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## Child poverty and family transfers in Southern Europe

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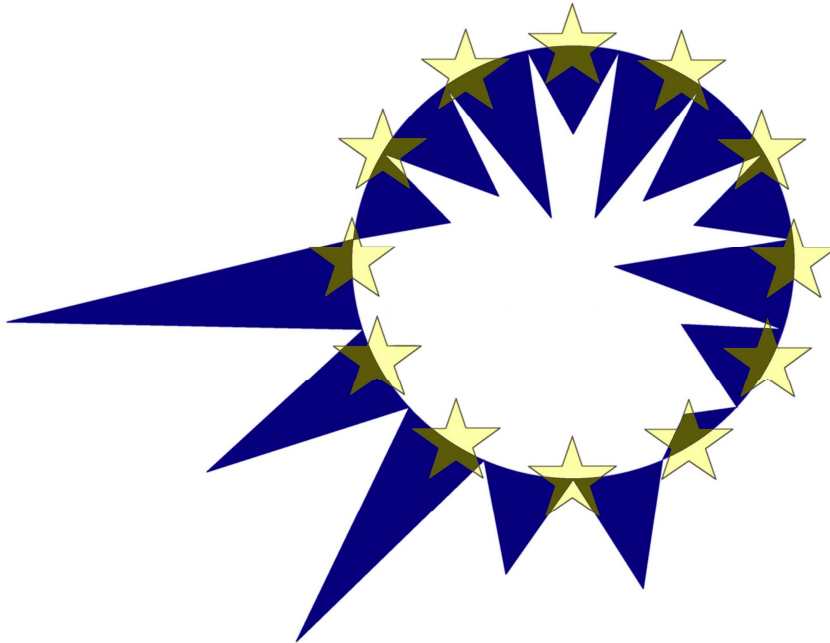
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# **EUROMOD**

## **WORKING PAPER SERIES**



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### **CHILD POVERTY AND FAMILY TRANSFERS IN SOUTHERN EUROPE**

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July 2004

# CHILD POVERTY AND FAMILY TRANSFERS IN SOUTHERN EUROPE

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## Abstract

The drive to reduce child poverty is of particular interest in southern Europe, where the subsidiary role of the State in matters of family policy has implied that programmes of public assistance to poor families with children are often meagre or not available at all. The paper examines the effect of family transfers (used broadly to include contributory family allowances, non-contributory child benefits and tax credits or allowances) on child poverty in Greece, Italy, Spain and Portugal. Using the European microsimulation model EUROMOD, the paper first assesses the distributional impact of existing family transfers and finds it is weak. The scope for policy reforms is then explored. By way of illustration, universal child benefit schemes similar to those in Britain, Denmark and Sweden are simulated. The impact of such schemes on child poverty is shown to be considerable, but their fiscal cost correspondingly substantial. The paper concludes with a discussion of key findings and policy implications.

JEL: C81, D31, I38

Keywords: Child poverty, social transfers, fiscal benefits, south Europe, microsimulation

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## 1. Introduction

Child poverty has risen to prominence as a distinct issue of social policy over the last few years. There is a variety of reasons for this development. On the one hand, concern with child poverty seems to appeal to all. As a matter of fact, the distinction between the “deserving” and the “undeserving” poor (as old as social policy itself, but arguably never quite forgotten) is not suited to a view on child poverty. Therefore, policies against child poverty enjoy much wider support than general anti-poverty policy can ever hope to muster. On the other hand, there is sufficient evidence on the social costs of child poverty and the benefits of early intervention. In the light of this, policy measures to combat child poverty can be justified on the grounds of the high future returns reasonably expected of such investment in human capital<sup>1</sup>.

In view of the above, the recent emphasis on child poverty on the part of policy makers looking to establish new areas of consensus on social policy can hardly be surprising. In the United States, the Clinton administrations greatly expanded the scope of Earned Income Tax Credit, which has now become the main instrument for the provision of income support to families. In Britain, the Labour government has committed itself to halving child poverty by the year 2010. A variety of policy instruments are to be employed, including substantial improvements to universal Child Benefit and of the child supplements to means-tested Income Support, as well as the extensive use of in-work benefits<sup>2</sup>.

Nearer home, from a south European perspective, the European Commission’s contribution to the Lisbon summit in March 2000 included a proposal to halve child poverty by 2010. Although eventually this proposal was not endorsed by the European Council, the Social Inclusion Process confirmed the greater visibility of anti-poverty policy at the level of the EU. Moreover, the elaboration of biennial National Action Plans since May 2001 has been in many countries, including those examined here, the occasion for initiatives specifically targeted to children<sup>3</sup>.

The drive to reduce child poverty is of particular interest in the context of southern Europe. If anything, “familialism” has long been identified as a special ingredient of south European welfare states. At first glance, it might be thought that in such a context families and children are well looked after. Rather paradoxically perhaps, this is not the case. On the one hand, family activism in the domain of social policy has proved far from fully effective in terms of preventing child poverty. The mobilisation of family resources to bail out relatives at risk of poverty requires that such resources are adequate in the first place, even when the existence of families or their willingness to help is not an issue. On the other hand, the “subsidiary” role of the State in matters of family policy has often implied that formal programmes of public assistance to poor families with children are meagre or not available at all<sup>4</sup>.

The limited role of social assistance for low-income families with children in the countries of southern Europe is in sharp contrast to the extensive (and, from a political point of view, rather “unproblematic”) reliance on tax benefits. Fiscal welfare, mostly taking the

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<sup>1</sup> For a detailed review of the evidence see Esping-Andersen (2002). For a more general analysis of social policy and child outcomes in the OECD area see Kamerman et al (2003).

<sup>2</sup> For an early assessment of the drive to reduce child poverty in Britain see Piachaud & Sutherland (2003). Working Families Tax Credit and Child Care Tax Credit (introduced in 1998) were consolidated to the new Child Tax Credit in 2002. For a review see Brewer (2003). For an assessment of means-tested programmes in the US see the various contributions in Moffitt (2002).

<sup>3</sup> For a detailed analysis of the open method of co-ordination as applied to the social inclusion process see Marlier (2003) and Ferrera et al (2002). For a full review of the National Action Plans see the joint inclusion reports issued by the European Commission in December 2001 and in December 2003 respectively. For a good child audit of the 2001 National Action Plans see Ruxton & Bennett (2002).

<sup>4</sup> For a classic analysis of south European welfare see Ferrera (1996). See also the collection of articles edited by Rhodes (1996). For a recent review of anti-poverty policy in southern Europe see Matsaganis et al (2003).

form of non-refundable income tax credits for dependent children, seems to be alive and well and causing the same regressive outcomes predicted by Titmuss many years ago<sup>5</sup>: tax benefits target tax payers, but poor families are often too poor to pay tax.

The combination of limited social assistance and the extensive recourse to fiscal benefits results in uneven coverage, with gaps where protection is needed most. The provision of categorical family allowances on a contributory basis compounds such fragmentation.

This paper aims to assess the impact of family transfers on child poverty in Greece, Italy, Spain and Portugal. The term "family transfers" is used broadly to include non-contributory child benefits, contributory family allowances and tax credits or allowances for dependent children<sup>6</sup>. The analysis relies on EUROMOD, a cross-country comparative benefit-tax model for all 15 members of the EU. Microsimulation models like EUROMOD allow users not only to evaluate the impact of existing tax and benefit measures but also to simulate the effects of alternative policy reforms. Both features are brought to use here.

The structure of the paper is as follows. The next section briefly describes the data and methodology used here. Section three reviews the incidence of child poverty by family type in southern Europe. Section four offers an account of family transfer programmes in the four countries. Section five assesses the distributional impact of existing family transfers. Section six simulates the effects of reforms to family transfers. The paper concludes with a discussion of key findings and their policy implications. Finally, policy updates and official statistics on child poverty are provided in the Appendix.

## **2. Data and methodology**

This paper relies on the output of EUROMOD, a cross-country comparative benefit-tax model. The model simulates a variety of taxes and benefits in each of the 15 countries of the EU. The policy instruments simulated here include income taxes, social insurance contributions, social assistance benefits, unemployed benefits, housing benefits, family benefits and, where possible, social insurance benefits.

EUROMOD simulates policy rules for particular countries as they existed in 1998, applied on the original micro-data sets drawn from family income surveys. The data used in this paper are derived from the Bank of Italy Household Income Survey (1995) and from the European Community Household Panel for Greece (1995), Portugal (1996) and Spain (1996). Income data have been updated to the year 1998, using appropriate adjustment factors by country and by income source.

The advantages of a microsimulation model such as EUROMOD are quite obvious. Benefit information is normally collected as part of surveys such as the above. Nevertheless, the benefits of interest (here family transfers) are often difficult to identify because of aggregation. Moreover, income taxes are almost impossible to read off the original data. Finally, the data year is inevitably not the same as the policy year under examination. As a result, it is impossible to estimate the effect of policies introduced or modified after the data were collected – except through microsimulation. In view of all this, the model constitutes a powerful tool for research on reforms to social security and the fiscal system in a comparative perspective.

Equally obvious are the disadvantages. EUROMOD is a static model, based upon purely arithmetical calculations. As such, it cannot account for behavioural responses, such as

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<sup>5</sup> See the collected essays of Richard Titmuss edited by Alcock et al (2001). The issue is dealt with in particular in Part IV: Fiscal and occupational welfare and the myth of economic man.

<sup>6</sup> In a recent study, Levy (2003) adopted a still broader definition of family transfers than the one used here, one that included all child-related instruments anywhere in the social benefit system. Indeed, the practice of adding special allowances for dependent children to policy instruments as diverse as old age pensions, unemployment benefits, housing benefits and so on is quite diffuse in southern Europe. In view of that, this approach is promising (and a good demonstration of the analytical power of tax-benefit models). Nevertheless, a more conventional approach is followed in this paper, restricted to transfers specifically targeted to children.

those related to labour supply decisions, when simulating the effects of policy changes. Moreover, due to data limitations, it should be noticed that in-kind benefits and publicly provided services are not examined here. This is an important omission: non-cash benefits have a significant effect on family and child welfare and play a major role in the policy debate in many countries. This is an issue we will return to later on in the paper.

A further set of methodological problems is potentially more amenable to treatment. The application of policy rules to a given population implies that these rules are fully adhered to. Of course, this is not true in the real world. On the one hand, not all individuals claim the benefits they are entitled to. It is known that non-take up is caused by fear of stigma, incomplete information about entitlements, administrative errors and other reasons. It is also known that the extent of non-take up can be considerable with respect to means-tested benefits, though much less so with respect to universal benefits. However, non-take up of social benefits in the countries of southern Europe is neglected as a policy issue and relatively overlooked as a research topic<sup>7</sup>. Similarly, there may be "leakage" of means-tested benefits to non-entitled households or individuals. For the purposes of this paper, the impact of family transfers is assessed as if all benefits were perfectly targeted, in the sense of being fully taken up by all legitimate claimants and received by no illegitimate ones.

On the other hand, not all individuals pay the taxes they are liable to. Tax evasion is known to constitute a serious issue, all the more so in the countries of southern Europe. Again, no adjustment is made to the data, as if the incomes reported in the surveys on which the model relies were the same as the incomes declared to the authorities for the purposes of assessing both liability to income tax as well as eligibility to income-related benefits. The implications of the twin assumptions of perfect tax compliance and perfect targeting are discussed in the conclusions.

The objective of this paper is to assess the effect of family transfers on child poverty and to examine the role of reforms that are variations on the theme of universal child benefits. In line with the recommendation of UNICEF, children are defined as individuals below 18 years of age. Differences in household size and composition are dealt with by applying the modified OECD equivalence scale, as used by EUROSTAT. Household income is assumed to be equally shared among household members. The poverty line is set at 60 per cent of the median per capita equivalent disposable income in the "baseline scenario" and is held constant in simulated reforms.

### **3. Household composition and child poverty**

The importance of the family has long been identified as an outstanding feature of southern Europe. In this part of the world, families function as an informal but effective social safety net, across a whole range of policy areas (including child care, care for the elderly, unemployment assistance, housing and social assistance).

