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# THE TARGETING OF FAMILY ALLOWANCE IN HUNGARY

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## Abstract

We consider the targeting of the family allowance in Hungary. In 1989, expenditure on family allowance accounted for half of government expenditure on non-pension social income in cash and 3 percent of GDP. We (i) show the development of the allowance scheme during the post-war period, (ii) investigate its incidence across the income distribution using household survey microdata relating to 1987, and (iii) consider arguments for bringing the family allowance into the base of the progressive personal income tax. We show that the choice of equivalence scale makes a substantial impact to the conclusions regarding incidence. We conclude against taxing the allowance.

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## INTRODUCTION

Family allowances, in the form of cash payments made by the state to families with children, are a common feature of social policy in industrialised countries. In Europe, this has applied both to the market economies of the West and the former command economies of the East. The level of family allowance, in relation to wages, was in general more generous in the latter, see Table 1 (although the pre-reform picture in Eastern Europe is more complicated that this suggests, see Atkinson and Micklewright, 1992, chapter 8).

The transition of the Eastern European economies towards a market system has resulted in attention being paid to the role of family allowance in the countries concerned. One view sees generous family allowance as a natural feature of a command economy but not of a market economy. It is argued that governments in command economies could, and did, hold down wages but returned some of the proceeds in the form of price subsidies and 'social income' in cash and kind, including generous family benefits. On this view, transition to the market economy implies a reduction in the ratio of family allowance to wages. A second view takes a more neutral position on the place of family allowance within an economic system. The lower family benefits in Western Europe may result from political choice rather than the natural features of a market economy. We note that reasoned arguments for substantially higher family allowances (coupled with other changes) have been put forward in the UK (Johnson et al, 1989, Parker and Sutherland, 1991). The maintenance of generous family allowance in Eastern Europe may be seen as desirable, but it is argued that macroeconomic stabilisation in the face of stagnant or negative growth requires a reduction in government expenditure and a focus of cash support on those most in need. On this view, the debate is about *targeting*.

In this paper we consider the targeting of family allowance in Hungary. Hungary stands out in Table 1 as having the most generous family allowance in 1980 among the six Eastern European countries illustrated. In 1989, expenditure on family allowance amounted to 20 percent of government expenditure on social income in cash (and half of non-pension expenditure), the total representing 3 percent of GDP (World Bank, 1992, Table 2.2, p.10). The family allowance scheme inherited by the incoming democratically elected government in May 1990 is a *universal* scheme. By this we mean that allocation, and hence 'targeting', is determined by the demographic

characteristics of the household with no explicit reference to income or employment status. Family allowance in Hungary is paid to all families with children under the age of sixteen (and up until the age of twenty for those in full time education).[1] The rate per child varies with family size and higher rates are paid to single parents. (The rates in August 1990 are shown in Table 2.)

In considering the situation in Hungary, we are not necessarily advocating either of the views expressed above of family allowance in transition economies. Rather, we are concerned that debate about the future of family support in Hungary should take account of a range of issues relevant to any discussion of targeting. There is a naive view that the targeting of a benefit paid without explicit reference to income must be inefficient by definition. But if the categorical criterion for receipt, in this case children, is correlated with low income, then targeting of a universal benefit may be much better than is presumed. The *degree* of targeting achieved is a matter for empirical research. We also believe that the debate should take place in the knowledge of what the *pre-1990* system did or did not achieve. Discussion of reform of social security in any country is influenced by its history, not least since the past may condition the attitudes of those responsible for reform. In the case of Eastern Europe, the historical context may be particularly important if there exist negative feelings towards everything associated with the Communist period.

The pre-reform situation is the subject of the first two sections of the paper. In Section 1 we consider the evolution of the pre-1990 system of family allowance, using aggregate statistics on coverage and benefit levels. We show that coverage of all children by the allowance scheme in Hungary, in the practical as well as the formal sense, is a comparatively recent phenomenon. The level of the allowance in relation to wages was notably higher in 1990 than that shown for Hungary in 1980 by Table 1, which was in turn substantially above levels existing earlier in the post-war period. These trends can be expected to have influenced attitudes towards family support in Hungary and therefore the political economy of family policy.

In Section 2 we analyse the incidence of family allowance pre-reform

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[1] There is no age restriction on eligibility for family allowance if the child concerned is a permanent invalid and is looked after by the parents. In this case the allowance acts as a carer's benefit rather than a family allowance.

using household microdata from the 1988 Income Survey conducted by the Hungarian CSO. We consider the share of family allowance going to each decile of the pre-allowance distribution of income. (This of course is only one of several possible measures of incidence.) The picture of pre-reform targeting varies with the equivalence scale which is chosen to allow for differences in family size, a choice which we emphasise is open to genuine debate and which may be affected by economic transition. The results could be used as ammunition by persons with a variety of views about the need for changes in targeting.

