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in the European Union**

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EUROMOD - AN INTEGRATED EUROPEAN BENEFIT TAX MODEL

Child poverty and child benefits in the European Union[1]

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Abstract

Using evidence from the European Community Household Panel we find that family benefits vary in their importance to household incomes and in the prevention of child poverty across Europe. In one group of countries family benefits appear to have a significant effect on the protection of children from financial poverty. The UK and the Netherlands are both members of this group, and we use the microsimulation model EUROMOD to examine the extent to which differences in child benefits explain the very different level of child poverty in the two countries. We also explore the effect of "swapping" child benefit systems between the two countries and find that there is some scope for improvements in looking beyond national borders. We conclude that the poverty reduction properties of universal child benefits may be improved without resorting to means-testing or compromising the other functions of these benefits. This analysis illustrates that comparative microsimulations can be extremely informative, and provides a flavour of the potential of EUROMOD to offer valuable pointers for the direction of social policies.

JEL: C81; D31; I38

Keywords: Child poverty; European Union; Child benefits; Microsimulation.

1   Introduction and summary

This paper explores the role of child benefits in protecting European children from financial poverty. By "child benefits" we mean regular cash payments made to parents or other carers on behalf of children who are dependent on them. These benefits can take many forms. They may be taxable or non-taxable, income- and/or wealth- tested or universal, contributory or non-contributory. They may vary by the age or parity of the child, or be the same value for all children. The simplest benefit - a universal unconditional flat-rate benefit for all children - can be seen as having many functions in addition to reducing the rate of child poverty (Brown, 1988). For example, it performs a similar role to child tax allowances in contributing to horizontal equity in the net taxation of families of different types; it helps secure some degree of lifetime re-distribution by enhancing family incomes during a period of additional need; it has the potential to redistribute resources towards mothers (which is likely to improve the welfare of their children - see Goode et al. (1998) and Lundberg et al. (1997)).

A particular design of benefit will reflect the balance of priorities given to each objective. A benefit that is means-tested can be seen as prioritising short-term income maintenance with a lesser regard for the possible adverse consequences of this form of targeting. These include negative effects on work incentives; a reduction in horizontal equity at higher income levels; inequities introduced due to the stigma associated with means-testing; and the "unfairness" of high effective marginal tax rates (see Atkinson, 1998). In this paper we consider the poverty reduction properties of child benefits at the same time as recognising their other functions. Thus we choose not to explore poverty reduction through policy measures that rely on targeting by income (i.e. by means-testing) but instead seek other ways of using cash benefits to target children living on low incomes.[2]

We consider the children of the European Union (EU). They are of interest as a single group for two reasons. First, although social policy co-ordination in Europe has not yet reached the stage of common benefits across countries, comparisons with other EU countries are a major influence on national policy development. Furthermore, convergence of macroeconomic policy and the constraints imposed by the Stability and Growth Pact of 1997 *do* have effects at the micro-level on the living standards and incomes of families with children (Atkinson, 1998a). These effects themselves are unlikely to be common across countries, not least because of varying national responses to the need for adjustments. However, the very combination of policy formulation at the European level with differential national response to its effects motivates the need for a Europe-wide analysis.

The second reason is that, although by global standards the countries of Western Europe are rich, there remains considerable variation among them in average disposable income (see section 2). Drawing a single European poverty line - and the great dispersion in national poverty rates that this implies - helps to keep the very different absolute standards of income within our view.[3] Even so, we find that there are poor children in the richest countries,

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[2] Jarvis (1995) considers these issues in depth for the case of Hungary.
[3] See Atkinson (1998) for a discussion of the choice between national or European poverty standards (pages 27-29).

suggesting that child poverty is an issue that is rightly considered in European as well as national terms with, perhaps, scope for a co-ordinated European solution.

Section 2 establishes the scale of the problem by using household micro-data for 15 countries to count the proportion of children living in households with incomes below a European poverty line. Section 3 makes an initial attempt to assess the role of existing family benefits in preventing child poverty. This analysis is based on a simple calculation using the European Community Household Panel (ECHP) of the effect on household incomes of the removal of family benefits. The limitations of this approach are spelled out in section 4, and section 5 describes a Europe-wide microsimulation model, EUROMOD, built specifically to overcome these problems. In section 6 we present preliminary results from EUROMOD for two countries - the Netherlands and the UK – to illustrate the capabilities of EUROMOD. We examine the impacts of national child benefits on the national income distributions and estimates of poverty, and explore the effects of introducing each national system into the other country.

2   A European poverty line and children in European poverty

As a first step, we seek to establish the incidence of financial poverty among European children under existing social policies. There are many approaches to this task. Here, since we focus on Europe as a whole, we draw a European poverty line. Because the calculations are for illustrative purposes only, we confine ourselves to a particular set of assumptions and one data source for each country. Micro-data for 13 countries are drawn from the second wave of the European Community Household Panel (ECHP), using the User Data Base (UDB) for Wave 2. Sweden has no ECHP and Finland did not join until Wave 3. For these two countries micro-data are drawn from the respective national income distribution statistics, which in both cases are based on a combination of register and survey data. We calculate the numbers of people and numbers of children living in households with equivalised income below proportions of the EU15 mean. In doing this we implicitly assume that if household income falls below the poverty line then all the individuals within the household are poor to the same extent.

Our choice of the mean as the central measure of income (rather than the median, which is now favoured by Eurostat[4]) is designed to minimise the effort involved in integrating information for Finland and Sweden.[5] Household incomes are measured after taxes and benefits, on an annual basis for 1994 and are converted to a common currency using 1994 PPP-adjusted exchange rates. They are equivalised using the modified OECD scale.[6] In calculating the means and performing the headcount calculations, each household is weighted

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[4] Eurostat's Statistical Programme Committee agreed the recommendations of the Task Force on Social Exclusion and Poverty Statistics in November 1998. See Eurostat document CPS 98/3/12.

[5] We are very grateful to the EUROMOD project participants from Finland (Esko Mustonen and Heikki Viitamäki) and Sweden (Bengt Eklind) for taking part in the two-stage process to include their countries in the calculations. First, they provided estimates of mean income and population for their countries. In the second stage they calculated the numbers in Finland and Sweden below the EU15 poverty line. Note that the equivalent procedure to integrate Swedish and Finnish headcounts based on *median* incomes would have been much more elaborate.

[6] Single = 1; additional adults (aged >13) = 0.5; children (aged < 14) = 0.3.

by the number of people in it. The EU15 mean is calculated by weighting the national means by the national population and dividing by the EU15 population. For more information see Immervoll et al. (1999). The EU15 mean is 12102 PPP-adjusted ecu per equivalent person per year. National means as proportions of the EU15 mean shown in Table 1 range from 0.6 (Portugal) to 1.8 (Luxembourg).[7] This variation is similar to that shown for European countries by other indicators of aggregate income, such as GDP per capita (Eurostat, 1996; table B2). There is no reason to expect the two measures to produce exactly the same picture, since the income concepts are different.[8] Nonetheless, it is rather surprising that the ranking of some countries using 1994 GDP per capita (shown in the last column of Table 1) is quite different to that for mean equivalised income using ECHP data in the first column of Table 1. In particular, Italy appears much higher (ranked 8 instead of 12), Austria is higher (3 instead of 5) and Germany and the UK are lower (5 and 9 instead of 3 and 7, respectively). This comparison may raise the issue of the quality of the ECHP data, particularly for Italy. However, it is not our purpose here to provide definitive estimates of child poverty using these data. Rather, it is to illustrate the type of analyses that are possible with the direct use of household survey micro-data and to explore the extent to which they can answer our questions about the role of child benefits in preventing child poverty.

Table 1 shows the headcount ratios using three alternative proportions of the EU15 mean as poverty lines (40%, 50% and 60%), for Europeans of all ages and for two alternative definitions of a "child". These both identify relatively young children (aged under 14 and under 16) for reasons of simplicity in the calculations and in interpretation of results across countries. Clearly many people aged over 16 are rightly considered children. However, we are safe in assuming that all people aged under 16 are dependent children, and for comparability reasons we adopt this narrow definition.[9] We can make the following observations:

- There is great variation in headcount ratios across countries, due not only to differences in within-country inequality but also to differences in mean income between countries. Focusing on all ages and the 50% cut-off, we can see that five countries have proportions that are very low: less than half of the all-EU figure of 18% (Luxembourg, Denmark, Finland, the Netherlands and Sweden). A further five countries have proportions lower than the EU average (France, Belgium, Austria, Germany and the UK). The remaining five vary from 50% larger than the all-EU figure (Italy and Ireland), to double the EU figure (Spain and Greece), with the highest proportion (47% of the population) in Portugal.

- At the European level the headcount ratios are consistently somewhat higher for children than for the population as a whole: children are more likely than adults to live in poor households.

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[7] It is worth noting that the national means that we have calculated are close, but not identical, to those calculated by Eurostat using the same data source (1999; table C1.2).

[8] See Atkinson (1996; figure 2.4) for a schematic description of the differences.

[9] It remains the case that the definition of a dependent child is an important issue for social policy and for its evaluation. There are large differences across European countries in circumstances in which and the extent to which older children may be treated as dependent on their parents. For example, people aged up to 30 may be treated as children in Spain, but with the exception of disabled dependants, all people aged 19 and over are considered independent of their parents in the UK. See Millar and Warman (1996) and O'Donoghue and Sutherland (1998; Appendix 2), for more information.