Resource pooling between family members needs not operate within households, but it usually does. As a matter of fact, the common assumption of equal sharing of resources on which most current research on poverty – including the research presented here – rests may not fully capture what actually goes on inside many south European families. There is evidence that low income families go to very considerable lengths to ensure that their children appear less "different" to their peers than might have been expected on the basis of family income alone (for example, by spending a larger share of the family budget on expensive clothing and footwear)<sup>8</sup>.

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<sup>7</sup> For a recent survey of non-take up of social security benefits in Europe see Hernanz et al. (2004).

<sup>8</sup> For an excellent analysis of family and consumption in contemporary Italy see Ginsborg (2001: chapter 3). Incidentally, in the absence of a theory and more robust evidence of how family budgets are actually allocated between family members, replacing the rule of equal sharing of resources by any other would risk introducing a greater dose of arbitrariness. Nevertheless, if poor families really spend a disproportionate amount of their

As youth joblessness remained high or increased such resource pooling intensified. It is remarkable that the proportion of young persons aged 25-29 still living with their parents rose between 1987 and 1996 from 39 to 50 per cent in Greece, from 39 to 59 per cent in Italy, from 49 to 62 per cent in Spain and from 39 to 52 per cent in Portugal. The equivalent figure in the EU as a whole was a mere 32 per cent<sup>9</sup>.

Moreover, as much of current research has emphasised, social change has undermined the assumption of a working husband supporting a housewife and their children, or the "male breadwinner model" on which welfare state building in the post-war period implicitly relied. The decline of the traditional family and the rise of atypical family forms have exposed certain population groups to a higher poverty risk, single mothers and their children being the most widely discussed case<sup>10</sup>.

In the light of the above, it follows that the point of departure for any discussion of child poverty in southern Europe must be an analysis of household composition. This is shown in Table 1.

[TABLE 1]

As Table 1 shows, a large proportion of children in southern Europe, ranging from 47 per cent in Portugal and 55 per cent in Spain and Italy through to 60 per cent in Greece, still live in "standard" families of father, mother and their one or two children. The incidence of families with grown-up children (i.e. aged over 18) is comparatively large. The same is true for the proportion of children in large or extended families ("other household types"). On the contrary, lone parent families account for a relatively low share of the child population, especially if one focuses on those with children below 18 (single parent families with older children are likely to include more widows than never-married mothers).

In the light of the above, when analysing child poverty in southern Europe it is useful to distinguish between poverty rates and poverty shares. The former is simply the proportion of children in a certain household type that are below the poverty line. The latter is a function of the population share of each household type, calculated as the number of poor children in a certain household type as a proportion of all poor children<sup>11</sup>.

The implications of this distinction are more clearly brought out in Table 2. In terms of poverty rates, child poverty rates are highest in large and lone parent families. In this sense, there is nothing remarkable about child poverty in southern Europe compared to the rest of Europe. In terms of child poverty shares, a very different picture emerges. In the case of lone parent families this is clearly limited: from about 8 per cent of all poor children in Italy to 15 per cent in Portugal. Large families account for a higher share of poor children, especially in the three Latin countries<sup>12</sup>. Yet, a very substantial proportion of children in poverty (ranging from 29 per cent in Portugal to 48 per cent in Greece) live in "standard" families of couples with one or two children.

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scarce resources on their children, the position of southern Europe in the child poverty league would have to be revised upwards.

<sup>9</sup> For a more detailed analysis of youth independence in southern Europe see Fernández Cordón (1997). The statistics cited are reported in Ferrera et al (2000).

<sup>10</sup> For a lucid analysis of social changes and their implications for social policy see Lewis (2001). For a south European perspective see Saraceno (1997).

<sup>11</sup> Note that any estimate of child poverty by household type is sensitive to the equivalence scale used. Other things being equal, the lower the household economies of scale implicit in the equivalence scale used with respect to children, the higher the headcount poverty rate and poverty share of children living in larger households.

<sup>12</sup> Other evidence suggests that the poverty rate for families with three or more children in Greece reported here is an underestimate (see Table A.3 in the Appendix). As explained in section 5.2, the principal reason for this is that our analysis assumes perfect targeting of benefits. Since benefits to large families are particularly generous in Greece, their anti-poverty impact under conditions of full take up is shown to be strong. This point is discussed more fully later on.

[TABLE 2]

Turning to the age profile of poverty, Table 3 shows that the risk of poverty is higher for children than it is for the population as a whole in all countries except Greece. On the other hand, poverty rates for the elderly are lower than for children in Italy and in Spain, while the opposite is true for Greece and Portugal.

[TABLE 3]

Naturally, "headcount" rates tell only part of the story. For instance, a look at the income gap ratio, or the average income shortfall of poor families from the poverty line as seen in Table 4, reveals that the "depth" of child poverty is greatest in Greece and smallest in Portugal. Remember that the opposite is true with respect to the poverty rate (17 per cent in Greece vs. 23 per cent in Portugal). In other words, while proportionally fewer children find themselves below the poverty line in Greece compared to the other south European countries, those who do have lower relative incomes on average.

[TABLE 4]

The picture changes again if a poverty indicator is adopted that attaches greater weight to larger income gaps, such as the index proposed by Foster, Greer & Thorbecke (1984). For values of the poverty aversion parameter ( $\alpha$ ) greater than one, the FGT index simultaneously takes into account the poverty rate, the income gap and the extent of inequality among the poor<sup>13</sup>. In the right-hand panel of Table 4, the index values are reported for  $\alpha=2$ .

Contrasting headcount ratios with income gaps and the FGT index is a useful reminder of the fact that the effectiveness of policy (the main focus of this paper) cannot be simply read off official poverty statistics based exclusively on headcount ratios. The impact of family transfers on child poverty is discussed later on. Before that, the paper turns to the nature of family transfers in the south European countries. A brief account of the relevant arrangements in the domain of social security or the tax system for each of the four countries in turn is provided below.

#### 4. National policy profiles

In all four countries of southern Europe income transfers to families include occupational family allowances, non-contributory benefits and tax relief for dependent children.

In Greece, substantial assistance to large families is provided through the "3<sup>rd</sup> child benefit" and the "large family benefit", funded out of general taxation. Since 2002, these are no longer income tested. Another non-contributory benefit but of lower value is "unprotected child benefit", aimed to low-income single parent families or households caring for orphans born to relatives (i.e. foster families are not eligible). Civil servants receive family allowances as salary supplements, while similar but lower allowances are paid to private sector employees conditional on adequate contributory record. Finally, child tax credits reduce the tax bill of eligible tax payers at a flat rate and on a non-refundable basis. In 2002, a new refundable tax credit was introduced, targeted at low-income families with children at school aged 6-16.

In Italy, the main transfer to households with children is "family allowance", a contributory benefit reserved for dependent workers (active or retired). The amount of benefit increases with household size and is inversely related to household income (since 1983). Two non-contributory schemes were introduced in 1999: a "benefit for large families" for households with three or more children and a "maternity allowance" for mothers not covered by social insurance. Both schemes are tested with the Indicator of Economic Situation (ISE), an instrument combining information on household income and wealth. While the benefit for large families can be claimed by the self-employed as well (unlike the contributory family allowance), the only scheme providing universal

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<sup>13</sup> For expositional purposes, the estimates of the FGT index reported in the paper have been multiplied by 100.



support to children is the income tax credit for dependent children. Since 2001, the tax credit rises with the number and age of children, while it decreases moderately beyond a certain level of taxable income.

In Spain, families with children below 18 may be eligible for income-tested child benefit. The benefit is targeted at families with very low incomes, though the income threshold increases with the number of children. Approximately 13 per cent of all children received this benefit in 2001. On the other hand, child tax deductions in Spain until 1998 took the form of a non-refundable child tax credit that rose more than proportionally with the number of children. In 1999, the tax credit was replaced by a child tax allowance (i.e. a reduction of taxable income rather than of tax due), whose level per child rises with the number and diminishes with the age of children. In 2003, a refundable tax credit for working mothers was introduced for working women with children aged less than 3.

In Portugal, assistance to families is provided under the "child and youth family benefit" programme. Benefit rates are inversely related to family income. Income brackets are set at multiples of the minimum wage. Within each bracket, allowances vary by the age and number of children. Moreover, special supplements apply in case of disability. While eligibility for the "child and youth family benefit" is limited to children of dependent workers covered by social insurance, the scheme is open to the self-employed on a voluntary basis. Low-income families without social insurance coverage may have access to the child benefit provided they meet a more stringent income test. Furthermore, a system of tax credits for dependent family members operates within the income tax system: each tax unit may credit a certain amount per dependent family member against its gross tax liability.

Not all of the above programmes were taken into consideration in assessing the impact of family transfers on child poverty. The year of reference for this paper is 1998. New programmes have been introduced in the meantime, while changes to older programmes have also taken place. Table 5 shows the programmes whose impact is examined here. A policy update is provided in Table A.1 in the Appendix.

[TABLE 5]

The above brief accounts of family transfer arrangements in southern Europe indicate that, in spite of a certain degree of institutional variation, common patterns are not hard to identify. This is brought out more clearly in Table 6, where stylised entitlements to cash benefits and tax relief are presented. Various points at the income scale (€5 000, €10 000, €25 000 and €100 000 per annum in 1998) are taken as yardsticks for families with one, two and three children.

[TABLE 6]

The amount of assistance per child provided through cash benefits rises with the number of children in Greece, but this effect is less clear in Italy, while the structure of benefits remains invariable in Portugal and especially in Spain. On the other hand, benefit levels are inversely related to income, at least over a certain range, with the exception of Greece where such effect is less consistent. In Spain, benefits are withdrawn fully at relatively low levels of income. In Italy, low-income families with one or two children risk being ineligible for benefit, while the amount of assistance seems to be maximised at the €10 000 income mark, as it then declines steeply. In Portugal, benefits decline gently as income rises. In both Italy and Greece, the structure of transfers leaves a large number of children in low-income families exposed to poverty. The fragmentation of contributory allowances along occupational lines mentioned earlier adds quite an exceptional element of regressivity in the allocation of family transfers.

Turning to the treatment of dependent children by the income tax system, regressive outcomes seem to be the rule. To start with, families on low incomes derive little or no benefit from the child tax relief, as they would have paid little or no income tax in any case. At this income level, irrespective of the number of children, tax relief is entirely worthless in Italy and Spain, while the resulting gross tax liability is lower than the tax

credit itself in Greece and Portugal. In general, as families begin to pay tax, the per child value of child tax relief increases and then remains constant in all four countries. Overall, income transfers to families with children are even less generous through the tax system than through social security. In Spain, a clear dichotomy seems to apply: taxpayers are entitled to tax relief for dependent children but not to family cash benefits, while low-income families with children are entitled to cash benefits but not to tax relief.

The discussion of the effects of policy changes after 1998, reference year for this paper, is clearly beyond its scope. Nevertheless, stylised entitlement to family transfers in 2003 is shown in Table A.2 of the Appendix. A comparison with the figures reported here in Table 6 shows that in Portugal and in Spain entitlement to cash benefits improved across the board since 1998. Such improvements were more selective in Italy and in Greece, where they favoured families with three children on low and high incomes respectively<sup>14</sup>. Changes to the structure of tax relief for dependent children brought about large gains to families in the upper part of the income scale in Italy and in Spain (specifically, middle-income families in the former and high-income families in the latter). In Portugal and in Greece increases to the value of tax relief were less marked, though the large family bias was somewhat reinforced further in the case of Greece.

Stylised entitlement is heavily dependent on underlying assumptions, especially where (as in Greece and, to some extent, in Italy) coverage is fragmented. As a result, the emerging picture may be partly driven by the choice of cases for which entitlements are calculated. This is not an issue if estimated entitlement is generated by the model itself. Average values of family transfers for 12 family types are shown in Table 7.

[TABLE 7]

Table 7 is different from Table 6 in various other respects as well. To start with, an extra dimension has been added as regards the number of children in the family (4+). Moreover, the family income groups are defined in terms of average full-time earnings of male employees in each country. For example, "middle" income is defined as falling in the range of 75% to 175% of average earnings, while "low" and "high" incomes are defined as being below or above that range respectively. Furthermore, microsimulation estimates entitlement by taking into account hitherto ignored interactions. For instance, family benefits may be taxed, receipt of benefit raises disposable income which may lead to more tax paid etc.

