary resources required to meet a child's basic needs versus the actual amount families spend on raising a child. Expenditure data reflect parental choices, income levels, and lifestyle differences rather than an objective measure of essential costs (Sarlo, 2013[118]). Higher-income families may spend significantly more on their children without implying that lower expenditures equate to inadequate care. This distinction is crucial for policy discussions, as focusing solely on observed spending risks underestimating the financial strain on lower-income families and overestimating what is truly necessary for child well-being.

Our key findings are as follows:

Variations in the cost of children by household structure and living arrangements

Estimates of the cost of children vary widely across household types, underscoring the need to consider household composition and family living arrangements when assessing their impact on household living standards:

- Overall, across methodological approaches and countries, the cost of the first child ranges between 20% and 75% of that of the first adult. This range includes the value that the modified OECD equivalence scale assigns to child consumption (which corresponds to 30% of an adult). However, the estimated cost of children varies across countries. For example, according to expenditure data, the cost is highest in Spain (40%) and lowest in Sweden (10%). Moreover, estimates based on household expenditure suggest that the cost of children are on average 50% below those based on self-reported information on economic well-being.

- The presence of one child is much more costly for a single-parent household than for a couple household: on average across European OECD countries and controlling for a set of household characteristics, the costs of a child to a single-parent household is around 60% according to self-reported financial strain data, twice as much as the cost of a child in a two-parent household. Cost estimates based on self-reported financial strain data are close to those estimated from expenditure data, regardless of the number of children, in Greece, the Netherlands, the Slovak Republic, and Spain. Those difference may be due to the fact that financial strain data capture the stress and economic insecurity perceived by household – stress that is often more acute among single-parent families, whose living standards are particularly vulnerable to changes in the cost of living, labour market conditions, or the support benefits they receive.

- Evidence of significant economies of scale with an increasing number of siblings is limited. Clear reductions in the relative cost of a child as the number of children rises from one to three are observed with expenditure data only in Croatia, France, Greece, Hungary, and Poland. In other countries, such as Ireland, Slovenia, and the Slovak Republic, while the second child costs relatively less than the first, the third child does not result in further cost reductions. Additionally, in many countries, including Austria, Denmark, Estonia, Ireland, Lithuania, Luxembourg, and Sweden, the first child is notably linked to a heightened perception of financial strain compared to subsequent children.

- The cost of raising children tends to vary by age. A common trend across countries is that children and dependent adult children aged 14 to 24 incur expenses at least as high as those of children under 5. In several countries, such as Germany, Ireland, Spain, and the Netherlands, costs rise with age in couple households, while in France, this pattern is observed among single-parent households. These findings suggest that financial challenges are not confined to the early years of raising young children. Instead, they often persist and may intensify as children reach late adolescence and early adulthood.

- Self-reported data on households' economic strain provide a valuable complement to information on child-related expenditures, offering deeper insights into how children affect a household's overall ability to make ends meet. A key advantage of this data is its capacity to capture the effects of various family configurations, not only on household budget constraints but also on broader factors like economic insecurity, which may be influenced by family circumstances and employment-related situations.

- Self-reported data on households' economic strain suggest that the cost of a first child for a couple household is significantly higher than estimates based on expenditure data in Austria, Denmark, Estonia, Lithuania, Luxembourg, and Sweden. Additionally, self-reported financial strain data

reveal pronounced economic strain among single-parent households in Austria, Czechia, Denmark, Estonia, France, Hungary, Ireland, Latvia, Lithuania, Poland, Slovenia, and Sweden. The challenges of making ends meet seem to extend beyond the expenditures households can afford once a child is present and may grow with the number of children: for instance, in Hungary, self-reported data indicate that the financial strain of raising children increases with the number of children, while expenditure data suggest that per-child costs decline as household size grows.

- A significant proportion of households contain children whose primary residence is outside the household. Estimates from the 2021 EU-SILC data suggest that on average 7% of children below age 15 are in shared residence arrangement. Significant differences exist between countries, from 2% -3% of children in Poland and Greece, to 15% in Denmark and over 22% in Finland.

- Non-resident children (i.e. children whose main residence is outside of a surveyed accommodating household) also imply costs to the non-accommodating household. Data on self-reported ability to make ends meet suggest that, on average across countries, the cost of a non-resident child amounts to 22% of a single adult for two-parent households and 40% for single-parent households. These costs are not evident everywhere, but they tend to be higher in Scandinavian countries, where children tend to split their time between households more often.

- A more precise categorisation and standardised international classification rules are necessary for a deeper analysis of the costs associated with children living part-time in households and those considered "non-resident". Children reported by survey respondents as resident or household members often reside in the household only part-time, yet the criteria for their classification as "resident" remain unclear. For example, in Ireland, the Netherlands, and Portugal, "resident" children who have a parent in another household spend, on average, fewer than 15 nights per month in the household where they are officially categorised as living. Conversely, some "non-resident" children may spend time in the surveyed household on certain days, but this detail is not recorded. Consequently, the distinction between non-resident and resident children with alternating residence is not always straightforward. Collecting more systematic data on the time children spend in various households (including those of non-resident family members) provide a clearer picture of shared residence arrangements and help distinguish between resident and non-resident children more accurately. This issue is particularly important, as our results also show that non-resident children impact households' financial strain.

- Finally, according to self-reported economic well-being data, there is strong income dependence of the cost of children in some countries, including France, Italy, Ireland and Sweden. In these countries, low-income households face relatively higher child costs – a negative relationship between child costs and income prevails. This same conclusion cannot be drawn from expenditure data, where differences in child costs with respect to the reference income level are minor, and at best point towards a positive correlation.

- Although the reasons for cross-national differences in the costs of children are not examined, they are likely to be due to differences in the cost households have to pay to purchase goods and services for children, such as early childhood education and care services, out-of-school leisure and sport activities. Moreover, differences in income levels also vary across countries, and so do consumption baskets. For example, in more affluent countries, necessities such as food will account for a smaller share of expenditure, and their weight on the cost of children will be weaker in these countries. Conversely, rising housing prices in advanced economies are likely to increase the share of housing costs in the total cost of raising children. Future studies could explore these factors further.

Policy challenges

Finally, the paper provides insights into the policy challenges related to these findings:

- The cost of raising children, defined as the proportion of household income dedicated to child-related expenses, plays a crucial role in shaping children's material well-being, as well as health, socio-emotional, and academic outcomes. These aspects are influenced by the goods and services households can afford to support their children's learning, play, and overall development, Additionally, these costs and the financial strain of making ends meet significantly influence household decisions regarding having or expanding a family (OECD, 2024[1]). Therefore, policies that boost household income or lower child-related costs or reduce the income needed to cover child-related expenses, are likely to improve children's well-being and potentially influence fertility behaviour.

- A range of measures can help reduce the cost of raising children and alleviate financial challenges. These include policies that support parental employment, especially for mothers, who are more likely than fathers to reduce or interrupt their careers after having children. They include:
  - Paid parental leave schemes: These allow parents to care for children while maintaining labour attachment and receive income. Adequate income replacement rates reduce household poverty risks and promote a more equal distribution of "leave time" between parents.
  - Formal childcare services: These services support parents in balancing work and family life, during the years prior to mandatory schooling. However, especially for children under 3, participation rates for low-income households are lower compared to higher-income households. Ensuring affordable, high-quality childcare is essential for low-income households to balance work and family needs.

- The tax and benefit system is a key policy tool for improving disposable income, and helping lower-income households bear the costs of raising children (Penne et al., 2019[16]). The variation of these costs depending on household composition, number and age of children, and family living arrangements, has significant implications for using child cost estimates to design income support policies.

- The evidence on the cost of children provides benchmarks against which income tax and benefit systems supporting households with children can be assessed. Desk research on the implicit equivalence scale implemented in European tax and benefit systems suggest that these systems may overcompensate high-income households with large households (two or more children) for the cost of children in many countries where some economies of scale with the number of children are observed.

- The elevated impact of children on single parents' self-reported ability to make ends meet highlights the financial challenges facing single parents, largely due to a significant proportion being unemployed or working part-time. In 2021, 27% of single parents in Europe were unemployed, and 10% worked part-time, compared to less than 4% of couples with children who were jobless. Strengthening financial incentives for returning to work and improving access to childcare services could help provide stable income and ease financial strain.

- Fixing flaws in child support systems could help alleviate the financial struggles faced by single parents, as unpaid child support remains a significant issue. Although many countries have measures to enforce payments or provide public support when the non-custodial parent cannot pay, these processes are often slow and uncertain, leaving single parents in financial distress. In some cases, child maintenance payments are reduced when custodial parents return to work or are deducted from minimum income support. Furthermore, some countries lack a child support guarantee programme altogether.

- In cases of joint or alternating custody following separation, households may struggle to maintain a standard of living that adequately covers the costs associated with raising children, whether the children are resident or non-resident. To better support these families, financial assistance programs – such as family benefits, housing support, and social assistance – could reflect the realities of shared custody, where children do not reside full-time in one home. A 2024 review of 13 OECD countries found that most benefit systems do not consider shared residence arrangements and the existence of "non-resident" children in benefit payment rules. Norway is a notable exception, incorporating them into a broad spectrum of benefits.

- Last but not least, to inform public policy, it is crucial that statistics on poverty and household living standards reflect the realities of diverse family and residential arrangements linked to family life. This study highlights the value of such detailed information in understanding the impact of children on household expenditure and self-reported financial strain – particularly relevant when analysing specific sub-groups, such as single parents. To ensure these issues can continue to be explored, it is essential that surveys on income, living conditions, and household budgets systematically include information on family and residential arrangements that extend beyond the boundaries of the household. This includes shared residency and spending on non-resident children – which may include, but may go beyond child maintenance payments. Extending this information to all non-resident family members would make statistics on living standards more aligned with the realities of family life.

2 Assessing the cost of children

The cost of children usually refers to household expenditure resulting from the presence of children (i.e. the *direct* cost of children). On the one hand, this includes costs in a narrow sense, such as spending on (child) clothing, education, and leisure activities. On the other hand, it encompasses implicit child-related costs associated with household-level consumption, such as potentially higher housing costs due to an additional bedroom. Arguably, children imply costs to parents beyond what they spend on a child's consumption. For example, parents (and mothers in particular) may take time off from work to care for their children, which may depress their incomes both in the short but also in the long term. A separate set of methods is geared towards measuring the indirect costs of children (Kleven et al., 2019[17]). This report does not consider such indirect costs of raising children.

The measurement of the cost of children is an old challenge in economics and different methodological approaches exist (Schröder, 2009[18]). One of the challenges in measuring this cost lies in the fact that as a household grows, as a result of a couple formation or the birth of a baby, household consumption expenditures will increase but not in proportion to the size of the household due to economies of scale. For example, cooking a meal for three persons costs more than it does for two, but less than for three separately. Having a child often means moving to a new home, but not necessarily to one that costs proportionally more.

Equivalence scales are a common way to express economies of scale, household needs and the cost of children. Equivalence scales represent the needs of a household with an arbitrary number of children relative to the needs of a childless household. The result is a number that summarises the "consumption units" of a household. If there are no economies of scale, the number of consumption units in a household corresponds to its size. With perfect economies of scale, additional household members have no impact on expenditure, and all households regardless of size and composition have one consumption unit.

Determining the appropriate equivalence scale and cost of children is a complex empirical matter with no straightforward solution. The core question is how much additional resources a household with children relative to a childless household requires to reach a given welfare level. The literature offers many different methodological approaches, each characterised by its own strengths and weaknesses. Some approaches perform better than others in view of modelling economies of scale that households unlock through the sharing of resources. Other approaches are particularly well suited to account for the unequal sharing of resources within households. There are also methods that focus on minimising data requirements, circumventing the use of expenditure data. In all, each approach has diverse benefits and drawbacks, which depend on specific methods.

The OECD modified equivalence scale is a popular scale that contains a particular estimate of the cost of a child. While the second adult in a household counts as only half a unit to reflect economies of scale, each child under 14 years of age counts as 0.3 units. This suggests that a child costs 30% of the first adult. Therefore, a single parent household with one child has 1.3 consumption units, while a couple household with a child counts 1.8 consumption units. On the other hand, many studies, including those by the OECD, use the square root of household size to "equivalize" incomes. This approach implies that no distinction is made between children and adults when assigning weights to each member. However, this hypothesis is

challenged in the research literature – and several studies document an age gradient in the cost of children (Thévenon et al., 2009[19]; Bauer et al., 2021[20]; Henman et al., 2007[12]; Martin, 2017[21]).

Three broad methodological approaches to the measurement of the cost of children exist.[4] The first relies on **expert opinions on the needs of children**. For example, Goédeme et al. (2015[22]) devise reference budgets together with experts in different European cities. This approach consists in defining a basket of goods that are considered necessary for a child. In a second step, the prices of each good in the basket are aggregated to obtain a measure of the cost of children.

While reference budgets are a valuable approach to estimating the costs of children, drawbacks exist. Their relevance depends heavily on the assumptions used to identify and price the goods and services included in the budgets. In some cases, alternative methods for measuring child-related costs are necessary, particularly for expenditures that are difficult to attribute to an individual child, such as housing expenses. From a comparative perspective, approaches such as reference budgets are not commonly used, even though there is significant interest from a policy perspective in the use of reference budgets. While this is an active field of research, there are no comparable reference budgets for the OECD countries yet. Moreover, it is not straightforward to extend the approach to the study of the situation of separated and blended families. Reference budgets are usually only constructed for a set of specific model household types, such that the information requirements increase substantially when more complex family arrangements enter the analysis. In a report on the measurement and monitoring of absolute poverty in the European Union, the European Commission's Joint Research Centre also identifies the ensuring of broad "population coverage at both national and European level" as one of the main methodological challenges associated with reference budgets (Menyhért et al., 2021[23]).

Measuring the cost of children with household expenditures data

The second approach looks at consumer expenditure across different household types. In some instances this is done by simply adding spending that is unambiguously devoted to children and a fraction of the spending that cannot be allocated directly to arrive at a measure of the cost of children (Lino et al., 2017[24]). The most prominent approach that uses expenditure data estimates consumer demand equations for different household types. A large and growing variety of methods falls into this approach. Each of them relies on the assumptions needed to identify income needs, with potential drawbacks (Box 1).

A basic case in point for measuring the cost of children with household expenditure data is the Engel method. This method relies on the idea that two households are equally well off if they devote the same share of expenditure to food. This is motivated by the observation that the food expenditure share falls as income rises, while it rises with the number of household members. By estimating the relationship between food expenditure and income, as well as household composition, the Engel approach shows how much more income a household with a child needs to compensate for the higher food expenditure share resulting from the presence of the additional household member. The simplest approaches in the literature on expenditure systems are straightforward to implement and rely on data that is readily available. However, this simplicity comes at a cost: there is a strong assumption that households with different compositions but the same expenditure shares on food have similar levels of well-being, which has problematic consequences (Deaton and Muellbauer, 1986[25]).

The assumptions that are used in the Rothbart method, which is another simple method, are no less problematic. Here, the central idea is to take parents' expenditure on "adult goods" (such as alcohol) as an indicator of welfare that allows for comparisons across household types. For households with different

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[4] The list of methods in this section is not fully exhaustive. For example, the cost of children can also be recovered from tax-implicit equivalence scales (van de Ven, Herault and Azpitarte, 2017[74]). However, we discuss the most established methodologies that also feature in applied work.

numbers of children, the Rothbart method aims at equalising expenditure on adult goods. While attractive from a theoretical point of view, the Rothbarth approach can imply empirical challenges. For example, household surveys tend not to perform well in capturing spending on certain adult goods, such as alcohol and tobacco (Buda et al., 2022[26]).

In applied work, the Prais-Houthakker method is another popular method. Rather than focusing on one expenditure category to draw inferences about the cost of children, this method allows to compute specific equivalence scales for each goods category, which can be aggregated into an overall equivalence scale for total expenditure. While this method is more complex than the Engel or Rothbart approach, it accommodates the idea that the entire spending profile of a household is relevant to the well-being of its members. Even though the Prais-Houthakker method was popular for a long time, it also comes with important drawbacks. One is econometric: Deaton (2019[27]) argues that not all good-specific scales can be estimated in this approach without additional information. In addition, the model makes relatively strong assumptions about the optimising behaviour of households, requiring that households do not substitute between goods (Muellbauer, 1980[28]).

The Barten-Gorman model offers a generalisation of the Prais-Houthakker, Rothbart and Engel methods. In an important extension, the Barten-Gorman model considers that the presence of children in a household will not only lead to higher income needs but may also trigger substitution between different goods. While the Barten-Gorman approach has an important set of desirable qualities, it also suffers from difficulties in the econometric implementation (Deaton, 2019[27]).

A large part of the current empirical literature on equivalence scales relies on modern expenditure and demand systems (Dudel, Garbuszus and Schmied, 2020[29]). For example, the linear expenditure system (LES) derives demand functions for different goods from a consumer's utility function. The demand function has a minimum expenditure level for each good, and additional expenditure that is a function of the consumer's income once minimum need are satisfied. The equivalence scale derives from the ratio of the minimum needs in this model. One advantage of these structural models is that they are founded on a microeconomic model of consumer behaviour. Moreover, the model does not necessarily require price data, such that it can be estimated on cross-sectional data (which is not possible for some of the more recent models in this class, such as the almost ideal demand system). It is important to note that the versions of this model that are attractive from the perspective of empirical estimation rely on assumptions on the response of consumption to price and income changes that are debated in the literature (Dudel, Garbuszus and Schmied, 2020[29]).

The more recent literature on modelling household demand has abandoned the idea that the household is a single decision-making unit, moving towards collective models of household behaviour (Chiappori, 2016[30]). In these models, the cost of children is determined by factors such as economies of scale, but also the distribution of resources within households. While this approach is theoretically attractive, it relies on detailed data related to expenditure items that are clearly attributable either to mothers, fathers or children. In addition, the discussion offers results for the cost of children, some of which are close to zero (Bargain and Donni, 2012[31]), and further research would be necessary to facilitate the use of such results in policymaking.

Self-reported economic well-being for child cost estimation

The increasing use of self-reported economic well-being in social sciences has opened new possibilities for a third approach in the measurement of the costs of children (Van Praag, 1971[32]). One idea used in these applications is that self-reported economic well-being increases as income rises. At the same time, for a given level of income, people in larger households with children find it harder to make ends meet compared to one-person households. Analogous to the simplest forms of the expenditure-based approach (Box 3), child costs can be then measured by estimating how much more income a household with a child

needs to maintain a given level of self-reported economic well-being compared to a household without children.

This approach has been a popular methodological choice in recent years for the measurement of child costs for several reasons. Firstly, data on households' economic strain is readily available in many cross-country surveys. As a result, these data are available for more countries and at higher frequencies compared to detailed consumption data. Secondly, self-reported information on the standard of living have the potential to reflect the lived experience of households, including the economic insecurity that certain groups of households (e.g. single-parent households) may face (Martin, 2017[21]).

However, the self-reported based data also has disadvantages. Unlike expenditure data, there is no aggregate benchmark to anchor responses regarding self-reported well-being and to evaluate their "accuracy". The way respondents assess their income adequacy can vary and is not necessarily homogeneous or consistent (Charlier, 2003[33]). When somebody evaluates their income, they might consider their permanent income and needs that materialise in the future, or they might focus on their current income exclusively. Another example of this uncertainty around people's responses to questions of financial well-being is the extent to which satisfaction from other life domains affects responses related to economic outcomes. For child cost measurement, it is particularly relevant whether respondents consider the direct welfare they derive from having children when assessing their economic welfare. Moreover, there is some evidence that reference group effects bias individual responses to income satisfaction questions, which has significant implications for the measurement of equivalence scales (Borah, Keldenich and Knabe, 2018[34]). In addition, it is necessary for the identification of equivalence scales with self-reported data that the changes in satisfaction are comparable both across people and within people over time. In other words, responses to questions about income satisfaction should not be overly influenced by short-term fluctuations in households' economic situation.

Figure 1 illustrates the relevance of using self-reported information on financial ease to assess the costs of children using data from the EU-SILC. It plots the relationship between disposable household income and the ability to make ends meet across households of different sizes. The chart is a binned scatterplot, with each point representing the average ease in making ends meet. Ease of making ends meet is measured on an ordinal scale ranging from 1-6. For illustrative purposes in the Figure, we treat it as a continuous variable rather than an ordinal one. The figure shows that at any given income level, larger households find it more difficult to make ends meet. As expected, the average ability to make ends meet is the highest for single households, and it is lower the higher the number of household members. The Figure illustrates the basic idea of using information on the ability to make ends meet to appraise differences in income needs across households. The plot provides indicative evidence that self-reported income needs is indeed sensitive to household size, which is necessary to identify equivalence scales from this type of data. An equivalence scale can be derived from equating the ability to make ends meet and appraising the compensating income differences.

Figure 1. Households with more members find it harder to make ends meet at any given income level

The figure plots the average ability to make ends meet across the distribution of the logarithm of disposable household income for households with 1 to 5 members.
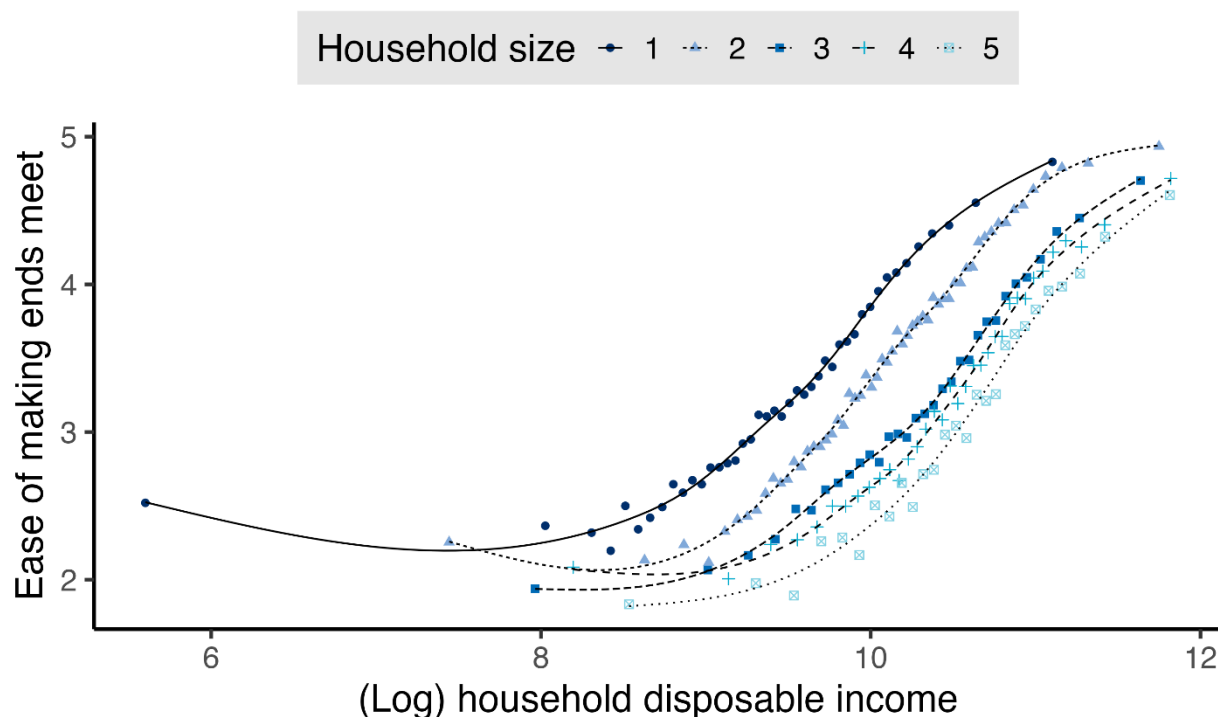
Note: For different bins of log-transformed income (x-axis) and household sizes in different colours (one to five members), the figure plots the average ability of households to make ends meet (y-axis). The ability to make ends meet is the average response to a survey question that elicits respondents' "feeling about the level of difficulty experienced by the household in making ends meet" (EUROSTAT, 2021[35]), rated on a scale from 1 (great difficulty) to 6 (very easy). Income is adjusted for the consumer price index in 2021 prices and 2021 purchasing power parities. The lines in the figure refer to the fit from predicting the ability to make ends meet along the income distribution by household size. The smooth is based on a cubic spline-regression with ten knots. While the ease of making ends meet is generally measured on an ordinal scale, for the purpose of this figure only we treat it as a continuous scale. Country fixed effects taken into account.
Source: European Union Survey on Income and Living Conditions (EU-SILC), for 2015.

Similar correlations to those presented in Figure 1 have also been studied in other countries. For example, in the United States, self-reported financial well-being among parents is lower than among other adults (Board of Governors of the Federal Reserve System, 2024[36]). This relationship has been consistent since 2015, where the data begins. The discrepancy between financial well-being among adults with and without children widens substantially since 2021, where 79% (75%) of adults (parents) report "at least doing ok financially". In 2023, these shares correspond to 75% and 65% respectively.

The complementarity of different measurement approaches

As the discussion of different measurement approaches to the cost of children reveals, each method has strengths and weaknesses. As a result, it is valuable to employ multiple complementary approaches to measuring the cost of children simultaneously, to assess the robustness of the results against different methodological choices. While some studies compare different expenditure-based approaches (Dudel,

Garbuszus and Schmied, 2020[29]), others make use of both expenditure data and self-reported evaluations of well-being (Martin and Perivier, 2015[37]; Mysíková et al., 2021[38]).

There are several reasons that suggest why it is particularly important to measure the cost of children using both expenditure data and information on self-reported well-being. First, while information on income and expenditure is intended to be objective, it is not immune to issues of misreporting and social bias.[5] Expenditure data are also prone to underreporting (Fricker et al., 2015[39]; Eckman, 2022[40]). Although the magnitude and direction of errors depend on the expenditure category, there is limited evidence on the extent to which bias may influence patterns of household spending on children. Not least in the EU-HBS, aggregates from survey data do not necessarily match the national accounts aggregates (EUROSTAT, 2020[41]).

In addition, Mysíková et al. (2021[38]) argue that financial constraints may influence observed spending patterns among households (particularly those on low incomes), whereas self-reported methodologies allow households to more freely report their wider financial needs. While it is important to consider households' ability to substitute between goods or reduce expenditure in certain areas, this does not provide insight into their overall capacity to cover the expenses associated with children and their perceived needs. Self-reported data on the ability to make ends meet provides valuable insights, deepening our understanding of households' capacity to fulfil their perceived needs.

Another argument is that survey respondents may evaluate their standard of living in reference to "consumption norms" (Bradbury, 2003[42]). As a result, parents might adjust their lifestyles by reducing consumption compared to childless households, without perceiving this as a decline in their standard of living – particularly when comparing themselves to other parents. However, if this reduction is substantial, it can significantly affect the material well-being of children, especially in larger families. In such cases, it is important to monitor actual consumption patterns, as self-reported well-being data may not fully capture these changes if parents do not feel worse off relative to their peers. Therefore, both types of information – on consumption expenditure and perceived financial ease – provide valuable and complementary insights.