- Comparing across countries we see that this is not uniformly the case. This is illustrated for children aged under 16 and the 50% cut-off in Figure 1, which shows the relationship between all-person poverty and child poverty. Countries above the 45° line have child poverty rates lower than adult rates and those below the line have child rates that exceed adults rates. In many of the countries with low poverty rates children are *less* likely to be poor. This is particularly the case in Denmark, Finland, Luxembourg and Sweden. In contrast, Greece – with the second highest poverty rate – also has a lower rate of child poverty than adult poverty. On the other hand (in descending order of overall poverty rates) children in Portugal, Spain, Ireland, Italy and the UK are *more* likely than adults to be poor. It is possible that these observations are due to the use of the (modified) OECD equivalence scale, which differentiates between the relative needs of younger children (those aged under 14) and others. However, the use of an alternative scale that does not take account of age (square root of household size) produces an *identical* pattern of countries with lower and higher chances of child poverty relative to adult poverty.[10]
- There is not a great difference in the headcount ratios for children aged under 14 and those up to 16. Although in the UK and Sweden older children appear to have a slightly lower risk of poverty, on average - and in most countries - the opposite is true. However, this observation does seem to be simply a consequence of our choice of the OECD equivalence scale. Using an age-neutral equivalence scale reduces the average difference in poverty rates for the two age ranges to zero.[11]

3   The role of "family-related benefits"

We now explore the extent to which explanations for differences across countries in headcount ratios for children (and in the relative ratios for children compared to adults) lie in international differences in family benefits.[12]

In this section we examine the evidence available in the ECHP for 12 countries. The ECHP UDB provides a variable "family-related benefits" which, as well as child benefits includes maternity benefits and benefits for carers of disabled dependants.[13] Table 2 shows the proportion of total household disposable income that is made up of these benefits (for all households). It varies from 6.6% in Belgium to 0.2% in Spain. In order to investigate its importance to households with children below the European poverty line, we carry out a rudimentary simulation. We set the value of family-related benefits to zero and re-count the number of children who are in households below the poverty lines. For simplicity, we do not re-calculate the mean but leave it fixed at 12102 Ecu per year per equivalent adult (see Table 1). Implicitly, we assume no behavioural adjustments (such as changes in wages or working hours) following this reduction in benefit income. Table 2 reports, for children aged under 16 and for each of the three poverty lines, the new headcount ratio (labelled "without FBEN"). It also shows the absolute (percentage point) increase in child poverty and the percentage increase in the proportion of poor children. The "European" (EU12) rate of child poverty

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[10] These calculations were done only for countries for which we have ECHP data: not Finland and Sweden.
[11] Calculated for the countries for which we have ECHP data.
[12] Previous studies include Ditch et al. (1996) who use Luxembourg Income Study data to estimate the impact of the whole direct tax and benefit system in nine countries of the EU on national poverty rates for families of different types.
[13] ECHP UDB variable HI133. This variable is not available for Germany.

increases by between 6 and 7 percentage points, depending on the choice of poverty line. We can identify three groups of countries:

1. Denmark and Luxembourg:[14] child poverty rates are relatively low, with or without family-related benefits. Although the benefits are relatively generous, removing them causes poverty rates to rise by a small absolute amount. However, the percentage increase in poor children is very large.

2. Spain, Italy, Greece, Portugal (and Ireland, except at the 40% line): child poverty rates start high but are little affected by the removal of benefits. This is because, with the exception of Ireland, the size of the benefits is small, combined with the fact that the European poverty lines are high in relation to the incomes of households with children in these countries. Benefits would have to be very large to have a significant effect on poverty measured in this way.

3. UK, Belgium, Austria, France, the Netherlands (and Ireland at the 40% line):[15] family-related benefits are relatively large in size and are also relatively successful at protecting children from poverty. On removing the benefits, poverty rates rise significantly both in absolute and proportional terms.

Clearly, family benefits have a major role to play in child poverty prevention in Europe. Here, we consider ways in which this role might be improved for each of these groups. In group 1 incomes are already relatively high, meaning that only a small minority of children are below the European poverty line. However, it remains the case that children in the poorest households in these countries are well-protected by family benefits. For example, in Denmark, the child poverty rate (using the 60% cut-off) would rise from 4.9% to 12.7% if family benefits were removed. Children in both countries are already less likely than the population as a whole to be poor. In these countries it would be interesting to explore ways in which benefits for children could be designed to raise the incomes of the small minority who are poor by European standards (3.1% of Danish children and 2.5% of children from Luxembourg using the 50% cut-off).

In group 2 countries, relatively low average incomes mean that the generally low benefits cannot bring households with children up to even the lowest European poverty line. In these cases it would be interesting to explore the effects of more substantial family benefits on child poverty rates. Need a new benefit be large and expensive to reduce the numbers of children in poverty, or could benefits of modest cost be designed to target particularly on groups vulnerable to poverty?

The third group consists of countries that appear to have family benefits that are relatively successful at reducing child poverty. However, in all these countries, child poverty rates are higher than for the population as a whole (using the 50% line). Are there improvements in the design of benefits that could assist in the rather modest target of making child poverty rates no higher than the rates for the whole population? Are there features of particular national systems that other countries could learn from? We note from Table 1 that the six countries in this group (including Germany) have relatively similar PPP-adjusted mean household incomes. With the exception of the UK they also have relatively similar child poverty rates

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[14] It is likely that Sweden and Finland also belong to this group.

[15] It is likely that Germany also belongs to this group.

(using the 50% and 60% cut-offs). The UK has a much higher rate (22% compared with between 9% and 14% for the other countries, using the 50% cut-off). This is significantly higher than the rate for the UK population as a whole. Can this be explained by inadequacies in the system of UK family benefits? Are there other types of benefit that would reduce the UK's contribution to the European rate of child poverty?

4   The role of policy simulation

The figures shown in Table 2 have some important limitations in terms of their ability to provide answers to the questions raised in the previous section.

First, we need to be clear about the policy instruments on which we wish to focus. If we wished to consider all types of income maintenance policy that might keep children out of poverty, we would cast our net wider than "family benefits". We would include in our analysis tax allowances and credits and other tax concessions benefiting families with children.[16] We might include social assistance, in-work benefits and housing benefits where these include specific components for children. We might also include sources of income in kind targeted on children that are part of some social protection systems (such as free school meals or subsidised day care). However, this paper is about the role of child benefits, rather than family benefits in general. With this narrow focus, we need to be able to distinguish child benefits from the wider category of benefits for which information is available in the ECHP.

Even with the narrow focus that we have chosen, there are many parameters of the system to consider. Child benefits may not only be of different magnitudes, they can also vary in many other respects. The benefits may be taxable or non-taxable, income- or wealth- tested or universal, contributory or non-contributory. They may vary by the age of the child, or by the number of children. The definition of an eligible child (or parent) may also vary. To explore how well the benefits perform - from the perspective of poverty reduction or any other function we consider to be important - we need to be able to focus on particular aspects of their design.

Clearly the size and structure of cash benefits are not the only factors that determine whether children are more likely to be poor than adults. Other crucial factors include the nature of the labour market, patterns of fertility and partnership, and the availability of non-cash support systems such as formal or informal childcare. The existence of child benefits of various types may play an anti-poverty role in the short term by simply raising the incomes of households with children. At the same time, they may have a longer term effect through their impact on labour market incentives. To separate the pure short term policy effects from the longer term, and from underlying differences in patterns of working and household formation we can ask "what if" questions using policy simulation. The calculation of the impact of the removal of family-related benefits in the previous section is an example of a very basic "what if" simulation. However, this calculation was not sufficient to answer questions about actual

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[16] It is certainly the case that most countries with small systems of family cash benefits have larger concessions to parents of dependent children within their income tax systems. See O'Donoghue and Sutherland (1998). At the same time, tax concessions may do little to reduce poverty, if poor families have incomes below the tax threshold for childless people.

policy instruments that the governments of EU Member States can administer. The rudimentary simulation could not provide a full answer to the question "what if we abolished family benefits across Europe?" because it could not capture the *interactions* between family benefits and other parts of the tax-benefit systems. In some countries poorer families would be protected from a fall in income by social assistance schemes. (Ireland and the UK are good examples.) Specific income-tested benefits such as housing benefits may perform a similar role. In practice, in these cases poverty would not increase to the extent shown in Table 2. In these countries the operation of child benefits is difficult to separate from the benefit system as a whole. Furthermore, in some countries some child benefits or other family benefits are taxable. Removing the benefits would decrease tax liability. This effect is also not captured in the illustrative calculations in Table 2.

In order to isolate the impact of a particular policy, to focus on detailed aspects of policy design, or to explore the implications for micro-level incomes of specific policy changes, a microsimulation model is required. Static microsimulation (or "tax-benefit") models offer distinct "levers to pull" and "buttons to push" so that simulated changes translate directly into changes to actual policy rules that governments can make. When policy is in transition - and in particular when changes are being phased in by treating "new" cases differently to "old" cases - users of simulation models are able to choose whether to model the old system for all cases, the new system for all cases, or the mixture as it exists at any point in time. (Of course, they can also be used to analyse the effects for all cases of moving from the old to the new system.)

The term "static" might suggest that such models are inferior to models described as "dynamic". However, in this context, a static model is exactly what is needed. Static models allow us to hold constant many variables so that we can focus on the aspects of interest. Specifically, they allow us to separate the direct effects of tax and social security policy on incomes from all the underlying influences on income and from the other characteristics and behavioural patterns of a specific population. So we can "borrow" policy - or parts of it - from one country and apply it to another country's population. Atkinson et al. (1988) apply the British tax system to the French population; De Lathouwer (1996) compares unemployment schemes for Belgium and the Netherlands using data on the Belgian population; O'Donoghue and Sutherland (1998) apply stylised versions of European systems of the taxation of couples to the UK population; Redmond (1999) explores the effects of introducing a UK-style system of means-tested family benefits in Hungary.