In Section 3 we consider a policy change which might improve the targeting of family allowance by introducing an explict link between receipt and income level, namely the inclusion of the allowance in the base for personal income taxation. This is a possibility that has been discussed in Hungary since the introduction of a progressive personal income tax in 1988. It may seem an attractive option since it would 'clawback' allowance from those with higher incomes whilst retaining the benefits of a universal allowance free of the well-known problems associated with means-testing. We discuss the unit of assessment for the personal income tax, the issue of existing child tax allowances, the administrative problems of taxing family allowance, and the degree of progression in the system. Taxation appears a much less attractive option that it might first seem and one which has become increasingly less attractive over time.

In the concluding section we remind the reader of those aspects relevant to the debate on targeting which we have not been able to consider and which would be worthy of more attention. In part this returns us to the theme of the first part of the paper since we note that payments of family allowance in Hungary in the past were much more differentiated by family size and composition than at present. This may have lessons for the present Government which appears to be moving towards family support through the tax system in a manner which is regressive, and which is therefore inconsistent with any view that family support in Hungary needs better targeting.

## 1. THE DEVELOPMENT OF FAMILY ALLOWANCE IN HUNGARY

The law making family allowance in Hungary a universal benefit, independent of employment status, was one of the last pieces of legislation passed by the outgoing Communist government in April 1990. (There were

concerns that the law might be repealed by the new democratically elected coalition even before it come into effect (Adamik, 1991)). This recent change should not obscure the fact that family allowance in Hungary has a long history. It was introduced in 1938 and Hungary was the first Eastern European country to give cash benefits to families with children (Ferge, 1991, Table 3.3) and among the first in Europe as a whole (Gordon, 1988, p.283). The benefit has never been subject to a means-test but up until April 1990 receipt of family allowance was conditional on a satisfactory employment record (and was funded out of the social insurance fund rather than the state budget). Ferge reports that payments were made only to parents with 21 days employment in a given month (1991a, p.20).

The payment of family allowance conditional on an employment record is an example of the underlying principle of much of social security provision in pre-reform Eastern Europe. Benefits were often restricted to those who could demonstrate current or past employment in the socialised sector (Ferge, 1991, Atkinson and Micklewright, 1992, chapter 8). Prior to 1990 family allowance in Hungary was restricted to the children of those persons working in the state sector or in agricultural co-operatives. Table 3 summarises the changes in the post-war period in the rules relating to the type of employment and family size. The table gives a general picture of increasing coverage over time.[2] Two features may be noted. First, the 1990 changes not only removed the employment rules on eligibility but also extended the allowance to all children in the family, something which had existed previously only in 1946-1953 and then only for families of state sector employees. Secondly, prior to 1975, agricultural co-operative families received less favourable treatment with lower rates of benefit and, until 1966, a restricted coverage of smaller families.

How did the rule changes in Table 3 translate into changes in numbers of children for whom family allowance was paid? In Figure 1 we show for 1950 to 1990 the number of children for whom any family allowance was paid in each year as a proportion of the number of children in the population in that year aged less than 15. The denominator in this calculation is not ideal as it excludes some older children who are eligible, but the calculation provides

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[2] We do not know if the rule concerning the number of days of work in the month, described by Ferge, changed over time or whether it was the same throughout the post-war period. Members of agricultural co-operatives had to demonstrate 120 days of work (80 days for women) in the preceding year (International Social Security Review, 1973, no.4, p.499).

a reasonable indication of changing coverage in the post-war period.

From 1985 onwards the numbers of children covered by family allowance exceeded the total number of children aged less than 15. That coverage was not in fact complete is shown by the sharp rise in the proportion between 1989 and 1990, from 107 percent to 117 percent. This reflects both the extension to the children of non-employed parents and the payment in respect of all children under 16 irrespective of family size or age of the child. Prior to the mid-1980s coverage was significantly lower. In 1975 the proportion illustrated in Figure 1 was 79 percent and if we go back to 1950 we find a figure of less than 50 percent. Between 1965 and 1985 we see a fairly steady increase.

In addition to coverage, we need also to consider the development of the *level of payments* of family allowance. Has the relationship between family allowance and average earnings in Hungary always been that shown for 1980 in Table 1? Figure 2 sheds some light on this. In view of changes which have occurred during the post-war period in the relative rates for different family sizes we provide three series, taking in each case the same average earnings denominator. The numerators are:

- the two-child rate of family allowance (both parents present, state sector employee)
- the average payment per family receiving family allowance
- the average payment per child covered by family allowance

For the first two series we have figures from 1949. The series for the average payment per child is shown from 1959. Looking first at 1980, the year which was the subject of the international comparison of Table 1, we see that the average payment per family was the same as the 2 child rate in 1980 shown in that Table - 25 percent of the average wage - while the average payment per child was 15 percent of the average wage.