Despite these differences, several of the earlier findings are confirmed. Cash benefits are more substantial than tax relief, except for middle to high income families in Spain. The value of cash benefits diminishes with income, though not as clearly in Greece. Tax relief favours higher-income families. The value of family transfers increases with the number of children.

The analysis of entitlements at various levels of income and family size presented above raises important questions about the distributional impact of family transfers in southern Europe. Offering answers to such questions requires a more systematic analysis of the incidence of family transfers. This is explored in the next section.

## 5. Family transfers and child poverty

What is the distributional impact of existing arrangements of family transfers in southern Europe? Section 5.1 presents detailed empirical evidence on this question drawing on estimates produced with the European tax-benefit model EUROMOD. A broad comparison of these estimates with official statistics of child poverty and of the distributive impact of social transfers is attempted in section 5.2. Finally, the question of target efficiency of family transfers in southern Europe is analysed more formally in section 5.3.

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<sup>14</sup> In the case of Italy, this was due to the introduction of the means-tested "benefit to large families" in 1999. On the contrary, in Greece the income tests for "3<sup>rd</sup> child benefit" and, secondarily, family allowance for private sector employees were abolished in 2002 and 1999 respectively.

### 5.1. Distributional impact of family transfers

Table 8 shows the incidence of total expenditure on family cash benefits and child tax relief separately by decile of equivalent disposable income in each of the four countries. Cash family benefits in Spain and in Italy target the bottom of the income distribution, as the four poorest deciles account for approximately 97 and 85 per cent of all benefit respectively. Conversely, the proportion of total expenditure received by the four richest deciles is 1 per cent in Spain and 4 per cent in Italy. This effect is less marked in the case in Portugal and reversed in that of Greece: while in the former the ratio of total benefit received by the four poorest and the four richest income deciles is 46 to 33 per cent, in the latter it is 37 to 44 per cent (i.e. more benefit to higher-income families).

[TABLE 8]

In contrast, child tax relief tends to be more evenly distributed among taxpayers (that is, except to lower income groups). As a matter of fact, the ratio of the amount received by the upper half of the distribution relative to that received by the lower half is 1.8 in Greece, 1.4 in Portugal and 1.1 in Spain, while in Italy the distribution of tax relief is skewed in favour of lower incomes.

Table 9 shows the incidence of family cash benefits and child tax relief by decile in terms of income share. Focusing on the poorest decile alone, cash benefits contribute about 1 per cent of total family income in Greece, 3 per cent in Spain and in Portugal, 6 per cent in Italy. Except in Italy (over 2 per cent), the relative value of tax relief to the bottom decile is negligible. On the whole, the distribution of cash benefits to families by income group seems to be more strongly progressive in Italy and, to some extent, in Portugal. In Spain, family cash benefits make an appreciable contribution to the incomes of families in the lowest decile, but taper off rapidly as income rises.

[TABLE 9]

The income share of child tax relief is much lower everywhere. Except in Italy, families in the bottom decile take little advantage of tax relief compared to those immediately above them in terms of income. Overall, the weight of tax relief is lower than that of cash benefits everywhere except in Spain. All these findings are in line with the previous discussion of entitlements.

Such variations between countries are vividly depicted in Graph 1. The graph contains four lines: the concentration curves of family cash benefits, child tax relief, all family transfers taken together and equivalent disposable income (net of family transfers), where the members of the population are ranked in ascending order according to their equivalent disposable income. The concentration curves show the cumulative distribution of the corresponding variables. Since the members of the population are ranked according to their equivalent disposable income, the concentration curve of equivalent disposable income (net of family transfers) is the Lorenz curve of this distribution. Furthermore, the (diagonal) line of perfect equality is also depicted in the graph for expositional purposes. Since cash benefits are more important than tax relief in Greece, Italy and Portugal, the location of the concentration curve of all family transfers taken together in these countries is determined to a large extent by the location of the concentration curve of cash benefits. The opposite is observed in Spain, where the income share of cash benefits is relatively low.

[GRAPH 1]

In Greece, where cash benefits are more spread across the entire income distribution than in the other countries, the corresponding concentration curve is very close to the diagonal. In the other countries, the concentration curve of cash benefits lies above the diagonal. In fact, in the cases of Italy and, especially, Spain these concentration curves follow closely the top left corner of the graph, thus implying that these highly

concentrated benefits are likely to be very progressive (especially in Italy, where cash benefits are quantitatively more important).

In all countries apart from Italy the concentration curve of tax relief lies below the diagonal. Actually, since in Greece, Spain and Portugal the poorest households do not benefit from tax relief, the concentration curve of tax relief in these countries crosses the Lorenz curve close to the bottom of the distribution.

When all family transfers are taken together, the corresponding concentration curves in all countries lie above the Lorenz curve, thus implying that these transfers reduce aggregate inequality. However, it should be noted that in Portugal, Spain and, especially, Italy the concentration curve lies above the line of perfect equality, whereas in Greece it lies below it. Therefore, it can be argued that in comparative terms these transfers are less well-targeted towards the poorest segments of the population in Greece than in the rest of the countries under consideration.

Table 10 presents the income share of family transfers and the average transfer per child by household type. In relative terms, the household types whose income increases the most after family transfers are couples with three or more children, followed by single parents with younger children. In absolute terms, the value of family transfers per child rises with the number of children in Greece and, to a lesser extent, in Italy, but the opposite is true in Portugal, while the corresponding profile is flat in Spain.

[TABLE 10]

Nevertheless, the most striking finding is that the overall value of family transfers in southern Europe is extremely low. For instance, couples with one or two children (i.e. the two family types that account for 55 per cent of all children in the four countries as a whole) seem to receive about €6 per child per month in Spain and in Greece, about €12 in Portugal and no more than €19 in Italy<sup>15</sup>.

What is the distributional impact of existing arrangements of family transfers in southern Europe? This question is harder to answer than appears to be the case at first sight. If income support had not existed, it seems reasonable to assume that some families might have adjusted their behaviour with respect to work and other aspects of their lives. As a result, the full effect of income support on poverty is destined to remain unknown (and the subject of controversy among economists). Nonetheless, its immediate impact is straightforward: benefits raise the disposable income of all claimants and lift at least some over the poverty line. The question therefore becomes: what is the first-order impact of family transfers in terms of children lifted over the poverty line? This is shown in Table 11. The figures can be interpreted as the proportional reduction in the number of children below the poverty line (left-hand panel) and in aggregate child income gap (right-hand panel) due to family transfers.

In terms of headcount poverty, family transfers reduce the number of poor children by 19-21 per cent in Portugal and in Italy, and by 7-8 per cent in Spain and in Greece. With respect to household types, family transfers are more effective at taking children out of poverty if these live in large families. On the contrary, the anti-poverty performance of family transfers as regards one-child families is below average in Italy and disappointing in the other three countries: a proportional reduction of merely 6 per cent in Portugal, 3 per cent in Spain and no reduction at all in Greece.

[TABLE 11]

A similar picture emerges in terms of income gap ratios. On the whole, the aggregate child poverty gap (before family assistance) is reduced by 37 per cent in Portugal, 28 per cent in Italy and 11-12 per cent in Greece and in Spain. This reduction is greatest among families with three children and lowest among those with one child only.

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<sup>15</sup> Low sample size affects the estimates for some household types, as in the case of lone parent with at least one older child (i.e. aged over 18) in Italy.

As explained earlier, family transfers have two components: cash benefits and tax relief. What is the relative contribution of each to the reduction of child poverty? An answer to that question is provided in Table 12. In terms of poverty rates, the impact of tax relief appears to be rather negligible, not exceeding a 1.2 percentage point reduction (in Spain). By contrast, family cash benefits seem to be most effective in Portugal and in Italy (a reduction of over 5 percentage points), much less in Greece (1 percentage point) and almost not effective at all in Spain. Overall, in comparison to what their level would have been in the absence of family transfers, child poverty rates are 6 percentage points lower in Portugal and in Italy, but less than 2 points lower in Greece and in Spain.

[TABLE 12]

The results obtained by focusing on the Foster-Greer-Thorbecke index ( $\alpha=2$ ) shed more light to the distributional impact of family transfers, since for  $\alpha>1$  the index attaches greater value to changes at the bottom of the income distribution. Tax relief has a negligible impact on the index, causing a proportional reduction ranging from 5 per cent in Portugal and in Italy to 1-2 per cent in Greece and in Spain. In contrast, the corresponding reduction achieved by cash benefits is much stronger: 44 per cent in Portugal, 27 per cent in Italy, 14 per cent in Spain and 11 per cent in Greece. In fact, the case of Spain offers an illustration of the limitations of a policy approach looking at the headcount rate alone: while tax relief lifts more children over the poverty line than cash benefits, its distributional impact further down the income scale as measured by FGT ( $\alpha=2$ ) is much weaker.

## 5.2. Comparison with official statistics

How do these estimates compare with official statistics on child poverty? Table A.3 in the Appendix presents the most widely used of such statistics, produced by Eurostat based on the results of the European Community Household Panel<sup>16</sup>.

A comparison of EUROMOD estimates presented in Tables 2 and 12 here with Eurostat figures reproduced in Table A.3 in the Appendix would conclude the following. In terms of baseline estimates of child poverty, EUROMOD figures are broadly in line with Eurostat ones with respect to Greece, but seem to overstate child poverty by about 4 percentage points in Italy and understate it by a similar margin in Spain and Portugal. In terms of distributional effect of family transfers, the main finding is that Eurostat estimates show it to be much weaker in the case of Italy than according to the results presented here. How can these differences be accounted for?

On the whole, as explained in section 2 earlier, the dataset incorporated in EUROMOD is "synthetic". The original data for the four countries of southern Europe refer to the year 1995 (Greece and Italy) or 1996 (Spain and Portugal). Income data were then updated to the year 1998, the policy year for our analysis<sup>17</sup>. Moreover, while in three of the four countries the original data were drawn from the European Community Household Panel, data from the Bank of Italy Household Income Survey were used for the model of that country. A further cause for discrepancy might be the definition of children as individuals below 16 in Eurostat documents, instead of individuals aged 0-17 as in this paper.

On the other hand, more general issues arise from the fact that tax-benefit models are fundamentally different to common datasets. In the latter social transfers can be read off the data, in the former they are simulated by the model itself. Furthermore, Eurostat defines social transfers excluding tax relief, which forms a crucial element in the analysis in this paper. Finally, as explained earlier, our estimates rest on the assumption of full take up of social transfers. Actual take up may well be less than complete, although the

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<sup>16</sup> For a more thorough comparison of EUROMOD baseline estimates with those derived from national statistical sources and the ECHP see Mantovani & Sutherland (2003).