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[5] For example, expenditure data from surveys is prone to underreporting in certain expenditure categories such as alcohol and tobacco, while even administrative data that is frequently used to improve survey data on income can suffer from biases that arises not at least from the linkage of survey and tax data itself (Angel et al., 2019[112]; Angel, Heuberger and Lamei, 2018[113]; Jenkins and Rios-Avila, 2023[115]; Deaton, 2010[116]).

3 The cost of children across countries

Building on the expenditure and self-report data methodologies, this section presents the cost of children derived by combining various coefficients of a regression that explains households' expenditures on different goods, as well as self-reported economic well-being, with several household characteristics. These outcomes can be considered as proxies of budget needs (Box 1). The data in the empirical analysis are the EU-SILC and the EU-HBS. The annex discusses the data sources, key variables and sample restrictions in detail.

We focus primarily on the cost of children in this section, and report equivalence scales in the Annex E (including standard errors). The cost of children is computed from the equivalence scale. This is in accordance with the modified OECD equivalence scale logic, where the cost of a child under the age of 14 is 0.3, obtained by subtracting the cost of adults from the equivalence scale and dividing by the number of children. For example, assume that the equivalence scale of a two-parent household with two children is 2.1, and the equivalence scale for a couple household without children is 1.5 (as in the modified OECD), the cost of a child implied by these equivalence scales is 0.3.

Box 1. Estimation approach used to measure the cost of children

Capitalising on self-reported economic well-being data

The estimates of the cost of children based on self-reported economic well-being data in this paper are obtained in a multi-step procedure. To begin, one decides whether to use plain household size as the starting point of the analysis (N), or some adjusted measure of household size (Ñ) that reflects specific assumptions about resource needs of various household members (such as children of different age groups, or children that are attached to the household through both parents or only one parent). Box 4 details the methodological approach for incorporating these more sophisticated assumptions into the analysis and reports corresponding findings on the weights of different types of children in their contribution to total household needs. Equipped with a suitable measure of household size, either adjusted or plain, the next step consists of estimating an ordered response model that regresses self-reported measures of economic well-being on actual household income (inc_h), and (adjusted/plain) household size.

A detailed discussion and numerous applications of this approach are presented in Hourriez and Olier (1998[43]), Martin and Périvier (2018[13]), as well as Pinel, Schweitzer and Virot (2023[14]) for France. Similar approaches are used in the German context (Biewen and Juhasz, 2017[44]), and in Russia (Abanokova, Dang and Lokshin, 2022[45]), but also in a comparative setting (Bishop et al., 2014[46]).

Empirical specification

The literature uses different ways to operationalise the relationship between household size and self-reported data of economic well-being for the purpose of child cost estimation. This paper estimates several regression specifications (I-IV) for each country and reports the results with the best model fit according to the Akaike Information Criterion (AIC). The reason for this more flexible approach is that the results in some countries are sensitive to transformations of the household size variables. Specification I consists of regressing economic well-being on household size, its log transformation and income in an ordered logistic model. The functional forms in specifications II and III drop either the untransformed (II) or the log-transformed household size (III) term from the regression equation. These three specifications require adding a dummy variable to distinguishing single parent households from other households. Only with the additional coefficient, it is possible on a dataset with household types a={A, AA, AAC, AACC, AACCC, AC, ACC} to distinguish two-parent households with one child from single-parent households with two children, for example. The approach in specification IV drops the number of household members from the specification altogether and instead relies on dummy variables for each household type.

Across models, S_h refers to the measure of financial ease of household h and inc_h refers to household disposable income (the annex discusses the income measure in more detail). While the operationalisation of household size and composition differs between specifications I to IV, all models feature the same set of control variables Z, each of which with their own coefficient in the vector B. The control variables include the respondent's gender, age, education, employment, marital status, as well as a polynomial of the adult household members' mean age, degree of urbanisation and an indicator variable that distinguishes interviews that were carried out in physical presence of an interviewer from those without interviewers (for example, telephone interviews). While we cannot control for household wealth, which may introduce a bias to the analysis (Rapp, 2021[47]), we proxy for assets by introducing the household's tenure status as a control variable.

Specification I is written as follows (in specifications II and III $\beta_2 N_h$ or $\beta_3 log(N_h)$ are dropped from the specification, respectively):

$$S_h = \beta_0 + \beta_1 log(inc_h) + \beta_2 N_h + \beta_3 log(N_h) + \beta_4 \mathbb{I}[singleparent_h] + ZB + \epsilon_h$$

N is the plain household size (note that this can be substituted for Ñ in cases where an adjusted household size measure presents itself as more suitable). The approach in specification I accommodates more flexible equivalence scales as the number of children increases compared to the specifications II and III, because there are two available parameters to fit the equivalence scale to the data. The additional parameter can affect the degree to which economies of scale change as household size increases. The specification IV substitutes $\beta_2 N_h$, $\beta_3 log(N_h)$ and $\beta_4 \mathbb{I}[singleparent_h]$ for $\sum_a g_a j_{a,h}$, where g_a are coefficients and $j_{a,h}$ are dummy variables for each household type in a. All specifications are estimated at the country-level using an ordered logit-model with survey weights. The data is pooled over survey waves and estimates account for wave fixed effects.

Methodologically, some studies supplement cross-sectional results with panel estimates (Schwarze, 2003[48]), while others rely on cross-sectional estimation (Bishop et al., 2014[46]). However, this approach is not feasible for the study of non-resident children, because the detailed family arrangement data is only available in one wave. Moreover, another crucial choice is the specific nature of the dependent variable. While some studies rely on self-reported economic wellbeing that is comparable to the measure of S_h (financial ease) in this study, others rely on data that refers to the minimum income that a household needs to make ends meet, for example (Bishop et al., 2014[46]). Using French data, it can be shown that the latter type of data yields relatively high economies of scale (and low costs of children) compared to self-reported ability to make ends meet (Martin, 2017[21]). The choice of self-reported ability to make ends meet in this paper is based on two considerations. On the one hand, EU-

SILC dropped the question on minimum income in 2021, which is the only year with data on non-resident children. Secondly, the use of the minimum income question is controversial for equivalence scale estimation, since it has been shown that individuals at the bottom and the top of the income distribution tend to respond differently to this type of question than those in the middle of the distribution (Gardes and Loisy, 1998[49]; Martin, 2017[21]).

Derivation of the equivalence scales

Once all reduced form estimates are obtained, the final step for the construction of equivalence scales consists in setting the level of financial ease equal across the reference household and some hypothetical alternative household. By rearranging, it is possible to derive an expression for the income that would be necessary for the alternative household to reach the same level of satisfaction as the reference household while maintaining differences in the number of children. The resulting formula depends on the functional form chosen to estimate the relationship between household composition and self-reported economic well-being. In the case of the specification I, for example, the exercise yields the following formula for the equivalent income level – defined as the increase of income that would be necessary to maintain the same living standard when an additional child is born:

$$m(N) = N_h^{\frac{-\beta_3}{\beta_1}} exp\left(-(N-1)\frac{\beta_2}{\beta_1}\right)$$

If only β_3 turns out to be significant, the formula for the equivalence scale collapses to specification II, or the model in Schwarze (2003[48]). The latter paper relies on a specification with log-transformed household size, which yields a one parameter equivalence scale in the spirit of the square root scale. As β_2/β_1 corresponding to zero if β_2 is zero, the exponential function assumes unity and one is left with the power function of N (i.e. a one parameter scale). Conversely, the part outside the exponential function assumes unity if β_2 is statistically significant, but not β_3 (as the exponent of the first term is zero) in specification I or if specification III minimises the AIC. In the specifications that contain an extra term to identify single parent households, m(N) is multiplied by exp(-β_4/ β_1). In specification IV, significant coefficients g_a yield an equivalence scale of the following form:

$$m(a) = e^{-\frac{g_a}{\beta_1}}$$

In a further step, it is possible to provide estimates of uncertainty around the estimated equivalence scales. For example, bootstrapping or the delta method are ways to obtain confidence intervals for the equivalence scale estimates (Pinel, Schweitzer and Virot, 2023[14]). We report bootstrapped standard errors for the main results in the annex.

The expenditure system

The linear expenditure system is a tool to draw inferences on the needs of households with children from expenditure data, based on a demand system. This means that the cost functions of reaching a given utility level with given prices for households with different compositions are derived from microeconomic theory. We provide a brief overview, while others provide a more detailed discussion of the approach including the derivation of the structural parameters from the reduced form (Merz and Faik, 1994[50]; Bauer et al., 2021[20]; Gerfin et al., 2009[51]).

The structural parameters

Typically, the expenditure system relies on a Stone-Geary utility function, which yields the following cost function:

$$C(U,a) = \sum d_k(a)\gamma_k + \prod \delta_k^{-\delta_k} \prod d_k(a)^{\delta_k} U$$

In this cost function, U represents utility, and $d_k(a)$ are weights specific to commodity k={1,…,K} that vary with household composition and reflect the idea of household specific relative prices (Barten, 1964[52]). In addition, γ_k refers to additional fixed costs associated with certain types of households that also vary by commodity. These two parameters shift and scale the cost function to allow for costs to reach a given utility level to depend on household characteristics. Note that for the household composition A, $d_k(a)$ equals unity. δ_k are parameters of the traditional Stone-Geary utility function and refer to the marginal budget shares of different goods. Across all commodities k, $\sum \delta_k=1$. It is also important to stress that in order to obtain the cost function, it is necessary to set commodity prices equal to unity.

The equivalence scale, and hence the cost of children, are derived from the ratio of the cost function for households with children over the cost function of a reference household without children (for example, the single adult household A). Variation between the cost function in the numerator and the denominator is created by $d_k(a)$. U is held constant. Taking for U the reference households' indirect utility function (with $d_k(A)=1$) at the reference income inc_0 yields the following equation that specifies the equivalence scale (a more detailed exposition on the derivation of the equation can be found in the annex):

$$m(a) = \frac{\sum d_k(a)\gamma_k + (inc_0 - \sum \gamma_k) \prod d_k(a)^{\delta_k}}{inc_0}$$

The reduced form

The structural parameters in the equivalence scale are $d_k(a)$, γ_k and δ_k. The parameters follow from the reduced form demand equations. These equations relate expenditure on a commodity k to household income, composition and control variables. Parameter estimates are often obtained from simple OLS regressions. The regression equations take the following form:

$$q_{k,h} = g_{k,0} + \sum_a g_{k,a} j_{k,a,h} + v_k(inc_h) + ZB + \epsilon_h$$

In this specification, $q_{k,h}$ refers to expenditure on good k by household h, while $g_{k,0}$ is the intercept. The expression in the sum operator refers to commodity specific intercepts for different household types a, and $j_{k,a,h}$ refer to the corresponding dummy variables. In addition to income inc_h and the commodity specific coefficients v_k, the equation features a set of control variables Z, each of which with their own coefficient in the vector B. The control variables include the reference person's age and educational achievement, the household's tenure status, the degree of urbanisation, and wave fixed effects (as data is pooled across waves). This is a more limited set of control variables than the one used in the regressions with income satisfaction. On the one hand, this is due to theoretical considerations. For example, it seems plausible that the mode of interview is more important for income satisfaction questions than for documenting household expenditure in a diary. On the other hand, the HBS data does not allow for the construction of some variables, such as mean age in the household.

From the reduced form parameter estimates follow the structural parameters $d_k(a)$, γ_k and δ_k (k substituted with w in the sum operators to indicate a running variable). It is possible to identify good specific weights $d_k(a)$ by allowing the aggregate consumption function to depend on household structure (Bauer et al., 2021[20]; Kakwani, 1977[53]). Otherwise, it would be impossible to identify K goods specific weights by estimating K demand equations (since the budget constraint and the demand for K-1 goods defines expenditure on the final good).

$$\delta_k = \frac{v_k}{\sum_{w=1}^{K} v_w}$$

$$\gamma_k = g_{k,0} + v_k \frac{\sum_{w=1}^{K} g_{w,0}}{1 - \sum_{w=1}^{K} v_w}$$

$$d_k(a) = 1 + \frac{g_{k,a}}{\gamma_k} + \frac{v_k}{\gamma_k} \frac{\sum_{w}^{K} g_{w,k}}{(1 - \sum_{w=1}^{K} v_w)}$$

Once the structural parameters are derived, they yield the equivalence scale when combined with the reference income. For the latter one may consider mean income among households with the reference household structure.

Child costs fall with the number of children and are highest among single parents

As a first step, focusing on households with two adults, the estimates of the cost of children are close to the OECD-modified equivalence scale for the first child. It is important to note that these estimates do not account for age differences in the cost of children or the fact that some children may spend only a limited amount of time in a given household. The unweighted[6] average of estimates across countries based on expenditure data is 23%, while estimates from data on self-reported economic well-being suggests that the first child costs a household 41% of a single adult. Figure 2 illustrates moderate cross-national variation in the cost of the first child among households with two adults. In most countries, expenditure-based estimates are somewhat below the OECD-modified benchmark, except for Estonia, France and Slovenia (by a small margin) and Greece and Spain, where the costs amount to 39% and 40% respectively. Sweden (10%) has lowest costs of the first child according to the expenditure-based estimates.

In all countries except Spain, the estimated cost of children is higher when using self-reported data on the ability to make ends meet compared to expenditure data. However, in many countries the difference is small. However, in Austria, Denmark, Estonia, Lithuania, Luxembourg, Portugal, and Sweden, when it comes to the first child, the difference is relatively large. Crucially, in Sweden the low costs of the first child found with expenditure data are not necessarily reflected in self-reported economic well-being, which in Sweden appear relatively high in Figure 2.

According to expenditure data, costs are particularly high for single-parent households. The first child appears to be much higher in single-adult households than in two-adult households (equivalence scales for both single and couple households with a varying number of children are reported in the Annex E). This holds true for both expenditure-based approaches and results derived from self-reported economic well-being data, with cross-country unweighted averages of 30% and 64%. In Austria, Denmark, Hungary, Ireland, Poland and Sweden, the estimated cost of a first child is much higher based on self-reported financial strain than on expenditure data. For single-parents in these countries, the presence of a child is perceived as placing a greater burden on their ability to meet needs than what is indicated by expenditure-based estimates of child costs.

The idea that single-parent households may have elevated child costs is a consistent finding in the empirical literature across countries (Bauer et al., 2021[20]; Pinel, Schweitzer and Virot, 2023[14]; Hirsch et al., 2020[54]). In addition, equivalence scales that have a special single-parent parameter have some relevance in the policy context. For example, the US Bureau of Labor Statistics and the Census Bureau have applied such scales in the past, not least in experimental and supplementary poverty measures (Short, 1999[55]; Short, 2014[56]). Higher child costs among single parents have multiple causes. First, two parent households have a greater time budget than single parents. The latter often have to outsource

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[6] Unweighted means that averages are taken across country results, rather than computing the statistic for the pooled set of countries.

certain activities, including childcare (Martin and Périvier, 2018[13]). Second, economies of scale may be lower as there are fewer individuals in a household. Third, children in single- parent households tend to be older, which is relevant as older child age is usually associated with higher costs (Bauer et al., 2021[20]).

The concept of economies of scale to household size implies that the cost of every additional child is below the cost associated with the first child – such is that the average cost of a child falls with the number of children. Figure 2 illustrates the evidence on the cost of children as the number of children in the household increases. In terms of the unweighted average, it is true that the second child costs less. The expenditure data suggests that the average cost of two children amounts to 20% among two-adult households and 23% among single-parent households. The same holds for the evidence from data on self-perceived economic well-being (31% and 60%, respectively).[7] However, exceptions exist. For example, in Lithuania and Czechia, there is no evidence of a decline in the cost of children among single-parent households with two children relative to single-parent households with only one child.

Among two-adult households with three children, there is no clear cross-national pattern that would suggest a further decline in the cost of children associated with the third child. While on average the cost of children declines marginally according to expenditure data, no such decline is present in the data on self-perceived economic well-being. This finding is consistent with the standard OECD-modified equivalence scale, that gives all children regardless of the number of siblings the same weight.

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[7] We report equivalence scales for different household types by the number of children in the Annex E. We do not provide confidence intervals for cross-national averages.

Figure 2. Child costs vary across countries, between two-parent and single-parent households and depend on the number of children

Child costs based on expenditure data and self-reported economic well-being as a share of cost of a single adult across countries and household types
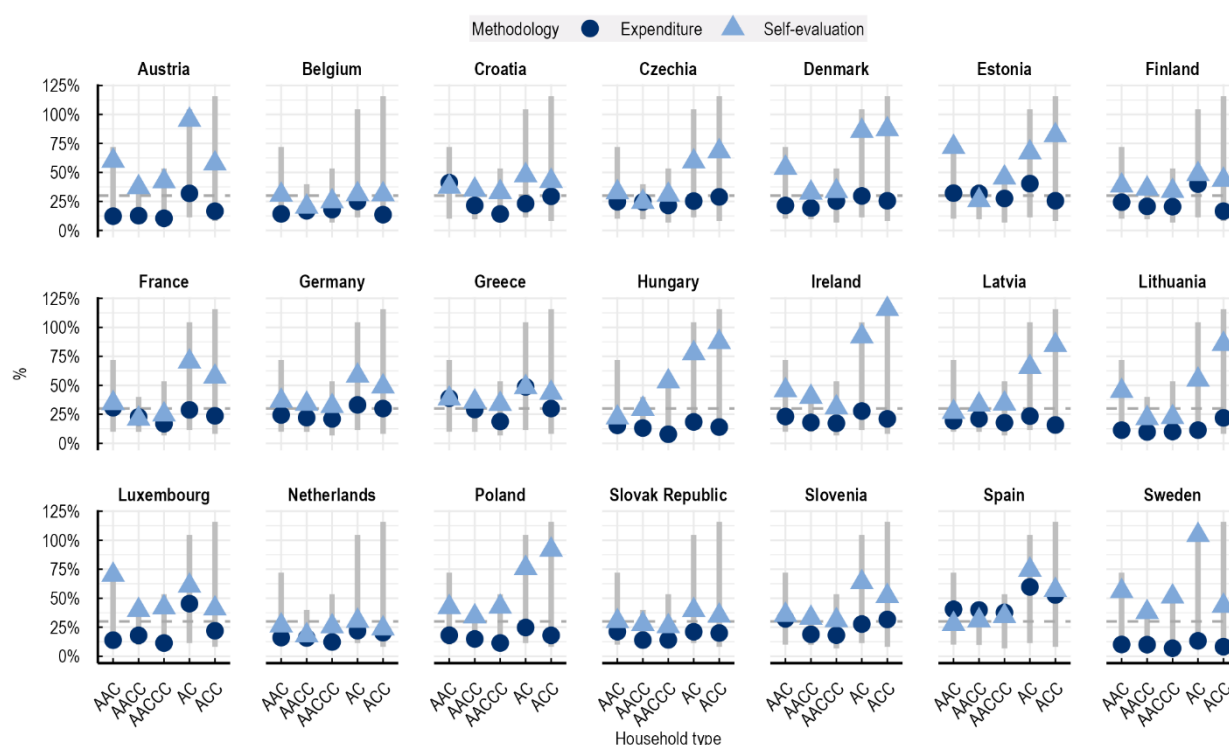
Note: The Figure refers to the cost of children relative to the cost of the first single adult for different households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. The dashed line refers to the cost of children according to the modified OECD-scale. For example, in Austria, the cost of a child in a household with two adults is 12% of the cost of the first adult according to the expenditure data, but 60% according to the self-reported data on economic well-being. According to the OECD modified scale, the cost is 30%. Income and expenditure are adjusted for the consumer price index in prices of the most recent year of the survey wave and purchasing power parities of the same year. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income. In the EU-HBS data, observations with negative expenditure in any COICOP division and households where expenditure in all divisions does not add up to the total expenditure (due to differences in definitions in the original surveys across countries) are removed. In Greek EU-HBS data, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves. Estimates are obtained from expenditure data and self-reported economic well-being data. No weights used to distinguish between different types of household members. Estimates are obtained by pooling across waves to obtain sufficiently large samples and controlling for wave fixed effects.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021 and European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

The cost of children depends on age in some countries

Children's needs vary depending on their age, which may impact their estimated costs. For example, among preschool children, childcare costs are an important cost component. As children grow older and more independent, this type of expenditure may become less significant. However, the cost related to (higher) education, school trips and other expenditure types gain relevance. Housing costs may also increase with the age of the children, for example, when children begin to need more privacy and may benefit from having their own bedroom. Additionally, leisure, sport equipment and/or transport costs may

rise as children enter their teenage years and their activities increasingly occur outside family life. Therefore, it is important to examine the cost of children by different age groups.

Across countries with sufficiently high numbers of observations,[8] it is almost always the case that children between 14 and 24 imply the same cost or more than children in the youngest age group (Figure 3). This conclusion holds regardless of the methodological approach. The (unweighted) average across countries for two-parent households with children in the youngest age bracket is 16%. The cost of a child in the middle bracket aged between 5 and 13 years and the cost of a dependent child aged 14 or above is 24% and 34% respectively based on expenditure data. The age gradient of the impact of children on household financial wellbeing is statistically significant only in some countries (Box 2). A similar increase in costs follows from the analysis of self-reported economic well-being, though at a higher level. Interestingly, the estimated cost for the early childhood age group is lower than that for older children, regardless of the early childhood policy context, including the education and care system for young children. This suggests that early years' policies are relatively effective in reducing the cost to parents of young children, while the costs of raising children may be largely influenced by other expenses that increase significantly as children age.

For single-parent households, the average cost increases from 21% for under 5-year-old children to 27% among households with children between 5 and 13 years of age. Finally, the cost rises to 36% for single-parent households with a single dependent child in the 14-to-24-year age group. Again, there is a monotonic growth in costs as child age increases according to the approach that capitalises on self-reported financial strain data in just a few countries including Estonia, Hungary, Ireland, Latvia and Spain. Self-reported data on economic well-being suggest much higher costs for single parents with young children than those with expenditure data in France, Lithuania, Poland and Sweden especially. In countries such as Estonia, Hungary, Ireland, Lithuania, Poland, and Sweden, the estimated costs based on self-reported financial strain data are significantly higher for single parents with adolescents and young adults. This finding suggests that struggling to make ends meet is often not a temporary issue tied solely to the presence of young children. Instead, financial difficulties may persist over time and even intensify as children transition into late adolescence and early adulthood.

Moreover, there is some heterogeneity between countries in terms of the relationship between child age and costs experienced by single-parent households. Notably, in Belgium, the Netherlands, France and Germany, there is an increase in the cost of children as children become older according to the expenditure data. However, the data on the ability to make ends meet shows that the perceived cost is as high for young children as it is for older children in these countries. While in all countries, the former approach tends to deliver flat or monotonically age gradients for the cost of children (exceptions are Poland and Estonia), the latter approach reveals a U-shaped cost pattern in Lithuania and Poland, and an inverted U-shape in Sweden.

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[8] The minimum cell size is 30 observations.

Figure 3. A granular perspective on the costs of children by age and across household type

Child costs based on expenditure data and self-reported economic well-being as a share of cost of a single adult across countries and households with children in different age groups
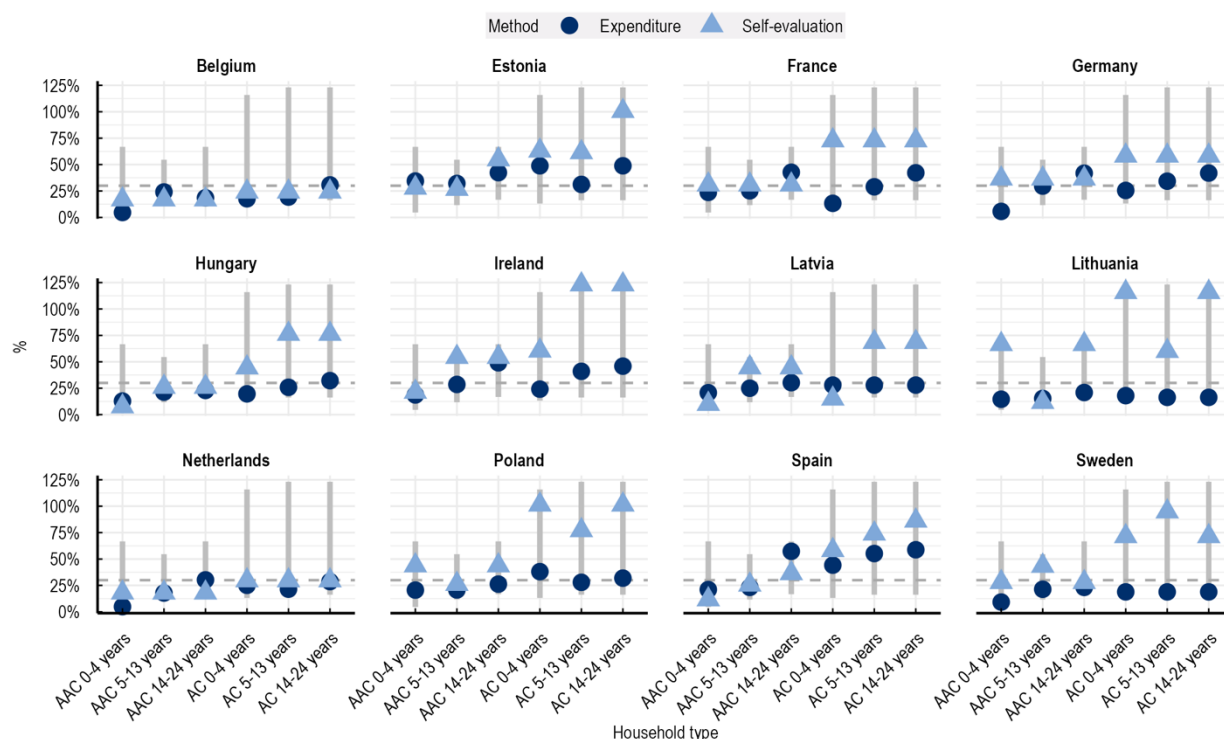
Note: Figure refers to the cost of children relative to the cost of the first single adult for different households with a given number of adults (couples AA or singles A) and one dependent child in different age groups. For example, AAC 0-4 years refers to a couple household with a child aged 0 to 4. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. The dashed line refers to the cost of children according to the modified OECD-scale. Income and expenditure are adjusted for the consumer price index in prices of the most recent year of the survey wave and purchasing power parities of the same year. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income and those with more than one child. Countries with less than 30 observations in one of the groups are dropped. In the EU-HBS data, observations with negative expenditure in any COICOP division and households where expenditure in all divisions does not add up to the total expenditure (due to differences in definitions in the original surveys across countries) are removed. Estimates are obtained from expenditure data and self-reported economic well-being data. Estimates are obtained by pooling across waves and controlling for wave fixed effects.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021 and European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Box 2. Adjusted household size Ñ with different age thresholds

Two approaches can be applied to study differences in the cost of children across different age groups. On the one hand, we rely on expenditure data to estimate an age gradient in the cost of children. On the other hand, it is possible to derive weights in a similar fashion to the weights used for non-resident children. Children enter the measure of adjusted household size Ñ according to their weights, before Ñ is used in specifications I-IV to recover age-specific estimates of the cost of children.