The 1980 figures were notably higher than those for earlier years in the post-war period. The series for the average payment per family displays a sequence since 1950 of sharp increases followed by gradual and smaller declines. The movement of this series reflects both changes in coverage and changes in benefit rates. As regards the latter, the 2 child rate was unchanged between 1951 and 1965, thus declining relative to average wages, and then was fixed again from 1966 to 1973. The average payment per family in 1950 was only 6 percent of the average wage, about a quarter of its 1980 level, and the average payment per child (not shown on the diagram) only 3

percent of the average wage. It is not until 1975 that the average payment per child reaches 10 percent of the average wage.

Turning to the period after 1980, it can be seen that in 1987 the average payment per child and the payment for 2 children are about the same as in 1980, relative to the average wage, while the series for the average payment per family declines somewhat reflecting the extension of coverage to certain single child families in 1983 (see Table 3). In 1988 all three series display a sharp increase which is repeated in 1989. The slight fall in the two average payments series in 1990, in contrast to the 2 child/2 parent series, probably reflects the extension of coverage to all single child families in that year.

By 1989 the average payment per family represented 36 percent of the average wage and the average payment per child, 21 percent. What were the reasons for the policy change in 1988-89 which led to these figures being some 70 percent higher than those for 1987? One reason is the phasing out of consumer price subsidies which led the government to increase family allowance to compensate for the change in real incomes. A second reason is the introduction of a progressive personal income tax in Hungary in January 1988. Wages in the main job of persons employed in the state and co-operative sectors were increased so as to ensure that net wages remained the same. (This has no impact on the denominator of the series in Figure 2 since we have calculated average earnings in 1988-90 by adjusting the 1987 figure using a net earnings index.) However, incomes from second jobs - a widespread phenomenon of the Hungarian labour market - were subjected to the new tax. Thus, as a result of the tax,

> "In the case of those having incomes from several sources, the summarized (after-tax) real income may decline....The surplus of state revenues deriving therefrom [the tax] has to be used - by increasing family allowance - to ease the situation of families with children" (Ministry of Finance, 1987, p.7).

In effect, higher family allowance was used to legitimise the introduction of taxation, or at least to legitimise its treatment of the family, a subject we return to below.

The family allowance scheme in Hungary has a long history which can be expected to be an important influence on the expectations of the electorate and the decisions of policy makers. Taking the post-war period as a whole there have been large increases in the numbers of children covered by the

scheme and in the level of payments relative to average wages. The extension of the scheme to full universal coverage in 1990 and the increases in benefit rates in 1988-89 should be seen in the context of the earlier history.

## 2. THE PRE-1990 TARGETING OF FAMILY ALLOWANCE

In this section we try and shed some light on the targeting of family allowance in the pre-reform period using household survey micro-data. The definition we take of "targeting" is important to spell out. We look at the proportion of total family allowance expenditure going to each decile of the pre-family allowance income distribution. This means that targeting, on this measure, is improved by any reform of family allowance which cuts the share of expenditure going to the upper parts of the distribution. This could be achieved by either a reduction in payments to higher income households or an increase in expenditure on lower income households (or both). The distinction is an important one. If our criterion of targeting were to be the reduction of poverty then merely cutting expenditure to high income households would do nothing to improve targeting.

### *Family Allowance and the 1988 Income Survey*

The data source we use is the 1988 Income Survey conducted by the Hungarian CSO, which collected information on annual incomes in 1987.[3] This survey was the sixth in a line of quinnenial surveys begun in 1963. (We draw here on the description of the survey given in Atkinson and Micklewright, 1992, Sources and Methods.) The survey aims to sample all private households of Hungarian citizens resident in the country in the reference year. Response to the Income Survey has been quite high: the 1988 survey had a response rate of 83 percent with refusal accounting for less than a third of non-response. The achieved sample size of 19,856 households was also quite large by international standards. As the name indicates, the principal purpose of the survey is to collect information on individual and household incomes. Detailed information is sought on annual income from all sources, including second jobs, agricultural income in kind, tips, and social security benefits. Reported earnings in the first job were checked with employers, taking into

[3] We use the original microdata from the 1987 Income Survey (and not the database formed for the Incidence Study of Kupa and Fajth (1990) from this survey and the 1989 Budget Survey).

account any changes of employment during the year. The assessment of this source by Atkinson and Micklewright (1992, chapter 3) is that it compares favourably with household income data available in Western countries, taking the sources in the UK as a yardstick.

