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MEASURING THE SIZE AND IMPACT OF PUBLIC CASH SUPPORT FOR CHILDREN IN CROSS-NATIONAL PERSPECTIVE

Non-technical summary

Studies that compare the size and effects of cash transfers for children across countries typically rely on gross benefit payments that are explicitly labelled as being for children (or families with children). This practice ignores the fact that some of these benefits may be taxable and overlooks other potential forms of cash support such as tax concessions. This not only introduces a bias in the estimates of the level of support received by different family types but also reduces cross-country comparability.

In this paper, we demonstrate how to overcome these problems by using static microsimulation techniques to derive a more comprehensive measure of cash support for children. In addition to accounting for gross benefit payments, the method helps to capture supplements for children in benefits labelled as having other functions (e.g. social assistance benefits) as well as determine corresponding tax liability on these benefits and the value of tax concessions. In this way, we are able to take into account all the cash support which is contingent on the presence of children.

Using EUROMOD, a tax-benefit model for the EU countries, we show the range of level of support across 19 countries using our "net child-contingent measure". We demonstrate significant differences compared to the conventional measure, which affect the ranking of countries providing the most support for children. On average, accounting only for gross benefits would underestimate the total support by one fifth. The differences are mainly due to taxes but there are also examples where child related components of other benefits are the main cause. Looking at how this support is targeted across the household income distribution reveals striking variety across countries. It is also notable that in several cases, the net support favours children in high income households.

We finally use the two alternative measures of support to estimate the effect in reducing the risk of child poverty and assess the relative extent to which support meets the needs of children. Apart from a few countries the differences are relatively modest but, once again, make a difference to cross-national rankings.

MEASURING THE SIZE AND IMPACT OF PUBLIC CASH SUPPORT FOR CHILDREN IN CROSS-NATIONAL PERSPECTIVE

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ABSTRACT

We suggest a new comprehensive measure of support given through tax-benefit systems to families with children. Using microsimulation techniques, this accounts for all provisions contingent on the presence of children, while usually only gross child/family benefits are considered. We use EUROMOD, the European Union tax-benefit microsimulation model, to quantify the support for children and analyse its impact on household incomes and child poverty for 19 countries. We find that the conventional approach underestimates on average the total amount of support for children by about one fifth. Furthermore, the differences between two measures vary considerably across countries and are, therefore, critical for cross-national comparisons.

JEL: C81, D31, H23

Keywords: Children, Taxes and cash benefits, Child poverty, European Union, Microsimulation.

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1 Introduction

It is widely accepted that families with children should receive support from the public sector and this can be justified in a number of ways. First, support for children contributes to preserving horizontal equity by treating households not only according to their income but also to their different circumstances. Secondly, it aims to increase vertical equity by supporting families with higher expenditure and lower earnings as a consequence of the presence of children. Apart from equity concerns, support for families with children is important from an economic perspective based on efficiency arguments. Public transfers for children can be considered as a form of smoothing of inter-temporal difference in consumption patterns, making people better off at a time of greater need and supporting the process of intergenerational mobility. There is strong evidence that employment, educational, health and social outcomes for children growing up in poor families are more likely to be worse than those for better-off children (e.g., Ermisch et al., 2001).

In Europe, as well as elsewhere, there is a particular concern that national policies should reduce the risk of child poverty, promote equal opportunities for all children, and assist parents in pursuing working careers and so to facilitate, at the same time, the achievement of employment objectives (European Commission, 2008; Marlier et al., 2007). Policy intended for the direct support of children is clearly one major component of such a strategy.

Comparing the extent of such policies across countries, as well as assessing their effects, is not only a task of international bodies such as the European Commission (2008), UNICEF (2005) or the OECD (Whiteford and Adema, 2007), it is also relevant to academic studies of policy effects on aspects such as fertility, the labour market behaviour of parents and migration between countries, as well as child poverty and welfare. It is therefore important that policies to support children can be measured in a way that allows valid comparisons to be made across countries. Measures to support families with children come in many guises and different modes of provision vary in their absolute size and relative importance across countries. A major division is between

cash support and in-kind support such as free or subsidised childcare. Within the cash component there are benefit payments and tax concessions.[2] Such concessions may take the form of extra tax allowances, reliefs or credits in the direct tax structure, or may consist of reduced rates or exemptions from indirect taxes for particular child-related goods. (For example, children's clothing is zero-rated for VAT in the UK.) In this paper we consider how best to capture the "child targeted" element of household disposable income, the concept on which poverty and income inequality measures are often based. We therefore focus on the elements of child support contained within cash benefits and direct taxes.

Most studies that aim to capture the effects of state cash support for children focus on gross benefit payments that are labelled for children or families. Information on this is readily available in published statistics and in micro-data sources such as the European Union Statistics on Income and Living Conditions (EU-SILC). The aim of this paper is to demonstrate how a more complete measure of "child-contingent" support can be captured using microsimulation modelling, building on Corak et al. (2005). The next section explains why this provides a more comparable picture across countries than child/family benefits alone and discusses the issue of incidence assumptions within the household. Section 3 introduces an empirical illustration for 19 countries, using the European Union microsimulation model, EUROMOD. Adopting a set of particular assumptions results are presented showing the range of level of support across countries (section 4) and how this support is distributed across the household income distribution (section 5). This includes an analysis of the effect of support for children in reducing the risk of child poverty, contrasting the effect using conventional measures of public cash support for children with that using the microsimulation-generated "child-contingent" measure. Section 6 provides an illustration of another application of this measure: to assess the relative extent to which cash support for children meets the needs of children across countries and Section 7 concludes.

[2] "Benefit" is here used in its European sense of a cash transfer from the state. It is a term that includes contributory earnings replacement insurance payments, payments to compensate for contingencies such as disability, payments to support children and families, means-tested social assistance or welfare payments and "in-work" subsidies of low earnings.

2 Support for children: measurement challenges and approaches

In measuring the scale of support for children and assessing its effectiveness, for example in protecting children from poverty, there are two key decisions to be made. The first is to choose which forms of support are of interest and the second is to make assumptions about the incidence of payments and how they are shared within the household (Corak et al., 2005). It is common practice to identify benefit payments that are labelled as being for children or families. The problem with this is that such a definition misses some forms of payment such as supplements to unemployment benefits, housing benefits or social assistance benefits. It also ignores tax concessions made to parents of dependent children. To this extent it will underestimate the scale of support for children. At the same time, ignoring interactions with other tax-benefit instruments will overestimate the net value for families. First of all, some of the child benefits or, more generally, child-contingent benefits may be taxable. Secondly, if child targeted payments were abolished, part of the income loss may be compensated by larger entitlements from other means-tested benefits, therefore, limiting the additional gain from such payments. In cross-national perspective such issues become particularly important for two reasons. First, the classification and naming of a particular payment as being for children may be somewhat arbitrary since many welfare payments have more than one function. Secondly and most importantly, the types of tax-benefit instrument that are in use across countries vary considerably, even if they have a similar purpose. Capturing one part of the child support package and not others can lead to the use of misleading evidence about the relative scale of support for children in cross-national research.