Static microsimulation models exist in most countries of the EU and the rest of the OECD.[17] However, to explore the effects of benefits in a comparable manner in different countries as well as on European child poverty, we need a model that operates at the European level. This is the subject of the next section.

5   EUROMOD and policy simulation at the European level

EUROMOD is an integrated European tax-benefit model, which, at the time of writing, is under construction. EUROMOD provides us with a Europe-wide perspective on social and

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[17] See Sutherland (1998) for a 5-country review and Merz (1991) for an overview of microsimulation models.

fiscal policies that are implemented at European, national or regional level. It is also designed to examine, within a consistent comparative framework, the impact of national policies on national populations or the differential impact of co-ordinated European policy on individual Member States. See Immervoll et al. (1999) for more details.

To illustrate the potential that EUROMOD offers in answering questions about the effects of child benefits on child poverty across Europe, we use a preliminary version of EUROMOD for two countries - the Netherlands and the UK. Microdata for the Netherlands are from the 1996 wave of the Socio-Economic Panel (SEP). Households with large amounts of missing information are excluded, bringing the sample to 4568 households. For the UK we use the 1995/6 Family Expenditure Survey. No observations are excluded since the sample contains no households with significant missing information. There are 6797 UK households. In each case, the samples are weighted to adjust for non-response bias and to bring the results up to population levels. The simulations are based on the systems of tax and benefit rules current in June 1998 and the income variables in the micro-data are updated using the consumer price index (NL) and the retail price index (UK).

One of the advantages of an integrated European tax-benefit model is that consistent income concepts can be used in each country. For the current exercise we use the following definition of household disposable income: wage and salary income (including sick pay paid by government), *plus* self-employment income, *plus* property income (rent, dividends, interest), *plus* other cash market income and occupational pension income (regular private transfers, alimony and child maintenance), *plus* cash benefit payments (social insurance, disability, universal and social assistance benefits, including state pension payments and near-cash benefits), *minus* direct taxes and social insurance contributions.[18]

Given the limitations of the underlying data, not all the relevant components of the respective tax-benefit systems lend themselves to simulation. We simulate income taxes, social insurance contributions, child benefits and other family benefits, and income-tested benefits. In computing income, components that are not simulated in the model are taken directly from the data (i.e. it is assumed that they are unaffected by the policy reform). In particular, this is the case for contribution based payments, such as unemployment benefits or contributory pensions. Appendix 1 lists the specific instruments that have been simulated.

Household incomes have been equivalised using the modified OECD equivalence scale. In this exercise we use national poverty lines defined as 60% of median equivalised household disposable income, with each household weighted by its size.[19] In exploring the effects of policy changes on the incomes of households with children, we use two alternative definitions of a child. The first is all people aged less than 14 (as in the OECD equivalence scale). The second is the definition of a child used in UK policy: all people aged below 16, plus those

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[18] As defined in Atkinson, Rainwater and Smeeding (1995), Table 2.1. Components that are not part of our output income concept include imputed rent from owner occupation, the value of home production, other non-cash incomes, unrealised capital gains or losses, the value of credit or loans (repayments and interest payments are not deducted) and irregular lump sum incomes (regular bonuses are included). Employer contributions are neither added nor deducted. Forms of "committed expenditure" such as housing costs, child maintenance, alimony payments, etc. are not deducted.

[19] As recommended by the Eurostat Task Force on Social Exclusion and Poverty Statistics.

aged below 19 who are in full-time secondary education, not married and not a parent themselves. In comparing across countries monetary amounts have been converted using Purchasing Power Parities (PPPs).[20]

Table 3 shows the poverty lines for the two countries, based on 1998 policy simulated for the 1995 (UK) or 1996 (Netherlands) populations with updated incomes. The cut-off is some 10% higher in the Netherlands than the UK, on the basis of a PPP comparison. This is the reverse of the ranking given in section 2 using the mean of ECHP incomes for an earlier year. The table also shows the percentages of all people and of children (under both definitions) who are living in households with equivalised incomes below the national lines. In spite of the higher cut-off in the Netherlands, the all-person headcount is much lower: 12.6% instead of 20.4% in the UK. We also see that the poverty among children in the UK is higher if one adopts the OECD child definition (age<14) as opposed to the one used in the UK tax-benefit system (which includes many 14-18 year olds), indicating that child poverty is more concentrated among younger children. The opposite is true for the Netherlands, where the poverty rate for older children excluded from the OECD definition but included in the UK definition is 17.0%, substantially higher than the rate for younger children (12.7% for "OECD children").

This is confirmed by Figure 2, showing the position of children in the national income distributions in the two countries. In the UK, the percentage of "OECD children" in the three lowest income decile groups is clearly higher than that of "UK children". In the UK, the number of children generally decreases with increasing income (with the notable exception of the second decile group). In the Netherlands, on the other hand, the highest numbers of children are found in the middle of the distribution. Comparing the cumulative distributions of "UK children", also plotted in Figure 2, shows that a much higher proportion of UK children live in relatively poor households than do children in the Netherlands: 37% of UK children compared with 27% of Dutch children are in the 30% of households with the lowest incomes on a national basis.

Population figures and absolute numbers in poverty provide another perspective. As shown in Table 3, the UK is nearly four times the size of the Netherlands and there are 8.5 times as many "OECD children" and 7.4 times as many "UK children" in poverty in the UK compared with the Netherlands.

6   A case study: child benefits in the Netherlands and the UK

The ECHP evidence described in section 3 suggests that family benefits are relatively important to household incomes in both the UK and the Netherlands. They also appear to play a major role in protecting children from poverty in both countries. Evidence from administrative statistics suggests that child benefit itself is a similar proportion of GDP in both countries. In the UK in 1996/7 child benefit was 0.88% of GDP and 7.2% of all

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[20] The 1995 household sector PPP is carried forward to June 1998 using the changes in the Harmonised Consumer Price Index of both countries (the resulting 1998 PPP exchange rate is 3.0514 NFL/GBP). The 1995 PPP was taken from Eurostat (1999: p. 36).

government spending on social security benefits and in the Netherlands child benefits amounted to 0.90% of GDP in 1997, or 5% of total benefit payments.[21]

The 1998 systems of child benefit and child support in the Netherlands and the UK were structurally similar in some respects and different in others. Appendix 2 provides the details, which are summarised below.

Similarities
- Child benefit is not income- or wealth- tested
- Child benefit is non-contributory and not work-tested
- No income tax or contributions are payable on child benefit
- No child-related income tax allowances/credits, except for lone parents

Differences
- Child benefit payments increase with the number of children in the family ("parity") in the old Netherlands system, which is in the process of phased change. There is no variation with parity in the new system. In the UK system, the benefit *decreases* in value per child with the number of children (the amount for the eldest or only child is 23% more than for other children).
- Child benefit payments vary by the age of the child in the Netherlands, not in the UK.
- The definition of a child is slightly different. It includes most 16-17 year-olds in the Netherlands (subject to a child's income limit, employment and education status and disability conditions). In the UK it excludes a more extensive group of 16-17 year-olds but includes some 18 year-olds.
- Child benefit is not included as income in the assessment of income for social assistance in the Netherlands. There are no specific additions to social assistance rates (except for lone parents and young parents). In the UK, child benefit is included in social assistance income assessments and there are specific child additions to social assistance payments.

There are other significant differences between the systems of cash child support for low-income families in the two countries - notably in the UK the in-work benefit for parents on low earnings: Family Credit. However, we maintain our focus on the role of child benefit and evaluate a series of scenarios with the aim of exploring the impact of the national systems of child benefit. In each country we first abolish the existing child benefit. The motivation is not to evaluate this scenario as a realistic reform option. Rather, by comparing the existing scenario with one where no child benefits are available, it is possible to assess what difference the existing child benefit makes in terms of incomes. We then "swap systems" and explore the effect of the UK system in the Netherlands and vice versa. However, three factors complicate the exercise. First, both countries operate additional instruments targeted on lone parents. For reasons of clarity we hold these constant and do not explore changes to them.

Secondly, child benefit is integrated differently into the two systems. In the Netherlands, it is not included in income assessments for social assistance. In the UK, it is included in the assessment for social assistance (Income Support). Therefore we carry out two versions of

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[21] Office for National Statistics (1998: table 3.5) and Statistics Netherlands (1998: table S 60.8). The Netherlands and UK definitions of total benefits may not be comparable.

"abolition" for the UK. In the first, child benefit is abolished but Income Support entitlements are allowed to rise to take its place. In the second, Income Support child payments are reduced by the value of child benefit so that we can evaluate the effect of the universal child payment on all households with children.[22]

The third complication is that policy in both countries is in a transitional phase. In the Netherlands the 1998 scheme is part way between an "old" scheme where child benefit payments depended on the age and number of children and a "new" scheme that depends on age only and is being phased in so that it will apply to all children by the year 2011. In the UK lone parent benefits are not paid to new lone parents (or new claimants), but are retained for "old" claimants. (See Appendix 2 for more details of these transitions in both countries.) Throughout, our simulations for the UK assume that all lone parents are "old". For the Netherlands, the baseline is the actual 1998 hybrid system, but we explore the effects of moving to both the "old" and the "new" system in two scenarios. We simulate six scenarios for the Netherlands and five for the UK, as follows:

Scenarios simulated for the Netherlands
NL 1998 - Base-line scenario: System of rules current in June 1998.
NL noCB - Abolish child benefit: Same as NL 1998 but child benefit amounts reduced to zero.
NL newCB - New child benefit: The current (June 1998) child benefit is replaced by the "new" rules in which the benefit depends only on the age of children, not their parity.
NL oldCB - Old child benefit: The current (June 1998) child benefit is replaced by the "old" rules which are more strongly dependent on parity.
NL UKCB - UK child benefit: the current (June 1998) child benefit is replaced by the current UK child benefit. We adopt the UK rules with respect to both the child benefit amounts (except for the UK lone parent additional amount) and eligibility conditions (the child definition). Child benefit is *not* counted as "means" for social assistance. Using PPP exchange rates the child benefit for one child aged 5 would rise from 314.66 to 454.90 NFL per quarter. For a family with three children all aged between 6 and 9 it would fall from 1372.86 to 1193.86 NFL.
NL UKCBadj – Revenue neutral UK child benefit: Same as NL UKCB but instead of paying the same amounts - in PPP terms - as in the UK, all amounts have been increased by about 8% to match the overall cost of the NL 1998 scenario.