To estimate the age gradient with the expenditure system, we follow a similar methodology to the approach taken above. Instead of referring to single and couple households with varying numbers of children in $d_k(a)$ in the structural model and $j_{k,a,h}$ in the reduced form, we introduce dummy variables for single and couple households with a child in the youngest age group between 0 and 4 years, the middle age group of 5- to 13-year-old children and the oldest age group. The regression equation to estimate the reduced form has the same control variables as the model used to estimate the model for households with varying numbers of children. However, the sample is restricted to households with at most one child to avoid contamination of the estimates through sibling effects. In addition, we do not report results for countries with less than 30 observations in one of the groups.

To ensure comparability with the estimates obtained from data on self-reported economic well-being, we test the household composition coefficient estimates of households with younger children in the reduced form against the estimates of the oldest age group. If the difference is not statistically significant at the 10% level, we assign the same reduced form estimates to households with younger children. As a result, the child cost estimates only differ between age groups if the differences are statistically significant. The regression output is reported in Table A E.1 in the annex.

Age specific weights for resident children using self-reported economic well-being

The weights are constructed and used to obtain Ñ in a similar way to those that this publication uses to distinguish resident from non-resident children (Pinel, Schweitzer and Virot, 2023[14]). Now, rather than resident and non-resident children, g represents children in the age group between 0-4 years, 5-13 years, and 14-24 years. We take the oldest age group as a reference group, and construct weights for younger children that may differ from unity. Children above the age of 13 obtain a weight of unity. Parallelling the approach to measuring the cost of children among households with non-resident children, under certain circumstances children under 14 years of age can also obtain a unit weight. This is the case if the coefficient estimate for children in that age group in the regression that is used to determine the weights is not statistically significantly different from the estimate of the oldest age group at the 10% level. The weights for the youngest age group $\lambda_{0\text{-}4}$ corresponds to $\alpha_3[group = 0 - 4\ years\ old]/\alpha_1[group = 14 - 24\ years\ old]$. $\lambda_{5\text{-}13}$ corresponds to $\alpha_2[group = 5 - 13\ years\ old]/\alpha_1[group = 14 - 24\ years\ old]$. The regression equation to estimate the weights for different age groups has the same control variables as the model used to estimate the weights of non-resident children. The same sample restrictions apply. Table 1 reports the weights of children in different age groups and p-values from testing whether the coefficient estimate is statistically different from the coefficient estimate of children in the oldest age group.

Table 1. Weights for children in different age groups

Weights and p-values for the age group weight being different from unity

Country	Weight 0-4 years	(p) 0-4 years = 16-24 years	Weight 5-13 years	(p) 5-13 years = 16-24 years
Belgium	0.88	0.41	0.79	0.17
Estonia	0.50	0.02	0.48	0.00
France	1.33	0.10	1.23	0.23
Germany	0.92	0.59	0.89	0.45
Hungary	0.27	0.00	0.81	0.35
Ireland	0.34	0.01	1.28	0.25
Latvia	0.19	0.00	0.66	0.10
Lithuania	0.87	0.77	0.21	0.01
Netherlands	0.84	0.59	0.98	0.94

Poland	1.14	0.44	0.60	0.01
Spain	0.35	0.00	0.73	0.08
Sweden	1.40	0.17	1.64	0.04

Note: Weights are obtained from the ratio of the coefficients on younger age groups over the coefficient on children in the age group between 14 and 24 years. "Weight 0-4 y" and "Weight 5-13 y" provide estimates of the weights in the two younger age groups. "Weight 0-4 y = 1 (p)" is the p-value of a test on the equality of the estimates for children in the age group between 0-4 years and children in the oldest age group between 14 and 24. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. Income is adjusted for purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income and households with more than one child.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

Non-resident children can affect households' self-reported economic well-being

In the next step, we delve into the diversity of families in more detail by making further distinctions between children who have different types of attachment to a given household. This is possible with self-reported well-being data using the 2021 EU-SILC data module but not with expenditure data, which lack detailed information on family living arrangements (Box 3).

The ad-hoc module reveals that a significant share of all children[9] alternate between two households (detailed definitions are given in the Box below). On average across countries, approximately 7%[10] of the total child population are considered non-resident (Figure 4). However, in some countries the share of non-resident children is much higher. For example, in Finland, more than 20% of children fall into this group. In other countries such as Croatia, a small fraction of children spend most of their time in another household.

Only a small number of households report that an adult member has at least one child living in another household. On average, across European countries approximately 2.3% of households report that one household adult member has at least one child in another household (Figure 4). There are significant variations across countries. For example, the share it is twice the average in Denmark (5.6%), but close to 0% in Croatia. Germany and Czechia have been excluded from the sample of countries considered here due to the significant number of missing values for these questions (Box 3).

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[9] For the descriptive analysis in this paragraph, we drop children who are 18 or older from the sample, including these children would deflate the proportion of non-resident children.

[10] This average is unweighted. In weighted terms (by population size), the average is one percentage point below this estimate.

Figure 4. Prevalence of non-resident children

The prevalence of non-resident children varies substantially across countries.

A: Non-resident children as a share of children

B: Household with non-resident children as a share of households
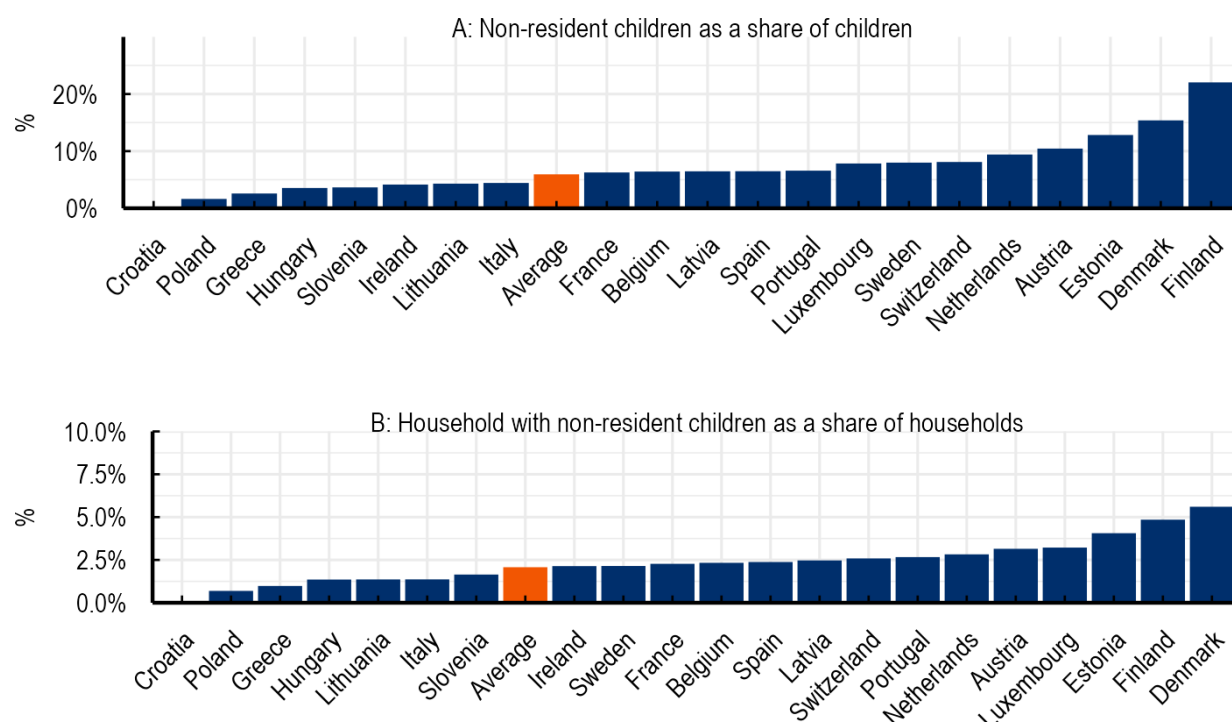
Note: The figure describes the prevalence of children with alternating residence who are classified as non-residence in the EU-SILC ad-hoc module. Panel A refers to the number of non-resident children as a share of the total number of children. Panel B refers to the share of households where at least one person reports to be the parent of a non-resident child. Non-resident children are children aged 17 and younger who usually live with another parent, or separated from both parents (living with grandparents, for example). The term does not include children who are away at the time of the interview for educational reasons or health, and it does not include deceased children. See Box 3 for a more detailed discussion of the definition of non-resident children. The total child population in Panel A are household members between the age of 0 and 15 years, as well as other household members under the age of 18 who are in education – provided they are neither the reference person nor their spouse. Note that this definition is different to the one used throughout the rest of this paper – to match better the data available on non-resident children (who are only covered by the survey if they are younger than 18). Germany and the Czech Republic are excluded due to large proportions of missing values. In Ireland, the Netherlands and Portugal, the number of non-resident children may be underestimated, as a large share of resident children spend less than half of their time in the survey household even though they are classified as resident children. The data needs to be interpreted carefully, as the number of non-resident children reported in the survey is below the number of children who have parents in other households.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021, ad-hoc module.

Box 3. The 2021 EU-SILC ad-hoc module on living arrangements and conditions of children in separated and blended families

To offer more detailed demographic data on household configurations, EUROSTAT included an ad-hoc module on non-standard family structures in the 2021 EU Statistics on Income and Living Conditions, in line with the recommendations of the UNECE Taskforce on Household Statistics. The success of this data collection at the European level, though mixed, but it still provides some information on separated and blended families to enrich the description of households and family living arrangements.

The data from the EU-SILC's 2021 ad-hoc module on separated and blended families used in Figure 4 collected data on family members outside the household within the EU-SILC survey infrastructure. Rather than featuring in each wave as part of the regular data collection of EU-SILC, data from the ad-hoc modules is only available in selected years. This allows to collect data on children with parents in other households and households with non-resident children at European level. Two variables were collected at household level:

- The number of children who are household members and have a parent living *outside* the household (non-resident parents).

  This variable aims to collect information on the number children who are household members and have one of their parents being part of a different household, including children whose mother is not a household member and father who is a household member, children whose father is not a household member and mother who is a household member, and children living with one of the parents but they have no contact with the other one. It excludes children who are household members and whose both parents live inside, children who are household members and are living with one of the parents (either mother or father) and the other parent has died, and children living with grandparents, uncle/aunt, or other relatives but don't know or don't have the father and mother living in the household. Note that even though children with a parent in another household may be considered household members in the survey, this does not rule out that they also live with that parent for some part of the time.

- The number of children who are not household members and whose parent lives *inside* the household (non-resident children).

  This item gathers information on the number of children whose parent (one or both) are members of the interviewed household, but the child is not a household member (even if the child may be accommodated by the parent part of the time). The focus of the variable is to define if at least one adult in the household has children who do not live permanently with him/her, either because: his/her children spent some days inside the household but mainly reside with another parent in a different household, or his/her children reside outside of the household.

This classification of resident and non-resident children offered by EUROSTAT has the advantage of a clear distinction between resident and non-resident children based on household membership. According to the Article 4.3 of Common Concepts Regulation (Commission Implementing Regulation (EU) 2019/2181), children's household membership depends on the amount of time that they spend in each household if they alternate between residences. Only if the child spends an equal amount of time in each residence, the place of usual residence of that child shall be the place of residence of the legal guardian or the parent who receives the child benefits, or the place of residence of the legal guardian or the parent who contributes more towards the child-related costs. If none of the above applies, the usual residence is the household where a child is during the interview.

Our analysis in the Annex B (Table A B.1) shows that children with parents in separate households typically spend the majority of their time in the household where they are considered a member. However, across countries, there are exceptions. Moreover, in Ireland, the Netherlands, and Portugal, children classified as residents spend on average significantly fewer than 15 nights per month in the EU-SILC household. When interpreting these findings, it is important to note that in these countries, resident children may be considered household members despite spending less than half of their time in that household.

The classifications of children into resident and non-resident provided by EU-SILC are only an imperfect indicator of the time a child spends in a given household as Table A B.1 reveals. Yet, it is not feasible to create a consistent indicator of residency based on data about the time children spend in a household across countries. Information on the number of nights a child spends in the household is only available for children who have an entry in the household register file – which only applies to children considered as household members to begin with (resident children). Therefore, there are only few observations of children that do not spend most of their time in the household that can be identified by the variable on the amount of time spent in the household. As a result, this analysis relies on the number of resident and non-resident children as reported by the two main household level variables on the number of resident and non-resident children.

The household level information on resident and non-resident children has been collected with varying degrees of success across countries. In Czechia and Germany, there is a substantial share of missing values (see Table 2). For this reason, these two countries are not included in the analyses presented in this paper.

Moreover, there is a discrepancy between the number of non-resident children, and the number of children with non-resident parents. In theory, one would expect each non-resident child to have one or two parents in other households, while each child with a non-resident parent should have a parent with a non-resident child. The last two columns in Table 2 reveal that the number of non-resident children is always below the number of children with non-resident parents. However, it is noteworthy that in some countries, such as the Netherlands, Finland and Germany, the count of non-resident children and children with parents in another household are relatively close to each other. One possible explanation for this regularity is that some non-resident parents may not know that they have children or may be unwilling to declare them in the survey context. This can inflate the number of children with non-resident parents relative to the number of non-resident children reported by parents. Additionally, it is possible that especially in cases where a child with alternating residence spends approximately half their time in each parent's household, both parents may consider a child as living with them most of the time.

Table 2. Key variables in the EU-SILC ad-hoc module on family arrangements

Shares of missing values and totals for non-resident children and parents.

Country	Missing: non-resident child	Missing: non-resident parent	N: non-resident child (in thousands)	N: non-resident parent (in thousands)
Austria	0%	0%	177.42	222.70
Belgium	0%	0%	185.45	575.26
Croatia	0%	0%	1.07	22.32
Czechia	97%	79%	155.93	301.33
Denmark	0%	0%	175.40	249.71
Estonia	0%	0%	37.03	45.29
Finland	0%	0%	221.40	240.75
France	0%	0%	959.66	2,837.07

Germany	48%	56%	1,052.55	1,088.42
Greece	0%	0%	54.36	97.43
Hungary	0%	8%	69.61	213.43
Ireland	0%	4%	59.28	175.36
Italy	0%	0%	484.44	1,296.16
Latvia	0%	0%	26.35	70.90
Lithuania	1%	1%	24.29	77.13
Luxembourg	0%	2%	11.36	29.25
Netherlands	1%	1%	349.90	359.90
Poland	0%	0%	129.28	588.90
Portugal	0%	0%	135.82	334.02
Slovenia	0%	0%	17.68	34.74
Spain	0%	0%	631.22	1,206.23
Sweden	0%	13%	175.57	288.33
Switzerland	0%	0%	146.37	199.81

Note: The percentage shares in the first two columns refer to the share of households by country where values in the variable counting children of a household member that live in other households (non-resident children) or children with parents in other households (non-resident parents are missing. The total is the number of entries in the household register file. The last two columns refer to the number of children who are considered non-resident children, and the number of children with non-resident parents. The numbers refer to thousands. Non-resident children include children aged 17 and younger who usually live with another parent, or separated from both parents (living with grandparents, for example). The term does not include children who are away at the time of the interview for educational reasons or health, and it does not include deceased children. Non-resident parents are cases where children are members of the household, but one of the parents lives elsewhere. This excludes half-orphans, and children living with grandparents, uncle/aunt, or other relatives who don't know or don't have the father and mother living in the household. No data for the Slovak Republic available. In Ireland, the Netherlands and Portugal, the number of non-resident children may be underestimated, as a large share of resident children spend less than half of their time in the survey household even though they are classified as resident children. Values are rounded.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021, ad-hoc module.

Ideally, the ad-hoc module should feature children that are considered as non-resident in the personal register. However, in the data delivered to EU-SILC users, the number of observations in the register file corresponds to the number of household members in almost all cases. Moreover, the way that the IDs of non-resident children are constructed should allow their identification in the personal register. An analysis of the IDs supports the conclusion that non-resident children are not part of the register. The only exception is France, where some non-resident children but not all have observations in the register file but are counted at the same time as household members in the household size. Since these children are defined as resident children in the third release, we also consider them resident in the second release.

In addition to the information mentioned above, each country provides data on the legal custody for children with alternating residence in the register file to document the legal right to make decisions about the child arrangement, even if in practice it could be different.

Overall, the data quality in the special module will require further exploration. EUROSTAT published the ad-hoc module only in the second release of EU-SILC, while retracting the data in the third release due to insufficient data quality checks with countries.

Figure 5 offers child cost estimates computed based on 2021 wave of EU-SILC, which offers its special module on non-resident children. Non-resident children are defined as those who spend the majority of their time outside the household, living with another household. However, some children classified as non-resident may spend a non-trivial amount of time in the household, potentially incurring costs for the household. Assessing the impact of children who alternate between households involves computing weights for non-resident children to test whether their presence affects self-reported economic well-being

of household members and include them in the adjusted household size Ñ according to the weight. The adjusted household size (Ñ) follows from assigning non-resident children weights reflecting the magnitude of the coefficient of non-resident children relative to the coefficient of resident children in a regression of household characteristics on self-reported economic well-being (Box 4).

Parallelling the previous illustrations, Figure 5 distinguishes between two-adult households and single-parent households.[11] In addition, the cost of children is broken down by the type of attachment to the household that different children have. The data on self-reported financial strain from EU-SILC reveals that in many countries, the cost of non-resident children is non-negligible. The unweighted average of the cost of non-resident children across countries is 22% in two-adult households and 40% in households with one adult. Therefore, the cost of non-resident children averages at half the cost of resident children. However, there are significant variations between individual countries. In ten countries, including Scandinavian countries (Denmark, Finland and Sweden) together with Austria, France, Italy, Luxembourg, and Switzerland, non-resident children have a statistically significant impact on self-reported economic well-being. In contrast, in none of the Baltic countries, non-resident children have a significant impact on self-reported economic well-being. In the Mediterranean economies, a mixed picture emerges with significant costs in Italy, but no costs in Spain.

Moreover, in all cases where the cost of non-resident children is positive, the cost of non-resident children is close to the cost of resident children; and in all these cases, the difference in the cost associated with a non-resident versus a resident child is not statistically significant (Table 3). These findings align with the fact that many non-resident children may be in shared custody, meaning they reside partly in the household and alternate between different households. As a result, costs such as those for a room, food, energy, transportation, toys, and other goods are duplicated and incurred by both households. Interestingly, non-resident children are as costly as resident children in Scandinavian countries and France, where joint physical custody of children after separation is most common (Hakovirta, Meyer and Haapanen, 2024[6]), as well as in Belgium and Italy, where the prevalence of joint custody is increasing. (Nieuwenhuis, 2021[57]).

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[11] Note that for some countries, the estimates of the cost of children in Figure 5 exhibit some degree of divergence from the results reported in Figure 2. This is the case in Denmark, Estonia, Latvia, Luxembourg, Spain and Sweden. Even though the results on non-resident children rely on a more limited selection of functional forms (specifications I - III), the differences are mostly driven by the differences in the sample. The annex replicates the cost estimates from Figure 2 for 2021 to illustrate this (Figure A E.3).

Box 4. Adjusted household size Ñ with non-resident children (based on income satisfaction data)

The estimation of the cost of resident vis-à-vis non-resident children largely follows the same principles set out in the previous section. However, instead of using household size N in the specifications I – III, adjusted household size Ñ is used to reflect the presence of non-resident children and to account for the fact that they may impact economic well-being in a household differently from resident children. This requires an additional step before estimating the reduced form and deriving the equivalence scale as in the previous section.

To derive weights for non-resident children and elicit Ñ, we first compute the impact of resident and non-resident children on self-reported economic well-being. The ratio of the coefficient magnitude for non-resident children over the coefficient magnitude for resident children constitutes the weight, that we assign non-resident children in the adjusted household size Ñ. All other household members obtain a weight of unity paralleling the approach taken so far in this publication.

The weights are derived in a regression framework. The relevant characteristics, in addition to a set of variables that is largely identical to the one used for the estimation of the equivalence scale, is regressed on a measure of income sufficiency. Therefore, we estimate the following model where for every household h, self-reported economic well-being S is given by an intercept α_0 and an individual level disturbance ε_h, as well as household income inc, a set of variables indicating the (number of) children that fall into different categories g (i.e. resident and non-resident children), and a set of control variables X with coefficients B:

$$S_h = \alpha_0 + \alpha_1 log(inc_h) + \sum_{g=1}^{G} \alpha_{g,h} a_{g,h} + XB + \varepsilon_h$$

The weights g_o for children that belong to a specific group g≠1 are given by the ratio of the coefficient on the number of children in that group and the number of children in a reference group g=1. For example, if there is a coefficient for resident children on the one hand, and non-resident children on the other hand, then the weight for non-resident children $a_{non\text{-}resident}$ corresponds to $\alpha_2[group = nonresident]/\alpha_1[group = resident]$.

Across different specifications, the set of control variables includes a dummy variable indicating whether the respondent lives in a couple. Moreover, the respondent gender, as well as a respondent age polynomial and education, relationship status, employment and tenure status in the household's main residence enter the analysis. In addition, the specification controls for a polynomial of the mean age of adults in the household. Despite our controlling for observables, it should be noted that the choice of main residence for children may be endogenous to both parents' economic situation. If children systematically spend more time with the parent who is economically better off for some reason that we do not control for, this may result in an upward bias of the weights for non-resident children.

Crucially, in the first stage, we limit the sample to either households without children (single adults, couples), or households with at most one child (couples, single parents). This sample restriction allows to abstract from sibling effects. Among households with multiple children, the presence of siblings may imply economies of scale which would depress the estimated effect of children on financial well-being. Since economies of scale are in the focus of the second stage regression, limiting the sample to small households with at most one child offers a cleaner empirical approach. In addition, we do not report results for countries with less than 30 observations in one of the groups.

Having estimated the coefficients for resident and non-resident children, positive weights are assigned in countries where the coefficient on non-resident children is significantly greater than 0 (at the 10% level). Table 3 provides coefficients by countries, and the p-values for a one-sided test of the hypothesis that the coefficient is smaller or equal to zero. The table supplements this information with a test of the hypothesis that the estimates of the coefficient on non-resident children and resident children are of the same magnitude.

Table 3. Weights for non-resident children

Weights for non-resident children and p-values for the weight being positive and different from unity

Country	Non-resident weight	Coef. Non-resident > = 0 (p)	Coef. non-resident = Coef. resident (p)
Austria	1.22	0.00	0.49
Belgium	0.20	0.25	0.04
Denmark	1.19	0.00	0.66
Estonia	0.28	0.25	0.15
Finland	1.52	0.00	0.21
France	1.03	0.00	0.93
Italy	1.60	0.00	0.42
Latvia	-0.40	0.72	0.12
Luxembourg	0.59	0.01	0.22
Netherlands	1.00	0.11	1.00
Portugal	0.50	0.16	0.45
Spain	0.56	0.13	0.45
Sweden	0.77	0.00	0.54
Switzerland	0.54	0.01	0.12

Note: Weights are obtained from the ratio of the coefficient on non-resident children over resident children. "Weight > 0 (p)" refers to the p-value of a one-sided test of the hypothesis that the coefficient on non-resident children is greater or equal to zero. "Weight = 1 (p)" is the p-value of a test on the equality of the estimates for resident and non-resident children. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. Non-resident children include children aged 17 and younger who usually live with another parent, or separated from both parents (living with grandparents, for example). The term does not include children who are away at the time of the interview for educational reasons or health, and it does not include deceased children. Germany and Czechia are excluded due to large proportions of missing values. Countries with less than 30 observations in one of the groups are dropped. The data needs to be interpreted carefully, as the number of non-resident children reported in the survey is below the number of children who have parents in other households. Income is adjusted for purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income and households with more than one child.

Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021, ad-hoc module.

Figure 5. Comparing the well-being cost of resident and non-resident children

Child costs based on self-reported economic well-being as a share of cost of a single adult across countries and household types
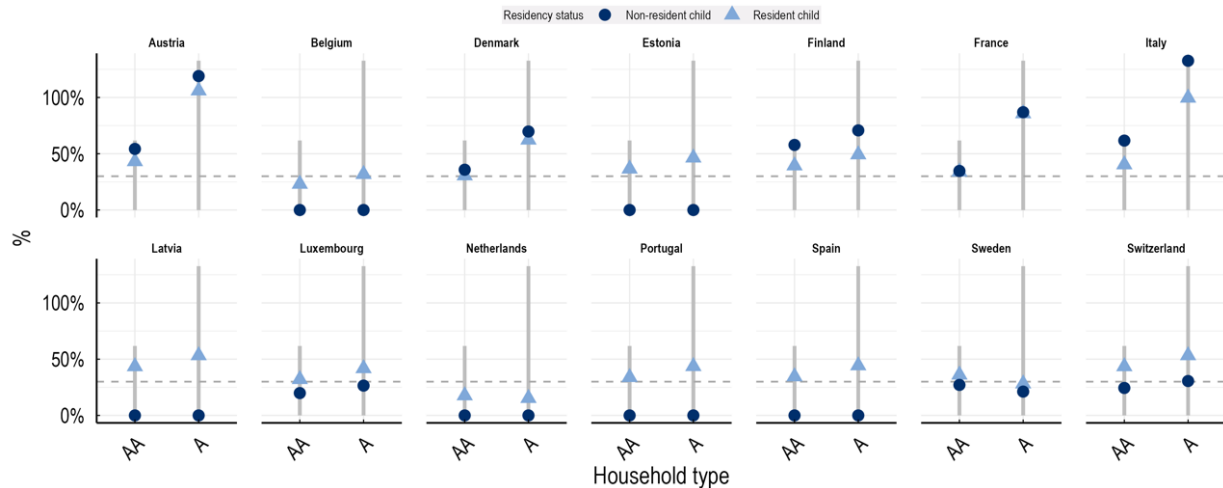
Note: Figure refers to the cost of children relative to the cost of the first single adult for two and one-adult households (AA and A). Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. Non-resident children include children aged 17 and younger who usually live with another parent, or separated from both parents (living with grandparents, for example). The term does not include children who are away at the time of the interview for educational reasons or health, and it does not include deceased children. Germany and Czechia are excluded due to large proportions of missing values. In the Netherlands, the number of non-resident children may be underestimated, as a large share of resident children spend less than half of their time in the survey household even though they are classified as resident children. Countries with less than 30 observations in one of the groups are dropped. The data needs to be interpreted carefully, as the number of non-resident children reported in the survey is below the number of children who have parents in other households. The dashed line refers to the cost of children according to the modified OECD-scale. Income is adjusted for purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021, ad-hoc module.