For this reason, we measure net "child-contingent" payments by capturing all the elements of taxes and benefits that occur due to the presence of children in the household. This is done by re-calculating tax liabilities and benefit entitlements assuming no children are present, using a tax-benefit microsimulation model, and comparing the resulting values with those when the children are present. More detail about how this is done is provided in the next section.

It is also important to consider a second issue: that of the incidence of payments within the household. First of all, having identified child-contingent payments we need to

decide how they are shared within the household. How this is done in practice is something we know very little about. In measuring income in order to assess the extent of poverty and inequality, the convention is to aggregate all household incomes, regardless of their source. Similarly, all taxes on income are deducted, regardless of the tax unit on which the liability falls. However, when comparing the relative size of support across countries it is the amount per child that should be captured. This is because the number of children per household is one of the factors that vary across countries. One option is to assume that all child-contingent support is incident only on the children in the household, and shared equally among them. Another is to assume each person in the household receives an equal share of the payment (lowering each child's share).

This raises a related issue about the role of non child-contingent payments in the support of children. Under the household income sharing assumption children benefit as much from €1 of pension received by their co-resident grandparents or €1 of unemployment benefit received by their adult sibling as they do from €1 of child-contingent payments. In this case it is relevant to consider all benefit payments together as is done by the European Commission (2008; figure 13), although they exclude public pensions. To allow for this perspective we also calculate the amount of all non child-contingent benefits (including public pensions) but improve on the usual practice by deducting taxes paid on the benefits, showing their net effect.

A further issue is how to compare levels of support across countries with different currencies and income levels. Again there are a number of options, as discussed in Brandolini (2007) and addressed in the next section.

3 Data and methods

The estimates are derived by using EUROMOD, a multi-country tax-benefit micro-simulation model, currently covering 19 EU countries – all the 15 pre-2004 member states and Estonia, Hungary, Poland and Slovenia.[3] The model calculates direct taxes, social contributions, and cash benefits on the basis of the tax-benefit rules in place in a

[3] See Sutherland (2007) and http://www.iser.essex.ac.uk/research/euromod/ for further information.

particular year, for a representative micro-data sample of households from each country. It can be used to show the first round effect of changes in either policies or the characteristics of the population on the distribution of household incomes. In the analysis reported here, baseline estimates are for the latest available policy year for each country, ranging from 2001-2005, as shown in Table 1. In most cases the EUROMOD input datasets refer to a period a few years prior to this policy year and the original incomes derived from them are updated to this date. The updating process involves simple indexing of each income component (which is not simulated) by appropriate growth factors, based on actual changes over the relevant period.[4] In general no adjustment is made for changes in population composition. The components of the tax-benefit systems which are not simulated (e.g. benefits which depend on contribution history) are taken directly from the data, along with information on original incomes.

In order to capture the components of household income that are contingent on the presence of children, children are temporarily removed from the EUROMOD input datasets and household incomes are re-calculated as though only adults were present. The difference between household income in the baseline and after removing the children is a first approximation to the "child-contingent" measure. Note that as well as payments specifically intended for children this includes payments made on a per-person basis (as in some social assistance schemes). Two further adjustments are carried out: first, the child related benefits that are not simulated by EUROMOD, due to lack of necessary information in the input datasets, are identified and added to the total. Secondly, any original income received by children is deducted from the total and taxes paid on that income are added back. The resulting value is the net amount of payments made to support children, including the effect of complements and supplements to benefits such as housing or unemployment benefits, the value of tax concessions and net of any taxes paid on these benefits, which is referred to below as "child-contingent taxes".

Gross non child-contingent benefits can be directly observed in the EUROMOD output data once children have been removed. Taxes levied on these benefits can be calculated

[4] This process is documented in EUROMOD Country Reports. See: http://www.iser.essex.ac.uk/research/euromod/documentation/country-reports

in one further step. Taxes that are solely due to the adults' original incomes are estimated by calculating taxes once all benefits are omitted from the tax base. This amount is then deducted from all taxes paid by adults when children are excluded: the difference is the taxes paid on non child-contingent benefits (referred to below as "non child-contingent taxes"). Figure 1 shows the process diagrammatically. As such it is implicitly assumed that children's own income is the "top slice" of the relevant tax base (and therefore facing the highest marginal tax rate under a progressive tax system), followed by (taxable) child-contingent benefits and (taxable) non child-contingent benefits.

In this analysis EUROMOD does not take account of any non take-up of benefits or tax avoidance or evasion. It is assumed, therefore, that the legal rules are universally respected and that the costs of compliance are zero. This can result in the over-estimation of taxes and benefits.[5] At the same time, our results can be interpreted as measuring the intended effects of the tax-benefit systems.

In the analysis which follows, to illustrate the general approach, the following particular assumptions are made:

- All payments are equally apportioned between household members. See Corak et al. (2005) and Figari et al. (2007) for results based on the alternative sharing assumption that child-contingent payments are entirely incident on children. In practice the choice makes rather little difference in terms of the relative size of child support by country.
- A child is defined as a person aged under 18. It is the payments and tax concessions for people in this age group that are counted in our analysis. Other age groups could, in principle, be examined. Tax liabilities and benefit entitlements are calculated using child definitions as appropriate to the specific national rules. Thus the part of payments or concessions which is received by

[5] It can also result in the under-estimation of poverty rates although this depends on the relationship between the level of income provided by benefits and the poverty line (potential claimants may be poor whether or not they receive the benefits to which they are entitled). For a comparison of poverty rates estimated using simulated incomes from EUROMOD with those calculated directly from survey data by the OECD or available through the Luxembourg Income Study, see Corak et al. (2005).

people aged 18 or over (even if considered children by the law) will not be counted as "child-contingent".

- The family benefits that are not simulated in EUROMOD, are added to the "child-contingent" measure assuming that the whole amount received by parents is due to people aged up to 17.
- We also consider maternity and parental benefits as part of child-contingent support. One could, alternatively, consider these as being for the support of parents and leave them out.
- In order to compare across countries, the per child level of support is expressed as a proportion of total per capita disposable income for that country. Alternative ways of normalising (such as the use of purchasing power parity adjustment) make rather little difference to the results – see Sutherland et al. (2007).