The amounts of family allowance recorded in the survey are calculations made by the CSO based on a combination of information provided by the responding households and tables of benefit rates. If a household indicated that it received family allowance during the year the CSO calculated the annual figure on the basis of the number, age, and educational activity of the children, taking into account whether one or two parents are present. This clearly may be expected to result in a higher degree of accuracy than annual figures based solely on respondent recall. There are 7,863 households in the 1988 survey with recorded family allowance.[4]

The grossed-up aggregate amount of family allowance recorded in the Income Survey may be compared with that in administrative statistics. We multiply the sum of annual family allowance recorded in the (unweighted) data by the ratio of the Hungarian population on 1st January 1988 (10,464 thousand) to the number of individuals in the survey (56,439). The resulting figure is 106 percent of the total family allowance expenditure in 1987 recorded in administrative sources (population and family allowance expenditure totals from *Statistical Yearbook 1990*, Tables 1.1 and 14.4). We suspect that the small over-statement of allowance in the Income Survey is the result of greater than average response by households with children.

The CSO calculates weighting factors for the survey which adjust for some non-proportional elements in the sampling procedure (which has a stratified random design). We use these weights in the rest of the paper. (These weights do not take into account any differential non-response.)

The Income Survey data allow us to see how important in practice were family allowance payments in total household incomes in 1987. The figures given in Section 1 for the average payments as a percent of average earnings provide an indication of changes in the generosity of the benefit over time but they do not show the importance of the allowance for individual families.

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[4] In calculating this number we exclude 640 households with one child aged over six who have a small payment recorded as "family allowance" despite the rules in 1987 excluding them from this benefit. We understand from the Hungarian CSO that the figures reflect a coding of a state transfer that is not family allowance and we do not treat it as part of family allowance in our use of the data below.

A family receiving the allowance may have two earners - the normal pattern for married couples in Eastern European countries - and there may in addition be other sources of income, notably, in the case of Hungary, the second economy. On the other hand, there may be some households with total income who rely heavily on the family allowance as a major source of income, for example single-parent households.

To shed light on this issue we take all households in the Income Survey who received family allowance during 1987 and calculate the share of their total annual net income accounted for by their allowance payments (taking no account of differences in household size). We then rank the households by the value of this share and summarise the distribution in Table 4. The table shows that for 60 percent of households receiving family allowance, the payments they received made up less than 10 percent of their net income; for nearly a third of households the share was less than 5 percent. Family allowance constituted more than 20 percent of income for less than a tenth of households with the benefit. While this is a significant minority, it suggests that the relationship between the average payment per family in 1987 and the average wage, shown earlier in Figure 2, is not a good indicator of the importance of family allowance in household incomes at that time.

**Measuring the incidence of family allowance**

We now turn to look at the targeting of family allowance in 1987. As explained earlier we look at the share of total family allowance expenditure received by each decile of the distribution of net household income. We include *all* households in the Income Survey for the purpose of these calculations, not just those who have children or who actually received family allowance. Our purpose is to consider the incidence of family allowance in the population as a whole.

In doing so, there are a number of methodological issues which need to be made clear. First, our unit of the analysis is the *household*, defined in the Hungarian data as a group of persons living in the same dwelling who partly or entirely share expenses. An alternative, which might give rather different results, would be to look at the incidence of family allowance across the distribution of *families*, defined as persons or couples plus any dependent children.

Secondly, in view of the size of the family allowance payments, we look at the incidence of family allowance across the *pre-allowance* distribution of

income. That is, we subtract any recorded allowance from each household before ranking them in the distribution on the basis of their incomes (adjusting for size and composition of the household as explained below). It is important to note however that the distribution of incomes minus the allowance does not necessarily represent the distribution which would have existed in the absence of the family allowance system. The changes in labour supply and other aspects of household behaviour which might have occured in the absence of the allowance need to be taken into account. The same applies to increased entitlement to means-tested benefits which can be expected to have resulted. In common with other Eastern European countries, means-tested social assistance benefit in pre-reform Hungary was less developed than in Western countries (Ferge, 1991, Atkinson and Micklewright, 1992, chapter 8). But it is still the case that in 1987, the year covered by the Income Survey data we use, there were over half a million "one-off" emergency social assistance payments to adults, and in addition a separate scheme providing cover for children (World Bank, 1992, p.177, Zam, 1991.)