Self-reported financial strain data points towards income-dependent child costs in some countries

Since households along the income distribution show pronounced differences in spending patterns (see Annex C,), it is important to study variation of the cost of children among affluent and less affluent households (Donni, 2015[58]). Most estimates of the cost of children rest on the assumption that costs as a share of total expenditure do not differ across income groups. However, there are good reasons to believe that income may play a role when it comes to the additional spending of households with children relative to childless households. On the one hand, more affluent households will have a lower expenditure share of food and clothing with low economies of scale. Moreover, larger houses among high-income individuals will imply smaller additional cost for accommodating an additional child. On the other hand, one cannot rule out that some luxury goods, such as expensive vacation trips, are associated with lower economies of scale (Koulovatianos et al., 2005[59]).

Focusing on child-specific expenditure, differences across income groups have been documented in a few OECD countries. In the United States, the evidence suggests that households in the highest income group (earning more than approximately USD 100 000) spend more than twice as much on their children as households in the lowest income group with an income just under USD 60 000 (Lino et al., 2017[24]). Over time, evidence from the United States suggests that inequality in parental investment in children increased

between the early 1970s and the late 2000s (Kornrich and Furstenberg, 2013[60]). Among less affluent households, little income growth feeds in stagnating spending on children (Schneider, Hastings and LaBriola, 2018[61]; Hastings and Schneider, 2021[62]; Kornrich and Furstenberg, 2013[60]; Kornrich, 2016[63]). Moreover, it can be shown that there is a difference between single and cohabiting parents as opposed to married couples, the latter investing more in their children (Hastings and Schneider, 2021[62]). In addition to evidence from the US, survey data from Denmark reveals an elasticity of 0.43 of expenditures on children with respect to net household income (Bonke and Browning, 2011[64]).

The relationship between household income levels and the overall costs associated with children, including collective expenditure items, is less clear-cut. The expenditure system approach makes this relationship explicit in the structural equation that specifies the equivalence scale m(a) in Box 1. Both in the numerator and the denominator, the equation features the term inc_0, that refers to the reference household income. A simple way to appraise the sensitivity of the cost of children to different income levels is to vary inc_0 (Bauer et al., 2021[20]; Gerfin, Leu and Schwendner, 1994[65]). While the baseline specification takes the mean income of a one-person household for inc_0, income dependence would imply that the cost estimates change if instead one would consider half that value or increase it substantially.

Overall, the expenditure data provides limited evidence for income dependent costs of children. Figure 6 re-evaluates the cost of children for a reference income level inc_0 at 50% (low) and 150% (high) of an average household's income (across household types A, AA, AAC, AACC, AACCC, AC, ACC). The cost estimates refer to the first child of two-parent and single-parent households respectively. In most countries, the costs are approximately the same regardless of the reference income. However, there are some exceptions. In Greece, Ireland and Slovenia, varying the reference income level suggests that the cost of children is marginally higher in more affluent households. The relatively limited sensitivity of the expenditure-based cost of children estimates are consistent with previous studies that have employed a similar approach. For example, in Austria, Bauer et al. (2021[20]) show that their estimates are robust to changes in the reference income level.

Some studies, using alternative methods, find that the costs of raising a child, as a percentage of income, are lower for higher-income households due to greater economies of scale. Garbanzos et al. (2021[66]) find that, in Germany, equivalence scales are considerably higher among households with very low incomes. In contrast, a French study applies the Hou Thakker methodology to different quintiles of the income distribution (Martin and Périvier, 2018[13]). While the study finds a tendency of lower child costs among more affluent households, many results are not statistically significant. As a result, the conclusions based on expenditure data do not provide unambiguous evidence for income dependence (Thévenon et al., 2009[19]).

Figure 6. Expenditure-based results are robust to changes in the reference income level

Child costs based on expenditure as a share of cost of a single adult across countries and household types, for a high and low reference income
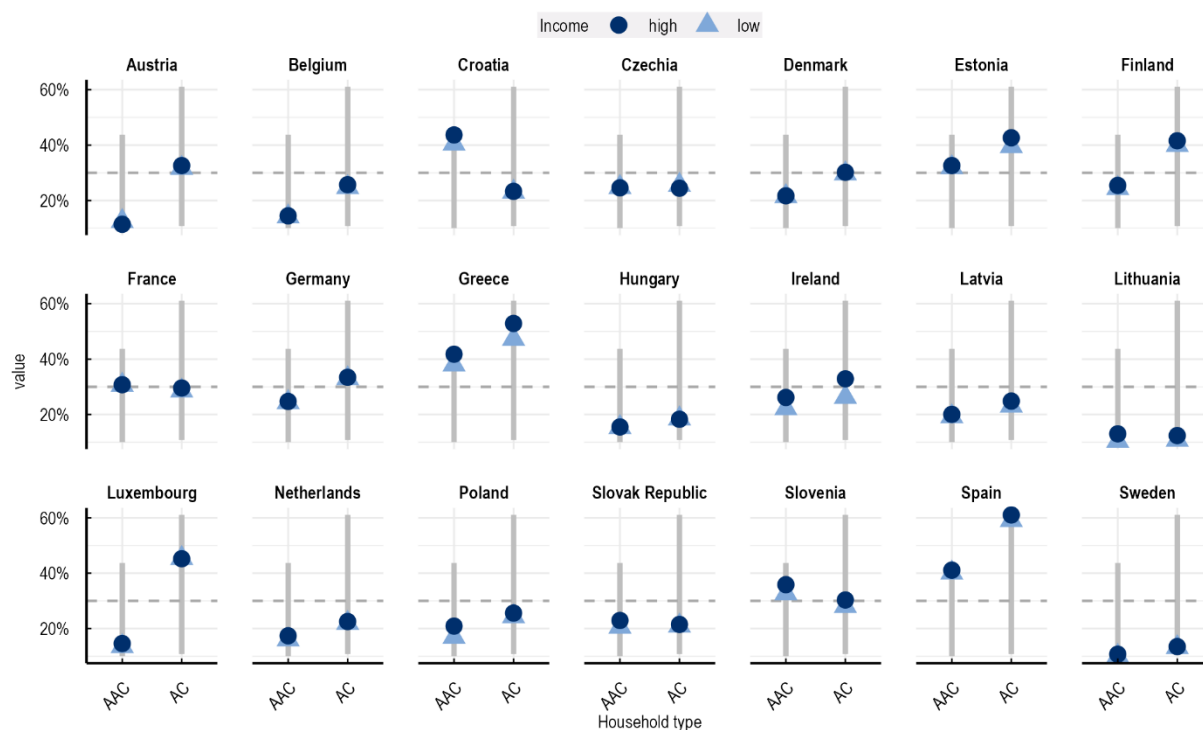
Note: This figure refers to the cost of children relative to the cost of the first single adult for different households with a given number of adults (couples AA or singles A) and one dependent child. The cost of children is computed with a high reference income (50% above the mean income of a single adult) and a low reference income (50% of the mean income of a single household) for each of these household constellations. The dark blue points indicate high income, and the triangles low income. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. The dashed line refers to the cost of children according to the modified OECD-scale. Income and expenditure are adjusted for the consumer price index in prices of 2020 and purchasing power parities of the same year. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income. In the EU-HBS data, observations with negative expenditure in any COICOP division and households where expenditure in all divisions does not add up to the total expenditure (due to differences in definitions in the original surveys across countries) are removed. Estimates are obtained from expenditure data. Estimates are obtained by pooling across waves and controlling for wave fixed effects.
Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

In addition to expenditure-based methodologies, some tests for income dependence of the cost of children rely on self-reported economic well-being data. The underlying idea is to introduce interaction effects between income and household size in a regression framework. As a result, it is possible to compute the parameters of the equivalence scale and thus child costs along the income distribution (Box 5).

<div style="border:1px solid purple">

Box 5. Income dependence with self-reported economic well-being data

To obtain income dependent estimates of the cost of children in a framework that draws on self-reported economic well-being, it is necessary to adjust the approach outlined in Box 1. We take specification III for simplicity and use unadjusted household size N, paralleling the approach behind the findings in Figure 2. However, an interaction effect enters specification III between $log(inc_h)$ and $log(N_h)$. This approach is close to the implementation of income-dependent equivalence scales estimated by Martin and Perivier (2015).

Whenever this interaction is statistically significant at the 10% level, we compute the equivalence scale m(N) (and in a next step, the cost of children). The modified equation reads as follows, where β_3 is the coefficient estimate on $log(N_h)$, β_1 the coefficient estimate on $log(inc_h)$ and ζ the coefficient estimate on the interaction between income and household size:

$$m(N) = N_h^{\frac{-(\beta_3 + \zeta * log(inc_h))}{\beta_1}}$$

</div>

Figure 7 indicates that, although not in all countries, child costs are significantly higher for low-income households in many cases. In Italy, for example, child costs amount to 20% of a single adult's costs for households with above-average unequalised household income whereas for low-income households, the cost of children exceeds that of a single adult. Similar differences between child costs of high-income and low-income households are also evident in France, Ireland, and Sweden. The only exceptions to this pattern are Poland, Portugal and the Slovak Republic, where child costs in high-income households exceed marginally those in low-income households.

The findings based on data from self-reported economic well-being resonate with the findings from France, where a strong income dependence was found (Martin and Perivier, 2015[37]). Biewen and Juhasz (2017[44]) offer a detailed examination of income dependence based on income satisfaction data for Germany. They show that among households with one or more children and two adults, economies of scale rise with income. The authors argue that households may unlock economies of scale in household expenditure that become more important as families become more affluent, such as family holidays. Their findings are consistent with the general pattern apparent in Figure 7, which also documents increasing scale effects with income in some countries. However, we find little income dependence in Germany. This may be partly due to a different estimation approach and data source - for example, the authors use the German Socio-Economic Panel rather than the EU-SILC.

Figure 7. According to self-reported economic well-being, affluent households have lower costs of children

Child costs based on expenditure as a share of cost of a single adult across countries and household types, for a high and low reference income
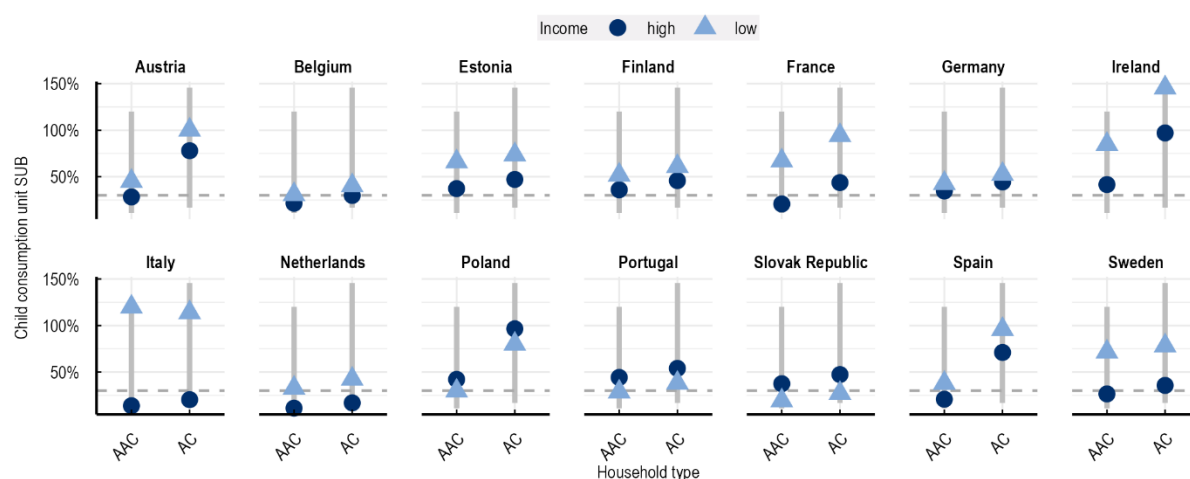
Note: Figure refers to the cost of children relative to the cost of the first single adult for different households with a given number of adults (couples AA or singles A) and one dependent child. The cost of children is computed with a high reference income (50% above the mean household income across household types) and a low reference income (50% of mean household income across household types) for each of these household constellations. The dark blue points indicate high income, and the triangles low income. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. The dashed line refers to the cost of children according to the modified OECD-scale. Income and expenditure are adjusted for the consumer price index in prices of 2021 and purchasing power parities of the same year. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income. Estimates are obtained by pooling across waves and controlling for wave fixed effects.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

4 Conclusion – Policy implications

The structure of modern families is undergoing rapid transformation. Across European OECD countries, there is a notable decline in the number of children growing up in traditional households, accompanied by an increase in single-parent households. Across the OECD European countries included in this study, an average of 16% of households with children were headed by a single parent in 2021. Additionally, the living arrangements for children from separated families have become significantly more diverse. The rise of shared custody means that children, even if not legally or statistically linked to one parent's household, still impose financial costs on that parent.

At the same time, young people are staying in their parental homes longer and remaining financially dependent for extended periods. This trend impacts how households allocate their resources to manage these costs. Together, these demographic shifts influence what households with children spend to meet their needs, affecting the cost of children based on their number, age, and living arrangements. This paper has documented how the cost of raising children varies with household composition and living arrangements in European countries with available data.

For households with two parents, the cost of a first child is estimated to be, on average, between 20% and 40% of the cost of a single adult. This aligns with the relative weight assumed in the OECD-modified equivalence scale. However, there are significant differences between countries. The estimated cost, based on expenditure data, is notably lower in some countries (e.g., Sweden) but higher in others (i.e., Estonia, France, Greece, Slovenia, and Spain). Additionally, there is little evidence to suggest significant economies of scale with an increase in the number of siblings. Only in Croatia, France, Hungary, and Poland is there clear evidence of a substantial decline in the relative cost of a child as the number of children increases from one to three. In other countries (e.g., Ireland, Slovenia, Slovak Republic), while the second child costs relatively less than the first, yet the third child does not lead to any further reduction. It is also worth noting that in many cases (e.g., Austria, Denmark, Estonia, Ireland, Lithuania, Luxembourg, Sweden), having a first child is associated with a significantly greater perception of economic strain compared to subsequent children. This perception of struggling is also higher than what is suggested by cost estimates based on expenditure data.

Single-parent households experience a higher financial burden related to raising children compared to couple households in many countries, regardless of whether the costs are assessed using expenditure data or self-reported financial strain data. A key feature is that, especially for single-parents, estimates based on self-reported ability to make ends meet indicate significantly higher child-related costs than those derived from expenditure data in two-thirds of the covered countries (Austria, Czechia, Denmark, Estonia, France, Hungary, Ireland, Latvia, Lithuania, Poland, Slovenia, and Sweden). This suggests that the presence of a child creates a particularly intense financial strain for single-parent households. This finding reinforces previous research in several OECD countries suggesting a heightened need for financial support or resources for single-parent households in several OECD countries (OECD, 2011[67]).

The unfavourable economic situation of single parents is due to several factors. First, a considerable proportion of single parents are either jobless or work part-time. In 2021, an average of 27% of single parents in Europe were unemployed, while in contrast, less than 4% of couples with children were headed by two jobless adults (OECD, 2024[68]). Moreover, 10% of single parents worked part-time (OECD,

2024[69]). Additionally, in some countries, such as France, single-parent households may have reduced access to formal childcare compared with couple households (OECD, 2016[70]; Bouteillec, Kandil and Solaz, 2014[71]). These findings echo similar observations from prior analyses focused on French data and make clear that neglecting their specific features can lead to overestimating the living standards and underestimating the associated risks of poverty of certain groups of households and children.[12]

The cost of raising children appears to vary with their age. Across countries, a common pattern is that a child aged 14 to 24 incurs costs at least as high as those of a child under the age of 5. In several countries, including Germany, Ireland, Spain, and the Netherlands, the cost of children increases with age in couple households, while in France, this trend is observed for single-parent households. This finding indicates that financial struggles are often not limited to the early years of raising young children. Rather, these challenges may endure over time and even escalate as children enter late adolescence and early adulthood, not least due to education costs.[13]

Another key finding from the analysis is that the presence of non-resident children significantly affects a household's ability to make ends meet in about half of the countries where data are available. Furthermore, in nearly all these countries, the costs associated with non-resident children are not statistically lower than those of resident children.

The impact of non-resident members on self-reported financial strain shows the value of continuing efforts to collect detailed information on household living arrangements, going beyond broad categorisations of household types in income and living standards surveys, and improving their quality (UNECE, 2011[72]). The analysis has also highlighted the limitations of the simple distinction between resident and non-resident household members/children, as non-residents are, in reality, part-time residents. More systematically collected data on the time spent in each residence would provide a clearer picture of the impact of this living arrangement on the cost of children. This could involve adding one question to the household grid in household surveys following the example of the EU-SILC ad-hoc module looking forward, asking whether household members reside full-time in the household. If not, the survey would also ask how many days per month they spend in the household. Such data would still have a blind spot regarding households with children that do not spend enough time in the household to count as residents (i.e. non-resident children). To better assess the impact of non-resident children on household living standards, it would be useful to include questions in household budget surveys about the expenses attached to these children – which are not necessarily fully reflected in child support payments. On an international scale, it is crucial to further standardise the way children's membership to households is coded.

These results also suggest that self-reported data on households' economic strain provide a valuable complement to information on child expenditures, offering insights into the impact of children on households' financial strain. One advantage of such data is their potential to capture the effects of certain

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[12] Pinel, Schweizer and Virot (2023[14]) find that taking into account elevated costs of children in single parent families increases their poverty rate by up to 20 percentage points. They also show that the poverty rate of single parents who have children in other households rise substantially once the financial needs of the non-resident children are accounted for. In France, there is also robust evidence showing that the living standards of children decline upon separation (Bonnet and Solaz, 2023[114]). This is particularly the case for children who live with their mother, who see twice the decline in living standards compared to peers who continue to live with their fathers. Shared custody arrangements attenuate the decline in living standards upon parental separation, though selection effects partly explain this finding.

[13] In many OECD countries, household private expenditures on children's education generally increase with the age of the children. As children grow older, their educational needs tend to become more complex and costly. For example, in primary and secondary education, families may face expenses related to school supplies, extracurricular activities, tutoring, and transportation. When children reach tertiary education or higher education, costs often rise significantly due to tuition fees, accommodation, and other university-related expenses (OECD, 2023[119]). On average across the OECD, households contribute approximately 7% of total expenditures for primary and secondary education, while their share rises to 22% for tertiary education (up to 24% in Ireland and 30% in Spain) – Table C3.1 in (OECD, 2023[119]).

family configurations not only on household budget constraints but also on broader factors, such as economic insecurity, that may be linked to family circumstances.

Another consideration inspired by the results presented in this paper concerns the measurement of poverty and inequality, and the monitoring of social exclusion which crucially depends on how the cost of children is reflected in the equivalence scales used to assess households' living standards. While there is practical value in using a common reference with limited assumption on how children impact household welfare for cross-national comparison, our results point to significant cross-national variations in how the presence of children, depending on their number and age, affect families' living standards. These differences are understandable, as household budget allocation decisions take place within vastly different institutional contexts. In some countries, access to certain goods or services (e.g., education, childcare, health, and housing) may be heavily subsidised, reducing their costs and freeing up resources for other needs. Therefore, when shaping policy responses, it is advisable to assess the sensitivity of poverty and living standard statistics using alternative "country-specific" measures to capture the impact of the diverse family configurations and living arrangements on expenditure patterns and the ability to make ends meet. This is especially relevant for analysing specific subgroups, such as single parents. A better understanding of the institutional drivers behind differences in the cost of children across countries and household types is also needed and is an area for future research. For this to be feasible, it is essential that surveys on household budgets and living conditions include detailed information about family living arrangements (in addition to the information provided on inter-household transfers).

Households' ability to meet the cost of raising children, defined as the additional income needs associated with the presence of a child in the household, is a key factor influencing children's material well-being. Beyond material living conditions, spending on children more generally also affects health, socio-emotional development, and academic success. These outcomes partially depend on the goods and services households can afford to support their children's learning, play, and overall development. Additionally, the costs of raising children, along with the financial challenges of making ends meet, also play a significant role in households' decisions about having a child or expanding the family with an additional one (OECD, 2024[1]).

Policies to address the cost of children

Various measures can help reduce the cost of raising children and ease the difficulties of making ends meet. These include initiatives that encourage and support parental employment, particularly for mothers, who are more likely to reduce or interrupt their professional activities following the birth of a child. A policy environment supportive of parental employment is crucial to ensuring that household income remains sufficient and stable to meet material needs.

Maintaining parental employment

Particularly effective measures include paid parental leave schemes, which allow parents to care for their children while maintaining an income during this period and continue their careers smoothly. However, in some OECD countries, wage replacement rates are relatively low, especially for low earning workers.[14] Furthermore, workers on fixed-term contracts do not always have access to paid parental leave. This poses a challenge: low wages and associated low leave payments – or no access to paid leave increase the risk

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[14] For example, it is estimated that in 2024, the average payment rate for the total period of paid leave available to mothers will range from 0% in the United States, where there is no statutory payment and compensation is provided at the discretion of companies, to less than 25% of average national full-time earnings in Finland and Ireland, and 100% in several countries, including Chile, Colombia, Costa Rica, Estonia, Israel, and Mexico (OECD, 2024[117]).

of poverty for households with young children, while higher leave payments for both parents mitigate this risk and encourage a more balanced sharing of leave time between parents.

Formal childcare services are also crucial for helping parents balance work and family responsibilities without resorting to informal arrangements: In 2022, just over a third of children under the age of 3 (36%) are expected to be enrolled in early childhood education and care services, although this proportion will vary from less than 1% in Türkiye to more than 70% in the Netherlands (OECD, 2024[73]). It is also notable that, among the countries with available data, the coverage rate of childcare services is significantly lower for children from families in the lowest income tertile (40%) compared to those from families in the highest income tertile (50%). The key challenge is to ensure the availability of high-quality, affordable services for children in low-income households, enabling parents to reconcile work and family while ensuring that children receive quality care.

Buffering costs through taxes and benefits

The redistribution achieved through the tax and benefit system is another policy lever to impact on disposable income, helping lower-income households bear the cost of raising children, regardless of their labour market situation. In general, income redistribution varies based on household composition, including the number and age of children, the civil status of the parents, and family living arrangements, particularly in cases of family separation (Miho and Thévenon, 2020[5]). The results summarised above have several implications for the use of child cost estimates in designing income support policies.

The estimates of the cost of children presented in this paper provide benchmarks against which income tax and benefit systems supporting households with children can be evaluated. One interesting approach to such an exercise is to assess whether the implicit equivalence scales in tax-benefit systems (including means tested benefits or tax designs that feature income splitting in couples) align with the estimates of the cost of children derived in this paper. While recent estimates of these implicit equivalence scales are lacking, van de Ven, Hérault and Azpitarte (2017[74]) developed a method to measure them.[15] They estimated a tax-implicit equivalence scale for the EU-15, assigning a relative cost of 0.3 to each child (from the first to the third) in couple households at the upper segments of the income distribution. However, substantial cross-country variation suggests significant differences in the value judgments implicit in the respective tax-transfer systems. Our findings indicate that this average scale may overcompensate large high-income households (two or more children) for the cost of children in many countries where some economies of scale are observed (Figure 2).

Tax-benefit systems can be accommodating to increasingly complex family arrangements. For example, significant support is available for shared residence situations regarding housing allowances in seven of the thirteen countries covered by Harkitova et a. (2024[6]). In these countries, children living in two homes can be factored into the housing allowances of both parents, enabling households to qualify for a larger housing unit than if the child resided exclusively with one parent. By contrast, in 10 of the 13 countries, only one parent can receive social assistance for a child, so shared residence is not supported. Support for shared residence is available in Belgium, Finland, and Norway, where children can be considered part of both parents' households for social assistance purposes, provided eligibility criteria are met. In Belgium, children living with a parent at least three days a week qualify the parent for a benefit that combines

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[15] In this context, the tax implicit equivalence scale is the number by which the reference household's after-tax income is multiplied, to obtain the after-tax income that any given household with a different composition would need *if it had the same tax merit*. Tax merit is the factor underlying the rank ordering of tax units (in terms of the magnitude of the tax burden on them) that determines the tax and transfer system. Two households have the same tax merit if they pay the same share of their pre-tax income in tax. Note that the concept of tax merit is not necessarily the same as welfare, as tax-transfer systems may also depend on electoral considerations, for example.

elements of family and single-person assistance, resulting in no extra overall support compared to sole custody. In Finland, the child's social assistance amount is split between parents but does not exceed the amount for sole custody, offering recognition rather than additional benefits. In Norway, parents can receive either a standard inclusion of the child in social assistance or daily supplements for overnight stays, with shared residence providing a higher combined benefit than sole custody, representing significant support. Finally, among countries that have a child support guarantee, there is often no clear strategy for addressing shared residence, either because they only guarantee the amount specified in the order or because there are no explicit rules for the supplemental portion of the guarantee (Hakovirta, Meyer and Haapanen, 2024[6]).

The flaws and limitations of child support systems are also a source of insecurity and uncertainty, which likely affect the ability to make ends meet. A key concern is the interaction between child maintenance payments and other means-tested benefits, which may diminish the effectiveness of child support in alleviating or preventing poverty[16] (OECD, 2025[75]; Miho and Thévenon, 2020[5]). Given the significant issue of unpaid child support, many countries have implemented measures to enforce payment obligations or to provide public support when the non-custodial parent is unable to fulfil these obligations (OECD, 2025[75]). However, the processes involved can be lengthy and uncertain, failing to fully resolve the financial insecurity faced by single parents trying to make ends meet. In addition, in some countries, child maintenance payments from non-resident parents are either strongly reduced when the custodial parents resume work or still deducted from minimum income support provided to single parents (Skinner et al., 2016[76]; Miho and Thévenon, 2020[5]; Hakovirta, Meyer and Skinner, 2022[77]). Moreover, some countries do not have a child support guarantee program (Hakovirta, Meyer and Haapanen, 2024[6]; OECD, 2025[75]). Eliminating these offsets can be a crucial step toward alleviating the additional financial burden faced by single-parent households.

The findings that the costs of non-resident children can be high including in countries with high rates of joint custody after separation suggest that more can be done to ensure that shared residence is compatible with child well-being[17]. This necessitates, in particular, the full acknowledgment of the involvement of both custodial parents within the rules governing child maintenance, along with a clear definition of and limits to the potential arrangements[18]. Policy should also prevent significant reductions in social assistance and

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[16] As underlined by OECD (2025[75]), States may treat child maintenance payments as either a complement to or a substitute for social assistance, which impacts their effectiveness in reducing poverty. For example, in countries like Finland, Germany, and the Netherlands, child maintenance is considered part of the parent's income when calculating eligibility for social assistance benefits. This approach can reduce a family's eligibility for other benefits, effectively allowing the state to "claw back" some of the child maintenance by decreasing social assistance payments. In contrast, in countries such as Australia, Ireland, and the United Kingdom, child maintenance is excluded from income calculations for social assistance, ensuring that its receipt does not reduce other benefit payments. The interaction between child maintenance and social assistance remains an under-researched area, highlighting the need for further studies to better understand the dynamics between these systems.