4 Level of support for children

Relative to national per capita disposable income, among the 19 countries considered, Hungarian children receive the highest level of child-contingent support, with the lowest level being one sixth of the Hungarian level, received by Greek children. Figure 2, where countries are ranked in order of the net payment, shows how the level of child-contingent support varies across country and also shows the composition of this support.

The total effect of income taxes can be positive, where there are tax concessions for children, or negative where other child-contingent components are subject to tax. The negative effect outweighs the positive in the Nordic countries (Sweden, Denmark and Finland) and the same applies to social contributions in Slovenia, Germany and to a small extent in Poland. For benefits we use the following categories: family benefits (including among other things, child benefits, support for child care and disabled children), parental benefits, social assistance (including housing benefits) and other benefits, i.e. old age and survivor benefits, health related benefits, unemployment benefits etc., which sometimes include child-contingent additions. The largest component of child-contingent benefits is, unsurprisingly, family benefits in most countries. But it is by no means the case that other benefits and taxes play no role, nor that the relative importance is the same across countries. Parental benefits are also

important in Sweden, Slovenia and Estonia.[6] Social assistance is the third largest group of benefits on average, contributing to child-contingent income especially in France, Germany, Poland, Portugal and the Nordic countries, while the other types of benefit account only for a marginal share, but as a group are of significant size in Poland, Slovenia and Ireland.

In Spain the total effect of taxes (child-contingent tax concessions less taxes on child-contingent benefits) exceeds the gross income from child-contingent benefits which are very low. The main contribution on the tax side comes mostly in the form of income tax allowances, especially in Hungary, France, Slovenia, Luxembourg and Belgium as well as the southern European countries. The exception is in the Netherlands where most of the effect comes through lower social insurance contributions.

Overall we can see that only counting gross family and parental benefits would make a significant difference to the identification of which countries provide the most support for children. The differences are highlighted in Figure 3. They are largest, and show child-contingent payments exceeding gross family and parental benefits for the group of six countries with the lowest levels of support on either measure (Greece, Spain, Italy, Portugal, the Netherlands and Poland) and a group with relatively high levels on the child-contingent measure (France, Slovenia, Luxembourg and also Belgium). In most of these cases the difference is mainly due to the value of tax concessions. In France and Portugal social assistance benefits contribute equally with tax concessions while in Poland the difference is mainly due to other benefits (orphan pension, nursing allowance and nursing benefit). In Sweden the tax paid on benefits is sufficiently large to mean that gross family and parental benefits are larger than the net value of all child-contingent payments. In the UK benefits for children are paid up to the age of 19 if the child is in secondary education. They are therefore captured for children aged 18 in the measure of gross family/parental benefits while only those for children aged up to 18

[6] However, the data on parental benefits are not comparable across countries as in some cases (Germany, France, Ireland, Italy, Netherlands, Portugal and the UK) some or all payments are indistinguishable from earnings because employers administer the payments. Generally, where this is the case, parental benefits tend to be less generous or of shorter duration compared to countries where the payments are made directly by the government (see the Mutual Information System on Social Protection, MISSOC, http://ec.europa.eu/employment_social/spsi/missoc_en.htm). Furthermore, the problem of lack of comparability of parental benefit measures across countries also applies to traditional analysis using information on family and parental benefits taken directly from the data.

are captured in the child-contingent measure, by assumption. Similar effects may also apply in other countries but are only visible in the UK because the overlap between the two measures is otherwise large.

Although our focus is on payments intended to support children, the assumption that underpins standard poverty measures that all income is shared within the household means that it is also relevant to consider the effect of non child-contingent benefits. These are also calculated net of taxes paid on them, as explained above. Figure 4 contrasts the average size of each child's share of net non child-contingent benefits with the size of their child-contingent payments.

In a number of cases, notably the four Southern EU countries and Poland, non-child-contingent benefits are of comparable size (Portugal and Italy) or even exceed child-contingent amounts (Poland, Greece and Spain). In every other country shown, children on average receive more support from the benefits and tax concessions targeted on them than they do from all the other benefits and public pensions received by household members. It is worth noting (but not shown) that pension incomes make up a large share of non child-contingent incomes in some households containing children, particularly in the Southern European countries, Poland and Slovenia. This is a combined effect of the generosity of the pension systems and the presence within households of extended families. In Figure 4 countries are ranked by the total level of support per child and it seems that there is no particular relationship between the scale of benefits that are contingent on the presence of children and that of benefits that are not child-contingent. They neither complement nor substitute for each other in any systematic way.

5 Distribution of support for children

So far we have considered national average payments for children. The way in which such payments are distributed across the distribution of household income in each country is highly relevant to their effectiveness, especially in terms of vertical equity. We consider the size of the payment made per child in each decile group of the equivalised household income distribution. Disposable incomes are adjusted for

household size and composition using the modified OECD equivalence scale[7] and children are assigned to decile groups on the basis of this measure of their household's income. Figure 5 shows the average child-contingent payment for the children in each decile group. In order to be able to compare across countries the payments are, as before, measured as a proportion of per capita disposable income in that country. Also shown is the share of all children in each decile group and it can be seen that children are not uniformly distributed by household income. In most cases, there are more children in lower deciles, except in the Nordic countries, Slovenia and Belgium, where children are concentrated in the middle deciles, and Estonia with a relatively flat distribution. However, as deciles are based on income after receipt of benefits and deduction of taxes and contributions, the distribution of children is also affected by the distribution of child support.

This chart shows the relative amounts received for each child, depending where their household is placed in the income distribution. It does not indicate the distribution of resources for children across the income distribution. The net effect of child-contingent incomes (i.e. benefits, less taxes paid on these benefits, plus tax concessions) is shown by a solid line and the dark bars distinguish between taxes deducted (negative) and tax concessions (positive). In some countries both are present and the net effect is shown. In many countries the basic shape of the curves indicates that children in lower income households receive greater net child-contingent support than children in higher income households. This is strongly the case in Ireland and the UK (except the bottom decile group) and there is a similar but less pronounced effect in Denmark, Germany, Italy, the Netherlands, Poland, Portugal and Finland. In other cases the net effect favours children in high income household, particularly in Spain, Hungary, Estonia and Greece. In a third group of countries children receive rather similar amounts of support at each point in the income distribution, for example, in Belgium, Luxembourg, Austria and Sweden. In France and Slovenia (and also to some extent in Hungary and Luxembourg) the line has a rather irregular shape. In these four countries the positive effect of taxes (due to large tax concessions) and benefit payments play complementary roles with the former

[7] Attaching weight equal to 1 to the head of household, 0.5 to other adults (aged 14+) and 0.3 to children (aged below 14).

being more important at higher incomes, although with the exception of France the positive effect of taxes loses its value in the top decile group and taxes play a negative role here in Hungary. Generally the effect of the tax system, where there is one, is to complement that of benefits. But in Finland and especially Sweden taxes reduce the value of benefits for the better off and the same applies especially for children in high income households in Estonia, Hungary and Germany. Also, it is evident that the net effects of taxes are not always the most beneficial to those on the very highest incomes. This is not what one might expect *a priori* and one cannot assume that by omitting the effect of tax concessions one is simply under-estimating the effect on the richest.