The third issue is the treatment of household size and composition in our calculations. What equivalence scale should be applied to the income of each household in the distribution? This can be expected to have a major impact on the results which are obtained. We wish to look at the incidence of a benefit related to the number of children, and, via the equivalence scale adjusting for household size and composition, the number of children will in part determine a household's rank in the income distribution and hence the picture of family allowance incidence.

It has been a common practice in Eastern European statistics on the distribution of income to consider household *per capita* income (Atkinson and Micklewright, 1992, chapter 3). In the case of Hungary, this was the practice adopted by the study of the incidence in 1989 of social income in cash and kind and of price subsidies, funded by the World Bank (Kupa and Fajth, 1990, and World Bank, 1992). Such an equivalence scale could be expected to result in more large families being nearer to the bottom of the income distribution than would be the case with an alternative scale, with obvious consequences for the picture of incidence of family allowance.

The choice of equivalence scale reflects judgement about both technical issues such as economies of scale in consumption and value judgements about the priority assigned to the needs of different groups, such as children and the elderly. The use of a per capita scale in Hungary, less commonly applied

in Western countries, might be considered appropriate in the pre-reform period due to low housing costs (a "fixed cost") or the oft-expressed position that children were "put first". But in our view, it is important to recognise the diversity of opinion as to the appropriate equivalence scale and we present results on a number of different bases.

The differences between equivalence scales have been summarised by Buhmann et al (1988) who suggest that the measure of income entering the distribution may be written as:

$$E = Y/H^{\alpha}$$

where E is equivalised income, Y is total household income, H is household size and $\alpha$ is the elasticity of household needs with respect to household size. For example, the OECD equivalence scale of 1 for the first adult, 0.7 for other adults and 0.5 for each child, corresponds broadly to a value of $\alpha$ equal to 0.7. A 10 percent increase in household size leads, with this value of $\alpha$, to a 7 percent increase in household needs. We show the effect of taking four different equivalence scales. We consider the distribution of:

1) *household per capita income*, which corresponds to setting the parameter $\alpha$ equal to 1 in the Buhmann et al formula;
2) *total household income*, which corresponds to setting $\alpha = 0$;
3) *CSO equivalised income*, in which total household income is divided by an equivalence scale used by the Hungarian CSO for the 1988 Income Survey. This is given in the notes to Figure 3. For a household with a couple and 2 children in which at least one adult works it corresponds to a value of $\alpha$ in the range 0.66 - 0.89, depending on the age of the children and whether the second adult works.[5]
4) *OECD equivalised income*, in which total household income is divided by the OECD equivalence scale described above and which as noted corresponds approximately to setting $\alpha = 0.7$.

The adjustments in the first two distributions represent the extreme values of $\alpha$; the per capita scale ($\alpha = 1$) implies maximum adjustment with no account

[5] In calculating this range for $\alpha$ for the CSO scale from the information in the notes to Figure 3, we have treated the first adult as having a value 1.0 and the second adult and children as having the values given divided by 1.2. This allows for the additional fixed cost element of 0.2 for the head of household which is separately identified in the Hungarian CSO scale.

taken of any economies of scale with increasing household size; the total household income distribution ($\alpha = 0$), on the other hand, implies that there is no change in household needs as size increases. The third and fourth distributions are based on intermediate values. The CSO scale takes more account of household composition than does the OECD scale, needs varying with activity status and age in addition to adult/child status.

Some readers may feel this discussion of equivalence scales in terms of needs ignores any argument that household size in a developed country is a matter of choice and that children may generate private benefits as well as costs. This choice might in part be affected by the existence of family policy such as generous family allowance payments.[6] This is a well known problem with the equivalence scale literature: for example, scales that are derived from econometric estimates are conditional on choice of household size; they reflect the costs of children to the family but not the benefits. However, it is important to remember that the choice over size is one made by the parents rather than the children, and the welfare of both must be taken into account. Household size has a significant impact on household costs, and hence the children's welfare; this provides a rationale for the use of econometric estimates of equivalence scales that condition on the choice of size.[7]

This leads us to the final methodological issue. What weight should each household receive in calculating the distribution of income? Should we look at the distribution of *households'* income equivalised by the different scales we have discussed or should we consider the distribution of equivalised household income of the *individuals* which make up those households? Here we feel the choice to be clear, and that the distribution of individuals is the one to be considered, implying that each household receives a weight equal to household size, H, in our calculations. Having adjusted for differences in needs between households with an equivalence scale, each member of every

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[6] A review of Hungarian research based on longitudinal data into the effect of cash transfer programmes on fertility is given in ILO (1989, p.87). This research concluded that the programmes considered had at most altered the timing of births but not their number.