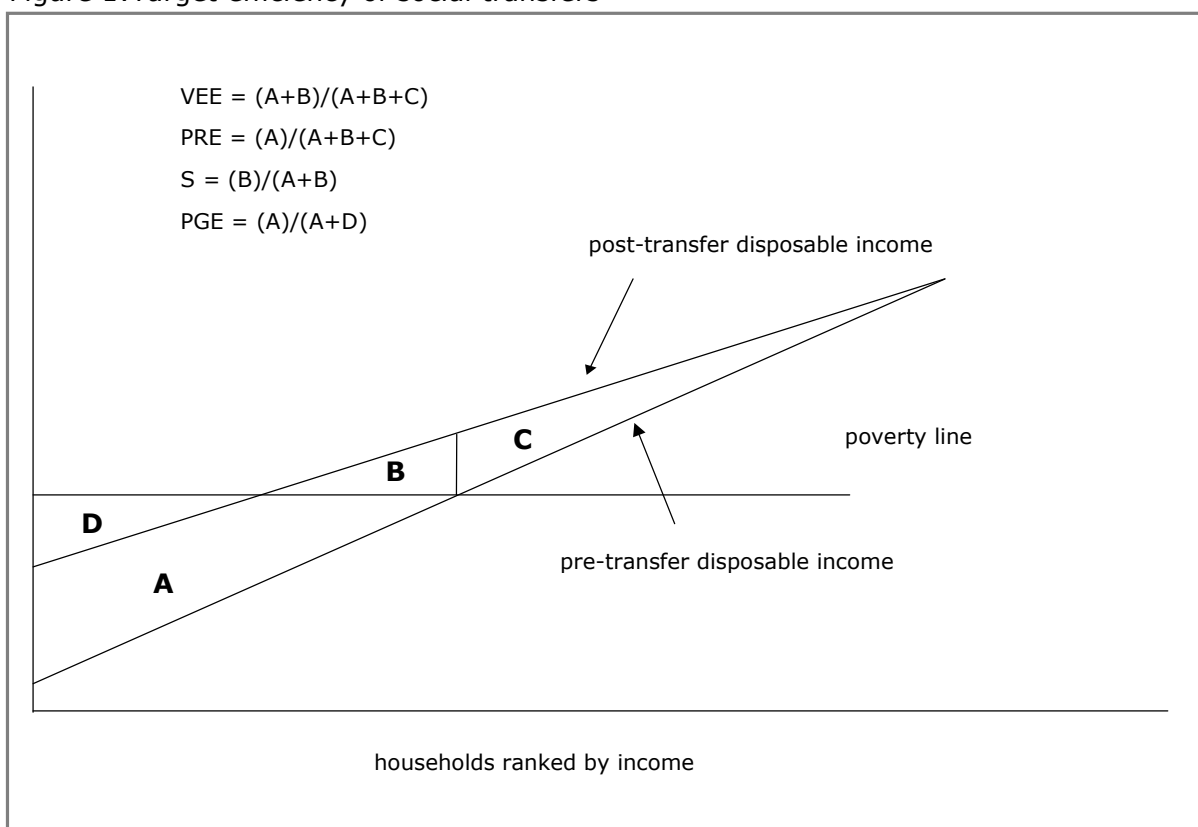
<sup>17</sup> More details on the updating process can be found in the relevant country reports in the EUROMOD website (<http://www.econ.cam.ac.uk/dae/mu/emodcty.htm>). The model is being currently updated for the year 2001.

extent of the problem in the case of family transfers in southern Europe remains a moot point<sup>18</sup>. Note that the failure to account for non-take up in EUROMOD and the failure to include tax relief in Eurostat statistics introduce biases that may partly offset each other.

### 5.3. Target efficiency of family transfers

The preceding discussion of anti-poverty effectiveness raises an obvious question: are family transfers in southern Europe well targeted? The term “target efficiency” is often used loosely, especially in the policy debate. However, it can be formally measured through a set of indicators<sup>19</sup>. For the purposes of this work four indicators are estimated. Vertical expenditure efficiency (VEE) measures the share of total benefit received by individuals below the poverty line. As seen in Figure 1,  $VEE = (A+B)/(A+B+C)$ . Poverty reduction efficiency (PRE) is the fraction of total expenditure allowing poor individuals to approach or reach – but not cross – the poverty line. PRE is shown as  $(A)/(A+B+C)$ . The spillover index (S) is a measure of the excess of expenditure relative to the amount strictly necessary to reach the poverty line, defined as  $(B)/(A+B)$ . It can be seen that  $VEE(1-S) = PRE$ .

Figure 1: Target efficiency of social transfers



Note: VEE denotes vertical expenditure efficiency. PRE denotes poverty reduction efficiency. S denotes spillover. PGE denotes poverty gap efficiency.

The three measures considered so far are useful in measuring vertical efficiency or the extent to which total benefit is received by those below the poverty line alone. However, vertical efficiency cannot evaluate the effectiveness of a programme in fighting poverty.

<sup>18</sup> For a treatment of non-take up in the context of microsimulation see Sutherland (2003).

<sup>19</sup> The framework applied here explicitly draws on the work of Beckerman (1979). In general, vertical efficiency measures poverty reduction due to a benefit as a share of total spending on that benefit. Instead, horizontal efficiency measures poverty reduction as a proportion of pre-benefit poverty.

A transfer may be efficient in the sense that it is overwhelmingly targeted on the poor, but may fail to reach all those below the poverty line or its level may be too low to raise the living standards of beneficiaries significantly. This latter aspect is better captured by poverty gap efficiency (PGE), an indicator of horizontal efficiency, measuring the extent to which the transfers succeed in filling the aggregate poverty gap. PGE is equal to  $(A)/(A+D)$ . The poverty gap itself can be either unweighted, when the parameter  $\alpha$  of the FGT index is set equal to 1, or weighted to indicate greater concern for the condition of the poorest (higher values of  $\alpha$ ). All four indicators of target efficiency are presented in diagrammatic form in Figure 1.

Our estimates of target efficiency with respect to child poverty<sup>20</sup>, for each class of family transfers (cash benefits and tax relief) separately, can be seen in Table 13.

[TABLE 13]

In terms of vertical efficiency, as measured by PRE, family cash benefits seem to be best targeted in Spain (80 per cent of total expenditure). Targeting is less efficient in Italy (55 per cent of total expenditure), in Portugal (39 per cent) and in Greece (21 per cent). Child tax relief is clearly not targeted. In Italy, more than 75 per cent of all tax relief for dependent children is aimed above the poverty line. In the other three countries, the equivalent figure is closer to the 90 per cent mark. The other two indicators of vertical efficiency, VEE and S, reiterate the point presenting a similar picture.

Our estimates are much less reassuring in terms of horizontal efficiency, as measured by PGE. The reduction of the unweighted aggregate poverty gap ( $\alpha=1$ ) caused by family cash benefits ranges from a low but significant of 21 per cent in Portugal and 15 per cent in Italy, to a rather disappointing 5 per cent in Spain and Greece. Obviously, attaching greater weight to the improvement of lowest incomes increases the value of the index: for  $\alpha=3$ , the reduction of weighted aggregate poverty gap is 40 per cent in Portugal, nearly 20 per cent in Italy and just over 10 per cent in Greece and in Spain. In contrast, the anti-poverty impact of tax relief remains negligible in all cases.

Summing up the evidence on target efficiency presented here, two findings stand out. On the one hand, in terms of both vertical and horizontal efficiency family cash benefits are better targeted than child tax relief. It is clear that the non-refundable nature of the latter renders it unsuitable as mechanism of income support to the poorest. On the other hand, family transfers as a whole are better targeted in Italy and Portugal. In the case of Greece, current policy seems to fail low-income families with children on both counts. In Spain, cash benefits appear to exemplify the textbook case of stringent means-testing: reserved for the poorest families alone, but not nearly adequate enough to improve their living standards significantly.

To conclude: in terms of poverty reduction existing family transfer programmes seem to perform better in Portugal and Italy than in Greece and Spain, but rather modestly overall. Conversely, the scope for improving the redistributive performance of income transfers to families with children through redesigning the structure of social benefits appears ample. This is examined next.

## 6. Reforming family transfers

It was earlier established that a common feature of actual family transfer programmes throughout southern Europe is that many families with children at risk of poverty are left with little or no income support. An obvious – though far from uncontested – solution to the problem of coverage gaps is the introduction of a universal child benefit. From the point of view of this paper, such an approach has the extra advantage that it is easy to explain and simple to implement. For the sake of good policy design, not to mention

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<sup>20</sup> Note that estimations of target efficiency crucially depend on the poverty threshold chosen.

fiscal prudence, such a benefit is assumed to substitute (rather than be added on to) existing family transfer programmes.

What would be the implications of a universal child benefit, introduced at the same time as actual programmes of family transfers are abolished? Using a tax-benefit model like EUROMOD enables us to provide specific answers to the effect of such a policy change.

Universal child benefits appear straightforward enough. However, one still has to define parameters such as the value of benefit and eligibility conditions with respect to age. In this section, five variations to the general theme are explored. All five involve replacing existing family transfers for children aged 0-17 by a universal child benefit. In the case of reforms I-II, the (flat) rate of benefit in each country has been chosen so as to match existing family transfers exactly in terms of impact on child poverty and on fiscal costs respectively, i.e. they are "poverty neutral" and "budget neutral".

Reforms III-V simulate "actually existing" child benefits: the British, Danish and Swedish schemes respectively. The three schemes were chosen to illustrate the effect of different benefit structures. The British child benefit scheme pays a higher rate to the eldest child in the family and a single (reduced) rate to all other children. The Danish scheme pays variable rates with respect to age: the benefit rate is highest for children aged 0-3 and falls somewhat for older children. The Swedish scheme is more similar to the British in that benefit rates vary with the number of children in the family, but in reverse: more generous benefits are paid for the third and subsequent children than for the first two. In order to account for variations in living standards, benefit rates have been fixed with respect to average male full-time earnings as estimated by the model itself. In other words, the Danish child benefit simulated here is worth the same (as a proportion of average male full-time earnings) in each of the four countries as in Denmark itself. The same goes for reforms III and V. The amount of benefit payable under each version is presented in Table 14.

[TABLE 14]

Table 15 shows that the anti-poverty impact of universal child benefits, such as the ones simulated here, would be rather mixed. Reform II (budget neutral UCB) would not affect the headcount child poverty rate in Greece, but would increase it by nearly 1 percentage point in Spain and by around 2 percentage points in Italy and in Portugal. Reform IV (Danish CB) would reduce the headcount rate by over 3.5 percentage points in Portugal and Spain and by 1.5 point in Greece, but would raise it by 0.5 percentage point in Italy. The effect of reforms III (British CB) and V (Swedish CB) would be to reduce headcount poverty in Spain and Greece, but raise it in Italy and – though only slightly – in Portugal.

[TABLE 15]

Results for the Foster-Greer-Thorbecke index ( $\alpha=2$ ) show that the distributional impact of universal child benefits appears stronger the greater the weight attached to changes at the bottom of the income distribution. Introducing a budget neutral universal child benefit in place of existing family transfers would have little impact on the FGT index either way. Reform IV (Danish CB) would cause a proportional decline of the index in all four countries: by 28 per cent in Spain and Portugal, by 21 per cent in Greece and by 7 per cent in Italy. The other two reforms, III (British CB) and V (Swedish CB), would reduce the value of the index in Spain (by 18 to 20 per cent), Greece (14-15 per cent) and Portugal (8-10 per cent), but would cause a small increase in Italy (1-2 per cent).

In fact, the best result in terms of the FGT index for  $\alpha=2$  in the case of Italy is achieved by reform I (poverty neutral UCB), which would reduce the value of the index by 17 per cent. This is because, as Table 14 shows, reform I in Italy amounts to the most generous universal child benefit scheme of all five examined here – with the exception of families with at least one child aged less than 3 and no child aged over 8 for which reform IV is worth more.



These results make it clear that, provided it is pitched at a level high enough, a universal child benefit could have a considerable redistributive impact in southern Europe. At this point, a question arises: would there be enough political support for such a policy shift? Clearly, a proper answer to this question lies beyond the scope of this paper. However, the distribution of winners and losers following such reform might reveal some of the difficulties involved<sup>21</sup>. By way of illustration, our findings for each universal child benefit simulated here by income decile are presented in Tables 16 to 20.

[TABLE 16]

Table 16 shows that a poverty neutral universal child benefit would leave more winners than losers in all four countries. Nevertheless, this would not be true among low income groups in Spain and in Italy (bottom 20 and 30 per cent of the income distribution respectively). Obviously, a "poverty neutral universal child benefit" is merely an artefact, simulated as a means to gaining an insight to the likely effects of a switch to a flat rate child benefit that leaves poverty rates unchanged. In this sense, the results of Table 16 are quite revealing: in those countries where family transfers were found earlier to be better targeted, more individuals below the poverty line would be worse off as a result of such a switch. Note, however, that a universal child benefit of €76 per month per child (the poverty neutral rate in Table 14 is €912 per year) would still be superior to current family transfers for as many as 32 per cent of those in the lowest income decile in Italy.

[TABLE 17]

Compared to the poverty neutral reform, a budget neutral universal child benefit would be less generous in all four countries. Table 17 shows that, following such reform, there would be more losers than winners in Italy (particularly in the bottom 40 per cent of the distribution), while a majority within all income deciles would be worse off in Spain. On the contrary, under reform II, winners would outnumber losers in Greece (except in decile 9, i.e. the second richest) and in Portugal (throughout the income distribution).

Calculating winners and losers under a policy change that is not budget neutral can be misleading, as it raises the question of how the extra cost is to be financed. The obvious answer to that would be "by raising taxes". Funding reforms III to V would most likely raise the number of losers, depending on the incidence of the offsetting tax increase or the public expenditure cut. Various tax policy designs are conceivable and can be easily modelled. While none is in Tables 18-20, the relevant results are still indicative of the effect of benefit generosity on the distribution of gains and losses.