Overall it is striking how much variety there is across countries in the targeting of resources by household income and in the use of the tax system to help target. Only accounting for gross family benefits would make little difference if any to the shape of the curve in some countries (Austria, Ireland, Poland and UK) but would have a significant effect in others (in particular in France, Greece, Italy, Luxemburg, Slovenia, Spain and Sweden), making it important to capture as much as possible of total support in cross-national comparisons.

Given this variety in targeting net child-contingent payments by income it is likely that there will be differences in the extent to which such payments protect children from poverty. It is also of interest to explore whether the picture is any different for net child-contingent payments than for gross family benefits, as conventionally used in such analysis (European Commission, 2008; Table 8). Poverty is defined as living in a household with total disposable income less than 60% of the median value, with incomes adjusted for household size and composition using the modified OECD equivalence scale. Table 2 shows the proportions of children measured as being in poverty if household income includes net child-contingent payments, and if it excludes them. It also shows what happens if gross family benefits are excluded.[8] As is well-documented elsewhere (European Commission, 2008) support for children has a highly variable effect on the risk of child poverty in different countries. Here the relevant issue is the extent of the difference between the effects of the two measures of child support.

[8] The poverty line remains the same, fixed at the level using (baseline) household disposable income, for all three measures.

The child-contingent measure makes a modest difference to the lowering of child poverty risk in many of the countries. It is substantial in Belgium, France, the Netherlands, Hungary and (relatively) in Spain. It is negligible in Denmark, Luxembourg and Finland and negative in Sweden and the UK (for reasons outlined above). Again, the importance of taking account of all child-contingent elements of income lies not so much to the difference it makes in any one country, but how it alters the picture cross-nationally.

One problem with considering the effect of state support on the risk of being poor is that this support, while contributing to income, may not be sufficient to raise it above the poverty line. Table 2 also shows the effect of the two measures of state support on the child poverty gap. This is the mean distance of the household income of poor children below the poverty threshold, expressed as a percentage of that threshold.[9] Since we hold the threshold fixed, this index picks up the extent to which the two measures of state support that we consider improve the situation of poor children. This effect is also illustrated in Figure 6 which shows how without net child-contingent benefits and tax concessions the child poverty gap would be much higher than it would be without gross family benefits in a sub-set of countries including France, the Netherlands, Germany, Portugal and Poland. Again, the relative effectiveness of policies in reducing the child poverty gap looks quite different, depending on the measure used. For example, the size of the poverty-reducing effect in Portugal is similar to that in Italy using the conventional measure. Using the child-contingent measure it is doubled.

6 Support versus needs

The net child-contingent measure captures the additional income received by a household because of the presence of children. We can use this to assess the extent to which countries cover the extra needs of children and hence contribute to horizontal equity. In general, assessing the degree of horizontal equity is difficult because it requires a comparison of the effect of the system on households that are like in all respects except one. In reality households with children can differ from childless households in many ways, both directly and indirectly: for example, through labour

[9] Also known as the FGT(1) index (Foster et al., 1994).

market behaviour. Our approach allows us to compare equivalised income for households with children with income for exactly the same household, assuming there were no children, but all other things remaining the same.

Comparing equivalised disposable incomes with and without children involves making two distinct calculations. First, we take no account of children in the calculation of household needs. This causes household equivalised income to rise, as indicated by the dark bar in Figure 7, which shows equivalised income without children as a percentage of equivalised income with children (the baseline). Then, we remove the net benefit payments and tax concessions received because of the presence of children. This causes equivalised income to fall as indicated by the pale bars.

Countries are ranked by the proportion of the needs (i.e. the dark bars) covered by the child-contingent incomes (i.e. the difference between the dark and pale bars) and this is shown by the bold line (against the right-hand axis). The ranking is similar to that for the average child-contingent payment, shown in Figure 2, which is to be expected. The proportion of children's extra needs that are met by the tax benefit system is more than four times higher in the most generous country, Hungary (54%) as in the least, Greece (12%).

The results of this exercise are highly dependent on the equivalence scale used, and should not be interpreted as absolute measures of need or the extent that it is met. This approach is of value because our focus is comparative and the extent to which having children makes households (financially) worse off varies with the tax and benefit system.

The same indicator obtained with gross family benefits (thin line) shows modest differences for most countries, except France. The results are basically the same with each measure for Luxembourg, Belgium and Ireland. The percentage of needs covered is higher when measured for child-contingent support for countries which rank either at the top or at the bottom by this measure. It is the opposite for middle-ranking countries. This demonstrates again that taking a more comprehensive approach to measurement of cash public support for children matters particularly in cross-national perspective. The between-country variance of the proportion of needs covered is higher using the gross family benefit measure than it is using the child-contingent measure (as measured by the

coefficient of variation – 48.4% and 41.6%, respectively). The traditional approach therefore over-estimates the extent of variation in public cash support for children for the 19 countries considered.

7 Conclusions

Much of the analysis that compares the size and effects of cash transfers for children across countries does so on the basis of gross benefit payments that are labelled for children. We have demonstrated how a more comprehensive measure, captured using static microsimulation techniques, improves comparability across countries. Our "net child-contingent measure" includes additions for children in benefits labelled as having other functions, it deducts taxes where they are payable on these benefits and it adds the value of tax concessions.

On average over the 19 countries that we consider the gross family benefits measure underestimates the total paid for the support of children by about one fifth. More importantly, the extent of the underestimation varies by country. It is largest for countries with relatively high levels of child-contingent support (e.g. France, Slovenia and Luxembourg) and those with relatively low levels (e.g. the Southern countries), while in case of Sweden and the UK the gross family benefits measure actually overestimates the scale of support. Moreover, the distributional effect of the components omitted from the traditional measure may also be significant. Most notably, tax concessions tend to favour children in better off households, particularly in France, but the tax treatment of children overall does not necessarily favour children in the very highest income households. The taxation of benefits reduces their net value, particularly for the better off. Certain benefits containing child-contingent elements, such as social assistance and housing benefits in some countries are naturally targeted on low income families. We also find that the protection offered against child poverty varies across countries with a different pattern when using the child-contingent measure than the traditional measure of child support. And we demonstrate how the more comprehensive measure can be used to establish a ranking of countries in terms of the proportion of the additional needs of children that are met through state support. Not only does this differ from that based on the size of gross family benefits but the cross-country variance in

degree of support, while still large, is smaller using the child-contingent support measure.