[7] In their disucussion of the theoretical basis for equivalence scales, Deaton and Muellbauer (1980, p.211) address this point explicitly in the context of income maintenance policy for families with children. See also Coulter et al (1992, p.90) who note that the decision to have children is irreversible and may be based on expectations which are not realised.

household should be treated in the distribution as an "equal citizen".[8] Therefore our calculations of incidence refer to the *distribution of individuals' equivalised household pre-allowance incomes.*

***The incidence of family allowance in 1987***

Figure 3 shows the share of total family allowance expenditure recorded in the 1988 Income Survey data going to each decile of individuals in the pre-allowance income distribution.[9] The results provide evidence in support of conflicting views on the degree of targeting of family allowance in 1987. The person who wished to argue that the benefit was quite well targeted on low income households would point to the per capita distribution. Nearly a quarter of expenditure goes to the poorest 10 percent of individuals in the population and two-fifths to the poorest 20 percent. About one twelfth of expenditure goes to the richest 20 percent of the population. The person arguing that family allowance expenditure was "wasted" on high income households could point to the total household income distribution: the richest 20 percent of individuals capture a fifth of the expenditure - one and a half times more than is taken by the bottom 20 percent - and the bottom 10 percent get least of all.

Neither calculation would be convincing to the person who rejects the lack of equivalising in the total income distribution ($\alpha = 0$) but who believes that the use of a per capita scale ($\alpha = 1$) goes too far. The overall picture given by either the OECD scale or the Hungarian CSO scale is similar to that with the per capita scale, in that the share of expenditure going to each decile of income declines as income rises. (This may reflect the fact that the values of $\alpha$ implied by these scales are closer to one than to zero.) The CSO scale gives results which are particularly close to those obtained with the per capita adjustment and over 20 percent of expenditure still goes to the bottom decile. If we look at the bottom two deciles, 40 percent of family allowance expenditure is received when the per capita scale is used, 35 percent with the CSO scale and 32 percent with the OECD scale. One reason for the difference in results between the OECD and CSO scales may be the more

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[8] As noted by Danziger and Taussig (1979) this is consistent with individualistic welfare functions.

[9] The data on which Figure 3 is based are given in the Appendix, where we also show (for purposes of comparison) results for the household distribution of pre-allowance income.

sophisticated adjustment in the latter for differences in age and activity status.

These results refer to 1987 when the family allowance system was not paid on a universal basis. The extension of the allowance in 1990 to those not working in the socialised sector may have increased the share of expenditure going to low income households, in other words to have improved targeting on our criterion.

Our analysis of the incidence of family allowance demonstrates the importance of making explicit the assumptions inherent in different measures of household income and of providing results on a variety of bases. As this illustrates, the debate about targeting involves choices about measurement and these choices will affect the conclusions which are drawn.

## 3. TAXING FAMILY ALLOWANCE

In the rest of the paper we turn to the question of improving the targeting of the universal family allowance in Hungary by subjecting the allowance to progressive income taxation. Reducing the value of family allowance to higher income households would indeed improve targeting using the criterion we employed in the last Section: the share of total expenditure going to lower income deciles. This will of course not be true for all criteria; merely taxing family allowance will not reduce poverty and could indeed increase poverty.

Our choice to consider the option of taxation, rather than a more direct income link via a means-test, reflects our view that family allowance *should* continue to be paid on a universal basis since we believe that the arguments for this are strong. First, there are the arguments which can be made in any society. The payment of universal family allowance is a recognition of the private costs of raising children with a view to equalising consumption across households of different sizes. A universal allowance free of an income-test provides support with little or no problems of take-up at low administrative cost. It provides protection against income instability arising from unemployment (if payments continue without interruption in the event of job loss) or, if the allowance is paid to the parent caring for the children, in the event of marital breakdown.

Secondly, there are the arguments based on the history of the allowance in Hungary. The increasing coverage in the Communist period, culminating in

the introduction of the universal principle in 1990, suggests that to abandon the universal nature of the allowance could be a politically destabilising act. This might prejudice the economic reforms which are taking place. Of course, the transition from Communism to a market economy requires a change in the attitudes of the population in many aspects of economic and social life. But we do not feel that a universal allowance is an unnatural feature of Hungarian social policy and we remind the reader of the widespread occurrence of universal family allowance in the market economies of the West.