Scenarios simulated for the UK
UK 1998 - Base-line scenario: System of rules current in June 1998.
UK noCB1 - Abolish child benefit: Same as "UK 1998" but child benefit amounts are set to zero (the additional amount for lone parents is left unchanged).
UK noCB2 - Abolish child benefit and reduce Income Support accordingly: Same as "UK noCB1" but the child related Income Support amounts are also reduced accordingly. This has the effect that for families on Income Support, the abolition of child benefit is no longer offset by higher Income Support payments.

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[22] Family Credit entitlements are unaffected by our simulated changes to child benefit because child benefit is not included in the Family Credit income assessment (although in practice Family Credit rates are set on the assumption that child benefit is received).

UK NLCB - *Netherlands child benefit:* Same as "UK 1998", except child benefit is replaced by the "old" Netherlands child benefit. We adopt the Dutch rules with respect to both the child benefit amounts and eligibility conditions (the child definition). Child benefit is *not* included in the means test for Income Support. Using PPP exchange rates the child benefit for one child aged 5 would fall from £11.45 to £7.92 per week. For a family of three children all aged between 6 and 9 it would rise from £30.05 to £34.56.

UK NLCBadj – *Revenue neutral Netherlands child benefit:* Same as UK NLCB, but instead of paying the same amounts - in PPP terms - as in the Netherlands, all amounts have been reduced by around 32% to match the overall cost of the UK 1998 scenario.

Results

Table 4 shows the monthly cost of each of the scenarios in national currency. Our simulation results for the existing systems compare well in cost terms with administrative statistics from each country.[23] In the Netherlands, the new system is substantially less generous than the old, with the actual 1998 system coming in between. The UK system of child benefit is slightly less generous than the corresponding 1998 Netherlands system but more generous than the new Netherlands system that is being phased in. In the UK, the old Netherlands system is very much more generous than the existing UK system, costing around 30 per cent more.

Table 5 shows the effect of moving from the baseline scenario to the alternatives in terms of the percentage change in household income across the national (all household) distributions of income.[24] These distributional effects are illustrated in Figure 3. The effects of the "noCB" scenarios illustrate the importance of child benefits to family incomes, particularly at the bottom but also in the middle of the distributions in both countries. For the UK the difference between the "noCB1" and "noCB2" scenarios shows the extent of dependence on Income Support by families with children in the bottom half of the distribution: around a quarter of the cost of child benefit for all children is made up of payments to families in receipt of Income Support. Comparing the distributional effects of the 1998 system and the old and new systems in the Netherlands (Figure 3a) shows that the current system is part-way between the old and the new in its distributional effect as well as its cost. For the Netherlands, Figure 3a does not indicate any significant distributional effect of introducing the revenue neutral UK system of child benefit. The actual, less generous UK system results in small losses in the bottom half of the distribution, but these are no greater than the losses that occur under the new Netherlands system. In the UK, however, the introduction of the old Netherlands system would bring significant percentage increases in income, particularly to the bottom quintile (Figure 3b). This is to a large extent due to the greater generosity of the Netherlands system. However, even after controlling for the higher cost of the Netherlands system of child benefit, the Netherlands structure of benefit distributes more to lower income UK households than does the present UK structure.

It is important to note, however, that not everybody would gain from the introduction of the "old" Netherlands child benefit in the UK. Figure 4b shows the number of persons and

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[23] The actual figures in monthly terms are "at least" NFL 543m for the Netherlands (Sociale Verzekeringsbank (1999)) and £607m for the UK (Department of Social Security, 1999; Table 1). These compare with simulated values of NFL 547m and £603m respectively.

[24] In these distributions, households are counted once and are not weighted by household size.

children gaining (positive values) and losing (negative values) as a result of the reform.[25] Families that are less well off under the "old" Netherlands child benefit include those with only one child. In addition, some 18 year olds are still eligible under the UK system, while in the Netherlands persons aged over 17 do not count as children (see Appendix 2 for a detailed overview of applicable amounts and definitions). However, even though there would be children in households worse off after the reform, those gaining from switching to the revenue neutral Netherlands benefit would clearly outnumber the losers. This is true especially for children in the lower income groups. The opposite holds for the Netherlands (Figure 4a): the introduction of a revenue neutral UK child benefit in the Netherlands would result in more losers (52%) than gainers (39%) among children in the bottom 40% of the household income distribution.

We now turn to the effect of the alternative scenarios on estimates of poverty. We have drawn the poverty lines using the baseline scenarios – the existing 1998 systems. The top part of Table 6 shows the poverty rates for the Netherlands and the UK for all persons and for children (using both definitions) under each scenario.[26] The rates, unsurprisingly, are related inversely to the generosity of the respective schemes. The most expensive scheme in either country is the "old" Netherlands scheme and this is also the most effective in reducing child poverty (and poverty overall). A comparison of schemes that cost the same shows that while the old Netherlands structure is more effective at poverty reduction in the UK than the current UK system, the current Netherlands system remains (somewhat) more effective than the UK structure in the Netherlands.

The lower part of Table 6 shows the effects in terms of the absolute reduction in poverty headcounts per unit spending on benefit. We use this measure as one possible indicator for the "efficiency" of benefits in terms of poverty reduction. For the Netherlands we find that the new scheme is generally the most efficient at reducing poverty, as well as being the cheapest. For the UK, the "old" Netherlands system is more efficient in terms of child poverty reduction than the current UK child benefit. For each unit of spending, the "old" Netherlands system removes 15% more children (UK definition) from poverty than does the current UK system (1.77 compared with 1.54 – shown rounded in the table). This effect is reduced but not removed by scaling down the Netherlands system so that it costs the same as the UK system. UK child poverty is reduced by 10% more per unit of spending (1.69 compared with 1.54) even though the schemes cost the same.

Comparing the results across countries we find that child benefit generally appears to be more effective at poverty reduction in the UK than in the Netherlands. For example, without child benefit the proportion of Netherlands children (using the UK definition) counted as poor

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[25] Here "losers" are persons living in a household whose equivalised household income decreases by at least £1 per month. "Gainers" are those who are in households that gain at least £1 per month.
[26] All the results reported in this paper are derived from survey data and are subject to sampling error. However, as shown by Pudney and Sutherland (1994), the statistical reliability of changes in poverty headcounts may be particularly problematic. Our reporting of simulation results should not be taken to suggest that they are statistically significant. It is also worth noting that these measures of poverty reduction could be quite sensitive to the choice of equivalence scale. The modified OECD equivalence scale is based on the age and number of persons living in the household. The performance of the different benefits could appear to be quite different if alternative criteria for equivalising incomes were adopted.

would be 20.2%. This falls by 7.6 percentage points to 12.6% with the "old" Netherlands child benefit. In the UK, 35.0% of children are counted as poor under the "no CB" scenario and this falls by 10.5 percentage points to 24.5% with the introduction of the Netherlands "old CB". However, this is mainly a result of the fact that children are more concentrated in lower income households in the UK. Reductions in poverty rates in *percentage* terms are actually higher in the Netherlands than they are in the UK: 38% and 30% respectively in the above example.

Table 7 provides another perspective. It shows the poverty gaps (i.e., the income necessary to lift a poor household out of poverty) summed across all poor households (column 3) and averaged across the poor (column 4). Again, the results confirm the importance of where children are located in the income distribution. Removing child benefit in the Netherlands increases the overall poverty gap by around 19%. However, because the percentage increase of the number of poor persons is even larger (about 24%), the average poverty gap per poor person actually *decreases*. In the UK, on the other hand, abolishing child benefit causes both overall and per-capita poverty gaps to rise because even though the number of poor households goes up, this increases by a smaller percentage than the overall poverty gap.

7   Concluding comments

We have seen that family benefits in general and child benefits in particular vary in their importance to household incomes and in the prevention of child poverty across Europe. In some countries, family benefits are generous but even without them incomes are sufficient to protect the large majority of children from poverty. In a second group, family benefits are relatively small and have little effect on poverty. In a third group, family benefits appear to have a significant effect on the protection of children from poverty. The UK and the Netherlands are both members of this third group and we have used microsimulation techniques to examine the extent to which differences in child benefits explain the very different level of child poverty in the two countries. We also have explored the effect of "swapping" child benefit systems between the two countries. We find the following:
- The Netherlands system is in transition. The "old" system, which depends on the number of children as well as the age of the child, is both more generous overall and more effective at reducing poverty than the "new" system, which depends on age alone. However, per unit of spending the new system is generally the most efficient at reducing poverty.
- In the UK, the "old" Netherlands system is also the most effective for child poverty reduction in the UK. Even when controlling for the amount spent on benefit, a system that pays more to older children and larger families appears to be the most efficient in reducing poverty rates in the UK.
- Most crucially, we have focussed on child benefits (and reforms) that do not involve income- or means- testing. We have shown that the poverty reduction properties of universal child benefits may be improved without compromising the other functions of these benefits.

Clearly, there is scope to take this type of analysis further. It would be interesting to explore the financing of more expensive schemes (through income tax or other means) as an

alternative to the scaling down of the benefits. Also, experiments with the variation of benefits by age and family size could be extended outside the scope of existing (or past or projected) policy.