[TABLE 18]

As a matter of fact, a non-funded reform III (British CB), shown in Table 18, would alter the picture drastically in all four countries. While the balance between winners and losers in Italy would be perfect (31 per cent each), there would now be 58 winners to just 1 loser in Spain. Similarly, the margin of winners over losers would be wider than before in Greece (41 to 11) and in Portugal (52 to 6).

As might be expected, reform IV (Danish CB) would eliminate losers in Spain and reduce their proportion to less than 5 per cent in Greece and in Portugal. However, a significant part of the population in Italy (29 per cent), including a majority of deciles 1 to 3, would remain worse off compared to the status quo. This is shown in Table 19.

[TABLE 19]

Finally, Table 20 shows that, under reform V (Swedish CB), there would be more winners than losers throughout the income distribution in all four countries, except in deciles 1 to 4 in Italy. As shown earlier (Table 14), with respect to average full-time male earnings

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<sup>21</sup> When calculating winners and losers no attempt was made to distinguish between "heavy" winners or losers from those gaining or losing small amounts as a result of each reform. Setting a threshold of say €1 per month or 0.5% of disposable income would "declassify" many of those shown as winners or losers in Tables 16-20.

the Swedish scheme is less generous than the British equivalent for families with one or two children, though its level rises sharply with the number of children in the family.

[TABLE 20]

The discussion of winners and losers under unfunded reforms raises the question of cost. Clearly, the fiscal effect of introducing a universal child benefit would be a function of the level and scope of the benefit itself. However, it would also depend on the demographic profile of each country and the generosity of the family transfer programmes it would replace. The fiscal implications of existing programmes and simulated reforms are all presented in Table 21 below.

[TABLE 21]

The current cost of family transfers is low: as a proportion of aggregate non-equivalised disposable income, it ranges from 0.5 per cent in Spain to 1.5 per cent in Portugal. The reforms simulated here would be comparatively more costly. Reform IV (Danish CB) would be the costliest of all<sup>22</sup>, raising expenditure to between 1.8 and 2.3 per cent in all four countries. Reforms III (British CB) and V (Swedish CB) would have a softer fiscal impact, bringing expenditure on income transfers to families with children to between 1.4 and 1.8 per cent of disposable income.

## 7. Conclusion

The purpose of the paper was to evaluate the impact of existing family transfers in four south European countries, taking into account both cash benefits and tax relief, and to simulate the effects of reforms in the shape of variants of a universal child benefit. The results presented above provide useful insights to the question under consideration. These are discussed in turn.

To start with, existing arrangements in this policy area leave much to be desired. Too many poor families with children are ineligible for income support under social security (as is the case in Greece and in Italy) or receive low benefits (as in Spain and, to some extent, in Portugal). Needless to say, this effect is even more pronounced with respect to tax benefits, as non-refundable schemes exclude poor families by design<sup>23</sup>.

Would universal benefits improve on the anti-poverty performance of existing schemes? Among the child benefits simulated that are actually in operation elsewhere in Europe, the Danish scheme clearly emerges ahead of the others in terms of generosity: it would be the costlier, but also the one with the highest impact on child poverty in all countries of southern Europe. On the other hand, the British and Swedish schemes, although very different in terms of internal logic (the former paying a higher rate to the elder child, the latter rising in value with family size), would have quite similar effects on child poverty and fiscal costs in the four countries studied.

On the whole, a trade off between fiscal cost and poverty reduction operates. More generous universal child benefit schemes have stronger distributional impact at a higher fiscal cost<sup>24</sup>. In a sense, this is so obvious it hardly needs mentioning. However, the point is that expenditure on family transfers is currently so low in southern Europe that it is unreasonable to expect that a simple reallocation within this policy area would bring

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<sup>22</sup> Except in Italy, where the poverty neutral UCB (reform I) would imply higher expenditure. See Table 21.

<sup>23</sup> More recently, refundable tax credit schemes were actually introduced in Greece in 2002 (for low-income families with children aged 6-16 at school) and in Spain in 2003 (for working mothers with children aged below 3). Although estimating their effect is a subject of future research, these schemes seem unlikely to alter the regressive nature of tax relief for dependent children in the two countries, since the number of beneficiaries is limited and the amount of benefit paid low.

<sup>24</sup> The cost estimates presented in Table 21 do not account for the fact that universal benefits are often taxed as normal income. Taxing benefits progressively would reduce fiscal costs without weakening their anti-poverty impact. On another note, since disposable income is less than gross domestic product, the estimated cost of the reforms simulated here would be a lower proportion of GDP.

about significant improvements in terms of poverty reduction. In view of that, combining a universal (albeit low) income base with more targeted (but non-categorical) policies could be a more effective way to reduce poverty at a reasonable cost to the tax payer.

As explained earlier, the analysis presented here is restricted to income transfers alone. Ignoring benefits in kind and their distributional effect is common practice in current research on incomes and wealth<sup>25</sup>. Although this must be partly driven by convenience, the methodological complexities of accounting for the distributional impact of benefits in kind ought not to be underestimated. Whatever the reason, the omission is regrettable. There can be little doubt that a concerted policy effort aimed to combat child poverty in Europe must assign a higher priority to the universal provision of family services than to that of cash benefits. To mention the most obvious example, good quality and affordable child care to allow mothers to work<sup>26</sup> may be a much more promising route out of child poverty than relying on cash benefits alone, however generous.

Naturally, care should be taken to avoid the other extreme, too: family services and cash benefits are complements, not substitutes<sup>27</sup>. A penniless family will always be poor, no matter how broad the range of services it has free access to. In other words, the design of income transfers to families with children matters still.

However, the contest of universal child benefits vs. existing family transfers implied by the results is less than fully fair due to another factor briefly touched upon earlier. The analysis presented here assumes 100% take up of all benefits. This is known to be a reasonable approximation of the real world with respect to universal benefits alone. As a matter of fact, the take up of means-tested benefits is incomplete, often significantly so. In other words, allowing for non-take up would tilt the balance of the assessment firmly in favour of the universal child benefit programmes simulated here. Furthermore, taking into account other features known to be associated with such programmes (for example, significantly lower administrative costs compared to means-tested benefits) would make universal child benefits look more attractive.

On another note, the headcount rate of poverty is a particularly harsh criterion by which to judge universal benefits. Bringing in the Foster-Greer-Thorbecke index revealed that the redistributive performance of the reforms simulated improved as we moved to a measure implying more concern for families at the bottom of the income distribution.

More broadly, universal benefits can be defended on the grounds that they strengthen work incentives and eliminate the poverty trap, while at the same time promoting wider goals such as individual autonomy and social citizenship. In the case of child benefits, a further argument in their favour is that they function as an instrument of horizontal redistribution from single taxpayers to families with children. If children can be viewed, at least partly, as a public good, then shifting some of their cost to the society at large can be seen as promoting distributional justice.

The final conclusion concerns the methodology applied here. Significant policy questions such as the one posed here ("what would be the effect on child poverty and fiscal costs of a universal child benefit introduced in place of existing programmes of family transfers?") are so complex and to a certain extent counterfactual that cannot be fully answered without recourse to a benefit-tax model such as EUROMOD. Microsimulation models are not immune from limitations of their own, some of which were discussed earlier. Nevertheless, their quite unique advantage is precisely the ability to simulate the impact of policy reforms.

In this sense, the contribution of microsimulation can best be thought as an input in the policy making process: informing policy questions and thereby promoting a more rational and dispassionate political debate on tax-benefit reform. There can be little doubt that

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<sup>25</sup> See Smeeding et al (1993) for an exception to that rule.

<sup>26</sup> For a convincing analysis see Esping-Andersen & Sarasa (2002).

<sup>27</sup> For an excellent elaboration of this point see Atkinson (1998).

these goods are in relatively short supply in southern Europe. Whether this paper appreciably adds to their stock remains to be seen.

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Table 1

**Distribution of children by household type**

	Greece	Italy	Spain	Portugal
couple with 1 child 0-17	14.6	15.8	14.5	16.1
couple with 2 children 0-17	45.1	39.3	40.9	30.9
couple with 3+ children 0-17	12.4	17.3	12.7	12.7
lone parent with children 0-17	2.9	2.8	2.6	5.5
lone parent with at least 1 child 18+	1.2	1.2	1.6	1.3
couple with at least 1 child 18+	9.6	14.7	17.7	15.0
other households with children 0-17	14.2	8.9	10.0	18.5
total	100.0	100.0	100.0	100.00
children as % of population	21.3	18.6	20.1	22.4

Note: Estimates for the year 1998. Children are defined as individuals below 18 years of age.

Source: EUROMOD.

Table 2

**Incidence of child poverty by household type**

	poverty rate (%)				child poverty shares (%)			
	Greece	Italy	Spain	Portugal	Greece	Italy	Spain	Portugal
couple with 1 child 0-17	10.0	13.0	12.5	11.3	8.6	7.8	8.4	7.9
couple with 2 children 0-17	14.9	20.7	15.6	16.1	39.3	30.7	29.6	21.4
couple with 3+ children 0-17	12.0	37.0	33.8	35.7	8.7	24.2	19.9	19.6
lone parent with all children 0-17	42.2	49.0	45.2	56.6	7.2	5.2	5.4	13.5
lone parent with at least 1 child 18+	30.0	67.7	41.6	34.4	2.1	3.0	3.1	2.0
couple with at least 1 child 18+	18.3	36.0	30.2	21.2	10.3	20.0	24.7	13.7
other households with children 0-17	28.5	27.6	19.5	27.4	23.8	9.3	9.0	21.9
child poverty	17.0	26.5	21.6	23.1	100.0	100.0	100.0	100.0
total poverty	20.5	20.7	18.3	22.0				

Note: Estimates for the year 1998. The child poverty rate is the headcount ratio. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members. The poverty line is equal to 60% of national median equivalent disposable income.

Source: EUROMOD.

Table 3

**Poverty rates by age**

age	poverty rate (%)				relative poverty risk			
	Greece	Italy	Spain	Portugal	Greece	Italy	Spain	Portugal
0-17	17.0	26.5	21.6	23.1	83	128	118	105
18-34	15.9	20.3	17.1	16.1	78	98	93	73
35-64	24.2	16.7	18.9	23.7	118	81	103	108
65+	34.6	18.0	17.7	39.9	169	87	97	181
total	20.5	20.7	18.3	22.0	100	100	100	100

Note: Estimates for the year 1998. The poverty line is equal to 60% of national median equivalent disposable income. The child poverty rate is the headcount ratio. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members.

Source: EUROMOD.

Table 4

**Intensity of child poverty by household type**

	income gap ratio (%)				Foster-Greer-Thorbecke index ( $\alpha=2$ )			
	Greece	Italy	Spain	Portugal	Greece	Italy	Spain	Portugal
couple with 1 child 0-17	39.5	35.1	28.0	23.8	2.3	3.3	1.5	0.8
couple with 2 children 0-17	36.5	29.8	34.5	20.8	3.1	2.9	3.0	1.0
couple with 3+ children 0-17	29.8	36.7	30.0	18.3	1.8	7.5	4.8	1.6
lone parent with all children 0-17	42.8	28.1	39.1	21.1	10.6	7.8	8.8	3.7
lone parent with at least 1 child 18+	39.7	36.1	33.3	15.3	5.6	11.2	6.6	1.6
couple with at least 1 child 18+	35.1	30.3	33.6	23.5	3.3	5.4	5.3	1.5
other households with children 0-17	30.7	34.0	35.1	20.4	4.5	4.5	3.4	1.6
all households with children	35.2	32.5	33.1	20.8	3.3	4.5	3.7	1.4
all households	36.0	29.9	30.2	23.9				

Note: Estimates for the year 1998. The income gap ratio is defined as the average income shortfall of poor households from the poverty line as a percentage of the latter. The Foster-Greer-Thorbecke ( $\alpha=2$ ) index attaches greater weight to larger poverty gaps, as it simultaneously takes into account the poverty incidence, the poverty gap and the extent of inequality among the poor. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and a value of 0.5 to other household members.

Source: EUROMOD.