We believe that the use of microsimulation to estimate the size of net child-contingent incomes provides a measure that improves on standard practice. We have demonstrated how this applies in cross-national comparisons and it should be recognised that the method is also of value when assessing the effect of policy changes over time in a single country. For example, if child tax allowances were converted first to tax credits and later to cash benefits, and were subsequently taxed, fully capturing the changes would require a similarly comprehensive approach.[10] But for comparisons of systems in which the modes of public cash support for children are as varied as those we have considered, and may indeed be hidden from those not familiar with the policy in the country concerned, it is critical that a method of capturing all the relevant components is adopted. Using a microsimulation approach allows us to do this, and EUROMOD provides the basis for comparable measurement across many countries.

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[10] For an example of such analysis for the UK see Adam and Brewer (2004).

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Table 1 EUROMOD input datasets and simulated tax-benefit systems

Country		Dataset	Date of collection	Income reference period	Tax-benefit system
BE	Belgium	Panel Survey on Belgian Households	2002	annual 2001	2003
DK	Denmark	ECHP	1995	annual 1994	2001
DE	Germany	German Socio-Economic Panel Study	2002	annual 2001	2003
EE	Estonia	Household Budget Survey	2005	monthly 2005	2005
EL	Greece	Household Budget Survey	2004/05	monthly 2004	2005
ES	Spain	EU-SILC	2005	annual 2004	2005
FR	France	Enquête sur les Budgets Familiaux (EBF)	2000/01	annual 2000/01	2001
IE	Ireland	Living in Ireland Survey	1994	monthly 1994	2001
IT	Italy	Survey of Households Income and Wealth	1996	annual 1995	2001
LU	Luxembourg	Socio-Economic Panel (PSELL-2)	2001	annual 2000	2003
HU	Hungary	EU-SILC	2005	annual 2004	2005
NL	Netherlands	Sociaal-economisch panelonderzoek	2000	annual 1999	2003
AT	Austria	Austrian version of ECHP	1998,1999	annual 1998	2003
PL	Poland	Household Budget Survey	2005	monthly 2005	2005
PT	Portugal	ECHP	2001	annual 2000	2003
SI	Slovenia	A sub-sample of Population Census merged with administrative records	2005 (2002)	annual 2004	2005
FI	Finland	Income distribution survey	2001	annual 2001	2003
SE	Sweden	Income distribution survey	2001	annual 2001	2001
UK	UK	Family Expenditure Survey (FES)	2000/01	monthly 2000/01	2003

Acknowledgment: EUROMOD data sources are the European Community Household Panel (ECHP) User Data Base and the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (under contract EU-SILC/2007/03); the Austrian version of the ECHP made available by the Interdisciplinary Centre for Comparative Research in the Social Sciences; the Panel Survey on Belgian Households (PSBH) made available by the University of Liège and the University of Antwerp; the public use version of the German Socio Economic Panel Study (GSOEP) made available by the German Institute for Economic Research (DIW), Berlin; the Estonian Household Budget Survey (HBS) made available by Statistics Estonia; the Greek Household Budget Survey (HBS) made available by the National Statistical Service of Greece; the Enquête sur les Budgets Familiaux (EBF) made available by INSEE; the Living in Ireland Survey made available by the Economic and Social Research Institute; the Survey of Household Income and Wealth (SHIW95) made available by the Bank of Italy; the Socio-Economic Panel for Luxembourg (PSELL-2) made available by CEPS/INSTEAD; the Sociaal-economisch panelonderzoek (SEP) made available by Statistics Netherlands through the mediation of the Netherlands Organisation for Scientific Research - Scientific Statistical Agency; the Polish Household Budget Survey (HBS) made available by the Economic Department of Warsaw University; a sub-sample of Population Census merged with Personal income tax database, Pension database and Social transfers database, made available by the Statistical Office of Slovenia; the Income Distribution Survey made available by Statistics Finland; the Income Distribution Survey made available by Statistics Sweden; and the Family Expenditure Survey (FES), made available by the UK Office for National Statistics (ONS) through the Data Archive. Material from the FES is Crown Copyright and is used by permission. Neither the ONS nor the Data Archive bear any responsibility for the analysis or interpretation of the data reported here. An equivalent disclaimer applies for all other data sources and their respective providers cited in this acknowledgement.

Table 2 Child poverty rates and gaps with and without net child-contingent payments and gross family/parental benefits

	Child poverty rate %					Child poverty gap %				
	baseline	without child-contingent payments	*difference (pp)*	without gross family/parental benefits	*difference (pp)*	baseline	without child-contingent payments	*difference (pp)*	without gross family/parental benefits	*difference /pp)*
Belgium	8.5	24.3	*15.8*	20.2	*11.8*	2.3	6.2	*3.9*	5.1	*2.9*
Denmark	6.1	16.2	*10.1*	15.6	*9.6*	1.4	4.7	*3.3*	4.1	*2.7*
Germany	15.5	30.0	*14.5*	28.4	*12.9*	3.1	10.2	*7.1*	8.0	*4.9*
Estonia	19.2	30.0	*10.7*	28.6	*9.4*	4.9	11.9	*6.9*	11.8	*6.9*
Greece	22.0	23.5	*1.5*	23.1	*1.1*	7.6	8.5	*0.9*	8.4	*0.8*
Spain	23.4	26.3	*2.9*	24.2	*0.8*	7.5	8.7	*1.2*	8.2	*0.7*
France	8.9	34.0	*25.1*	28.4	*19.5*	1.1	9.9	*8.8*	6.1	*5.0*
Ireland	26.9	34.2	*7.3*	33.1	*6.2*	7.2	15.6	*8.4*	14.7	*7.6*
Italy	26.0	33.1	*7.1*	31.2	*5.2*	8.6	12.0	*3.4*	11.6	*3.0*
Luxembourg	14.9	32.7	*17.8*	31.9	*17.0*	1.6	8.7	*7.1*	8.2	*6.6*
Hungary	21.4	44.3	*23.0*	41.0	*19.7*	4.9	17.9	*13.0*	17.2	*12.4*
Netherlands	13.9	22.7	*8.8*	20.0	*6.1*	3.0	6.0	*3.0*	4.6	*1.6*
Austria	9.1	27.3	*18.2*	25.7	*16.6*	1.5	6.9	*5.4*	6.6	*5.1*
Poland	22.8	34.4	*11.6*	31.8	*9.0*	7.0	14.1	*7.1*	11.7	*4.7*
Portugal	27.9	31.0	*3.1*	30.0	*2.1*	5.9	11.8	*5.9*	8.9	*3.0*
Slovenia	15.2	30.3	*15.2*	28.2	*13.1*	2.5	10.1	*7.5*	10.3	*7.7*
Finland	11.3	24.2	*12.9*	24.3	*13.0*	1.8	6.9	*5.1*	6.9	*5.1*
Sweden	8.2	21.7	*13.5*	22.3	*14.1*	1.6	5.5	*3.9*	5.9	*4.3*
UK	19.1	37.7	*18.6*	38.2	*19.1*	2.9	14.3	*11.4*	15.2	*12.2*

Note: Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Poverty lines are held constant at 60% of the baseline national equivalised household disposable income. Source: own calculations with EUROMOD (version D24).