We have used a case study of just two countries with quite similar child benefit systems. An EU15 version of EUROMOD will allow us to compare countries with more diverse systems. EUROMOD also offers us the possibility to carry out similar analyses for larger sub-groups of countries and for the whole EU. As discussed above, it will enable us to draw common European poverty lines, to construct a common income distribution and generally to consider the European population across national boundaries.[27] Simulation of various levels of a common universal benefit for children (or a children's "Citizen's Income") to replace existing cash benefits and tax expenditures would allow us to assess national systems against a set of common benchmarks.

We have seen that variation in the definition of what we mean by "a child" can have an impact on our comparative and national results. As well as providing analysis of policy (and policy change) as such, we expect that EUROMOD will be a useful tool for the exploration of the implications of this and other similar choices (such as units of assessment and units of analysis), taking account of the wide variation that exists across the EU.

It is clear that bi-lateral comparative microsimulations can also be extremely informative. Our example shows that seeking for improvements in policy design across national boundaries can be a quite fruitful exercise. Further work would be needed to draw firm conclusions about the beneficial effects on child poverty in the UK of child benefits that depend on the age of the child and on the number of children. However, we believe that this preliminary output from EUROMOD is the first of many microsimulation exercises to provide valuable pointers for the direction of social policies.

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[27] In the present paper we have refrained from exploring the effect of child benefits on EU2 (UK and the Netherlands combined) since this group would be dominated by the UK.

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Table 1: The percentage of all Europeans, and European children living in poor households in 1994

% of EU15 mean income:		40%			50%			60%			GDP/capita
Age group:		all	age<14	age<16	all	age<14	age<16	all	age<14	age<16	1994[1]
Country	mean[2]										
Germany	13855	7.6	9.8	10.1	10.7	13.4	13.8	16.3	20.2	20.9	18326
Denmark	13923	1.8	0.9	1.1	4.2	2.5	3.1	8.1	4.1	5.0	19143
The Netherlands	12482	5.1	4.8	5.1	7.8	8.7	9.1	15.0	17.1	18.3	17317
Belgium	13733	6.0	6.1	6.1	10.6	10.0	10.9	16.4	15.6	16.7	18800
Luxembourg	22261	2.7	1.6	2.0	3.3	1.8	2.4	4.0	3.0	3.4	26979
France	13365	5.0	4.6	4.8	10.4	11.1	11.5	18.0	19.0	19.8	17886
United Kingdom	13314	7.6	11.3	10.9	15.7	22.6	22.2	24.7	33.3	32.6	16442
Ireland	11301	15.0	20.1	21.3	27.8	34.4	35.3	38.3	44.5	45.7	14171
Italy	9905	15.4	17.2	18.3	26.6	29.1	30.7	37.4	42.0	44.0	17086
Greece	8401	26.5	21.1	21.6	38.9	33.9	34.9	51.7	47.2	48.6	10561
Spain	8961	21.7	25.0	26.0	34.9	37.7	39.0	47.8	49.8	51.8	12654
Portugal	7668	34.8	36.2	38.2	46.9	49.7	51.8	59.6	61.8	63.7	11432
Austria	13659	6.9	9.1	9.2	10.7	13.7	14.2	16.3	20.6	20.7	18829
Sweden	12128	5.6	2.8	2.7	8.4	5.2	5.1	14.1	9.9	9.7	16230
Finland	11872	1.7	0.8	0.9	4.2	2.3	2.3	10.6	8.3	8.5	15099
EU15	12102[3]	10.8	11.8	12.3	18.0	19.9	20.6	26.5	29.1	30.0	16641

[1] Eurostat (1996) Table B2 (page 72). GDP at market prices per head of population in PPS

[2] In Ecu per year (using PPP-adjusted exchange rates), equivalised using the modified OECD scale, weighted by household size.

[3] Mean calculated by weighting national means by national populations.

Sources: Own calculations for EU13 from the 2nd wave of the ECHP; for Finland and Sweden the figures are calculated from 1994 Income Distribution statistics.

Table 2 The role of family related benefits (FBEN) in reducing the percentage of children in poor households

% of EU15 mean income:		40%				50%				60%			
	mean FBEN as % of mean income (all households)	with FBEN[2]	without FBEN	% point difference	% increase in poor	with FBEN[2]	without FBEN	% point difference	% increase in poor	with FBEN[2]	without FBEN	% point difference	% increase in poor
Germany[1]		10.1				13.8				20.9			
Denmark	4.4	1.1	2.8	1.7	154.5	3.1	7.5	4.4	141.9	4.9	12.7	7.8	159.2
The Netherlands	3.0	5.1	8.6	3.5	68.6	9.2	15.9	6.7	72.8	18.2	27.7	9.5	52.2
Belgium	6.6	6.2	15.2	9.0	145.2	11.0	21.0	10.0	90.9	16.8	27.8	11.0	65.5
Luxembourg	5.1	2.1	4.6	2.5	119.0	2.5	6.3	3.8	152.0	3.5	12.0	8.5	242.9
France	4.1	4.8	13.2	8.4	175.0	11.4	22.6	11.2	98.2	19.6	31.7	12.1	61.7
United Kingdom	3.6	10.9	23.6	12.7	116.5	22.2	32.4	10.2	45.9	32.7	41.1	8.4	25.7
Ireland	3.2	21.4	28.7	7.3	34.1	35.1	39.9	4.8	13.7	45.6	49.8	4.2	9.2
Italy	0.4	18.0	18.4	0.4	2.2	30.6	31.8	1.2	3.9	43.8	44.9	1.1	2.5
Greece	0.5	21.6	22.2	0.6	2.8	35.0	36.2	1.2	3.4	48.7	49.5	0.8	1.6
Spain	0.2	25.7	26.1	0.4	1.6	38.3	38.5	0.2	0.5	51.2	51.5	0.3	0.6
Portugal	1.7	38.0	39.6	1.6	4.2	51.7	53.8	2.1	4.1	63.5	65.7	2.2	3.5
Austria	6.2	9.3	17.8	8.5	91.4	14.3	26.1	11.8	82.5	20.7	36.3	15.6	75.4
Sweden		2.7				5.1				9.7			
Finland		0.9				2.3				8.5			
EU12[3]				6.2				6.7				6.8	

[1] Family-related benefits are not available separately for Germany in the ECHP UDB.

[2] Small differences compared with Table 1 are due to missing values for family-related benefits in the ECHP UDB.

[3] EU15 less Germany, Sweden and Finland.

Sources: Own calculations for EU12 from the 2nd wave of the ECHP

Table 3 Populations and baseline scenario (1998): poverty lines and headcounts, Netherlands and the UK

		Netherlands	UK
Population (thousands):[1]		15,120	57,440
60% median, per month:[2]		NFL 1487 (£487)	£443 (NFL 1351)
% below poverty line:	all	12.6	20.4
	children <14	12.7	29.5
	"UK" children	13.6	28.0
Number below poverty line (thousands):[1]	all	1,910	11,740
	children <14	370	3,160
	"UK" children	500	3,710

[1] As implied by weights in data.

[2] All amounts are in 1998 currency; conversions use a PPP-adjusted exchange rate of 3.0514 NFL/£.

Source: EUROMOD

Table 4 Child benefit scenarios: revenue effects

	Cost per month
Netherlands:	*million NFL*
NL 1998	547
NoCB	0
NewCB	486
OldCB	621
UKCBadj[1]	547
UK:	*million £*
UK 1998	603
NoCB2[2]	0
NLCB	786
NLCBadj	603

[1] The UK system, without scaling for revenue-neutrality costs 507 million NFL per month.

[2] The cost of continuing to pay the amount of child benefit to families on Income Support (NoCB1) is £163 million per month.

Source: EUROMOD

Table 5 Alternative child benefit scenarios, compared with the baselines: percentage change in mean household disposable income, by decile group

% change		Netherlands				UK			
decile group[1]	noCB	newCB	oldCB	UKCB	UKCBadj	noCB1	noCB2	NLCB	NLCBadj
Bottom	-5.9	-0.7	0.8	-0.5	-0.1	-1.4	-6.2	2.5	0.5
2nd	-3.1	-0.4	0.4	-0.3	-0.1	-2.3	-5.9	2.2	0.4
3rd	-3.3	-0.4	0.5	-0.4	-0.1	-1.9	-3.8	1.4	0.3
4th	-3.8	-0.5	0.5	-0.4	-0.2	-2.5	-3.1	1.1	0.1
5th	-3.1	-0.4	0.4	-0.2	0.0	-2.4	-2.6	0.8	0.0
6th	-2.7	-0.3	0.4	-0.1	0.1	-2.0	-2.1	0.6	-0.1
7th	-1.9	-0.2	0.3	-0.1	0.0	-1.5	-1.5	0.4	-0.1
8th	-1.0	-0.1	0.1	0.0	0.1	-1.0	-1.0	0.2	-0.1
9th	-0.8	-0.1	0.1	0.0	0.0	-0.8	-0.8	0.1	-0.1
Top	-0.4	0.0	0.0	0.0	0.0	-0.4	-0.4	0.1	0.0
All	-1.9	-0.2	0.3	-0.1	0.0	-1.3	-1.8	0.5	0.0

[1] Deciles of equivalised household disposable income (each household counted once)