[17] OECD (2025[75]) highlights that child maintenance systems are primarily designed around traditional post-separation family arrangements, where the mother has sole custody, and the father pays child support. These systems often fail to account for modern complexities, such as re-partnering, new children, stepchildren, and shared custody. Countries vary significantly in how shared custody impacts child maintenance payments, if at all. Challenges include defining the threshold for shared custody, determining appropriate payment reductions, and deciding whether payments should cease with equal custody. Importantly, granular adjustments for shared custody may incentivise parents to prioritise their own financial situation over the child's best interests. Some countries, like Canada, France, and the United Kingdom, maintain payments even with equal custody to address income disparities between parents.

[18] While considering custodial arrangements and parental preferences is a valuable general principle, it is essential to establish clear rules for possible arrangements. Without such rules, parents might put their own interests above the child's well-being. For example, a parent paying child support might seek an additional night with the child primarily to

disposable income for low-income households due to changes in child support payments; and, promote self-sufficiency by accounting for the child-related expenses of both custodial and non-custodial parents when determining welfare benefit eligibility (Miho and Thévenon, 2020[5]; OECD, 2019[78]). This can be achieved, for instance, by providing to some degree child benefits, housing allowances, and social assistance to the non-custodial parent who is not the primary caregiver (OECD, 2025[75]; Miho and Thévenon, 2020[5]). The initial assessment based on 13 OECD countries by Harkitova et al. (2024[6]) cited above found that support for shared residence is generally limited, with Norway being the only country offering comprehensive support across various areas. For instance, regarding child benefits, in France, Norway, Poland, and Sweden, child benefits can be split between parents under certain conditions. In France, parents can decide whether child benefits are paid to either parent or to both parents, and benefits are split if parents disagree. Norway provides single parents with an extra benefit, which can be shared in shared-residence cases without increasing the total amount. In Poland, benefits are split by agreement or go to the parent who applies first. In Sweden, joint custody automatically splits benefits unless parents opt otherwise. In Australia and New Zealand, with lower thresholds for shared residence, benefits are divided based on time percentages rather than equally.

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lower their payment obligation, while a receiving parent might resist increased time with the other parent to avoid a reduction in support payments. To mitigate this risk, limits should be placed on how changes in custody arrangements affect child support adjustments (Miho and Thévenon, 2020[5]).

References

Abanokova, K., H. Dang and M. Lokshin (2022), "Do Adjustments for Equivalence Scales Affect Poverty Dynamics? Evidence from the Russian Federation during 1994–2017", *Review of Income and Wealth*, Vol. 62/1, pp. 167-192, https://doi.org/10.1111/roiw.12559. [45]

Abela, A. and J. Walker (2013), *Contemporary Issues in Family Studies: Global Perspectives on Partnerships, Parenting and Support in a Changing World*, Wiley-Blackwel. [99]

Alderotti, G. et al. (2021), "Employment instability and fertility in europe: A meta-analysis", *Demography*, Vol. 58/3, pp. 871-900, https://doi.org/10.1215/00703370-9164737/924014/9164737.PDF. [2]

Anand, P., J. Krishnakumar and N. Tran (2011), "Measuring welfare: Latent variable models for happiness and capabilities in the presence of unobservable heterogeneity", *Journal of Public Economics*, Vol. 95/3-4, pp. 205-215. [110]

Angel, S. et al. (2019), "What did you Really Earn Last Year?: Explaining Measurement Error in Survey Income Data", *Journal of the Royal Statistical Society Series A: Statistics in Society*, Vol. 182/4, pp. 1411-1437, https://doi.org/10.1111/RSSA.12463. [112]

Angel, S., R. Heuberger and N. Lamei (2018), "Differences Between Household Income from Surveys and Registers and How These Affect the Poverty Headcount: Evidence from the Austrian SILC", *Social Indicators Research*, Vol. 138/2, pp. 575-603, https://doi.org/10.1007/S11205-017-1672-7. [113]

Arundel, R. and C. Lennartz (2017), "Returning to the parental home: Boomerang moves of younger adults and the welfare regime context", *Journal of European Social Policy*, Vol. 27/3, https://doi.org/10.1177/0958928716684315. [87]

Bargain, O. and O. Donni (2012), "Expenditure on children: A Rothbarth-type method consistent with scale economies and parents' bargaining", *European Economic Review*, Vol. 56/4, pp. 792-813, https://doi.org/10.1016/j.euroecorev.2012.02.003. [31]

Barten, A. (1964), "Consumer Demand Functions under Conditions of Almost Additive Preferences", *Econometrica*, Vol. 32/1, pp. 1-38, https://doi.org/10.2307/1913731. [52]

Bartova, A. et al. (2023), *Family Profiles - Risks, resources, and inequalities*, KU Leuven and Stockholm University. [96]

Baudin, T., D. De La Croix and P. Gobbi (2015), "Fertility and Childlessness in the United States", *American Economic Review*, Vol. 105/6, pp. 1852-82, https://doi.org/10.1257/AER.20120926. [81]

Bauer, M. et al. (2021), *Kinderkostenanalyse 2021*, Bundesministerium für Soziales, Gesundheit, [20]

Pflege und Konsumentenschutz (BMSGPK). [ ]

Becker, G. (1993), *A treatise on the family: Enlarged edition*, Harvard University Press. [83]

Ben Jelloul, M. and P. Cusset (2015), *Comment partager équitablement le coût des enfants après la séparation ?*, http://www.strategie.gouv.fr (accessed on 12 November 2018). [15]

Berger, L. (2016), *Family complexity and fluidity, child and family wellbeing and public policyn Wisconsin future of the family commission*, https://dcf.wisconsin.gov/files/fotf/pdf/berger-presentation.pdf. [91]

Biewen, M. and A. Juhasz (2017), "Direct Estimation of Equivalence Scales and More Evidence on Independence of Base", *Oxford Bulletin of Economics and Statistics*, Vol. 79, pp. 875-905, https://doi.org/10.1111/obes.12166. [44]

Bishop, J. et al. (2014), "Subjective poverty equivalence scales for Euro Zone countries", *Journal of Economic Inequality*, Vol. 12, pp. 265–278, https://doi.org/10.1007/s10888-013-9254-7. [46]

Board of Governors of the Federal Reserve System (2024), *Economic Well-Being of U.S. Households in 2023*. [36]

Bonke, J. and M. Browning (2011), "Spending on Children: Direct Survey Evidence", *The Economic Journal*, Vol. 121/554, pp. 123-134. [64]

Bonnet, C. and A. Solaz (2023), "Does parental separation increase the risk of child poverty?", *Population and Societies* 610, https://doi.org/10.3917/POPSOC.610.0001. [114]

Borah, M., C. Keldenich and A. Knabe (2018), "Reference Income Effects in the Determination of Equivalence Scales Using Income Satisfaction Data", *Review of Income and Wealth*, Vol. 65/4, pp. 736-770, https://doi.org/10.1111/roiw.12386. [34]

Bouteillec, N., L. Kandil and A. Solaz (2014), "L'accueil en crèche en France : quels enfants y ont accès ?", *Population & Sociétés*, Vol. 514/8, pp. 1-4, https://doi.org/10.3917/POPSOC.514.0001. [71]

Bradbury, B. (2003), "The welfare interpretation of consumer equivalence scales", *International Journal of Social Economics*, Vol. 30/7, pp. 770-787, https://doi.org/10.1108/03068290310478739. [42]

Buda, G. et al. (2022), "National Accounts in a World of Naturally Occurring Data:", *CEPR Discussion Papers*, Vol. 17519. [26]

Charlier, E. (2003), "Equivalence Scales in an Intertemporal Setting with an Application to the Former West Germany", *Review of Income and Wealth*, Vol. 48/1, https://doi.org/10.1111/1475-4991.00042. [33]

Chiappori, P. (2016), "Equivalence versus Indifference Scales", *The Economic Journal*, Vol. 126/592, pp. 523–545, https://doi.org/10.1111/ecoj.12371. [30]

Daley, A. et al. (2020), "Differences across countries and time in household expenditure patterns: implications for the estimation of equivalence scales", *International Review of Applied Economics*, Vol. 34/6, pp. 734-757, https://doi.org/10.1080/02692171.2020.1781798. [100]

Deaton, A. (2019), *The Analysis of Household Surveys (Reissue Edition with a New Preface): A Microeconometric Approach to Development Policy*, Washington, DC: World Bank. [27]

Deaton, A. (2010), "Price Indexes, Inequality, and the Measurement of World Poverty", *American Economic Review*, Vol. 100/1, pp. 5-34, https://doi.org/10.1257/AER.100.1.5. [116]

Deaton, A. and J. Muellbauer (1986), "On measuring child costs: With applications to poor countries", *Journal of Political Economy*, Vol. 94/4, https://doi.org/10.1086/261405. [25]

Doepke, M. et al. (2023), "The economics of fertility: a new era", Vol. 1/1, pp. 151-254, https://doi.org/10.1016/BS.HEFAM.2023.01.003. [80]

Doepke, M. and F. Zilibotti (2021), "Do rising returns to education justify "helicopter" parenting?", *IZA World of Labor*, https://doi.org/10.15185/IZAWOL.487. [84]

Doepke, M. and F. Zilibotti (2019), *Love, money & parenting : how economics explains the way we raise our kids*, https://press.princeton.edu/titles/13326.html (accessed on 15 May 2019). [4]

Donni, O. (2015), "Measuring the cost of children", *IZA World of Labor*, Vol. 132, https://doi.org/10.15185/izawol.132. [58]

Dudel, C., J. Garbuszus and J. Schmied (2020), "Assessing differences in household needs: a comparison of approaches for the estimation of equivalence scales using German expenditure data", *Empirical Economics*, Vol. 60, pp. 1629–1659, https://doi.org/10.1007/s00181-020-01822-6. [29]

Eckman, S. (2022), "Underreporting of Purchases in the US Consumer Expenditure Survey", *Journal of Survey Statistics and Methodology*, Vol. 10/5, pp. 1148-1171, https://doi.org/10.1093/JSSAM/SMAB024. [40]

EUROSTAT (2023), *Household Budget Survey 2020 Scientific-use files User Manual*. [79]

EUROSTAT (2021), *Methodological guidelines 2021 operation v8*. [35]

EUROSTAT (2020), *Household Budget Survey 2015 Wave*. [41]

Evans, A. and E. Gray (2021), "Cross-National Differences in Income Pooling among Married and Cohabiting Couples", *Journal of Marriage and Family*, Vol. 83/2, pp. 534-550, https://doi.org/10.1111/JOMF.12721. [11]

Fitoussi, J., J. Stiglitz and A. Sen (2009), *Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) Report*. [107]

Fricker, S. et al. (2015), "A Review of Measurement Error Assessment in a U.S. Household Consumer Expenditure Survey", *Journal of Survey Statistics and Methodology*, Vol. 3/1, pp. 67-88, https://doi.org/10.1093/JSSAM/SMU025. [39]

Fry, R. (2016), *For First Time in Modern Era, Living With Parents Edges Out Other Living Arrangements for 18- to 34-Year-Olds.*, Pew Research Center. [90]

Galdor, O. (2012), "The Demographic Transition: Causes and Consequences", *Cliometrica*, pp. 1-28. [82]

Garbuszus, J. et al. (2021), "Income-dependent equivalence scales: A fresh look at German micro-data", *Journal of Economic Inequalitz*, Vol. 19, pp. 855-873, https://doi.org/10.1007/s10888-021-09494-7. [66]

Gardes, F. and C. Loisy (1998), "La pauvreté selon les ménages : une évaluation subjective et indexée sur leur revenu", *Economie et Statistique*, Vol. 308, pp. 95-112, https://doi.org/10.3406/estat.1998.2592. [49]

Gauthier, A. and P. de Jong (2021), "Costly children: the motivations for parental investment in children in a low fertility context", *Genus*, Vol. 77/6, pp. 1-19. [85]

Gauthier, A., T. Smeeding and F. Furstenberg (2004), "Are Parents Investing Less Time in Children? Trends in Selected Industrialized Countries", *Population and Development Review*, Vol. 30/4, pp. 647-672. [105]

Gerfin, M., R. Leu and P. Schwendner (1994), *Ausgaben-Aquivalenzskalen für die Schweiz - Theoretische Ansätze und Skalen aufgrund der Verbrauchserhebung 1990*, BFS. [65]

Gerfin, M. et al. (2009), *Kinderkosten in der Schweiz*, https://doi.org/978-3-303-01241-3. [51]

Goedemé, T. et al. (2015), "Towards Cross-Country Comparable Reference Budgets in Europe: First Results of a Concerted Effort", *European Journal of Social Security*, Vol. 17/1, pp. 3-30, https://doi.org/10.1177/138826271501700101. [22]

Gregg, P., J. Waldfogel and E. Washbrook (2006), "Family Expenditures Post- Welfare Reform in the UK: Are Low-Income Families with Children Starting to Catch Up?", *Labour Economics*, Vol. 13/6, pp. 721-746. [103]

Hakovirta, M., D. Meyer and |. Haapanen (2024), "Shared residence and social security policy: A comparative analysis from 13 countries", *International Journal of Social Welfare*, https://doi.org/10.1111/IJSW.12647. [6]

Hakovirta, M. et al. (2023), "Joint physical custody of children in Europe: A growing phenomenon", *Demographic Research*, Vol. 49, pp. 479-492, https://doi.org/10.4054/demres.2023.49.18. [94]

Hakovirta, M., D. Meyer and C. Skinner (2022), "Child Support in Shared Care Cases: Do Child Support Policies in Thirteen Countries Reflect Family Policy Models?", *Social Policy and Society*, Vol. 21/4, pp. 542-559, https://doi.org/10.1017/S1474746421000300. [77]

Harkness, S. et al. (2023), "Culture and the Challenges of Being a Good Parent", *Emotion Regulation and Parenting*, pp. 189-204, https://doi.org/10.1017/9781009304368.015. [86]

Hastings, O. and D. Schneider (2021), "Family Structure and Inequalities in Parents' Financial Investments in Children", *Journal of Marriage and Family*, Vol. 83/3, pp. 717-736, https://doi.org/10.1111/jomf.12741. [62]

Henman, P. et al. (2007), *Improving the lives of Australians Costs of children: research commissioned by the Ministerial Taskforce on Child Support*, http://www.ag.gov.au/cca. (accessed on 7 August 2018). [12]

Hiekel, N., A. Liefbroer and A. Poortman (2014), "Income pooling strategies among cohabiting and married couples: A comparative perspective", *DEMOGRAPHIC RESEARCH*, Vol. 30, https://doi.org/10.4054/DemRes.2014.30.55. [10]

Hirsch, D. et al. (2020), "The Minimum Income Standard and equivalisation: reassessing relative costs of singles and couples and of adults and children", *Journal of Social Policy*, Vol. 50/1, pp. 148-167, https://doi.org/doi:10.1017/S0047279419001004. [54]

Hourriez, J. and L. Olier (1998), "Niveau de vie et taille du ménage : estimations d'une échelle d'équivalence", *Economie et Statistique*, Vol. 308, pp. 65-94, https://doi.org/10.3406/estat.1998.2591. [43]

Jenkins, S. and F. Rios-Avila (2023), "Reconciling reports: modelling employment earnings and measurement errors using linked survey and administrative data", *Journal of the Royal Statistical Society Series A: Statistics in Society*, Vol. 186/1, pp. 110-136, https://doi.org/10.1093/JRSSSA/QNAC003. [115]

Kaiser, C. (2022), "Using memories to assess the intrapersonal comparability of wellbeing reports", *Journal of Economic Behavior & Organization*, Vol. 193, pp. 410-442, https://doi.org/10.1016/j.jebo.2021.11.009. [111]

Kakwani, N. (1977), "On the Estimation of Consumer Unit Scales", *The Review of Economics and Statistics*, Vol. 59/4, pp. 507-510. [53]

Kasey, E. et al. (2023), *Exploring the Married-Cohabiting Income Pooling Gap Among Young Adults*, Journal of Family and Economic Issues, https://doi.org/10.1007/s10834-023-09885-0. [9]

Kleven, H. et al. (2019), "Child Penalties across Countries: Evidence and Explanations", *AEA Papers and Proceedings*, Vol. 109, pp. 122-126, https://doi.org/DOI: 10.1257/pandp.20191078. [17]

Kornrich, S. (2016), "Inequalities in Parental Spending on Young Children: 1972 to 2010", *AERA Open*, Vol. 2/2, pp. 1–12, https://doi.org/10.1177/2332858416644180. [63]

Kornrich, S. and F. Furstenberg (2013), "Investing in Children: Changes in Parental Spending on Children, 1972–2007", *Demography*, Vol. 50/1, pp. 1–23, https://doi.org/10.1007/s13524-012-0146-4. [60]

Koulovatianos, C. et al. (2005), "On the income dependence of equivalence scales", *Journal of Public Economics*, Vol. 89/5-6, pp. 967-996, https://EconPapers.repec.org/RePEc:eee:pubeco:v:89:y:2005:i:5-6:p:967-996 (accessed on 8 March 2024). [59]

Lino, M. et al. (2017), *Expenditures on Children by Families, 2015*, https://ageconsearch.umn.edu/record/327257. [24]

Martin, H. (2017), "Calculating the standard of living of a household: one or several equivalence scales?", *Economie et Statistique*, Vol. 491/1, pp. 93-108, https://doi.org/10.24187/ECOSTAT.2017.491D.1907. [21]

Martin, H. and H. Perivier (2015), *Les echelles d~equivalence et l~epreuve des nouvelles configurations familiales*, Ofce. [37]

Martin, H. and H. Périvier (2018), "Equivalence scales challenged by new family configurations", *Revue economique*, Vol. 69/2, pp. 303-334, https://doi.org/10.3917/RECO.PR2.0114. [13]

Menyhért, B. et al. (2021), *Measuring and monitoring absolute poverty (ABSPO) – Final Report*. [23]

Merz, J. and J. Faik (1994), *Equivalence Scales Based on Revealed Preference Consumption Expenditure Microdata - The Case of West Germany*, Forschungsinstitut Freie Berufe (FFB). [50]

Meyer, D., M. Carlson and M. Alam (2022), "Increases in shared custody after divorce in the United States", *Demographic Research*, Vol. 46, pp. 1137-1162. [92]

Miho, A. and O. Thévenon (2020), "Treating all children equally?: Why policies should adapt to evolving family living arrangements", *OECD Social, Employment and Migration Working Papers*, No. 240, OECD Publishing, Paris, https://doi.org/10.1787/83307d97-en.

[5]

Milan, A. (2016), *Diversity of young adults living with their parents*, Statistique Canada.

[89]

Muellbauer, J. (1980), "The Estimation of the Prais-Houthakker Model of Equivalence Scales", *Econometrica*, Vol. 48/1, pp. 153-176, https://doi.org/10.2307/1912023.

[28]

Mysíková, M. et al. (2021), "Equivalence Scale and Income Poverty: Two Approaches to Estimate Country-specific Scale for the Czech Republic", *Social Indicators Research*, Vol. 156, pp. 21–45, https://doi.org/10.1007/s11205-021-02636-4.

[38]

Nieuwenhuis, R. (2021), "Directions of thought for single parents in the EU", *Community, Work & Family*, Vol. 24/5, pp. 559-566, https://doi.org/10.1080/13668803.2020.1745756.

[57]

OECD (2025), *PF1.5 Child Maintenance (Child Support)*, OECD Family Database, https://www.oecd.org/en/data/datasets/oecd-family-database.html (accessed on 18 December 2024).

[75]

OECD (2024), *Indicator HC1.1. Housing-related expenditure of households*.

[101]

OECD (2024), *LMF2.2 Patterns of employment and the distribution of working hours for couples with children*, OECD Family Database, https://www.oecd.org/en/data/datasets/oecd-family-database.html (accessed on 20 January 2025).

[68]

OECD (2024), *LMF2.3 Patterns of employment and the distribution of working hours for single parents*, OECD Family Database, https://www.oecd.org/en/data/datasets/oecd-family-database.html (accessed on 20 January 2025).

[69]

OECD (2024), *PF2.1 Key characteristics of parental leave systems*, OECD Family Database.

[117]

OECD (2024), *PF3.2 Enrolment in childcare and pre-school*, OECD Family Database, https://www.oecd.org/en/data/datasets/oecd-family-database.html (accessed on 24 January 2025).

[73]

OECD (2024), *SF1.2 Children in families*, OECD Family Database, https://www.oecd.org/en/data/datasets/oecd-family-database.html (accessed on 3 February 2025).

[7]

OECD (2024), *Society at a Glance 2024: OECD Social Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/918d8db3-en.

[1]

OECD (2023), *Education at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en.

[119]

OECD (2019), *Treating all children equally? Why policies should adapt to evolving family living arrangements*, http://www.oecd.org/els/family/child-well-being/Treating-all-children-equally-Policy-brief-2019.pdf.

[78]

OECD (2016), "Who uses childcare? Background brief on inequalities in the use of formal early childhood education and care (ECEC) among very young children", OECD, https://www.oecd.org/els/family/Who_uses_childcare-Backgrounder_inequalities_formal_ECEC.pdf (accessed on 11 April 2018).

[70]

OECD (2013), *OECD Guidelines on Measuring Subjective Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/9789264191655-en. [108]

OECD (2011), *Doing Better for Families*, OECD Publishing, Paris, https://doi.org/10.1787/9789264098732-en. [67]

Penne, T. et al. (2019), "To what extent do welfare states compensate for the cost of children? The joint impact of taxes, benefits and public goods and services.", *Journal of European Social Policy*, Vol. 30, https://doi.org/10.1177/0958928719868458. [16]

Pinel, L., C. Schweitzer and P. Virot (2023), *Comment mieux prendre en compte la diversité des familles dans les échelles d'équivalence ? - Une analyse du coût de l'enfant à travers la consommation et le niveau de vie ressenti des familles, d'après l'enquête Budget de famille 2017*, Direction de la Recherche, des Etudes, de l'Evaluation et des Statistiques - Ministère des Affaires Sociales, https://drees.solidarites-sante.gouv.fr/publications-communique-de-presse/les-dossiers-de-la-drees/comment-mieux-prendre-en-compte-la (accessed on 8 March 2024). [14]

Rapp, S. (2021), *Asset Bias in Household Needs Measurement*, Vienna University of Economics and Business, https://doi.org/10.57938/90ef06dc-a21e-4d80-a38a-e09c1dcf7e6d. [47]

Sani, G. and J. Teas (2016), "Educational Gradients in Parents' Child-Care Time Across Countries, 1965–2012", *Journal of Marriage and Family*, Vol. 78/4, pp. 1083-1096. [106]

Sarlo, C. (2013), *The Cost of Raising Children*, https://papers.ssrn.com/abstract=2318106 (accessed on 21 March 2025). [118]

Schild, J. et al. (2023), "Effects of the Expanded Child Tax Credit on Household Spending: Estimates Based on U.S. Consumer Expenditure Survey Data", *NBER Working Paper Series*, Vol. 31412. [104]

Schneider, D., O. Hastings and J. LaBriola (2018), "Income Inequality and Class Divides in Parental Investments", *American Sociological Review*, Vol. 83/3, pp. 475-507, https://doi.org/10.1177/0003122418772034. [61]

Schröder, C. (2009), *The construction and estimation of equivalence scales and their uses*, Emerald Group Publishing Limited. [18]

Schwarze, J. (2003), "Using Panel Data on Income Satisfaction to Estimate Equivalence Scale Elasticity", *Review of Income and Wealth*, Vol. 49/3, https://doi.org/10.1111/1475-4991.00092. [48]

Short, K. (2014), *The Supplemental Poverty Measure: 2013*. [56]

Short, K. (1999), *Experimental Poverty Measures: 1999*. [55]

Skinner, C. et al. (2016), "Child Maintenance and Social Security Interactions: the Poverty Reduction Effects in Model Lone Parent Families across Four Countries", *Journal of Social Policy*, Vol. 46/3, pp. 495-516, https://doi.org/10.1017/S0047279416000763. [76]

Spitzer, S., A. Greulich and B. Hammer (2022), "The Subjective Cost of Young Children: A European Comparison", *Social Indicators Research*, Vol. 163/3, pp. 1165-1189, https://doi.org/10.1007/s11205-022-02942-5. [109]

Statistics Canada (2023), *The Daily — Survey of Household Spending, 2021*, [102]

https://www150.statcan.gc.ca/n1/daily-quotidien/231018/dq231018a-eng.htm (accessed on 22 March 2025).

Thévenon, O. et al. (2009), *The costs of raising children and the effectiveness of supporting parenthood policies in European countries: A Literature Review." Report for the European Commission.*, INED, https://www.researchgate.net/publication/32221161_The_costs_of_raising_children_and_the_effectiveness_of_supporting_parenthood_policies_in_European_countries_A_Literature_Review (accessed on 7 September 2020). [19]

Toulemon, L. (2016), *Children with multiple residence: how many, in which families?*. [97]

Toulemon, L. and T. Denoyelle (2012), "La définition des ménages dans les enquête françaises : Comment tenir compte des multi-résidences?", *Actes des XIe journées de méthodologie statistique*. [95]

Toulemon, L. and T. Denoyelle (2012), *La definition des menages dans les enquetes francaises: Comment tenir compte des multi-residences?*. [98]

UNECE (2011), *Measurement of emerging forms of families and households*, United Nations, New York and Geneva, http://www.unece.org/fileadmin/DAM/stats/publications/Families_and_Households_FINAL.pdf (accessed on 12 November 2018). [72]

van de Ven, J., N. Herault and F. Azpitarte (2017), "Identifying tax implicit equivalence scales", *Journal of Economic Inequality*, Vol. 15, pp. 257-275, https://doi.org/10.1007/s10888-017-9354-x. [74]

Van Praag, B. (1971), "The welfare function of income in Belgium: An empirical investigation", *European Economic Review*, Vol. 2/3, pp. 337-369, https://doi.org/10.1016/0014-2921(71)90045-6. [32]

van Wijk, D. and F. Billari (2024), "Fertility Postponement, Economic Uncertainty, and the Increasing Income Prerequisites of Parenthood", *Population and Development Review*, Vol. 50/2, pp. 287-322, https://doi.org/10.1111/PADR.12624. [3]

Wagner, S. and O. Thévenon (2017), "The Evolution of Within- and Cross-Country Differences in the Transition to Adulthood: A New Perspective", *Working Papers*, https://ideas.repec.org/p/crs/wpaper/2017-04.html (accessed on 19 March 2019). [88]

Zilincikova, Z. (2021), "Children's Living Arrangements after Marital and Cohabitation Dissolution in Europe", *Journal of Family Issues*, Vol. 42/2, pp. 345-373, https://doi.org/10.1177/0192513X20923721. [8]

Zilincikova, Z. (2021), "Children's Living Arrangements after Marital and Cohabitation Dissolution in Europe", *Journal of Family Issues*, Vol. 42/2, pp. 345-373. [93]

Annex A. Main data sources

The analysis in this paper employs two main data sources. On the one hand, it capitalises on the 2010, 2015, 2020 and 2021 waves of the European Union Statistics on Income and Living Conditions (EU-SILC). On the other hand, the analysis partly rests on data from the European Union Household Budget Surveys (EU-HBS).