Figure 1: Calculation steps

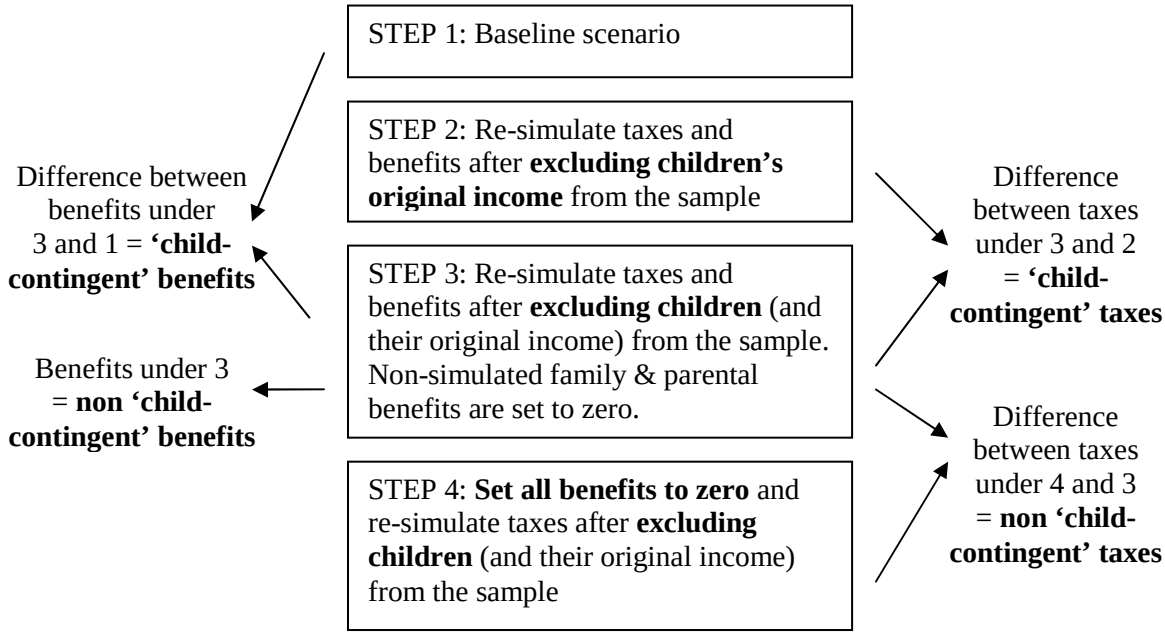
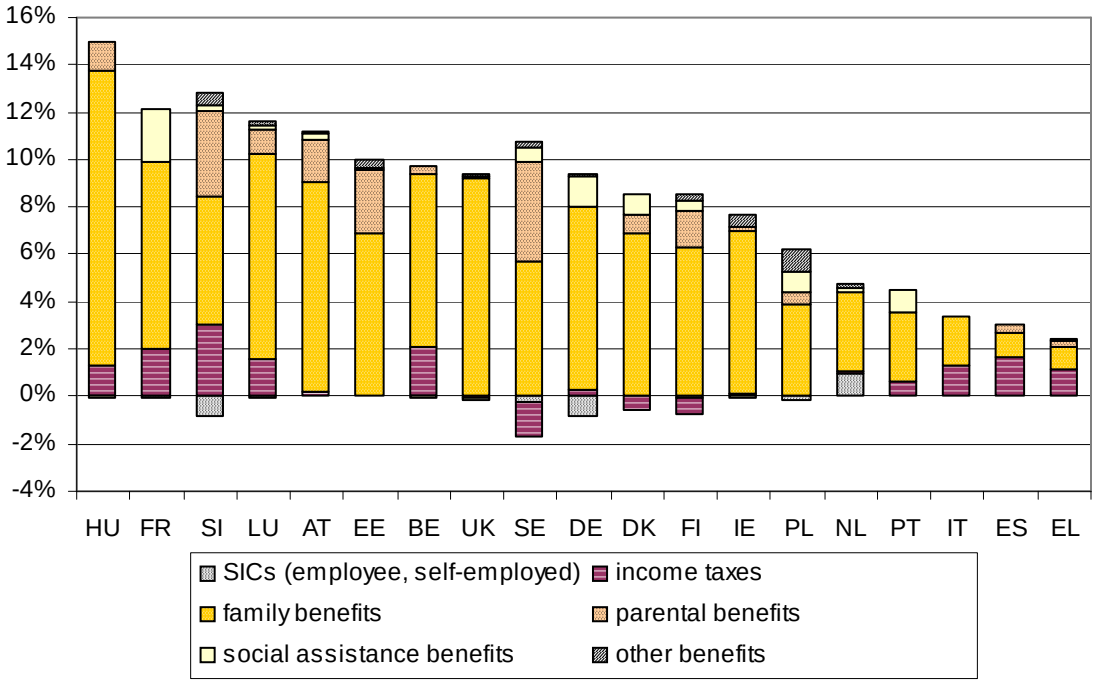
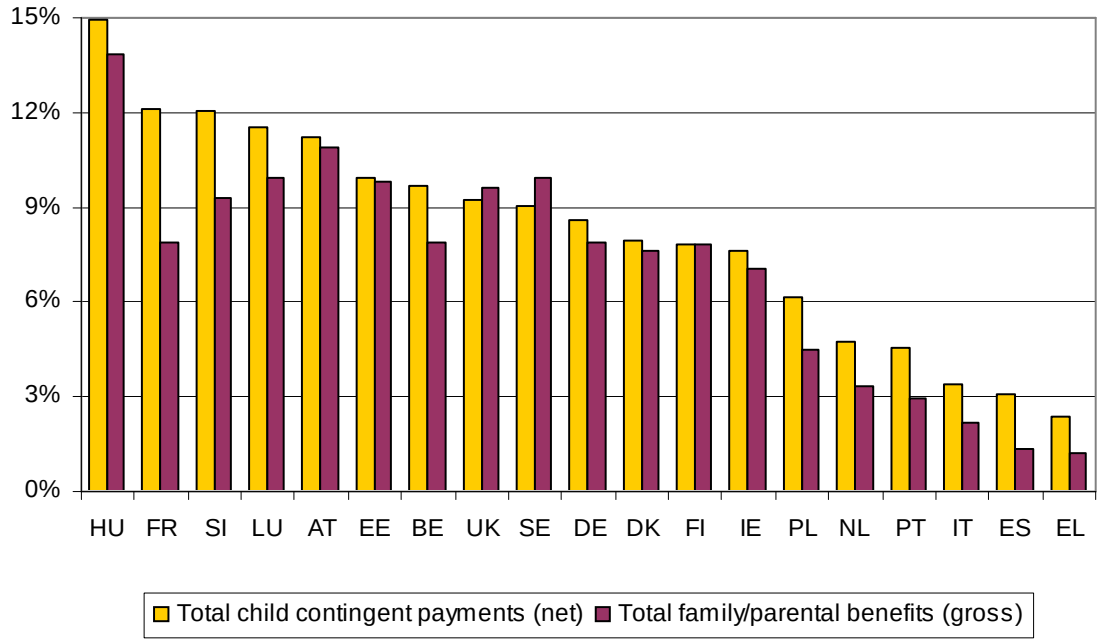