Source: EUROMOD

Table 6 Child benefit scenarios: poverty headcounts

	All persons	Children (aged <14)	Children (UK definition)
Poverty headcounts			
Netherlands:			
NL 1998	12.6%	12.7%	13.6%
NoCB	15.6%	19.4%	20.2%
NewCB	12.7%	13.0%	13.9%
OldCB	12.2%	11.7%	12.6%
UKCBadj	12.7%	12.7%	13.9%
UK:			
UK 1998	20.4%	29.5%	28.0%
NoCB2	23.3%	37.0%	35.0%
NLCB	19.2%	25.8%	24.5%
NLCBadj	20.3%	28.9%	27.4%
Decrease in the number of poor persons per £1,000 per month spent on benefit[1]			
Netherlands:			
NL 1998	2.5	1.1	1.4
NewCB	2.7	1.2	1.5
OldCB	2.5	1.1	1.4
UKCBadj	2.4	1.1	1.3
UK:			
UK 1998	2.7	1.3	1.5
NLCB	3.0	1.5	1.8
NLCBadj	2.9	1.4	1.7

[1] Using a PPP-adjusted exchange rate of 3.0514 NFL/£.
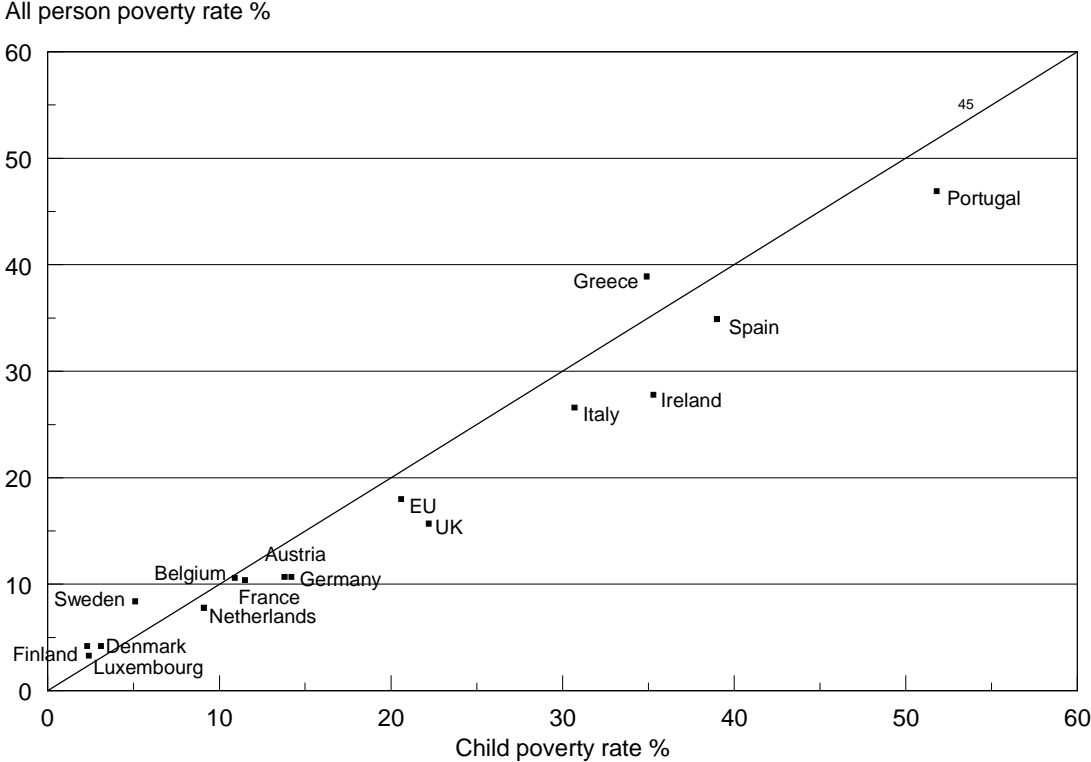Source: EUROMOD

Table 7 Child benefit scenarios: extents of poverty

	Persons in poor households (1000s)	Children (UK defn) in poor households (1000s)	Total poverty gap (millions per month, all persons)[1]	Per capita poverty gap (monthly, poor persons)[1]
Netherlands				
NL 1998	1909	498	NFL 490 (£161)	NFL 256.9 (£84.2)
NoCB	2361	742	NFL 584 (£191)	NFL 247.2 (£81.0)
NewCB	1927	508	NFL 499 (£164)	NFL 259.1 (£84.9)
OldCB	1847	461	NFL 481 (£158)	NFL 260.2 (£85.3)
UKCBadj	1923	510	NFL 493 (£162)	NFL 256.2 (£84.0)
UK				
UK 1998	11742	3712	£695 (NFL 2121)	£59.2 (NFL 180.5)
noCB2	13367	4643	£885 (NFL 2699)	£66.0 (NFL 201.5)
NLCBadj	11635	3626	£684 (NFL 2086)	£58.9 (NFL 179.2)

[1] Conversions using a PPP-adjusted exchange rate of 3.0514 NFL/GBP
Source: EUROMOD

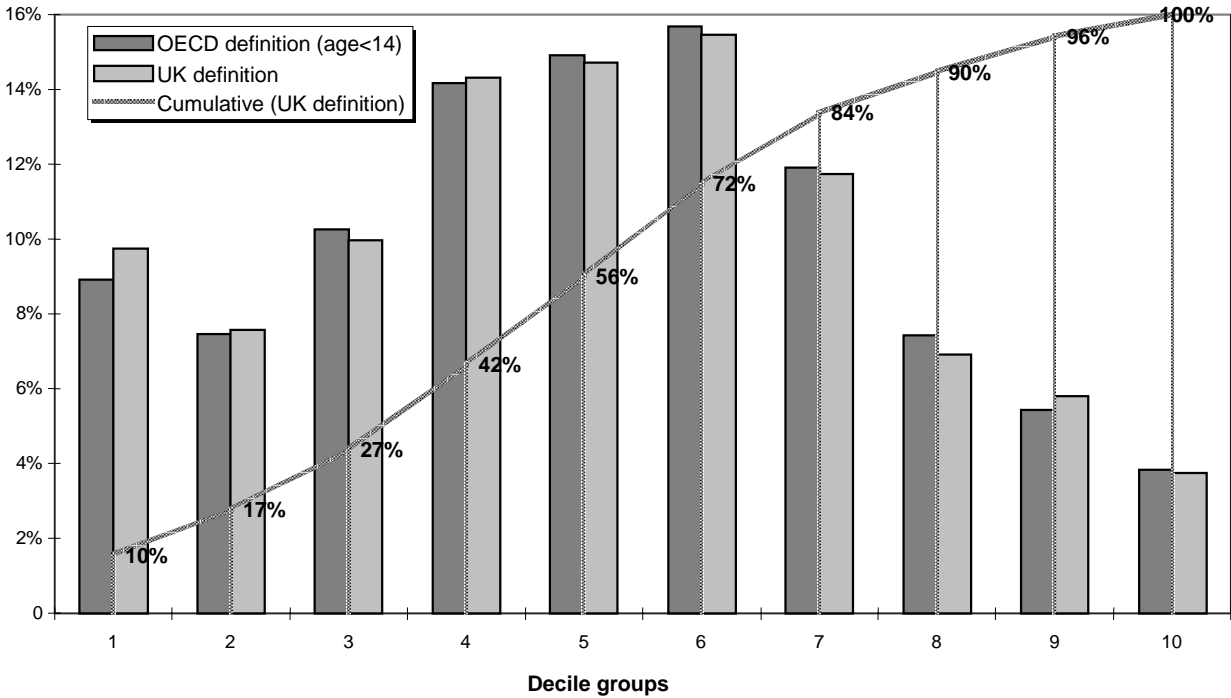**Figure 1: Rates of child poverty by all person poverty rates**