In both surveys, this paper implements sample restrictions for the estimation of the cost of children. Firstly, we drop households where the reference person is 60 years of age or older. Pensioners are not commonly considered an important priority when calculating the costs of children who usually have left the household as parents reach retirement age (Pinel, Schweitzer and Virot, 2023[14]; Dudel, Garbuszus and Schmied, 2020[29]). In addition, in both surveys the sample is restricted such that all households have positive incomes, and a non-zero weight. We focus on households with one or two adults, and full information on the age of all household members. Lastly, the analysis requires valid data on self-reported economic well-being (no missing values) and consistent expenditure data. This means that expenditures are positive and add up at the division level.

EU-SILC

The EU-SILC is a cross-national micro-dataset that collects information on income, labour, demographics, material living standards, housing, health and perceptions of economic well-being for households and individuals in most European countries. As it is one of the main instruments to monitor progress towards the EU's social objectives, it is a highly harmonised survey across European Member States. The EU-SILC is carried out on an annual basis. The dataset offers a longitudinal dimension in a four-year rolling panel. However, the analysis in this paper draws exclusively on the cross-sectional data.

Its sample is created such that it is representative for the population at the national level, and survey weights are provided to allow analysts to compile statistics that refer to the population rather than the sample only. The survey's target population is the universe of private households within the national borders of a given country. This excludes, by definition, individuals who live in institutional households (such as care homes or prisons), and those who do not live in any households, which includes the homeless population.

Information on housing and social exclusion are provided at the level of the household. In contrast, data on life domains such as labour, education or health outcomes are available for individuals aged 16 and older. Income, which is at the centre of the EU-SILC, is collected both at personal and household level. Detailed components of income are available. We define income as the total disposable household income. This includes cash or near-cash income from employment, capital gains, self-employed income, rents, company cars, benefits, education-related allowances, pensions, regular inter-household transfers. It is net of taxes and social security contributions, for example. In some countries, income data enters the survey from administrative registers. Note that the EU-SILC does not provide data on income from imputed rents in owner-occupied housing. Therefore, this study relies on a measure of net income that does not include the benefits of owner-occupied housing. In the regression analyses, however, we control for housing tenure status, which alleviates the omission of imputed rent benefits to some extent.

The EU-SILC relies on different interview modes, including Computer Assisted Personal Interviews (CAPI), Paper Assisted Personal Interviews (PAPI), telephone interviews and web-based interviewing techniques. The prevalence of these different interview approaches differs across countries, and many countries employ a mix of different approaches. As measures of self-reported economic well-being tend to be sensitive to the interview setting, we control for the interview mode wherever possible. In the regression analysis, for example, we control for the presence of an interviewer.

The EU-SILC does not use the concept of household head or reference person. However, there is usually a respondent who fills out the household questionnaire. In the analysis, their characteristics are important, since gender, employment situation and age etc. of the respondent affect how they respond to questions on self-reported economic well-being. To ensure consistency across the EU-SILC and the EU-HBS when it comes to sample restrictions, we define the reference person as the individual who contributes most to household income.

Detailed methodological information, variable descriptions, and information on the legal background are provided by EUROSTAT's Methodological Guidelines and Description of EU-SILC Target Variables (EUROSTAT, 2021[35]).

EU-HBS

The EU-HBS is another cross-national micro-dataset, that focuses on the collection of data on household expenditures. It serves the main purpose of providing information on the consumer goods basket in different European countries, which is vital for the computation of the weights for the European consumer price index – the Harmonised Index of Consumer Prices (HICP) in some countries. However, in addition to rich data on consumer expenditure, the EU-HBS also features data on the demographic characteristics of households, their income, labour force status and to some extent education. In contrast to the EU-SILC, there is less top-down guidelines on the implementation of the survey, and the National Statistical Offices and Member States can set goals, make methodological choices and decide on the resource allocation to the national HBS. Until 2020, there is no legal basis for the EU-HBS. Yet, EUROSTAT carries out some harmonisation ex-post, such that cross-national comparisons become possible.

The EU-HBS is available for the years 2010, 2015 and 2020. As National Statistical Offices may have different timelines for the implementation of their surveys, this means that the data for some countries may not have been collected in any of these years. For example, in the 2015 wave, the actual survey year varies between 2012 and 2017. However, the data transmission of each country's national datasets to EUROSTAT is mapped to an agreed reference year.

The target population of the EU-HBS is the population residing in private households on national territory. Again, this excludes collective or institutional households. Sampling is done in a probability sampling approach (like in the EU-SILC) in most countries, even though the sampling frames that are used for the drawing of the sample may differ across countries. Germany and Poland use quota sampling. In addition, some countries may impose additional restrictions on their sample. For example, in the 2015 wave, the German survey data excludes households with a monthly net income above EUR 18 000. In Sweden, households with all members above the age of 76 are also dropped. To some extent, our sample restrictions address these issues, as we exclude households with a reference person aged 60 and older.

As the survey's focus is clearly on expenditures, data on the household living conditions are much less exhaustive than in the EU-SILC. In addition, some important demographic variables are only provided in a crude manner. For example, age information comes in brackets, which are not particularly granular especially in the 2020 wave. This puts limits on our ability to test for the age gradient in the cost of children, for example.

The core of the EU-HBS is expenditure data. This data is collected in all countries based on expenditure diaries, where respondents record their expenditure on different types of goods over a certain period. The diary recording period varies across countries from a week to several months. Household diaries are used, though in some countries they are supplemented by individual diaries. Mostly, diaries are paper diaries, though there is an increasing use of web-based solutions for diary keeping. The information collected in expenditure diaries is then provided as spending data by purpose in the EU-HBS. Expenditure is grouped by the Classification of Individual Consumption by Purpose (COICOP) categories. In the EU-HBS, total expenditure is disaggregated into 12 main spending categories. In a next step, the survey provides expenditure data at three further levels of disaggregation. While this provides a very granular overview of households spending habits, it should be noted that the accuracy of spending data falls as disaggregation increases. In addition, the more granular levels of disaggregation make cross-national comparability more difficult. As the consumption categories used in different countries diverge to some extent before the harmonisation, post-harmonisation consumption aggregates at lower levels do not necessarily always add up to higher level aggregates. In this analysis, we dropped households with mismatches between total consumption and the sum of the 12 main spending categories (if the difference is more than EUR 5).

Income data in the EU-HBS generally refers to monetary income. However, except for Czechia, countries offer data on imputed rents of owner-occupied housing. Therefore, we use in all countries except Czechia total net income (including imputed rent from owner-occupied housing). Figure A E.4 in the annex E replicates the analysis using monetary income (excluding imputed rents) to estimate equivalence scales. The results are robust to changing the income definition.

Detailed information on the methodology can be found in User manuals for each wave of the HBS provided by EUROSTAT (EUROSTAT, 2023[79]). In addition, the Household Budget Survey 2015 Wave EU Quality Report provides helpful background information on the survey (EUROSTAT, 2020[41]).

# Annex B. Family configurations and living arrangements in Europe

The structure of children's families has undergone significant changes in recent decades. Declining fertility rates have led to households having children later in life and fewer children on average compared to previous generations. As a result, children are now more likely to grow up in smaller households. Additionally, the rise in family separations means that a notable portion of children live with a single parent or alternate between the homes of both parents. These shifts in household size and family living arrangements have important implications for the resources that need to be spent on each child to cover their needs. This section examines the diversity of family living arrangements for children across the countries included in this study, the associated international variations, and how household structure influences household expenditure patterns.

Children are growing up in households with fewer children than in the past

The decline in fertility has significantly reduced the number of children in households, resulting in smaller household sizes compared to a few decades ago. This trend is further intensified by an aging population, which is raising the number of households where children have left the parental home, thus contributing to the decline in the average number of children under 18 per household. Across OECD countries, households now have an average of 0.55 children under the age of 18, compared to 0.8 in the 1990s (Figure A.B.1). This decline is driven both by the decrease in the propensity of adults in childbearing age to become parents, but also the declining number of children in households with children (Doepke et al., 2023[80]). Crucially, the importance of both these two factors differs across countries (Baudin, De La Croix and Gobbi, 2015[81]).

Figure A B.1. Fewer children in households

Average number of children below age 18 living in a household
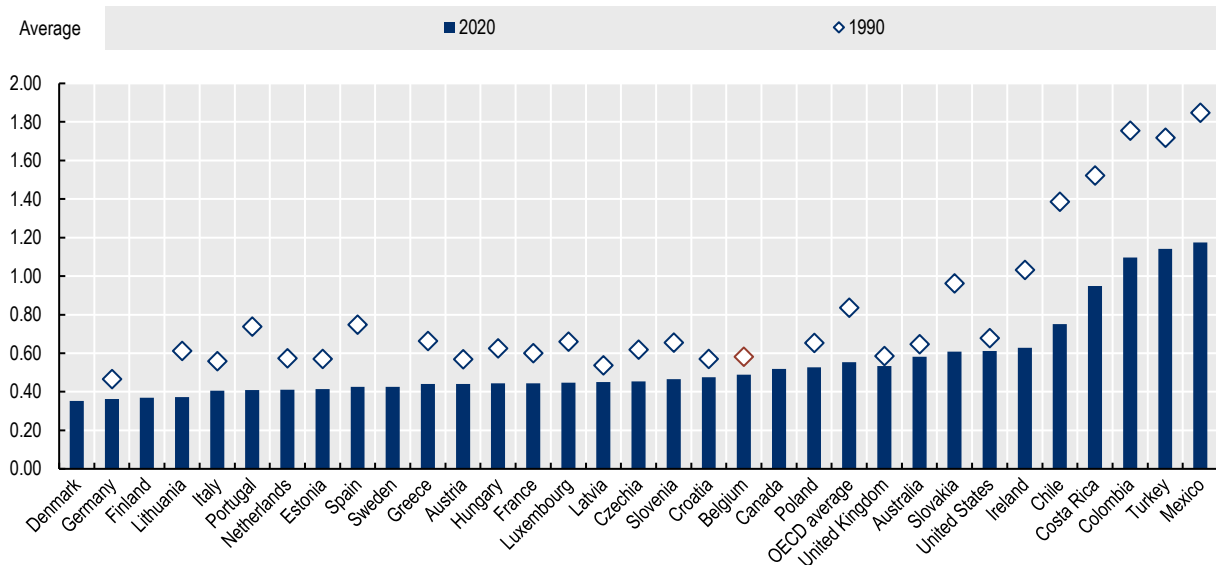
Fertility levels influence how households allocate income to meet the needs of children, including their care, education, and well-being. However, there is no clear-cut relationship between fertility levels as represented by the average number of children and the cost of raising children, as such costs are inherently measurable only in households that have chosen to have children. Yet, income and financial limitations can play a significant role in the decisions about whether to have children and how many to have. If income constraints strongly influence the decision to have children or not, the cost of raising children may appear particularly high, as childrearing becomes concentrated among wealthier households that can afford to spend more. Conversely, the estimated cost of children may be lower if income constraints play a less significant role in the decision to have at least one child, shifting the trade-off toward the number of children rather than the choice of whether to have children at all.

Beyond purely financial constraints, the reduction in the number of children also appears to be driven by parents' desire to invest as much as possible in their offspring, particularly to maximize their human capital (Galdor, 2012[82]) (Becker, 1993[83]). Additionally, the rise in income inequality and disparities in school performance seem to motivate parents to dedicate more money and time to their children in order to enhance their chances of success (Doepke and Zilibotti, 2019[4]; Doepke and Zilibotti, 2021[84]). Furthermore, it is not only the prospect of raising "quality" children that motivates modern parents to invest heavily in their offspring but also the aspiration to nurture happy, well-connected, and empowered individuals (Gauthier and de Jong (2021[85])) (Harkness et al., 2023[86]).

Age structure

Demographic changes also affect the age composition of households' offsprings. For example, as fewer parents have their first child before turning 30, declining fertility means that there are either less children, or that the same number of children is born but within shorter periods of time. Moreover, due to longer periods of study and economic challenges in achieving self-sufficiency, young adults are increasingly postponing leaving the parental home and are more likely to live with their parents compared to their grandparents' generation. As a result, households with children are now less and less likely to contain a young child, and more and more likely to have a youngest child that is in the older age group, between 16 and 24 years of age (Figure A B.2). In 2010, around one in three households with children in EU OECD-SILC across all countries included a child that was younger than five years in Figure A B.2, it is 26% of age. In 2021, this number had fallen to 26%. In 2010, 26% of households with children in EU OCED countries had the youngest child that was aged between 16 and 24 years old. In 2021, this share increased by 5 percentage points. In contrast, approximately one in every three households with children that are headed by single parents, or two adults include a child that is younger than 5 years in 2010. In 2021, this number falls to 26%.

Some countries see particularly pronounced increases in the prevalence of older children in family households (OECD, 2024[1]). In Denmark, for example, the share of two-parent and single-parent households with children in the oldest age group almost doubled from 15% to 28% (Figure A B.2). In addition, the share of households with older children also shows an upward trend between 2010 and 2021 in the Netherlands, Luxembourg, Sweden, Switzerland, and France. Notably, demographic development in the Mediterranean countries is also marked by a growing share of older dependent children, reflecting a significant reliance on parents to support their children until they can achieve financial independence (Arundel and Lennartz, 2017[87]; Wagner and Thévenon, 2017[88]).
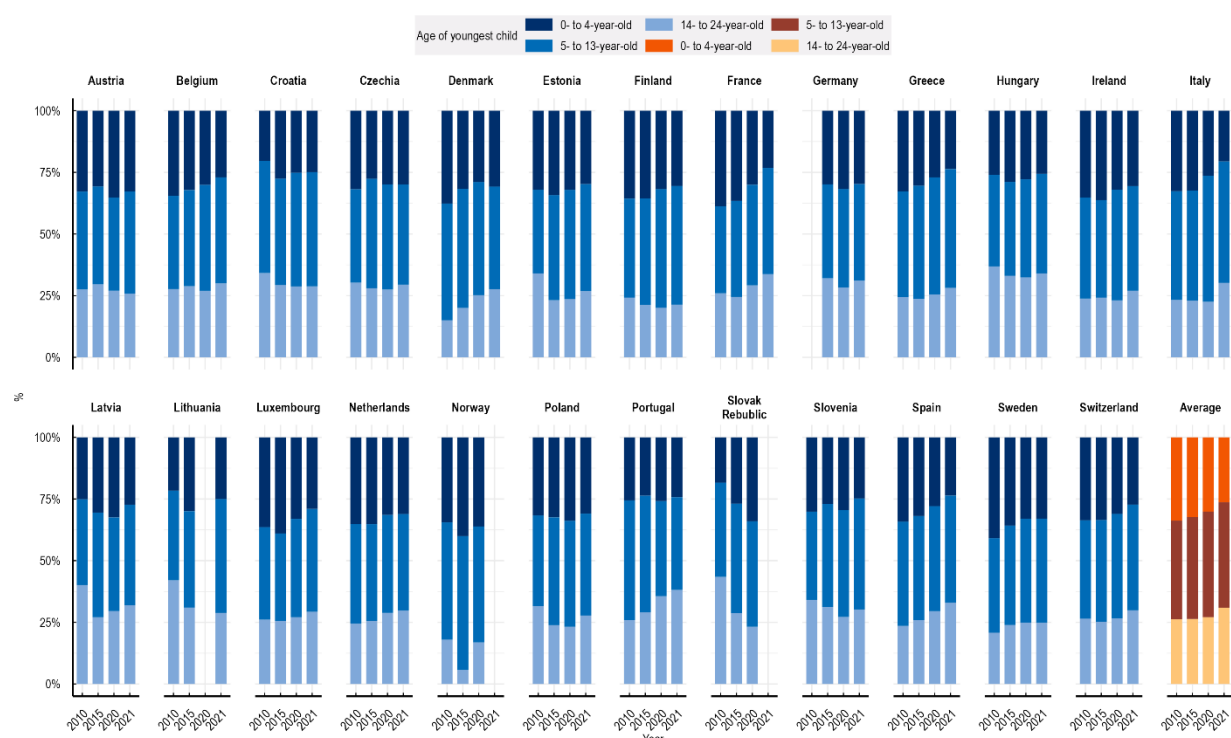
The data from EU-SILC broadly resonates with changes in the age structure of two-parent households with up to three children and single-parent households with up to two children from the EU-HBS. The Annex (Figure A B.3) illustrates the evolution of the share of households with children in different age brackets as reported in the budget survey data. For example, a similar rise of the share of households with their youngest child in the oldest age group appears in Denmark and, to a more moderate degree, in Southern Europe.

The evidence on the increasing age of children in family households for European countries presented in Figure A B.2 resonates with previous findings from other OECD countries. For example, in Canada, 42% of individuals aged between 20 and 24 were living with their parents in 1981. In 2011, this share increased to almost 60% (Milan, 2016[89]). In parallel, the share of young adults between 18 and 34 that lives with their parents almost doubled from approximately 20% to 36% between 1960 and 2014 (Fry, 2016[90]).

The presence of older children in households indicates that parents bear costs of raising children for a longer period of time than in previous generations. These costs are likely to be high as housing, leisure, and education costs tend to be higher for older children compared to younger ones. On the other hand, raising younger children often involves significant expenses for childcare, caregiving, and healthcare, which can be particularly burdensome in countries where public support for childcare and health insurance is limited.

Figure A B.2. Age of the youngest child in European households with children

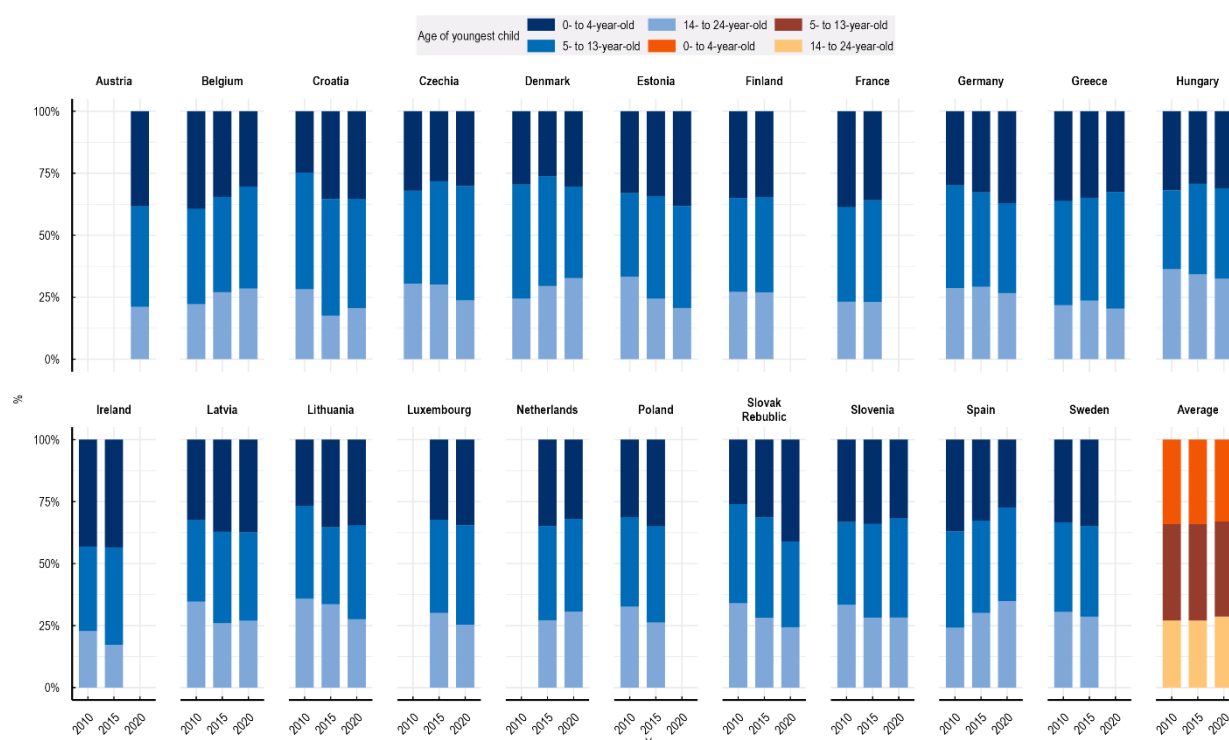The share of households with young children is falling across countries

Note: Data refers to the share of households that where the youngest child falls into a given age category. For example, the "0- to 4-year-old" category applies to all households where the youngest child is under five years old. The total includes couple and single parent households that have one, two or three children. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults.

Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

Figure A B.3. Age of the youngest child in European households according to the EU-HBS

A small increase in the share of households with children in the oldest age occurs across countries.

Note: Data refers to the share of households that where the youngest child falls into a given age category. For example, the "0- to 4-year-old" category applies to all households where the youngest child is under five years old. The total includes couple and single parent households that have one, two or three children. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves. In Czechia, where the number of household members below 15 years (MB03_Recoded_5Classes) exceeds the number of household members below 16 years (sum of HB051, HB052 and HB053), the distribution of children below 16 is imputed based on the data from previous waves.

Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

The increasing prevalence of children in separated and blended households

Parents' ability to pool their resources to cover child- related expenses is significantly affected by the child's living arrangements. When a child does not reside full-time with both parents, additional costs arise. In OECD European countries, most households with children are headed by two parents two-parent households rather than single-parent households[19] (Figure A B.4). In 2021, 84% of households with one to three children,[20] was headed by two adults while 16% were headed by a single adult. The proportion of single-parent households rose from an average of 13% in 2010. Non-negligible cross-country variation prevails in the proportion of single parent households: in Greece in 2021, 6% of households with one to three children were single-parent households, while this share corresponds to 17% in Denmark. Single-parent households are becoming more prevalent across countries and their proportion is growing at a faster rate in Scandinavian and Mediterranean countries, except Greece.

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[19] Statistics on household configurations and children's family living arrangements are available in the OECD Family Database, including for OECD countries not covered here (OECD Family Database, 2025).

[20] Please note that, to maintain consistency with the following analysis, the descriptive statistics presented here include households with 1 to 3 children for couple households and up to 2 children for single-parent households. Single-parent households with 3 children have been excluded, as their sample sizes are too small in some countries to provide reliable estimates of the cost of a third child.

Figure A B.4. Living arrangements of households with children in European countries

In several countries, the share of single parent households is increasing
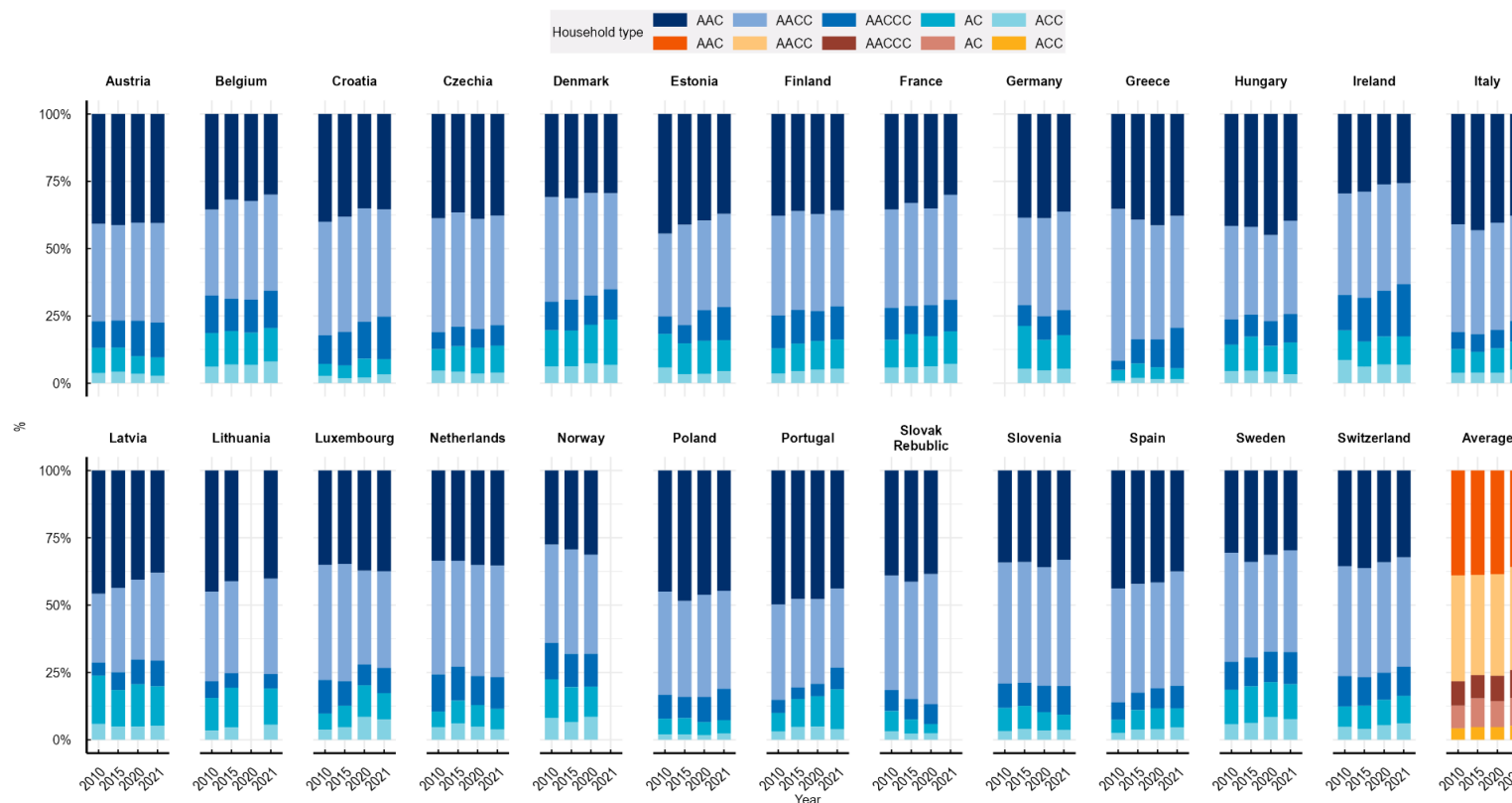
Note: Data refers to the share of households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a two-parent household with one child. Households with more than two adults or two-parent households (single-parent households) with more than three (two) children are dropped in this figure. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

Recent decades have seen a growth in the diversity of family living arrangements. It has become more common for children to alternate between households after a parental separation. In some cases, non-standard family living arrangements are established right after a child is born, particularly when the birth occurs outside of a stable couple relationship (Miho and Thévenon, 2020[5]; Berger, 2016[91]). Evidence from the United States shows that the share of divorces resulting in shared custody arrangements from 13% to 34% between 1985 and 2014 (Meyer, Carlson and Alam, 2022[92]).