Figure 2: Child-contingent cash payments per child by benefit and tax categories (as a proportion of national per capita disposable income)



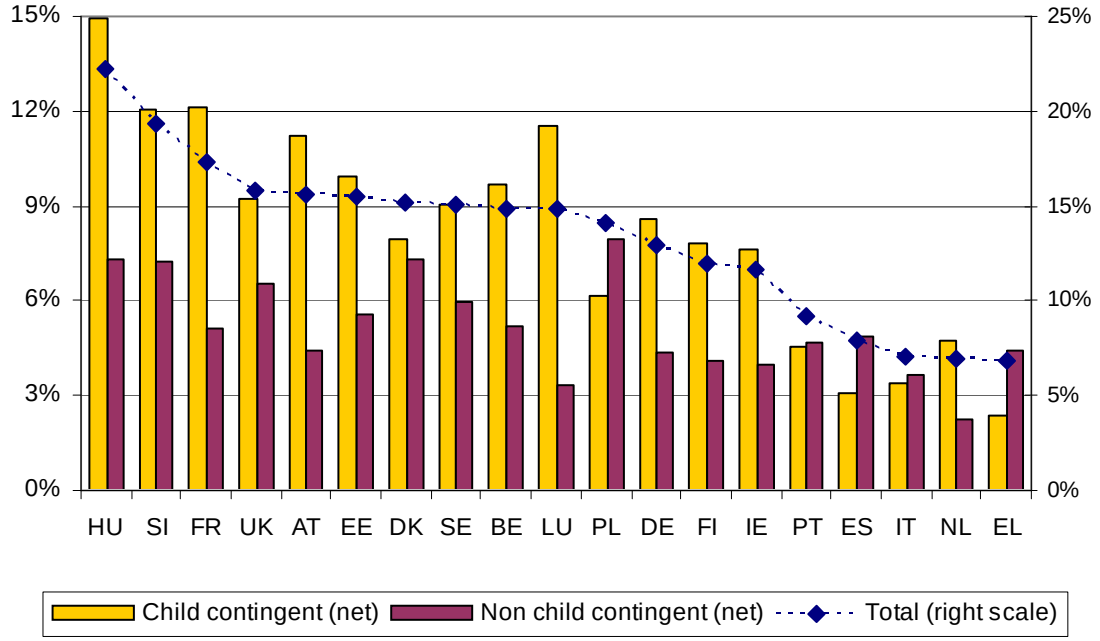
Note: countries are ranked by the size of the total net payment per child (as a proportion of national per capita disposable income). Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).

Figure 3: Total net child-contingent and gross family/parental benefits per child as a percentage of per capita disposable income



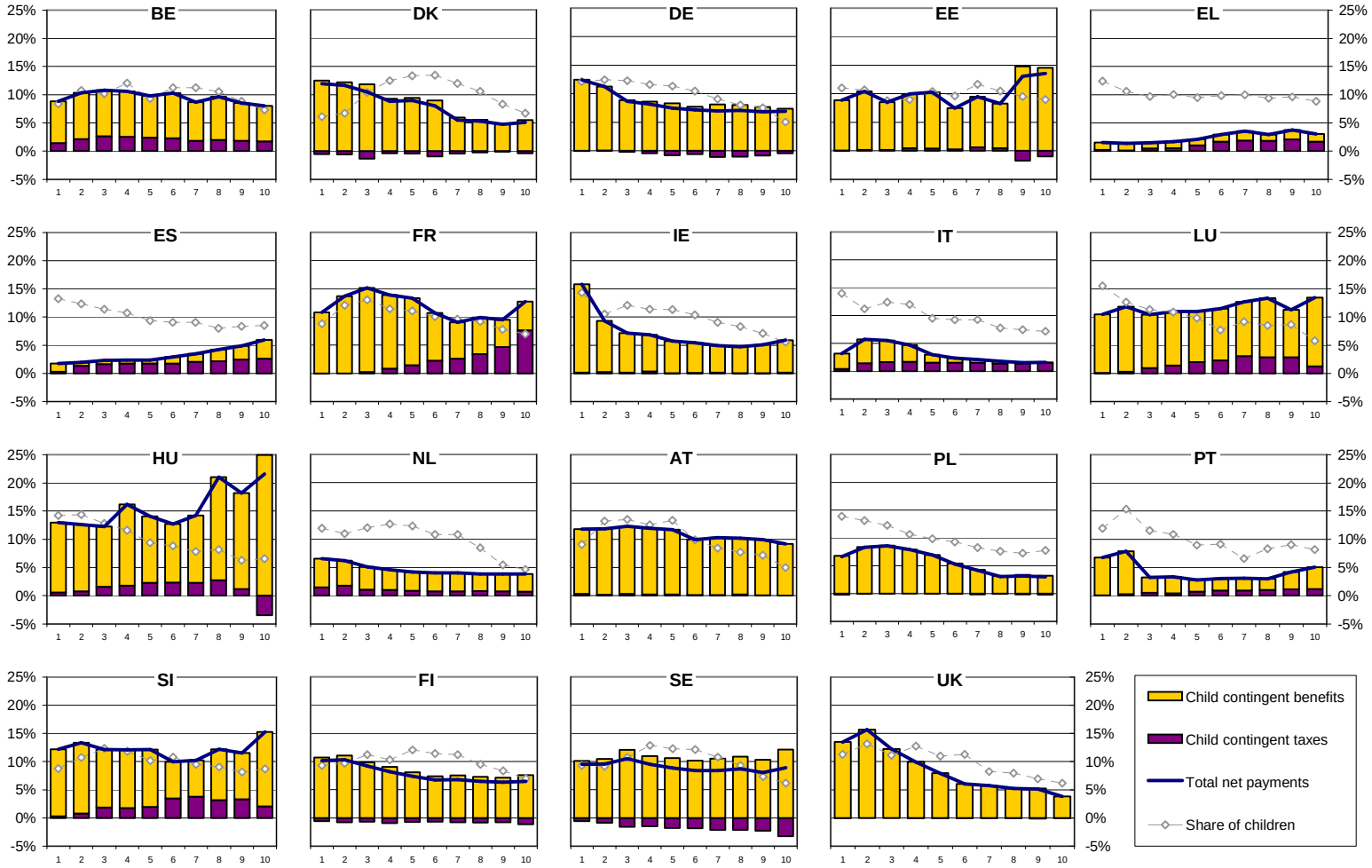
Note: countries sorted by the level of child-contingent payments. Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).