Table 5

**Family transfer programmes: cash benefits and tax relief**

	cash benefits	tax relief
Greece	<ul style="list-style-type: none"> <li>▪ 3<sup>rd</sup> child benefit</li> <li>▪ large family benefit</li> <li>▪ unprotected child benefit</li> <li>▪ OAEΔ family allowance</li> <li>▪ civil servant allowance</li> </ul>	<ul style="list-style-type: none"> <li>▪ non-refundable tax credits for dependent children</li> </ul>
Italy	<ul style="list-style-type: none"> <li>▪ contributory family allowance</li> </ul>	
Spain	<ul style="list-style-type: none"> <li>▪ child benefit</li> </ul>	
Portugal	<ul style="list-style-type: none"> <li>▪ child &amp; youth family benefit</li> </ul>	

Note: Programmes in operation in the year 1998.

Source: EUROMOD.



Table 6

**Stylised entitlement to family transfers**

family size	family income	Greece		Italy		Spain		Portugal	
		cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief
<b>1 child</b> aged 7	5 000	0	36	0	0	216	0	251	40
	10 000	39	73	1 568	174	0	150	177	97
	25 000	39	73	186	174	0	150	177	97
	100 000	211	73	0	174	0	150	166	97
<b>2 children</b> aged 7 & 3	5 000	0	18	0	0	216	0	251	20
	10 000	64	73	1 503	174	0	180	177	97
	25 000	64	73	344	174	0	180	177	97
	100 000	211	73	0	174	0	180	166	97
<b>3 children</b> aged 11, 7 & 3	5 000	492	12	0	0	216	0	293	13
	10 000	612	103	1 436	174	0	159	198	98
	25 000	81	103	707	174	0	220	198	98
	100 000	282	103	0	174	0	220	180	98

Notes: All values are annual amounts per child in 1998.

Average full-time earnings of male employees were €10 253 in Greece, €17 300 in Italy, €14 212 in Spain and €9 441 in Portugal.

Entitlements correspond to additional recipient characteristics as follows. In Greece, families earning €5 000 p.a. were assumed to be ineligible for any of the contributory allowances because not in legal employment (on the grounds of earning less than the statutory minimum full-time wage), those earning €10 000 or €25 000 p.a. were assumed to receive private sector (OAEΔ) family allowance, while families earning €100 000 p.a. were assumed to receive civil service family allowances. Families with three children earning €5 000 or €10 000 were assumed to receive 3<sup>rd</sup> child benefit as they met both the age condition and the income requirement. In Italy, families earning €5 000 or €100 000 p.a. were assumed to be ineligible for the contributory allowance (on the grounds of inadequate contributory record if working full-time and excessively high income respectively), while those earning €10 000 or €25 000 p.a. were assumed to receive contributory family allowance.

Tax relief in 1998 took in all four countries the form of non-refundable tax credits (i.e. reductions of tax due). In Italy and in Spain, families earning €5 000 were unable to gain from tax credits for dependent children as they would in any case pay no tax due to low income. In Greece and in Portugal, families earning €5 000 could not take full advantage of tax relief as their gross tax liability was lower than the tax credit itself, while the same was true for three-children families earning €10 000 in Spain. Tax units were assumed to be one-earner families headed by dependent full-time workers.

Source: Own calculations.

Table 7

**Estimated value of family transfers**

family size	family income	Greece		Italy		Spain		Portugal	
		cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief
1 child	low	88	67	250	188	36	114	191	80
	middle	71	68	267	202	16	138	188	87
	high	114	84	41	203	5	126	185	89
2 children	low	76	27	640	120	124	60	233	49
	middle	72	71	390	165	9	158	202	86
	high	131	79	29	159	2	176	182	96
3 children	low	319	11	569	85	165	42	227	38
	middle	313	83	664	147	24	185	225	76
	high	172	108	93	161	0	210	217	85
4+ children	low	327	47	177	71	203	0	254	24
	middle	457	88	895	129	95	113	308	24
	high	275	132	47	163	36	210	249	80

Notes: All values are annual amounts per child in 1998. Special allowances paid in the presence of dependent children are not simulated. Family income is expressed in terms of average full-time earnings of male employees in each country.

**Low** family incomes: under 75% of average earnings.

**Middle** family incomes: 75% to 175% of average earnings.

**High** family incomes: over 175% of average earnings.

Average full-time earnings of male employees were €10 253 in Greece, €17 300 in Italy, €14 212 in Spain and €9 441 in Portugal.

Source: EUROMOD.

**Table 8**

**Distribution of family transfers by decile of equivalent disposable income**

income decile	Greece		Italy		Spain		Portugal	
	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief
1	7	2	19	11	66	1	10	1
2	9	5	23	12	20	10	11	6
3	9	7	25	12	7	13	14	10
4	12	11	18	12	4	11	11	12
5	8	11	8	10	2	14	9	12
6	12	12	4	9	1	11	10	12
7	8	12	3	10	1	8	8	12
8	11	14	1	8	0	6	8	11
9	15	14	0	8	0	13	9	12
10	10	12	0	8	0	15	8	12
total	100	100	100	100	100	100	100	100

Note: Estimates for the year 1998. The unit of analysis is individuals ranked by non-decreasing disposable equivalent household income. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and a value of 0.5 to other household members.

Source: EUROMOD.

Table 9

**Income share of family transfers by decile of equivalent disposable income**

income decile	Greece		Italy		Spain		Portugal	
	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief
1	1.1	0.2	6.1	2.2	3.3	0.1	2.6	0.1
2	0.9	0.3	3.2	1.1	0.4	0.6	2.3	0.5
3	0.7	0.3	3.0	1.0	0.1	0.7	2.7	0.7
4	0.8	0.4	1.8	0.8	0.1	0.5	1.9	0.7
5	0.4	0.4	0.6	0.5	0.0	0.6	1.3	0.6
6	0.6	0.4	0.3	0.4	0.0	0.4	1.2	0.5
7	0.4	0.3	0.2	0.4	0.0	0.2	0.8	0.4
8	0.4	0.3	0.1	0.3	0.0	0.2	0.7	0.3
9	0.4	0.2	0.0	0.2	0.0	0.3	0.5	0.3
10	0.2	0.1	0.0	0.1	0.0	0.2	0.2	0.1
total	0.4	0.3	0.6	0.4	0.1	0.3	0.9	0.3

Note: Estimates for the year 1998. The unit of analysis is individuals ranked by non-decreasing disposable equivalent household income. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and a value of 0.5 to other household members.

Source: EUROMOD.

Table 10

**Income share of family transfers and average transfer per child by household type**

	income share of family transfers (%)				annual average transfer per child (€)			
	Greece	Italy	Spain	Portugal	Greece	Italy	Spain	Portugal
couple with 1 child 0-17	0.9	1.6	0.7	2.0	80	212	76	153
couple with 2 children 0-17	1.8	4.2	1.7	3.9	72	228	78	133
couple with 3+ children 0-17	6.0	8.1	3.2	7.6	131	258	81	115
lone parent with all children 0-17	3.7	5.9	2.8	6.9	163	314	116	164
lone parent with at least 1 child 18+	0.5	1.7	0.1	0.5	127	1 034	37	123
couple with at least 1 child 18+	0.5	1.0	0.1	0.7	83	322	20	90
other household types	1.3	1.7	0.6	2.3	67	177	48	82

Note: Estimates for the year 1998. Family transfers include both cash benefits and tax relief. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and a value of 0.5 to other household members. The estimate of annual average transfer per child to lone parent families with at least 1 child 18+ in Italy (€1 034) may be affected by small sample size and should be treated with caution.

Source: EUROMOD.

Table 11

**Impact of family transfers on child poverty by household type**

	reduction in no. of poor children (%)				reduction in child income gap (%)			
	Greece	Italy	Spain	Portugal	Greece	Italy	Spain	Portugal
couple with 1 child 0-17	0.0	17.6	2.7	5.9	1.9	14.4	8.5	16.4
couple with 2 children 0-17	3.3	25.6	9.2	17.6	4.8	31.6	12.0	29.6
couple with 3+ children 0-17	32.0	23.4	7.8	34.6	34.0	35.7	18.1	58.0
lone parent with all children 0-17	4.1	14.1	8.4	9.8	16.8	29.4	14.4	39.3
lone parent with at least 1 child 18+	0.0	0.0	2.3	4.0	16.7	14.7	10.0	32.6
couple with at least 1 child 18+	5.5	10.1	5.7	14.4	10.4	22.3	9.1	21.0
other household types	9.4	8.1	9.4	24.1	14.0	16.1	9.7	31.2
all households with children	8.1	19.0	7.3	20.8	11.4	28.2	12.1	36.7

Note: Estimates for the year 1998. The figures show percentage reduction in the number of children below the poverty line and in aggregate child income gap respectively due to family transfers. The poverty line is held constant at the actual level (i.e. at 60% of national median equivalent disposable income after all family transfers). Family transfers include both cash benefits and tax relief. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and a value of 0.5 to other household members.

Source: EUROMOD.

Table 12

**Impact of family transfers on child poverty**

		Greece	Italy	Spain	Portugal
child poverty rate (%)	before family transfers	18.5	32.7	23.4	29.2
	after tax relief	18.2	31.9	22.2	28.6
	after cash benefits	17.4	27.7	23.2	23.7
	after all family transfers	17.0	26.5	21.6	23.1
FGT index ( $\alpha=2$ )	before family transfers	3.8	6.5	4.3	2.5
	after tax relief	3.7	6.2	4.3	2.4
	after cash benefits	3.3	4.7	3.8	1.4
	after all family transfers	3.3	4.5	3.7	1.4

Notes: Estimates for the year 1998. The poverty line is held constant at the actual level (i.e. at 60% of national median equivalent disposable income after all family transfers). The poverty rate is the headcount ratio. The FGT index ( $\alpha=2$ ) attaches greater weight to larger poverty gaps.

**Before family transfers** excludes the effect of both cash benefits and tax relief.

**After tax relief** includes the effect of tax relief but excludes the effect of cash benefits.

**After cash benefits** includes the effect of cash benefits but excludes the effect of tax relief.

**After family transfers** includes the effect of both cash benefits and tax relief.

The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members.

Source: EUROMOD.

Table 13

**Target efficiency of family transfers**

		VEE	PRE	S	$\alpha=1$	PGE $\alpha=2$	$\alpha=3$
Greece	cash benefits	23.4	21.1	9.9	4.7	7.3	10.2
	tax relief	8.3	8.2	1.1	1.0	1.0	1.1
Italy	cash benefits	62.0	55.2	10.9	15.2	18.1	18.8
	tax relief	26.7	26.2	2.1	4.5	4.7	4.5
Spain	cash benefits	81.5	80.5	1.2	4.9	8.4	11.1
	tax relief	14.5	12.3	14.9	1.6	0.7	0.3
Portugal	cash benefits	43.7	38.7	11.5	20.7	31.5	39.6
	tax relief	14.0	13.6	3.2	2.6	2.9	3.4

Notes: Estimates for the year 1998. The poverty line is held constant at the actual level (i.e. at 60% of national median equivalent disposable income after all family transfers).

**VEE** denotes vertical expenditure efficiency and is defined as  $(A + B) / (A + B + C)$  in Figure 1.

**PRE** denotes poverty reduction efficiency and is defined as  $(A) / (A + B + C)$  in Figure 1.

**S** denotes spillover and is defined as  $(B) / (A + B)$  in Figure 1.

**PGE** denotes poverty gap efficiency and is defined as  $(A) / (A + D)$  in Figure 1. Transfers to those below the poverty line are weighted equally when  $\alpha=1$ , while transfers to the poorest are given more weight when  $\alpha>1$ .

The unit of analysis is individuals ranked by non-decreasing disposable equivalent household income. The modified OECD equivalence scale is used, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members.

Source: EUROMOD.