There is also evidence for European countries on the increasing prevalence of shared custody arrangements after the dissolution of parents' partnerships over time. For example, Zilincikova (2021[93]) provided a cross-national overview of the physical custody arrangements of children from nine European countries using data from the first wave of the Generations and Gender Survey. For example, the author estimated that in Sweden, Belgium, Austria, France, Germany, and Lithuania combined, the odds of shared custody after divorce for mothers in divorce cohorts from the 2000s are more than three times the odds of joint custody for mothers in divorce cohorts before the 1980s (Zilincikova, 2021[93]). Using data from the 2021 EU-SILC ad hoc module on family living arrangements, Harkovita et al. (2023[94]) estimated that around one in eight children in separated families across 17 European countries share their time equally with each parent. An additional 8.2% spend at least one-third of their time with each parent (but not exactly half-time), and another fifth have some form of joint physical custody.

The simple categorisation of children and families into two-parent versus single-parent households no longer adequately reflects the diversity of family living arrangements and the distribution of resources within and between households (Miho and Thévenon, 2020[5]; UNECE, 2011[72]; Toulemon and Denoyelle, 2012[95]) (Box A.B.1). Moreover, available household surveys generally collect information without distinguishing between children based on their biological relationship with both parents. As a result, there are no statistics on the share of children in stepfamilies available for all countries.[21]

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[21] Data from the *Health Behaviour Survey in School-aged Children* point to similar cross-national variations in the proportion of children in stepfamilies across the OECD, although these data focus on adolescents aged 11-15 in stepfamilies in 29 OECD countries. According to these data, slightly less than 1 in 10 adolescents live in a stepfamily, on average, among participating OECD countries. Yet, this proportion varies greatly from country to country: 12% or more adolescents live in a stepfamily in Belgium (French region), Estonia, Finland, France, Iceland, Sweden, but only 5% or less do so in Greece, Israel, Italy, and Türkiye.

Box A B.1. Children's family living arrangements: Household categorisations and their limits

Household surveys traditionally focus on the household as a unit of measurement, which may not always coincide with the family (Bartova et al., 2023[96]). For this reason, the resulting categorisation of households according to family composition is limited and generally does not provide information on separated and blended families.

The categorisation of households typically falls into three main groups: two-parent households, single-parent households, and no-parent households. Two-parent households consist of children living with both biological, step-, or adoptive parents, and may also include other adults like grandparents. Distinctions are often made between married and cohabiting parents. Single-parent households involve children primarily residing with one parent, along with potentially other relatives or unrelated adults. No-parent households refer to children living primarily with neither parent, which encompasses various living arrangements such as with grandparents, other relatives, unrelated adults, or in foster care.

However, despite guidelines for data collection, there are challenges in achieving comparability due to differing rules and definitions used by countries in identifying family members and categorizing households. Household surveys often fail to capture the diversity of family living arrangements accurately, especially with the increasing complexity of modern family dynamics, such as cohabitation, shared custody arrangements, and adults living apart but in a relationship (UNECE, 2011[72]).

This complexity raises concerns about double counting children who split their time between two households, which can bias estimates of single-parent households. For instance, in France, estimates suggest that between 4% and 6% of adults and 6.4% of children live in two or more dwellings respectively; The proportion of children not living with both parents then falls from a biased estimate of 19.7% to 17.9% when these children are not double-counted (Toulemon, 2016[97]; Toulemon and Denoyelle, 2012[98]). Additionally, the rise in union separation and re-partnering has led to an increase in step-parents splitting their time between their new partner and another dwelling, potentially resulting in underestimated numbers of children in stepfamilies (Abela and Walker, 2013[99]; UNECE, 2011[72]). This underestimation depends on whether the stepparent is considered a household member, which varies across countries and surveys.

In this study, we classify households by the number of adults and children. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In addition, we add non-resident children to the picture for parts of the analysis. The simplistic differentiation between adults and children can lead to classification problems, such as single-parent households with on child older than 24 being classified as couple households. However, to ensure consistency across the surveys, and to ensure a focus on children that is to some extent bounded by age, we proceed with this choice.

Source: (Miho and Thévenon, 2020[5]), "Treating all children equally? Why policies should adapt to evolving family living arrangements", *OECD Social, Employment and Migration Working Papers*, No. 240, OECD Publishing, Paris, https://doi.org/10.1787/83307d97-en.

Figure A B.5. Detailed household structure across surveys

Panel A details the household structure in EU-SILC, and Panel B refers to EU-HBS
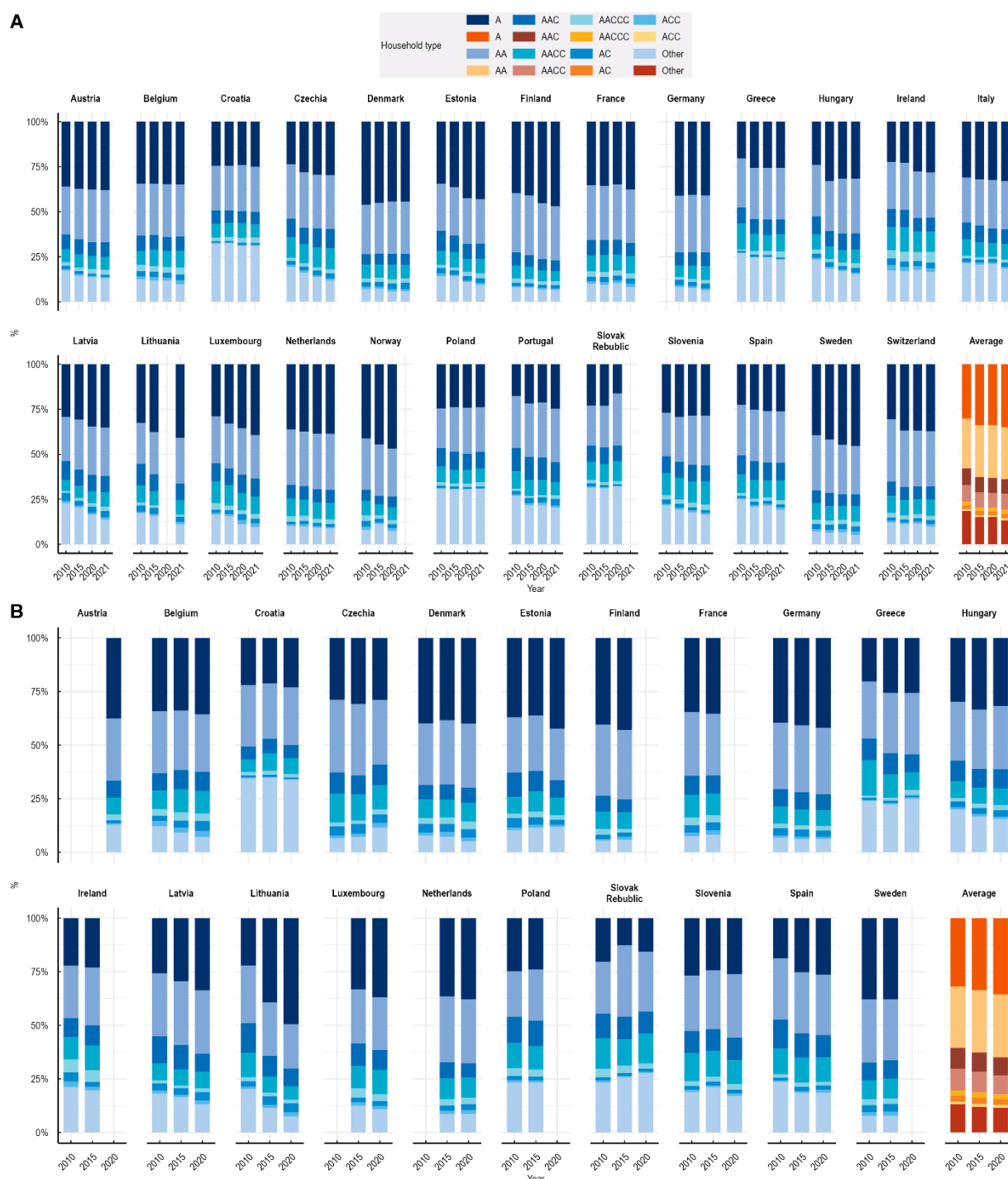
Note: Data refers to the share of households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece for EU- HBS data, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves.

Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021 and European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Time spent by children in the household categorised as their main residence

Table A B.1. Nights spent in the household by children classified as resident children in EU-SILC 2021

Descriptive statistics for resident children on the number of nights spent in the sample household per month

	Average nights spent	Minimum nights spent	Maximum nights spent	Number of observations	Less than 15 hours
Austria	26.35	0	31	337	27
Belgium	22.73	0	31	847	107
Bulgaria	1.62	0	28	395	389
Croatia	27.98	6	31	85	3
Czechia	26.73	10	30	552	4
Denmark	22.47	0	31	441	67
Estonia	25.93	0	31	370	30
Finland	24.57	1	31	665	8
France	20.90	0	31	1 576	307
Greece	27.16	0	30	325	16
Hungary	28.37	0	31	396	16
Ireland	2.49	0	15	254	244
Italy	26.13	0	31	766	94
Lithuania	29.03	5	31	220	8
Netherlands	6.08	0	28	690	568
Poland	25.65	0	31	592	93
Portugal	4.72	3	6	562	562
Romania	29.48	20	31	103	0
Serbia	27.04	0	31	161	9
Slovenia	25.70	1	31	282	21
Spain	23.67	1	31	1 495	158
Sweden	21.12	0	31	667	41
Switzerland	21.47	0	31	388	65

Note: The numbers in the first two columns refer to the number of nights a child in alternating residence that is a household member spends in the sample household per month on average (weighted). The next two columns refer to the minimum and maximum values of nights, respectively. The final column reports the number of observations in each year. No data for the Slovak Republic, Germany, Luxembourg and Latvia available. Values are rounded.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021, ad-hoc module.

Annex C. The economic situation of households

Household composition and family arrangements are important determinants of a household's standard of living and child well-being. Due to differing needs, constraints, and consumption technologies, households with children allocate their income differently compared to childless households. The share of spending that households devote to necessities, as opposed to leisure goods, is often interpreted as a measure of welfare (Daley et al., 2020[100]). However, this measure is somewhat imperfect. A high budget share devoted to necessities in households with children may result from budget constraints or a reduced desire among parents to spend on activities like going out. Nonetheless, when combined with theoretical models of consumer demand, expenditure patterns can provide valuable insights into the needs of households with varying compositions. Figure A C.1. and Figure A C.2 illustrate the share of total consumer expenditure across household types, broken down by categories of consumption goods. Across countries, households with children consistently allocate a higher share of their budgets to food and non-alcoholic beverages compared to single or couple households without children. For instance, a single household (Panel A) spends, on average, 18% of their total expenditure on food and beverages, whereas a two-parent household with three children allocates 22% (AACCC). Moreover, in most countries, the share of expenditure on transport and other items (including education) increases with the presence of children. A different pattern emerges for housing expenditure, which is the largest spending category in most OECD countries (OECD, 2024[101]). The budget share allocated to housing and furnishings decreases as the number of household members increases.

Figure A C.1. Households with children devote a higher share of total expenditure to food and eating out

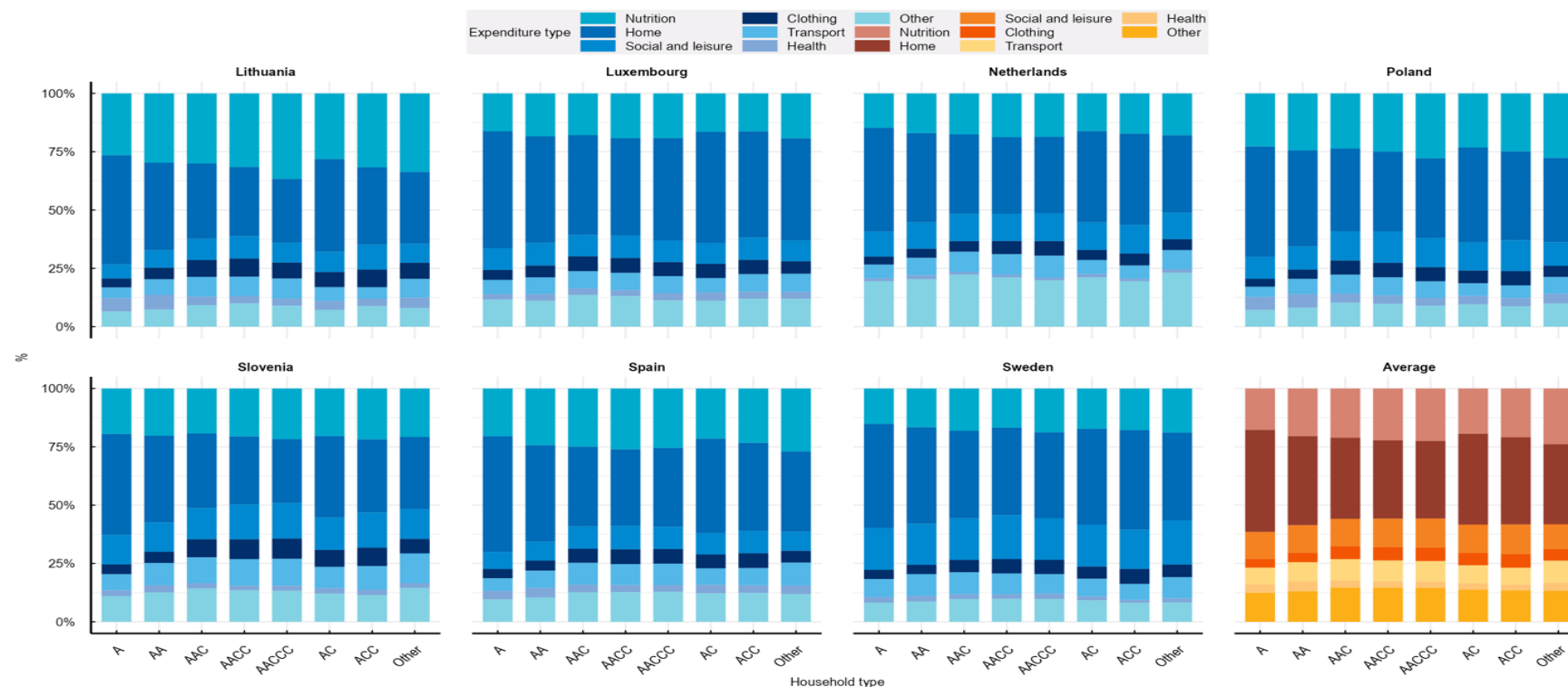Household expenditure by expenditure type
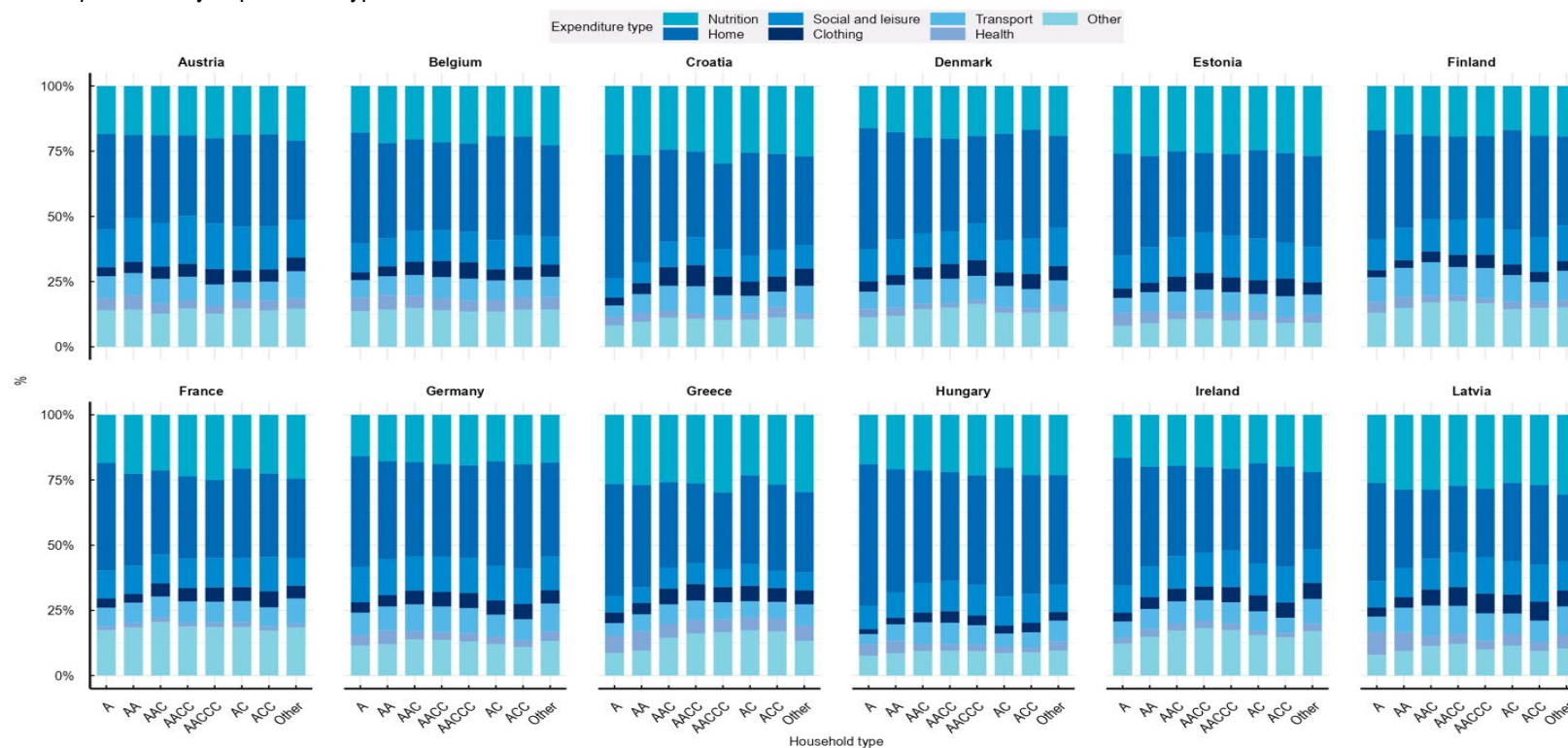
Note: Data refers to the share of total household expenditure devoted to different spending items. Nutrition includes food, non-alcoholic beverages and restaurant spending. Home refers to expenditure on housing and furniture. Social and leisure spending comprises information and communication as well as recreation, sport and culture. Travel excludes spending on durable transport goods. The residual category "Other" refers to alcohol and tobacco, educational services and miscellaneous goods and services. Data is pooled over waves. In Austria, the data refers to 2020, in Finland and in France it refers to the 2010 and 2015 waves of the EU-HBS. Spending is adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Household types are different combinations of adults (A) and children (C). For example, AAC refers to a two-parent household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves.
Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Figure A C.2. Household expenditure varies by household type

Households with children devote a higher share of their total expenditure to nutrition

Note: Data refers to the share of total household expenditure devoted to different spending items. Nutrition includes food, non-alcoholic beverages and restaurant spending. Home refers to expenditure on housing and furniture. Social and leisure spending comprises information and communication as well as recreation, sport and culture. Travel excludes spending on durable transport goods. The residual category "Other" refers to alcohol and tobacco, educational services and miscellaneous goods and services. Data is pooled over waves. In Sweden and Poland, the data refers to the 2010 and 2015 waves of the EU-HBS. Spending is adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Household types are different combinations of adults (A) and children (C). For example, AAC refers to a two-parent household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults.
Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

In addition to examining the structure of expenditure, research on the economic well-being of households and children often considers total expenditure and how it varies with household size and composition. Total household expenditure may, of course, be influenced by some household members reducing their consumption to maintain a certain consumption level for others.
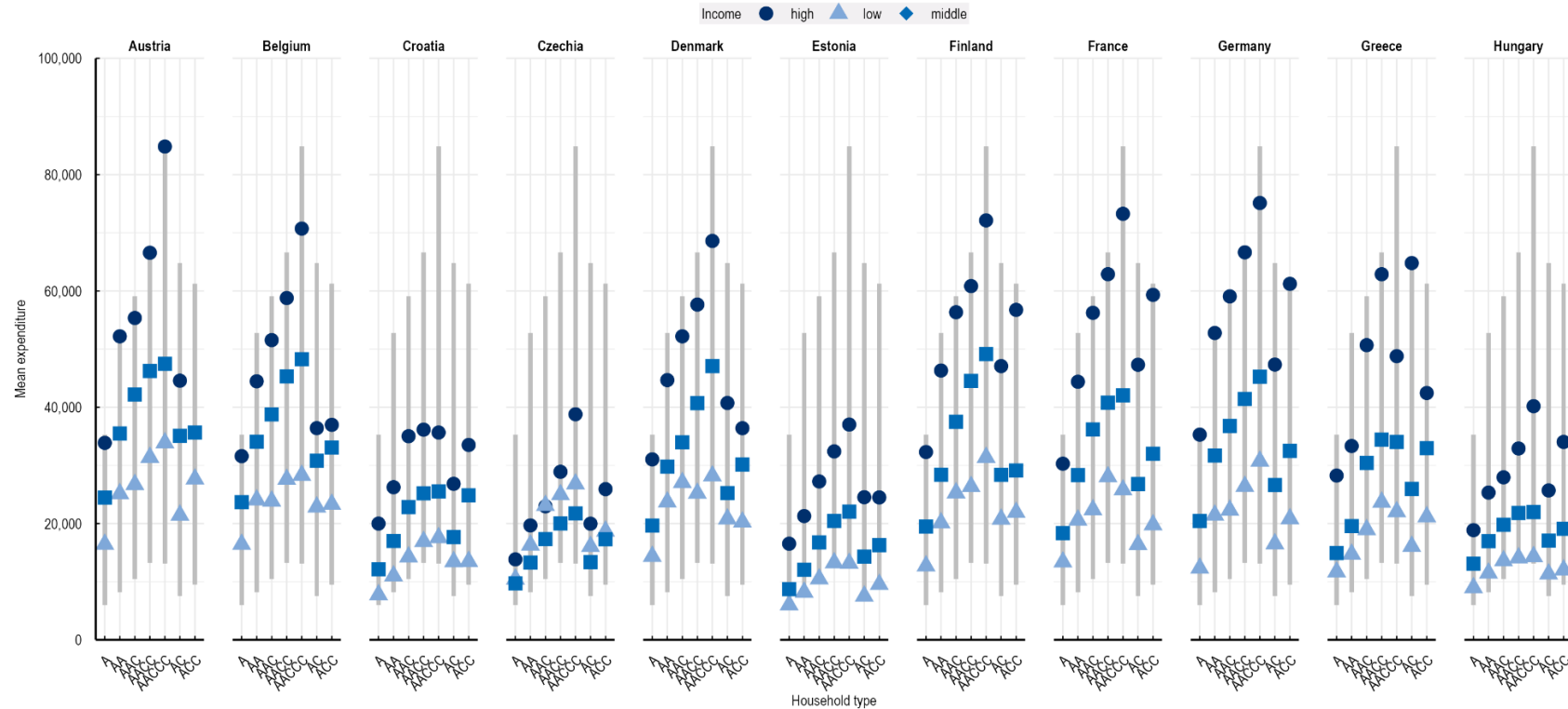
Figure A C.3 presents tentative evidence of differences in expenditure patterns. In Continental and Southern Europe (Greece, Spain) as well as Scandinavia (Denmark, Finland, Norway and Sweden), differences in total consumer expenditure by household type are most pronounced in the high-income group of households compared with households that have less means. For example, the total consumer expenditure of a high-income Belgian couple childless household is by approximately EUR 25 000.00 lower than a high-income two-parent household with three children. However, in the lowest income group, the differences in total expenditure between both household types is much smaller.

In contrast, Eastern European countries (Croatia, Czechia, Hungary, Slovak Republic and Slovenia) and the Baltic states (Estonia, Latvia and Lithuania) tend to exhibit smaller variation in total household consumer expenditure both across household types as well as income groups. In Czechia, spending is almost identical across income groups, while the absolute differences in expenditure between a couple household and a two-parent household with three children are much more moderate than in countries such as Austria, Belgium or Denmark.

There is also evidence on variations in household spending patterns across household types in non-European OECD countries. For example, in Canada, households in the top income quintile spend three times more than households in the bottom income quintile, even after accounting for household size (Statistics Canada, 2023[102]). Similar evidence exists for the United Kingdom (Gregg, Waldfogel and Washbrook, 2006[103]). Crucially, the relatively low consumer spending among low-income households with children, compared to high-income households, is likely influenced in part by liquidity constraints or limited cash flow. A recent study from the United States suggests that, following a positive income shock, low-income households respond with more pronounced increases in spending than the average household (Schild et al., 2023[104]). Differences in total household expenditure along socio-economic gradients can coincide with differences in child-specific spending and non-monetary investments (Kornrich and Furstenberg, 2013[60]; Gauthier, Smeeding and Furstenberg, 2004[105]; Sani and Teas, 2016[106]).