At first sight, the inclusion of family allowance within the base of the personal income tax introduced in Hungary in 1988 would be an obvious step if the worry is that excessive expenditure is going to high income households. The personal income tax (PIT) in Hungary has a progressive rate structure. Subjecting family allowance to tax would reduce its value to higher income parents while leaving the full value available to those with lower incomes. The IMF report, *Social Security Reform in Hungary*, recommended such a move (Kopits et al, 1990). However, there a number of issues which need to be considered. These suggest that targeting via the tax system is neither as easy nor as desirable as one might first think. First, there is the unit of assessment for the PIT as compared to that appropriate to the consideration of household welfare. Secondly, and related to this, we need to consider the existence of any provisions in the PIT giving preferential treatment to persons with children. Does the PIT provide any support to children which may become illogical if family allowance is to be subject to tax? Thirdly, there are the administrative problems of taxing family allowance to be considered. Fourthly, we need to consider the effective progression of the PIT and the changes over time. We consider these points in turn.

***Unit of Assessment***

The unit of assessment for the PIT is the individual. Each member of a household is taxed independently and there are no additional tax allowances for marriage. Tax liability depends solely on *individual* income. Family allowance on the other hand is, as the name indicates, a benefit paid to *families*. Our discussion of targeting in Section 2 related to the incomes of the still wider unit of the *household*. If our interest in targeting is due to concern over living standards of families or households (on the assumption that income is pooled at these levels) then the distinction between these units on the one hand and the individual on the other is an important one.

In practice we understand that the family allowance can be paid to either husband or wife. Although this may be of considerable importance to the financial arrangements made within individual marriages, it has no implications at the present time for other parts of the tax and social security system. If family allowance were brought into the PIT base it would become necessary to indicate the parent for whom the allowance would be treated as taxable income. This raises the question of equity between parents and it implies that considerations of vertical equity between families (or households) may not be fully taken into account. Assume there is freedom of choice or that the allowance is treated as the mother's income. If the participation rate of married women in Hungary is related negatively to the income of their husbands then the tax paid on family allowance may actually fall with increasing family (or household) income. More generally the degree to which taxation of the allowance under the PIT improves its targeting according to family or household incomes depends on the joint distribution of incomes of married couples - an empirical question which we have yet to establish.

***Tax treatment of the family***

As has been noted by Héthy,

> "critics have looked upon the Hungarian personal income taxation as 'antisocial' i.e. punitive to individuals with families and children." (1991, p.8).

Although the PIT embodies independent treatment of husband and wife, from the outset in 1988 a small recognition of the family was introduced in the form of a tax allowance for three or more children (two or more children for single parents). The allowance goes to the parent with the higher income (Ministry of Finance, 1987, section 17). The allowance is quite small, just 1,000 forints per month during 1988-91, which may be compared with an average monthly (gross) earnings in 1988 of 8,817 forints (*Statistical Yearbook*, 1989, p.19). Its presence has not been sufficient to assuage the critics of the PIT noted by Héthy. Throughout the history of the PIT there has been pressure to extend this allowance, to which the democratic government elected in 1990 has proved sympathetic. For example, in September 1990 Prime Minister Josef Antall stressed the need:

> "to relieve [from income tax] the social strata on subsistence level

and families with children of their extra burden." (quoted in the *East European Reporter* Vol.4 No.3, Autumn/Winter 1990).

In January 1992 the tax allowance for the third child was increased from 12,000 to 15,600 forints per year and, more significantly, extended to *all* children, irrespective of family size.

The child tax allowance may be set against tax liability at the individual's highest marginal rate. It is worth nothing to the person not liable to tax and worth most (in absolute terms) to those facing the maximum marginal rate. It would therefore make little sense to retain this tax allowance and yet to subject the family allowance to progressive taxation. The conversion of the tax allowance into an addition to the family allowance for large families would in our view be a pre-requisite for bringing family allowance into the PIT base. In extending the availability of the child tax allowance (a step we think most regrettable) the Government has done little to bolster any argument for bringing the family allowance into the PIT base.

***Administrative issues***

The administrative problems which would arise from taxing family allowance may be illustrated by considering two possible methods of taxing the allowance.

(i) The tax due on the family allowance is deducted at source, i.e. by the agent responsible for the payment of the benefit. This requires that the agent knows the correct marginal tax rate of the recipient on each occasion that a payment is made, taking into account other sources of income. While the family allowance continues to be paid with the wage packet through state sector employers (as is the case for many recipients at present) this does not present a problem for a large section of the work force. But this form of delivering family allowance is not particularly desirable and may well not be retained.

(ii) Each family receives the full benefit gross of tax. At the end of the tax year the appropriate parent files a tax return including a declaration of the amount of family allowance received, something which may be verified by the tax authorities by reference to central records on family allowance payments. Any tax due on the allowance is then paid. This system would correspond to that which we understand is used to claim the child tax allowances, i.e. an end-of-year adjustment of liability. However, there is a critical distinction. Whereas the claiming of the child tax allowance leads

to a tax rebate, the declaration of family allowance would lead to additional tax being due. Families who find themselves in financial difficulties at the time when the tax must be paid (caused for example by unexpected unemployment or family break-up) might be unable to pay and, given the value of the family allowance, even the family in "normal" circumstances might be obliged to save during the year merely to pay the tax. This does not seem desirable.