Table 14

**Simulated reforms**

	Greece	Italy	Spain	Portugal
reform I: poverty neutral UCB	204	912	196	350
reform II: budget neutral UCB	197	582	135	284
reform III:				
British child benefit	401	676	555	369
eldest child				
all other children	326	551	452	300
reform IV:				
Danish child benefit	594	1 003	824	547
children aged 0-3				
children aged 4-7	540	912	749	498
children aged 8-18	422	711	584	388
reform V: Swedish				
child benefit	354	597	490	326
first two children				
third child	448	756	621	413
fourth child	637	1 074	883	586
fifth+ children	707	1 194	981	651
average earnings of male f-t employees	10 253	17 300	14 212	9 441

Notes: All values are annual amounts in 1998.  
 All reforms involve the replacement of existing family assistance for children aged 0-17 by a universal child benefit.  
 In the case of reforms I-II, the (flat) rate of benefit in each country has been chosen so as to match exactly (in terms of impact on child poverty and on fiscal costs respectively) existing family assistance.  
 In the case of reforms III-V, the level of benefit in each country has been chosen so as to be exactly equivalent (as a proportion of average earnings of male full-time employees) to the British, Danish and Swedish child benefits.

Source: EUROMOD.



Table 15

**Impact of simulated reforms on child poverty**

		Greece	Italy	Spain	Portugal
child poverty rate (%)	existing family transfers	17.0	26.5	21.6	23.1
	reform I: poverty neutral UCB	17.0	26.5	21.6	23.1
	reform II: budget neutral UCB	17.1	28.4	22.5	25.4
	reform III: British CB	16.0	28.1	18.9	23.5
	reform IV: Danish CB	15.5	27.1	17.9	19.6
	reform V: Swedish CB	15.9	28.1	18.9	23.2
FGT index ( $\alpha=2$ )	existing family transfers	3.3	4.5	3.7	1.4
	reform I: poverty neutral	3.2	3.8	3.7	1.2
	reform II: budget neutral	3.2	4.7	3.9	1.3
	reform III: British CB	2.8	4.6	3.0	1.3
	reform IV: Danish CB	2.6	4.2	2.6	1.0
	reform V: Swedish CB	2.8	4.5	2.9	1.2

Notes: Estimates for the year 1998. As reforms are simulated the poverty line is held constant at 60% of national median equivalent disposable income after all existing family transfers. The equivalence scale used is modified OECD, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members. The poverty rate is the headcount ratio. The FGT index for  $\alpha=2$  attaches greater weight to larger poverty gaps. For more detail on the reforms simulated see Table 14.

Source: EUROMOD.

Table 16

**Winners and losers of reform I by income decile**

income decile	Greece		Italy		Spain		Portugal	
	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)
1	32	7	32	42	6	58	46	3
2	38	10	19	44	25	28	47	4
3	37	11	25	37	33	21	60	9
4	39	18	36	24	31	17	61	10
5	36	15	36	21	41	16	57	5
6	33	23	36	19	48	12	61	6
7	31	22	37	17	50	10	50	3
8	32	24	32	17	54	10	54	4
9	25	29	31	15	51	13	53	4
10	30	22	30	17	53	11	45	4
total	33	18	31	25	39	20	54	5

Notes: Estimates for the year 1998. "Winners" ("losers") are defined as individuals made better off (worse off) by the reform. Reform I involves the introduction of a **poverty-neutral** universal child benefit in place of all existing family transfers. For more detail on benefit rates see Table 14. The unit of analysis is individuals ranked by non-decreasing disposable equivalent household income. The poverty line is equal to 60% of national median equivalent disposable income (after existing family transfers), held constant as reform I is simulated. The equivalence scale used is modified OECD, assigning a value of 1.0 to the first adult, of 0.3 to children below 14 and of 0.5 to other household members.

Source: EUROMOD.

Table 17

**Winners and losers of reform II by income decile**

income decile	Greece		Italy		Spain		Portugal	
	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)
1	32	7	33	50	5	60	33	17
2	38	10	12	57	13	39	32	19
3	37	11	12	59	14	40	45	23
4	39	18	18	51	14	34	46	25
5	36	16	35	26	16	42	47	15
6	33	23	40	19	20	40	52	14
7	30	22	43	17	25	36	45	8
8	30	25	37	14	27	37	51	7
9	21	31	35	15	19	44	51	6
10	27	24	33	15	14	50	45	4
total	32	19	30	32	17	42	45	14

Notes: Estimates for the year 1998. "Winners" ("losers") are defined as individuals made better off (worse off) by the reform. Reform II involves the introduction of a **budget-neutral** universal child benefit in place of all existing family transfers. For more detail on benefit rates see Table 14. See also the note to Table 16.

Source: EUROMOD.

Table 18

**Winners and losers of reform III by income decile**

income decile	Greece		Italy		Spain		Portugal	
	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)
1	31	7	33	50	62	2	45	4
2	37	11	12	57	50	1	43	7
3	38	11	14	56	53	1	57	11
4	42	15	21	48	46	1	60	11
5	43	9	37	24	56	1	55	7
6	44	11	41	18	60	0	61	6
7	47	7	44	17	58	1	50	3
8	46	10	37	14	63	1	53	5
9	39	16	35	15	64	0	53	5
10	45	8	33	15	64	0	45	4
total	41	11	31	31	58	1	52	6

Notes: Estimates for the year 1998. "Winners" ("losers") are defined as individuals made better off (worse off) by the reform. Reform III involves the replacement of all existing family transfers by a universal child benefit chosen so as to be exactly equivalent (as a proportion of average earnings of male full-time employees) to the **British** child benefit. For more detail on benefit rates see Table 14. See also the note to Table 16.

Source: EUROMOD.

Table 19

**Winners and losers of reform IV by income decile**

income decile	Greece		Italy		Spain		Portugal	
	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)
1	35	4	35	48	64	0	49	1
2	41	7	12	57	52	0	48	3
3	43	5	17	53	55	0	68	1
4	48	9	34	35	47	0	63	9
5	50	2	41	20	57	0	59	3
6	48	8	41	18	60	0	63	3
7	52	2	44	16	60	0	51	2
8	54	3	37	14	64	0	55	3
9	52	3	36	15	64	0	55	2
10	51	2	33	15	64	0	48	1
total	47	5	33	29	59	0	56	3

Notes: Estimates for the year 1998. "Winners" ("losers") are defined as individuals made better off (worse off) by the reform. Reform IV involves the replacement of all existing family transfers by a universal child benefit chosen so as to be exactly equivalent (as a proportion of average earnings of male full-time employees) to the **Danish** child benefit. For more detail on benefit rates see Table 14. See also the note to Table 16.

Source: EUROMOD.

Table 20

**Winners and losers of reform V by income decile**

income decile	Greece		Italy		Spain		Portugal	
	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)	winners (%)	losers (%)
1	33	5	33	50	64	0	47	3
2	40	8	12	57	52	0	41	9
3	42	7	12	59	55	0	59	10
4	47	10	19	50	47	0	60	11
5	49	3	35	26	57	0	56	6
6	48	8	40	19	60	0	60	6
7	50	4	43	17	60	0	50	3
8	51	5	37	14	64	0	54	4
9	39	15	35	15	64	0	53	4
10	44	9	33	15	64	0	45	4
total	44	7	30	32	59	0	53	6

Notes: Estimates for the year 1998. "Winners" ("losers") are defined as individuals made better off (worse off) by the reform. Reform V involves the replacement of all existing family transfers by a universal child benefit chosen so as to be exactly equivalent (as a proportion of average earnings of male full-time employees) to the **Swedish** child benefit. For more detail on benefit rates see Table 14. See also the note to Table 16.

Source: EUROMOD.

Table 21

**Fiscal effects of simulated reforms**

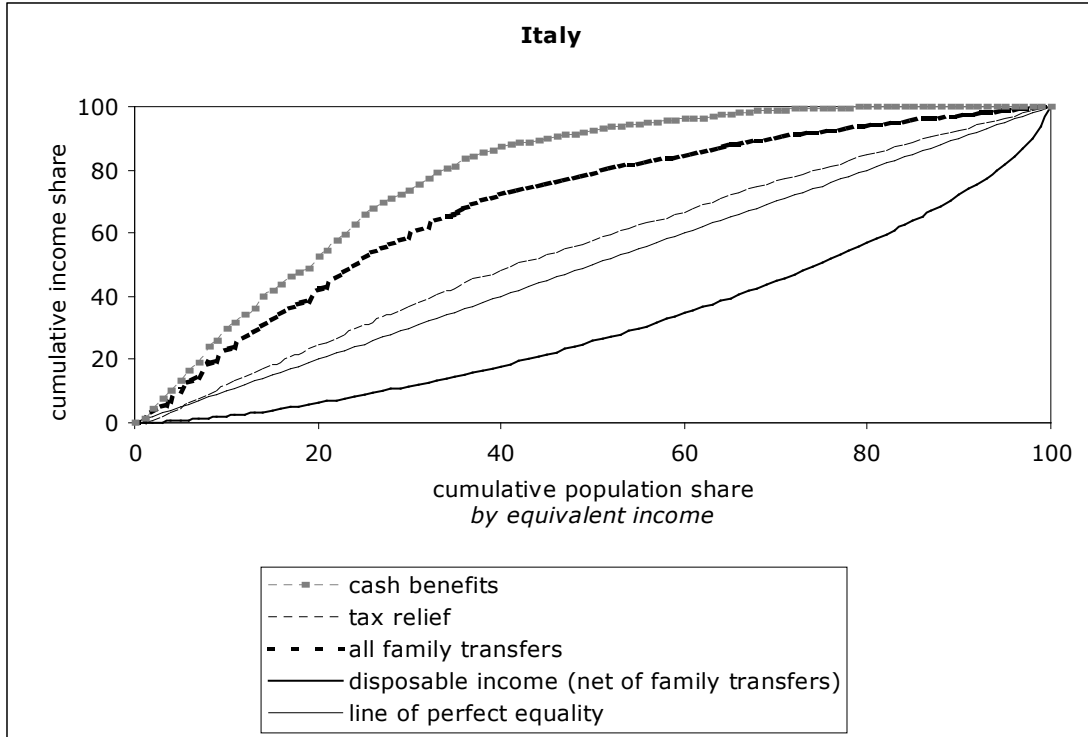
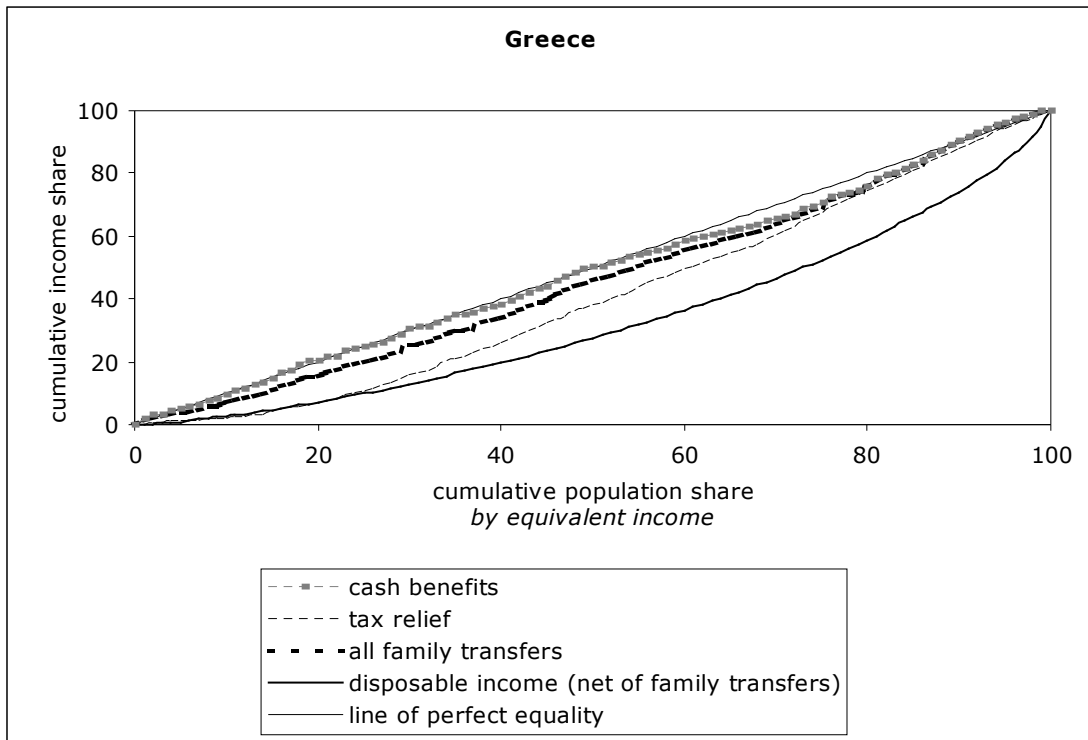
	Greece	Italy	Spain	Portugal
existing family transfers	0.9	1.3	0.5	1.5
reform I: poverty neutral UCB	0.9	2.2	0.7	1.9
reform II: budget neutral UCB	0.9	1.3	0.5	1.5
reform III: British CB	1.6	1.4	1.8	1.8
reform IV: Danish CB	2.1	1.8	2.4	2.3
reform IV: Swedish CB	1.7	1.4	1.8	1.8

Notes: Estimates for the year 1998. Fiscal costs are expressed as proportion of aggregate (non-equivalised) disposable income. For more detail on the reforms simulated see Table 14.