Figure 4: Total net child-contingent and non child-contingent cash payments per child as a percentage of per capita disposable income



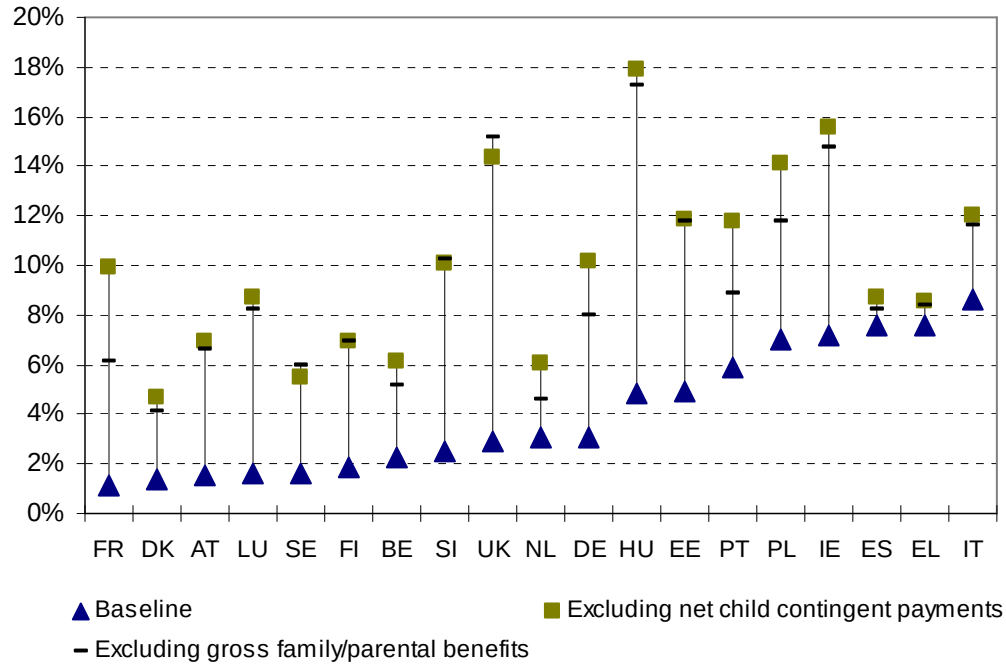
Note: countries sorted by the level of total benefits. Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).

Figure 5: Child-contingent payments (as a % of national per capita disposable income) and the share of children by decile group



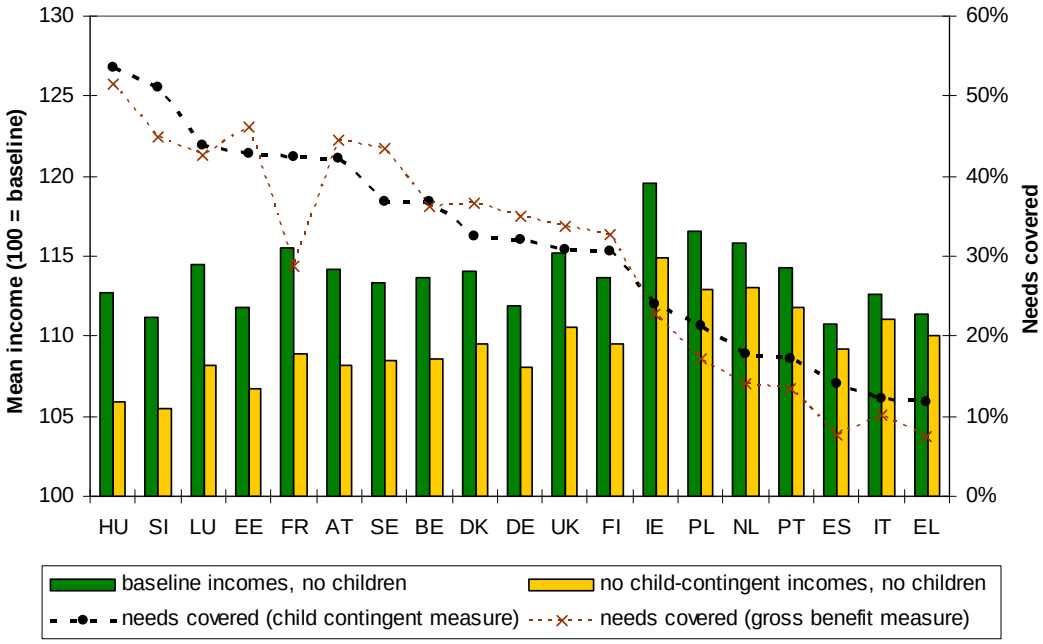
Notes: Bars show components of spending per child as a proportion of overall average per capita disposable income, by decile group. Deciles have been constructed on the basis of equivalised household disposable income of the entire population, using the OECD equivalence scale. Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).

Figure 6: Child poverty gaps with and without net child-contingent payments and gross family/parental benefits



Note: countries are ranked by the baseline poverty rate for the whole population, using national poverty lines defined as 60% of median equivalised disposable income. Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).

Figure 7: The proportion of average child needs covered by child-contingent payments



Note: countries are ranked by the % of child needs covered by child-contingent payments. Estimates relate to policy years 2001, 2003 or 2005. See Table 1. Source: own calculations with EUROMOD (version D24).