All person poverty rate %

Source: Table 1, using as poverty cut-off 50% of EU15 mean income; children aged <16.
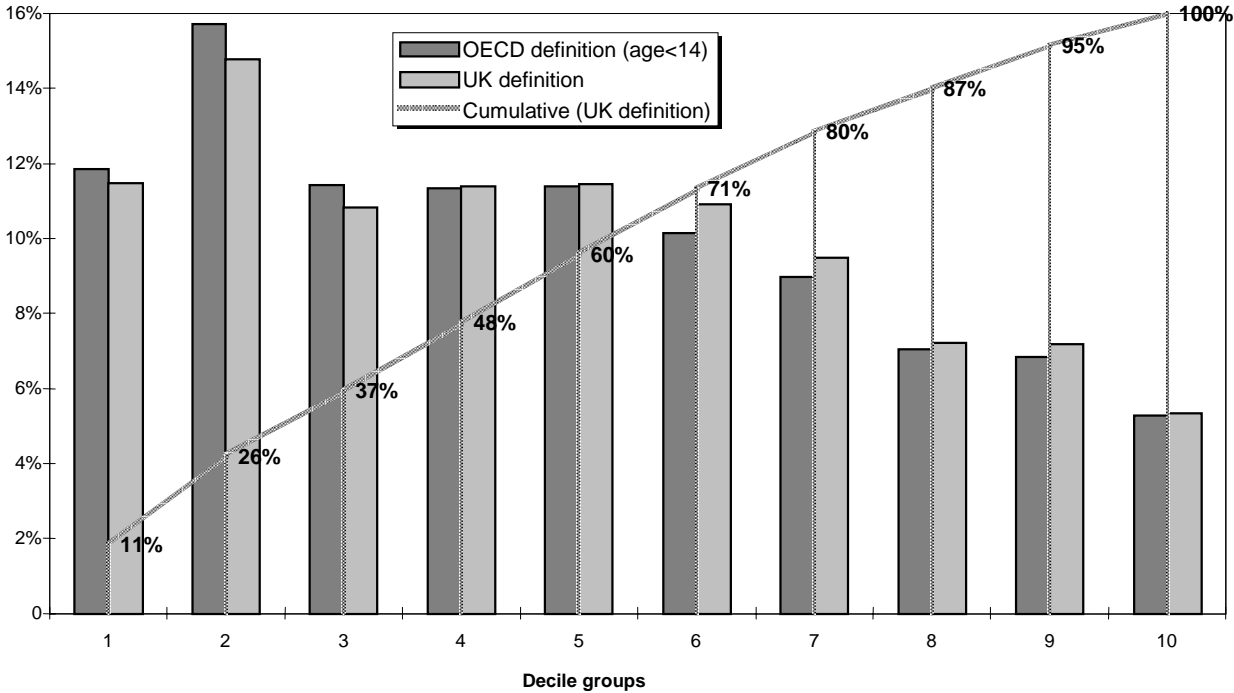
Figure 2: Proportions of children by decile group of equivalised household income
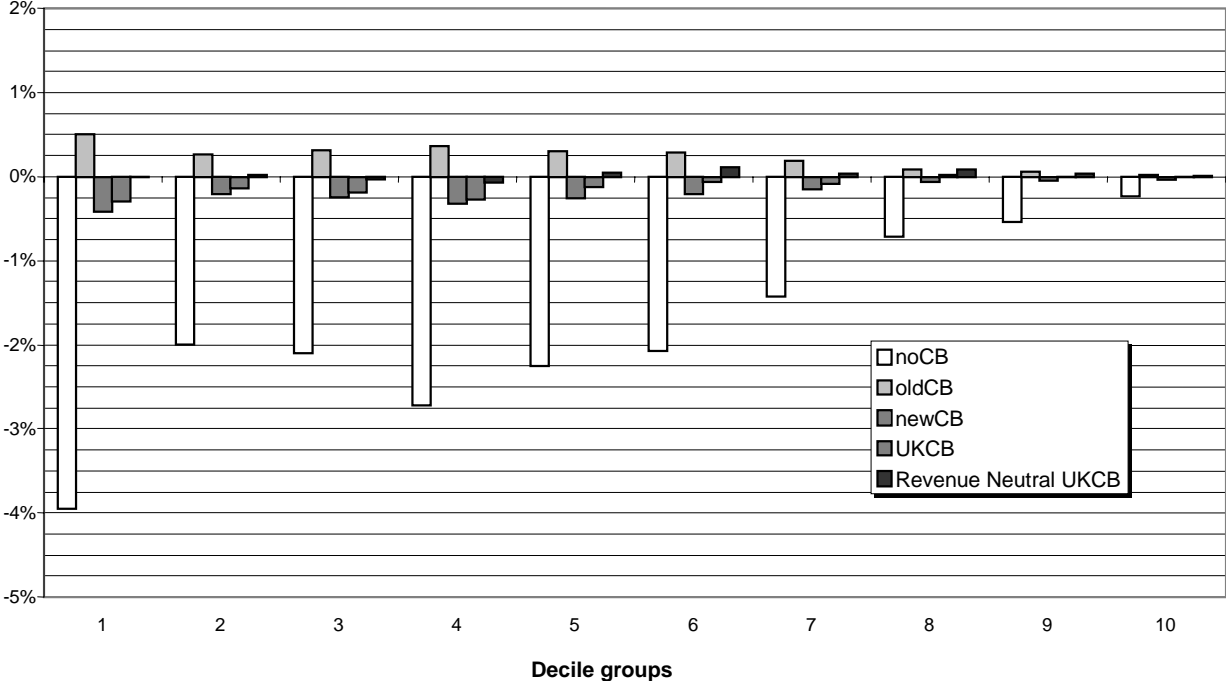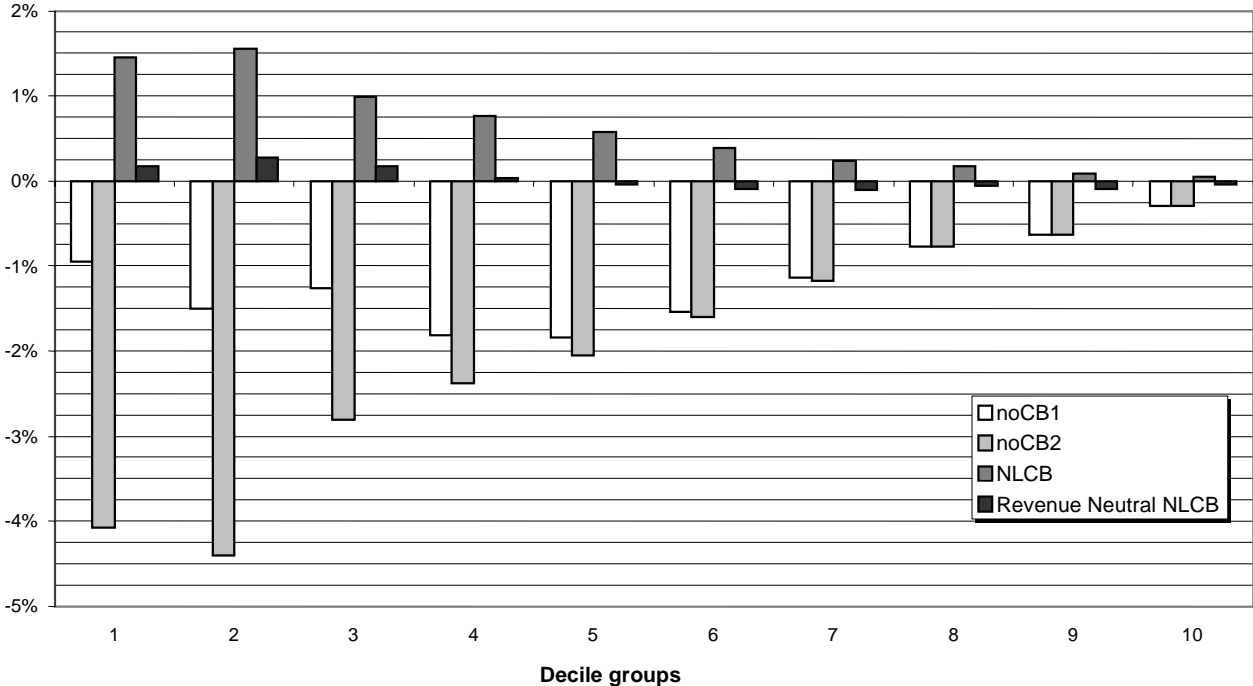**(a) The Netherlands**

(b) UK

Source: EUROMOD

Figure 3: Percentage change in equivalent household income compared with 1998 scenario (all households)
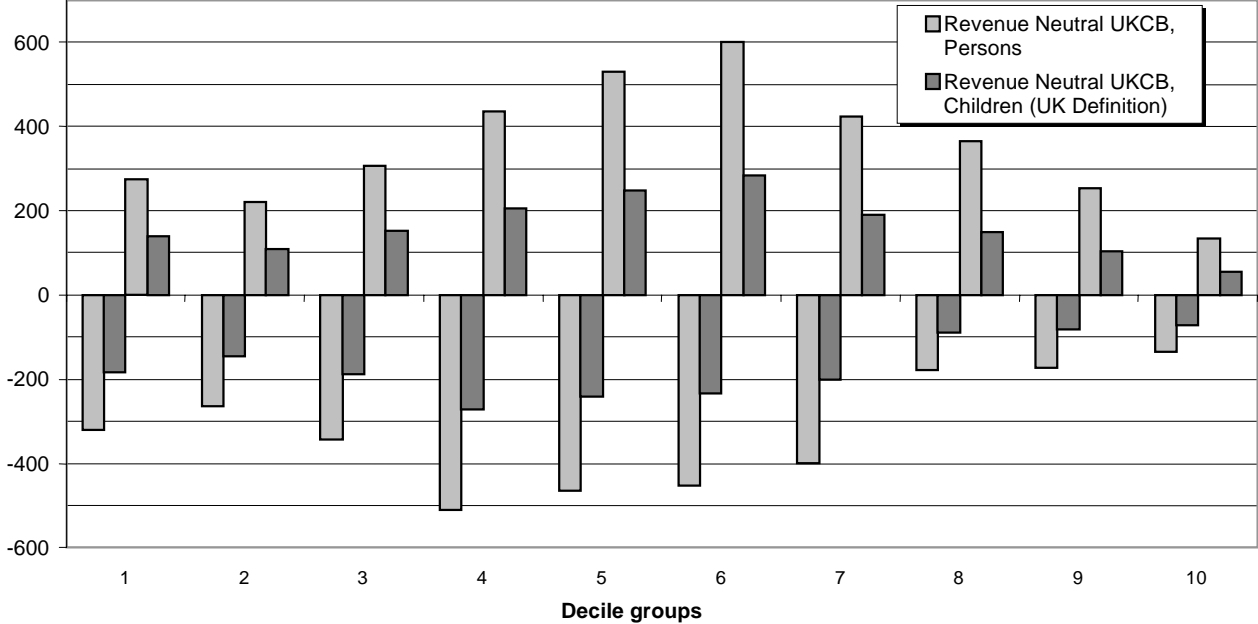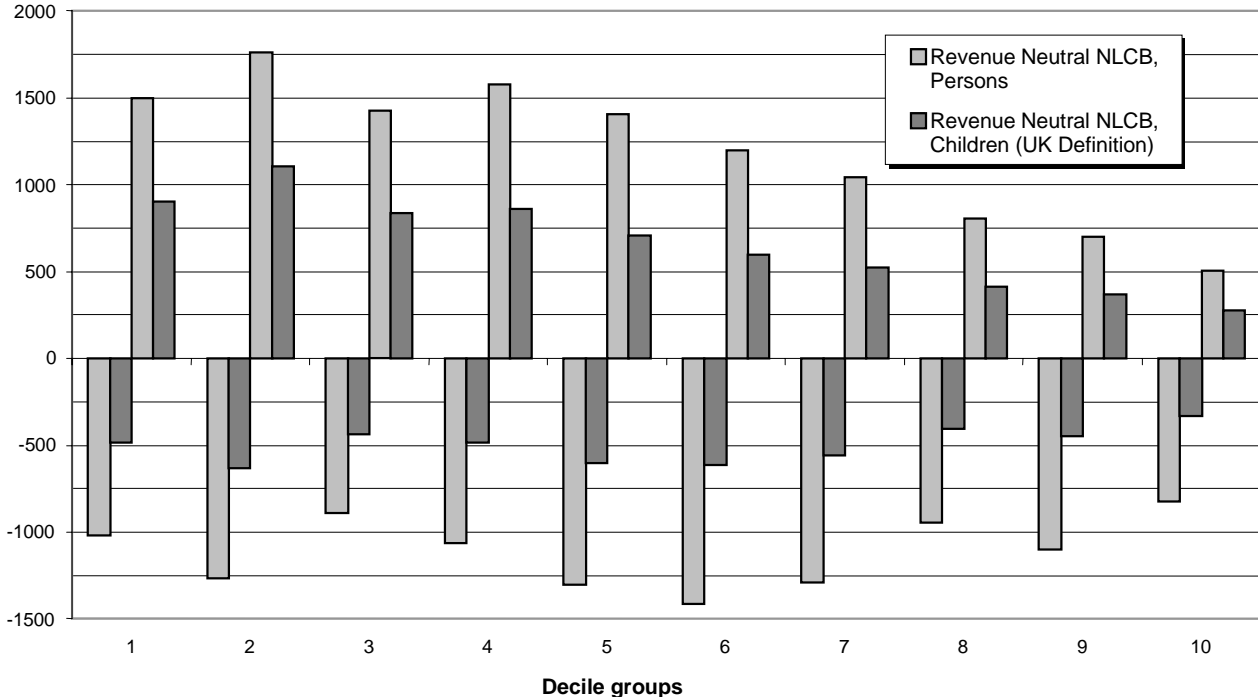**(a) The Netherlands**