Source: EUROMOD.

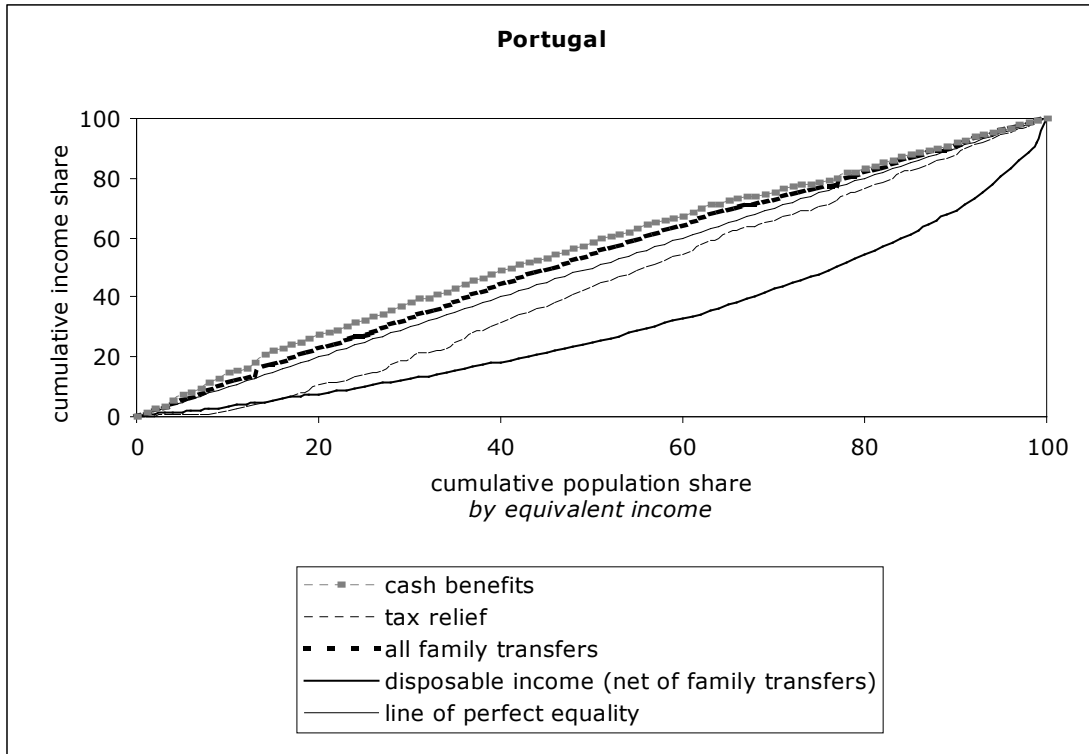
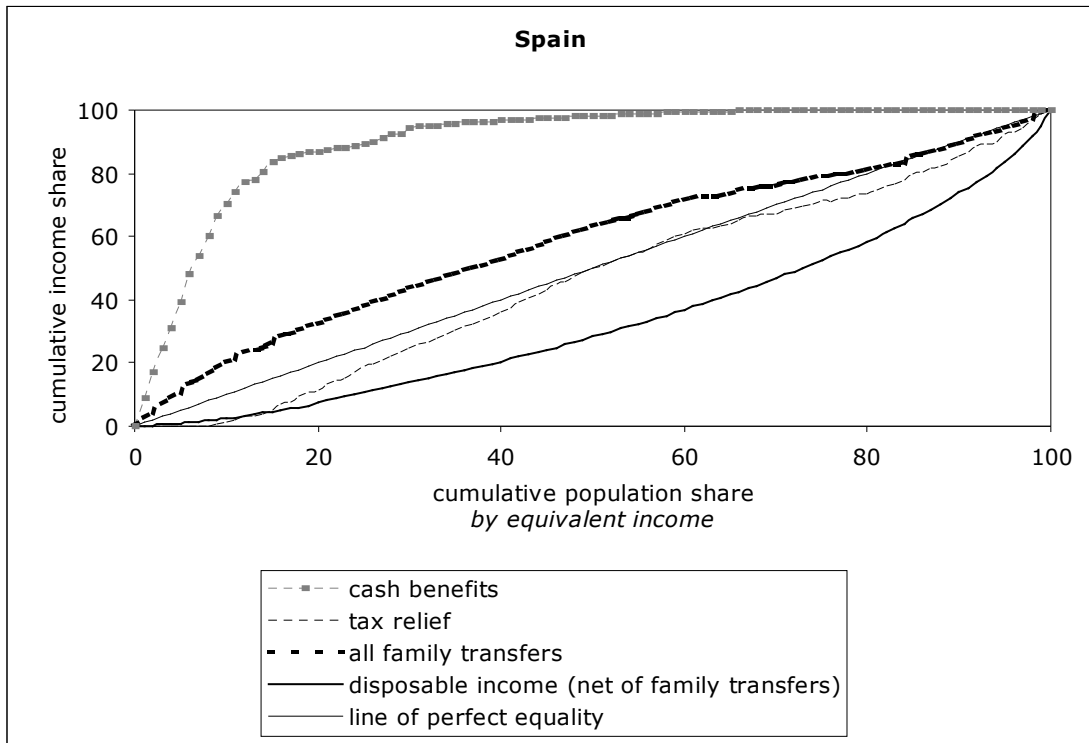
Graph 1

Concentration curves



Graph 1

Concentration curves (cont'd)





Appendix I  
**Policy updates to 2003**

Table A.1  
 Family transfer programmes: cash benefits and tax relief

	cash benefits	tax relief
Greece	<ul style="list-style-type: none"> <li>▪ 3<sup>rd</sup> child benefit</li> <li>▪ large family benefit</li> <li>▪ unprotected child benefit</li> <li>▪ OAEΔ family allowance</li> <li>▪ civil servant allowance</li> </ul>	<ul style="list-style-type: none"> <li>▪ non-refundable tax credit for dependent children</li> <li>▪ <b>refundable tax credit for low-income families with children aged 6-16 at school</b> (2002)</li> </ul>
Italy	<ul style="list-style-type: none"> <li>▪ contributory family allowance</li> <li>▪ <b>benefit to large families</b> (1999)</li> </ul>	<ul style="list-style-type: none"> <li>▪ non-refundable tax credit for dependent children</li> </ul>
Spain	<ul style="list-style-type: none"> <li>▪ child benefit</li> </ul>	<ul style="list-style-type: none"> <li>▪ tax allowance for dependent children</li> <li>▪ <b>refundable tax credit for working mothers</b> (2003)</li> </ul>
Portugal	<ul style="list-style-type: none"> <li>▪ child &amp; youth family benefit</li> </ul>	<ul style="list-style-type: none"> <li>▪ non-refundable tax credit for dependent children</li> </ul>

Note: Programmes in operation in the year 2003.  
 New programmes are shown in bold. Policy changes since 1998 were as follows.  
 In Greece: A refundable tax credit for low-income families with children aged 6-16 at school was introduced in 2002. OAEΔ family allowance ceased to be income-related in 1999. The income test for large family benefit and 3<sup>rd</sup> child benefit was abolished in the same year.  
 In Italy: A new non-contributory benefit to large families was introduced in 1999. The structure of the tax credit for dependent children changed in 2001.  
 In Spain: Tax relief for dependent children, that until then took the form of non-refundable tax credit, switched to a tax allowance in 1998. A refundable tax credit for working mothers was introduced in 2003.

Source: Own elaboration.

**Table A.2**

**Stylised entitlement to family transfers**

family size	family income	Greece		Italy		Spain		Portugal	
		cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief	cash benefits	tax relief
<b>1 child</b> aged 7	5 000	0	0	0	0	291	0	321	0
	10 000	70	90	1 699	194	0	17	250	143
	25 000	70	90	201	516	0	392	214	143
	100 000	211	90	0	285	0	630	189	143
<b>2 children</b> aged 7 & 3	5 000	0	0	0	0	291	0	321	0
	10 000	106	105	1 628	194	43	9	250	143
	25 000	106	105	372	578	0	388	214	143
	100 000	211	105	0	347	0	653	189	143
<b>3 children</b> aged 11, 7 & 3	5 000	582	0	467	0	291	0	375	0
	10 000	741	125	2 022	194	291	6	289	143
	25 000	741	205	765	558	0	435	240	143
	100 000	864	205	0	326	0	765	208	143

Notes: All values are annual amounts per child in 2003.

Entitlements correspond to additional recipient characteristics as follows. In Greece, families earning €5 000 p.a. were assumed to be ineligible for any contributory allowance because not in legal employment (on the grounds of earning less than the statutory minimum full-time wage), those earning €10 000 or €25 000 p.a. were assumed to receive private sector family allowance, while the families earning €100 000 p.a. were assumed to receive civil service family allowances. All families with three children were assumed to receive 3<sup>rd</sup> child benefit as they met the age condition. In Italy, families earning €5 000 or €100 000 p.a. were assumed to be ineligible for contributory allowance (on the grounds of inadequate contributory record if working full-time and excessively high income respectively), while those earning €10 000 or €25 000 p.a. were assumed to receive contributory family allowance. In addition, families with three children earning €5 000 or €10 000 p.a. were assumed to receive non-contributory large family benefit due to lower income.

In terms of tax relief for dependent children, this took the form of tax allowances (i.e. reductions of taxable income) in Spain. In the other three countries, tax relief took the form of non-refundable tax credits (i.e. reductions of tax due). Everywhere, families earning €5 000 were unable to gain from tax credits or allowances for dependent children as they would in any case pay no tax due to low income. In Greece, Italy and Portugal, tax relief took the form of non-refundable tax credits (i.e. reductions of tax due). In Italy, families earning €10 000 could not take full advantage of tax relief as their gross tax liability was lower than the tax credit itself, while the same was true for three-children families in Greece. In Italy and in Spain, supplements for children aged below 3 were taken into account where applicable. On the contrary, refundable tax credits available to families with children aged 6-16 at school with annual income below €3 600 in Greece and to working mothers with children aged below 3 in Spain were not taken into account because not applicable. Tax units were assumed to be one-earner families headed by dependent full-time workers.

Source: Own calculations.

Appendix II  
**Official statistics on child poverty**

Table A.3  
Eurostat estimates of child poverty

		Greece	Italy	Spain	Portugal	EU
child poverty headcount rate	2001	18	25	26	27	19
	1999	17	22	25	26	19
	1997	18	23	26	25	19
	1995	18	24	24	26	21
child poverty by household type	1 adult with child(ren)	37	23	42	39	35
	2 adults 1 child	8	13	18	9	10
	2 adults 2 children	14	21	23	15	13
	2 adults 3+ children	26	37	34	49	27
	3+ adults with child(ren)	23	24	18	23	16
child poverty	before transfers incl. pensions	24	30	33	39	32
	before transfers excl. pensions	21	27	30	31	31
	after all transfers	18	25	26	27	19

Notes: Children are defined as individuals aged below 16 (except in the "child poverty household type" rows where children include individuals aged 16-24 if inactive and living with at least one of their parents). EU figures are calculated as population-weighted averages of all 15 countries. All figures are for 2001 unless otherwise indicated.

Source: ECHP UDB version November 2003 as reported in Statistical Annex to Draft joint inclusion report Com (2003) 773 final published 12 December 2003 as Commission Staff Working Paper by the Commission of the European Communities. Available on the [www.europa.eu.int](http://www.europa.eu.int) website.