Figure A C.3. Total consumer expenditure varies strongly by income group

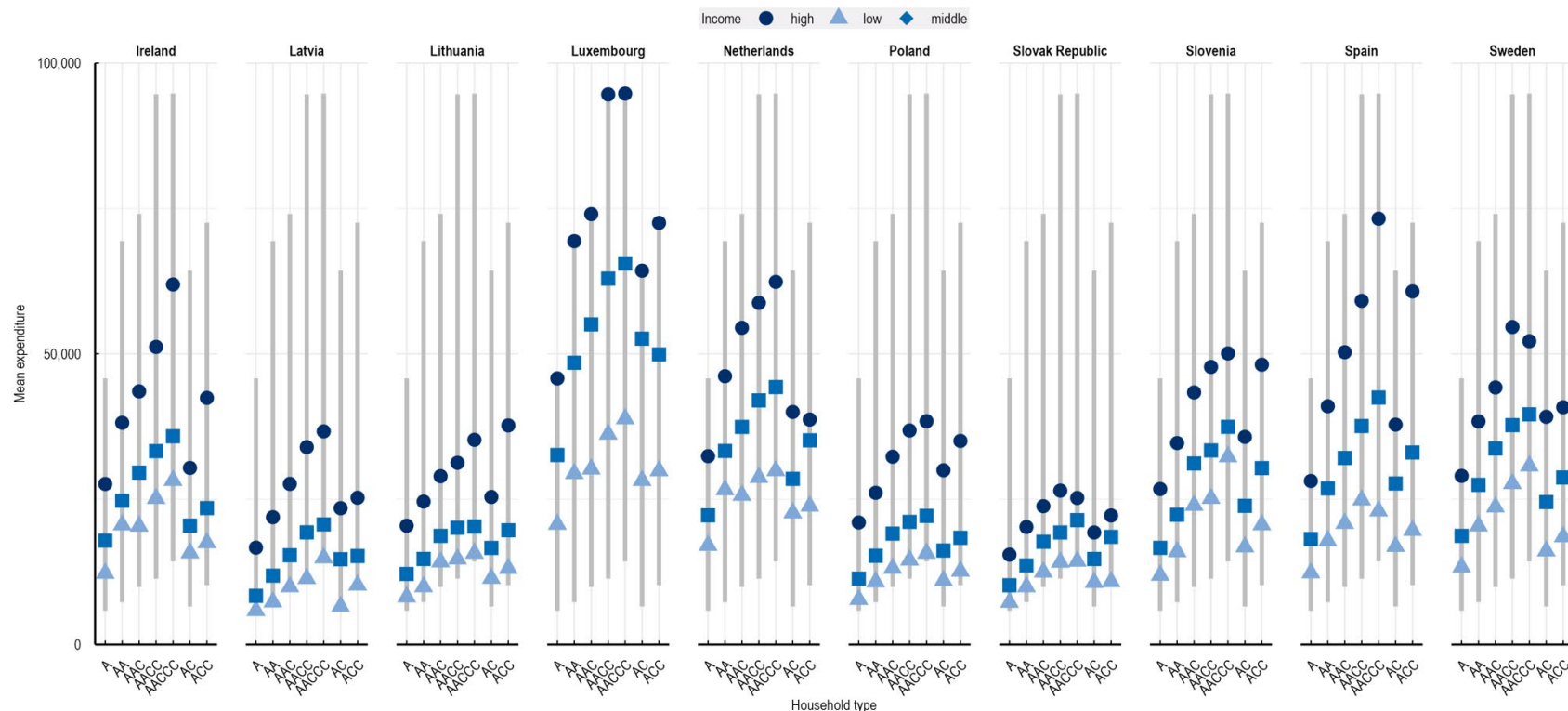Average total annual household expenditure across household types by income

Note: The figure plots mean total household expenditure for different household types and income groups. Data is pooled over waves. In Austria, the data refers to 2020, in Finland, Sweden, Poland and in France it refers to 2010 and 2015, and in Luxembourg the data refers to the 2015 and 2020 wave of the EU-HBS. Spending is adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Income groups are based on quintiles of household net monetary income equivalised with the square root scale. Low income refers to the first quintile, middle income to the second to fourth quintile, and high income to the top quintile. Household types are different combinations of adults (A) and children (C). For example, AAC refers to a two-parent household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves.

Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Figure A C.4. Total consumer expenditure varies strongly by income group

Average total annual household expenditure across household types by income

Note: The figure plots mean total household expenditure for different household types and income groups. Data is pooled over waves. In Austria, the data refers to 2020, in Finland, Sweden, Poland and in France it refers to 2010 and 2015, and in Luxembourg the data refers to the 2015 and 2020 wave of the EU-HBS. Spending is adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Income groups are based on quintiles of household net monetary income equivalised with the square root scale. Low income refers to the first quintile, middle income to the second to fourth quintile, and high income to the top quintile. Household types are different combinations of adults (A) and children (C). For example, AAC refers to a two-parent household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves.

Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

In addition to expenditure-based measures of household- and child welfare, self-reported measures of economic well-being are increasingly prominent in both academic research and policy-making (Fitoussi, Stiglitz and Sen, 2009[107]; OECD, 2013[108]; Spitzer, Greulich and Hammer, 2022[109]). Data on survey respondents' evaluations of their well-being has been shown to capture psychological constructs that individuals use when making decisions. Furthermore, the close alignment with welfare concepts in conventional economic theory adds to the empirical appeal of such measures (OECD, 2013[110]). Simple descriptive analyses of subjective economic well-being should be interpreted with caution, as unobserved heterogeneity and reference-group comparisons may influence responses (Anand, Krishnakumar and Tran, 2011[110]; Borah, Keldenich and Knabe, 2018[34]). Nevertheless, recent research on well-being suggests that explanatory analyses of self-reported well-being, despite some biases, are not severely undermined by these issues. Significance levels and the direction of effects generally remain consistent even after applying corrections (Kaiser, 2022[111]).

When comparing well-being between households with two adults versus one (both with and without children), a consistent cross-national pattern emerges: couples find it easier to make ends meet. Figure A C.5 illustrates the self-reported ability to make ends meet across countries. In every country, the share of people who rank in the top three categories of ease in making ends meet is higher among households with couples than among single-adult households. On average, 58% of individuals in two-adult households across countries report making ends meet without difficulty, compared to 51% of those in single-adult households who report relatively easily making ends meet.

There is substantial cross-national variation in the reported ability to make ends meet. For example, in Sweden, approximately 90% of households with two adults say that they can make ends meet, rating this potential at level 4 or higher out of six levels. While this share is lower in one-person households or single-parent households, the latter group still contains a high share of individuals who consider their ability to make ends meet favourably in Sweden (79% at 4 or higher). This is a sharp contrast to Greece, for instance. Approximately 13% of households with two adults report comparably high levels of ability to make ends meet, while only 8% of one-person households or single-parent households do so.[22]

The next sections delve deeper in the analysis of how household spending levels and the perceived ability to make ends meet vary according to household composition, using methods to assess the cost of children.

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[22] Figure A C.5 also reports the share of households with missing values on self-perceived ability to make ends meet. Notably, there is a substantial fraction of missing values in Germany. This is the case both among households with two adults and one-person households or single-parent households.

Figure A C.5. Two-adult households, with and without children, find it easier to make ends meet

Share of households reporting a given level of ability to make ends meet on a scale from 1 (with great difficulty) to 6 (very easily), by the number of adults in a household
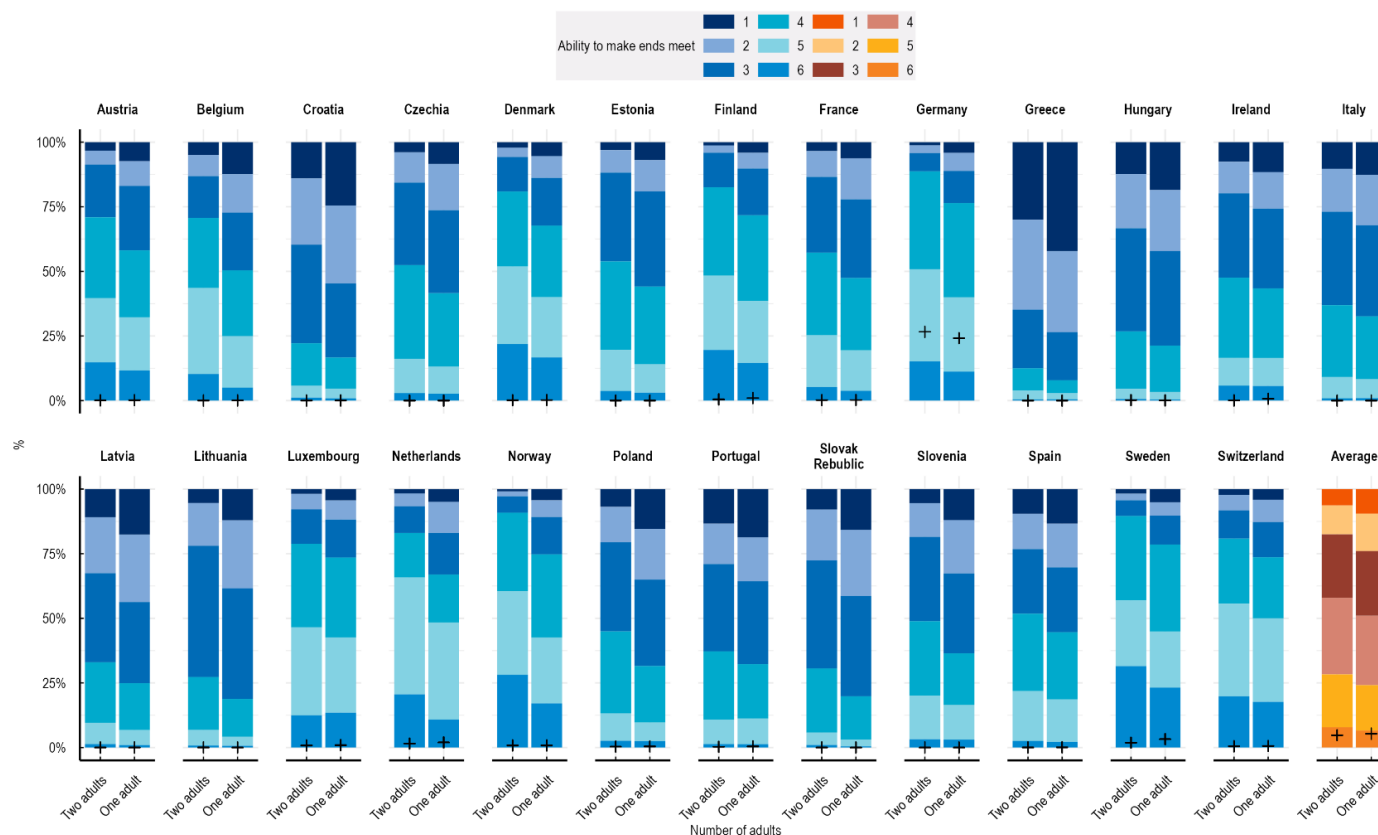
Note: This figure illustrates the share of respondents classifying their ability to make ends meet in a category from 1 (difficult) to 6 (easy). The '+' refers to the share of missing values. The chart refers to households with either one adult (and any number of children up to 2) or two adults (and any number of children up to 3). Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. Observations are pooled across survey waves.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

Annex D. Derivation of the equivalence scale

Box 3 specifies the equivalence scale used in the context of expenditure-based child cost estimation. The scale reads as follows:

$$m(a) = \frac{\sum d_k(a)\gamma_k + (inc_0 - \sum \gamma_k) \prod d_k(a)^{\delta_k}}{inc_0}$$

Start with a Stone-Geary utility function. From this utility function, it is possible to obtain the following cost function, specifying the cost C of reaching a given utility U at a given household composition a.

$$C(U,a) = \sum d_k(a)\gamma_k + \prod \delta_k^{-\delta_k} \prod d_k(a)^{\delta_k} U$$

U represents utility, and $d_k(a)$ are weights specific to commodity k={1,…,K} that vary with household composition. γ_k refers to additional fixed costs associated with certain types of households that also vary by commodity. For the household composition A, $d_k(a)$ equals unity. δ_k are parameters of the traditional Stone-Geary utility function and refer to the marginal budget shares of different goods. Across all commodities k, $\sum \delta_k$=1.

Now a household with composition a=1 (the single reference household), the cost function reads as follows, because $d_k(a)$ is set to unity:

$$C(U,a) = \sum 1\gamma_k + \prod \delta_k^{-\delta_k} \prod 1^{\delta_k} U$$

Thus, we obtain:

$$\frac{\sum d_k(a)\gamma_k + \prod \delta_k^{-\delta_k} \prod d_k(a)^{\delta_k} U}{\sum \gamma_k + \prod \delta_k^{-\delta_k} U}$$

In a next step, we substitute for utility U the utility level of the reference household at a given reference income inc_0 for the indirect utility function of the reference household at that income level (where commodity specific weights are unity and commodity prices are also set unity as in Box 3). The indirect utility function (obtained from plugging demand equations that optimise the utility function back into the direct utility function) is:

$$U = \frac{inc_0 - \sum \gamma_k}{\prod \delta_k^{-\delta_k}}$$

This gives the following:

$$\frac{\sum d_k(a)\gamma_k + \prod \delta_k^{-\delta_k} \prod d_k(a)^{\delta_k} \dfrac{inc_0 - \sum \gamma_k}{\prod \delta_k^{-\delta_k}}}{\sum \gamma_k + \prod \delta_k^{-\delta_k} \dfrac{inc_0 - \sum \gamma_k}{\prod \delta_k^{-\delta_k}}}$$

Simplifying this expression gives the above equivalence scale m(a). A more detailed account of each individual step can be found in the literature (Merz and Faik, 1994[50]; Bauer et al., 2021[20]; Gerfin et al., 2009[51]).

Annex E. Additional results on the cost of children

Figure A E.1. Equivalence scales from self-reported economic well-being

Equivalence scales from self-reported economic well-being benchmarked with the OECD-modified scale
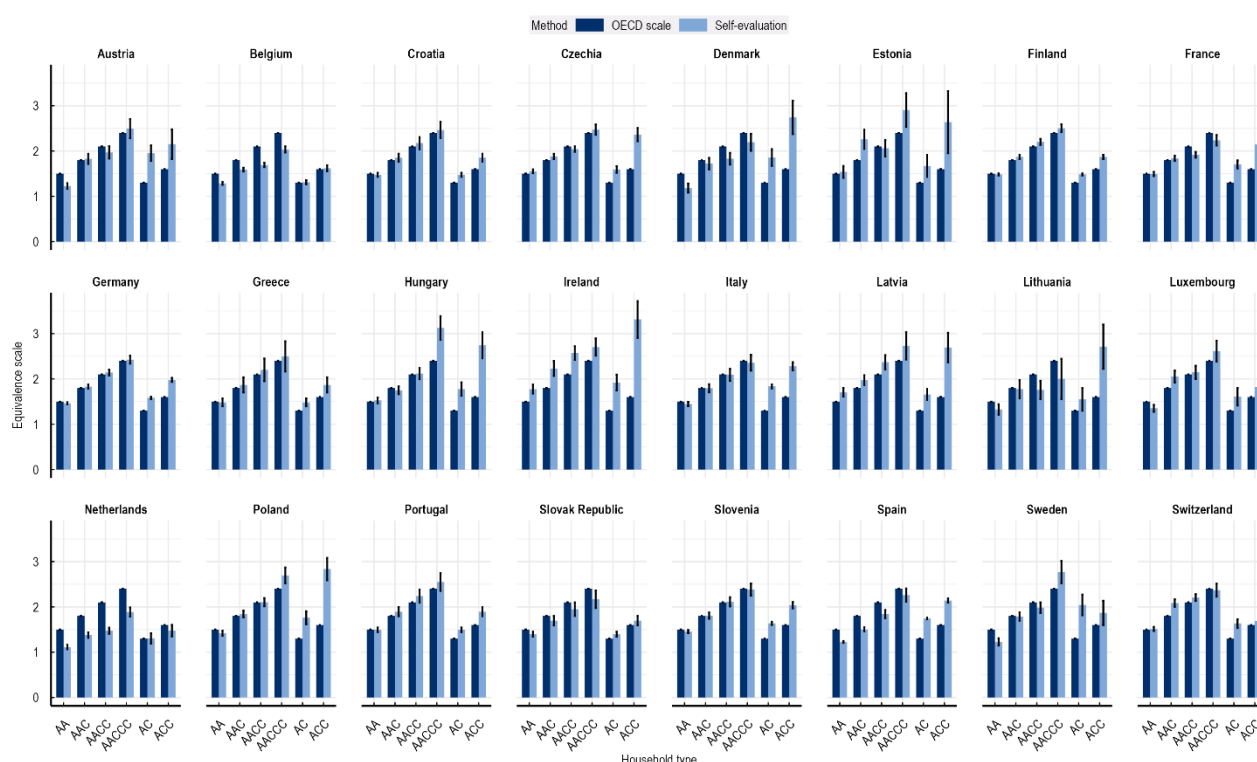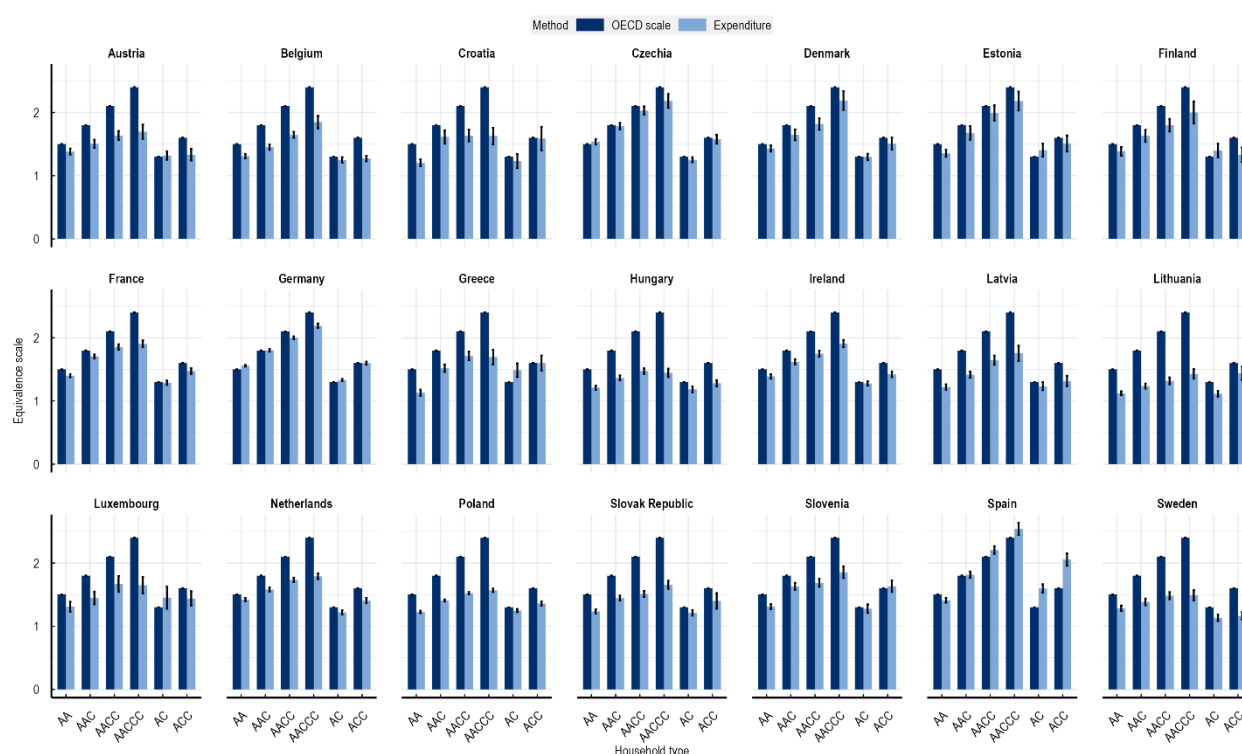

Note: This figure refers to equivalence scales for different households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. Equivalence scales are obtained from self-reported economic well-being data. Income is adjusted for the consumer price index in 2021 prices and 2021 purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income. Error bars represent standard errors obtained from bootstrapping with 100 replications.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.

Figure A E.2. Equivalence scales from expenditure data

Equivalence scales from expenditure data benchmarked with the OECD-modified scale
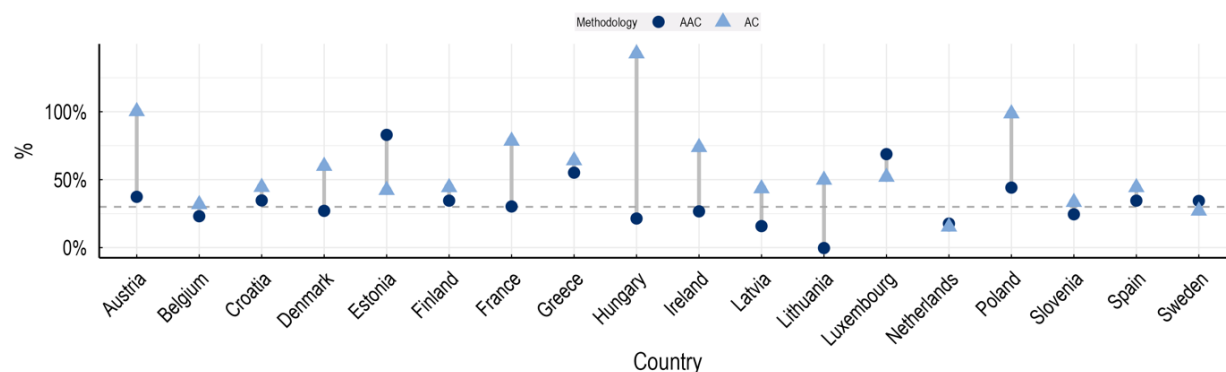

Note: This figure refers to equivalence scales for different households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves. Equivalence scales are obtained from expenditure data. Income and expenditure are adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income and observations with negative expenditure in any COICOP division. Households where expenditure in all divisions does not add up to the total expenditure (due to differences in definitions in the original surveys across countries) are removed. Error bars represent standard errors obtained from bootstrapping with 100 replications.
Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Figure A E.3. Child costs for the first child in 2021

The figure illustrates the cost of the first child relative to the first adult in a household for two-adult and single-parent households
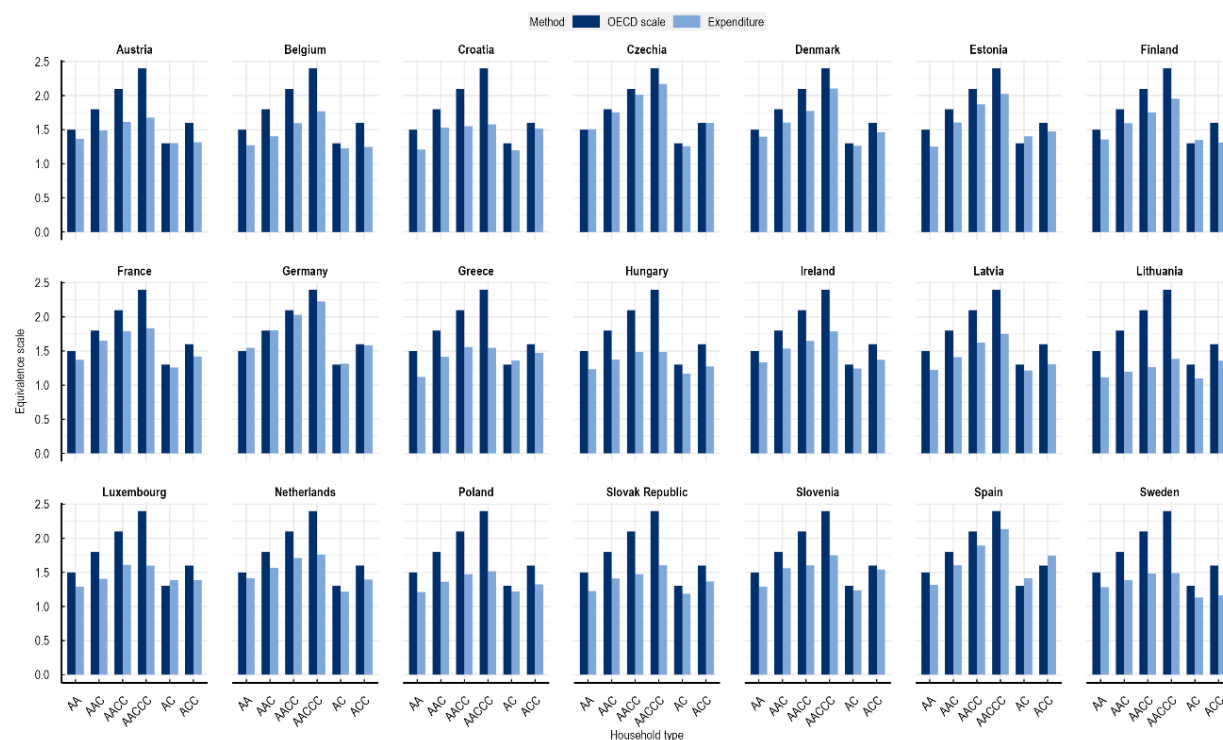

Note: This figure replicates the findings from the main analysis on the cost of children in Figure 2 for the year 2021. The figure refers to the cost of children relative to the cost of the first single adult for different households with a given number of adults (couples AA or singles A) and one dependent child. For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. The dashed line refers to the cost of children according to the modified OECD-scale. Income is adjusted for the consumer price index in prices of the most recent year of the survey wave and purchasing power parities of the same year. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income. Estimates are obtained from self-reported economic well-being data. No weights used to distinguish between different types of household members.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2021.

Figure A E.4. Equivalence scales from expenditure data with monetary income

Replication of the expenditure-based equivalence scales with income excluding imputed rent from owner-occupied housing

Note: This figure refers to equivalence scales for different households with a given number of adults (couples AA or singles A) and dependent children C (from one to three). For example, AAC refers to a couple household with one child. Children are defined as household members between the age of 0 and 15 years, as well as other household members under the age of 25 who are in education – provided they are neither the reference person nor their spouse. All other household members are considered as adults. In Greece, the number of students in the age bracket between 16 and 24 years is imputed based on the distribution of students among 15- to 29-year-olds in previous EU-HBS waves. Equivalence scales are obtained from expenditure data. Income and expenditure are adjusted for the consumer price index in 2020 prices and 2020 purchasing power parities. Households where the reference person in above 60 years are dropped from the analysis, as well as households with zero or negative income and observations with negative expenditure in any COICOP division. Households where expenditure in all divisions does not add up to the total expenditure (due to differences in definitions in the original surveys across countries) are removed.
Source: European Union Household Budget Surveys (EU-HBS) for 2010, 2015 and 2020.

Table A E.1. Regression of number of children in different age groups on economic well-being

Country	0-4 years		5-13 years		14-16 years	
	Estimate	SE	Estimate	SE	Estimate	SE
Belgium	-0.52	0.07	-0.47	0.08	-0.59	0.07
Estonia	-0.29	0.11	-0.28	0.09	-0.59	0.08
France	-0.51	0.07	-0.47	0.06	-0.38	0.06
Germany	-0.48	0.07	-0.47	0.06	-0.52	0.06
Hungary	-0.13	0.11	-0.38	0.08	-0.47	0.07
Ireland	-0.19	0.13	-0.72	0.11	-0.56	0.11
Latvia	-0.08	0.10	-0.29	0.08	-0.44	0.07
Lithuania	-0.34	0.17	-0.08	0.10	-0.40	0.08
Netherlands	-0.31	0.09	-0.36	0.07	-0.37	0.09
Poland	-0.55	0.08	-0.29	0.06	-0.49	0.06
Spain	-0.15	0.07	-0.32	0.06	-0.44	0.06
Sweden	-0.47	0.07	-0.55	0.08	-0.33	0.08

Note: The table reports regression coefficients and standard errors of regressing economic well-being on the presence of a child in different age groups. Further control variables omitted from output. Sample restricted to households with one child. Only countries reported where the sample sizes in the smallest group are large enough. Values are rounded.
Source: European Union Survey on Income and Living Conditions (EU-SILC) for 2010, 2015, 2020 and 2021.