(b) UK

Source: EUROMOD

Figure 4: Gainers and losers from revenue-neutral reforms (thousands)
(a) Netherlands: UK child benefit compared with NL1998 scenario

(b) UK: NL child benefit ("old") compared with UK1998 scenario

Source: EUROMOD

Appendix 1 Tax-benefit instruments in EUROMOD

Netherlands

Simulated	*Not Simulated (but included from data)*
Child Benefit	Basic disability benefit ("AAW")
Earnings Transfer Allowance	Basic Old Age Pension ("AOW")
Survivor's Benefit ("ANW")	Disability Insurance (former civil servants)
Social Assistance for the older unemployed and disabled unemployed ("IOAW")	NL Disability Insurance ("WAO")
Social Assistance ("ABW")	Social Assistance for self-employed ("UBZ")
Employee Social Insurance Contributions (unemployment, peoples' pensions, health)	Unemployment Benefit for civil servants
Self Employed' Social Insurance Contributions (disability)	Unemployment Benefit ("WW")
Employer Social Insurance Contribution (health)[28]	Sickness Insurance Pay ("ZW")
	Student Grants/Payments
Income Tax	Housing Benefit

UK

Simulated	*Not Simulated (but included from data)*
Child Benefit	Incapacity Benefit
Family Credit	Invalid Care Allowance
Income Support	Disability Working Allowance
	Disability Living Allowance
Employee National Insurance Contributions	Mobility Allowance
Self-Employed National Insurance Contributions	Severe Disablement Allowance
	Attendance Allowance
Income Tax	Industrial Injury Benefit
	Retirement Pension
	War Pension
	Widow Benefit
	Unemployment Benefit (Job Seekers Allowance)
	Statutory Sick Pay
	Maternity Payments
	Student Grants/Payments
	Council Tax Benefit
	Housing Benefit

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[28] This is not part of the output income concept but necessary for computing income tax and peoples' insurance contributions.

Appendix 2: Child benefits and other child-related instruments in the Netherlands and the UK, 1998

1. The Netherlands

Child Benefit:
Definition of children:
Age < 18 but eligibility for children aged 16 and 17 requires that they are in education (at least 213 hours per quarter), or unemployed, or at least 45% disabled. Moreover, the parents should contribute to the sustenance of the children to an important extent, which translates into the condition that the income of the children aged 16-17 should be less than NLG 2291 net per quarter.

Size of payment:
Base amount is NFL 314.66 per *quarter*.
Different multipliers apply depending on the date of birth of the child. If born before October 1st 1994, the multiplier depends on both number of children (parity) and age:

AGE	1	2	3	4	Number of Children 5	6	7	8	9	10+
<6	1	1.148287	1.197705	1.301722	1.364107	1.405708	1.435422	1.489512	1.531558	1.565181
6 to 11	1.565181	1.797278	1.874626	2.037432	2.135075	2.200188	2.246696	2.331357	2.397166	2.449793
<18	1.857116	2.132502	2.224278	2.417449	2.533305	2.610562	2.665745	2.766197	2.84428	2.906723

If born on or after October 1st 1994, the amount depends only on age:

AGE	
<6	1
6 to 11	1.214263
<18	1.4285578

Since this new regime is currently in the process of being phased in, there is an intermediate table valid for children who turned 6 or 12 after 1 October 1994 (and for children born between 1 October 1994 and 1 January 1995):

AGE	1	2	3	4	Number of Children 5	6	7	8	9	10+
<6	1	1.148287	1.197705	1.301722	1.364107	1.405708	1.435422	1.489512	1.531558	1.565181
6 to 11	1.214263	1.394330	1.454332	1.580658	1.656423	1.706954	1.742992	1.808682	1.859658	1.900559
<18	1.565181	1.797278	1.874626	2.037432	2.135075	2.200188	2.246696	2.331357	2.397166	2.449793

No income tax or contributions are payable on child benefit (almost all other benefits are subject to these payments). Not included in means for social assistance (most other benefits are).

Tax Allowances
For lone parents only: flat amount (NFL 547.17 per month) on top of the basic and single tax free allowance. If the *youngest* child is aged under 12 (on the 31st of December of the year

preceding the tax year) then an additional allowance applies. This is 12% of "income from work" of the lone parent, with a ceiling of NFL 547.17 per month.

Social Assistance

There is no amount per child. Different adult amounts apply if there are *any* number of children in the family (the extra amount is per family, not per child). But this applies only to lone parents or if at least one of the parents is younger than 21.

All amounts are net of taxes and contributions as are any means which are to be subtracted (social assistance is paid net, with the benefit agency making tax and contribution payments on behalf of the benefit recipient). An exception is the flat-rate health insurance contribution of NFL 18.00 per month, which has to be paid by the social assistance recipient.

Amounts (NFL/month) for (cohabiting or married) couples:

Both aged 21-64	1024.67 + 1024.67
Both 65+	2134.34
One 65+, one 21-64	2079
Both 18-20, no children	708.18
Both 18-20, with children	1118.05
One 18-20, one 21+, no children	1378.76
One 18-20, one 21+, with children	1788.63
Living alone:	
aged 21-64	1024.67 + 409.87
65+	1507.63
18 to 20	354.09
Lone Parents:	
aged 21-64	1024.67 + 409.87 + 409.87
65+	1917.49
18 to 20	763.96

2. The UK

Child benefit

Definition of child: aged under 16 or under 19 and in full time secondary education; not married.

Size of payment: £9.30 per week per child with an addition of £2.15 for the eldest or only child.

No age-relation; not taxed; no contributions payable; paid to the mother.

Lone parent addition of £5.65 per week. (Except for "new" lone parents who receive no addition. The premium is being phased out.)

"Lone parents" cannot be cohabiting but may be legally married to someone absent.

Income tax

The only relevant tax instrument in 1998 is the "Additional Personal Allowance" for lone parents. In this case, lone parents may be cohabiting, but there is only one allowance per cohabiting pair. They may not be legally married, with spouse absent. Lone parents are those with children aged under 16 or under 19 and in full time secondary education. The "allowance" is in fact a non-refundable credit, set at £1900 per year and allowed at a rate of 15% (ie the maximum cash value is £285 per year).

Social assistance (Income Support)
There are additions to Income Support (IS) for each child, which depend on age. There is also a family premium if there are any children and a lone parent premium which is additional to the family premium for lone parents. Again there is phasing out of the LP premium in the basis that new claimants (or new lone parents) do not receive it.

There are single and couple rates and premia which depend on the age of the adults. The rate for a single person aged between 25 and retirement age is £50.35 (£39.85 for those aged 18-24) and for couples (one or both aged 18+) it is £79.00 per week. Adults aged 16-17 (ie people of that age not in full time secondary education) in practice usually get nothing. Child additions are (per week):

age 0-10   £17.30
age 11-15   £25.35
age 16-18   £30.30
per family   £11.05
per lone parent £4.70

Child benefit is taken into account in the income assessment for IS. Thus if child benefit were reduced, IS entitlement would rise by the same amount.

The structure is similar for housing benefit and council tax benefit (which are held constant in this exercise), although there are tapers so these income-related benefits do not replace child benefit £ for £.

Family credit (FC)
Families with children where one parent works at least 16 hours per week may receive family credit. The "credit" (in fact, a cash benefit in 1998) is worked out taking account of work hours, net income of the nuclear family and numbers and ages of children. Given these things, there is no differentiation between one- and two- parent families.
There is a taper of 70% on family net income, after a minimum threshold.
Unlike with IS, the income assessment does not take account of child benefit. However, the FC child rates are set, and the benefit as a whole is designed, on the assumption that the families receive child benefit as well.
Child rates are (£/week)

age 0-10   12.35
age 11-15   20.45
age 16-18   25.40

These are additional to the main rate which assumes that there is at least one child.