In both cases, a larger amount of additional information must be given to the appropriate authority than is required in the administration of family allowance free of tax. Furthermore, the extension of the tax base could create even greater incentives for tax evasion in the form of the non-disclosure of income if the inclusion of family allowance in the tax base pushes a tax payer into a higher tax bracket.

***Progression in the PIT***

When introduced in 1988, the PIT had 10 positive marginal rates, ranging from 20 percent to a top rate of 60 percent. The tax system has since been progressively simplified with a large reduction in the number of marginal rates of tax and a substantial reduction in the top rate. As of 1992 there are only 3 positive rates: 25 percent, 35 percent and 40 percent.[10] If the aim is to target family allowance via the tax system then progression is an essential feature; the simplification of the tax system can be expected to have substantially reduced its use in this respect.

In practice what matters is the *effective* progression. What is important is the actual distribution of marginal tax rates rather than the tabulated rates. In Table 5 we show our estimates of the distribution of marginal tax rates on first economy earnings for September 1988 and September 1990 (the most recent earnings distribution data available to us). The estimates are based on our application of the tax schedule to grouped data on the distribution of earnings, something made possible by the independent treatment of husband and wife in the PIT, described above.[11] (The data source is described in Atkinson and Micklewright, 1992, Sources and Methods.) It should be noted that these estimates give only part of the story. There are other sources of income to consider - an aspect we stressed in another context

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[10] Economist Intelligence Unit Country Report on Hungary, No 1, 1992, p.12.

[11] We have to ignore the third child tax allowance in these calculations.

in Section 2 - which may mean that the actual marginal rate at which the family allowance would be taxed could be higher.

Looking first at 1990, the table shows two-thirds of individuals estimated as paying the same marginal rate - 30 percent - on first economy earnings in this year. By contrast, the modal tax bracket in 1988 - 20 percent - contained less than a quarter of employees. We also see that the revenue generated from taxing family allowance would probably be notably lower if the allowance was treated as the income of the mother: the tax rates at the margin on first economy earnings for women appear significantly lower on average. The message from the table seems clear. The reforms to the PIT introduced by the incoming democratic government in 1990 appear to have significantly weakened the potential of the PIT for targeting family allowance. The further simplification to just three positive rates in 1992 is unlikely to have improved matters.

In this section we have considered the problems with bringing family allowance into the base of the progressive personal income tax (PIT) as a means of reducing its value to those with higher incomes. We believe that there is little to merit such a move. The unit of assessment for taxation is inappropriate for the targeting of family allowance; the administrative problems are not insignificant; the degree of progression in the PIT may be insufficient to target the allowance effectively. We also note with regret the extension in 1992 of the system of child tax allowances.

## CONCLUSIONS

Family allowances are an important part of social policy in Hungary. In this paper we have (i) documented the post-war development of the scheme, (ii) analysed the incidence of family allowance using household survey data, and (iii) considered the taxation of the allowance as a way of reducing expenditure going to higher income households.

The reader who is looking for firm conclusions about the degree of targeting of family allowance in Hungary will be disappointed. We have stressed that the picture of targeting will depend in part on the method of measurement which is used. We have used just one criterion of targeting - the incidence across the income distribution - but even here there are a number of choices concerning measurement which must be made, notably the choice of equivalence scale. As we have demonstrated, this makes a substantial

difference to the results.

Our conclusions regarding the desirablility of taxing family allowance are more clear-cut: we do not believe that this would be a good policy change, although more detailed use of household survey data than we have made here would throw more light on this issue. The unit of assessment in the Hungarian income tax system and the degree of progression in this system are not those which are most suited to the use of taxation as a targeting mechanism.

Without changing the fundamental criteria for receipt of family allowance, there are changes to the administration of the scheme which could help improve targeting but which we have not considered in detail in this paper. Payment to the mother (except where the father has custody) could be expected to be the most effective way of ensuring that the children get the full benefit of the allowance. Payment of the allowance through an agency unrelated to the workplace (for example, post offices) would ensure uninterrupted payment in the event of job loss.

As regards more significant changes, there are a number of alternatives to the taxation of the allowance, which we have not considered. One would be to target more effectively by demographic characteristics. Payments of family allowance in Hungary in the 1950s and 1960s were much more differentiated by family size and composition than at present. Such a system of family support may be more attractive than a policy of child tax allowances which are inconsistent with any view that family support in Hungary needs better targeting.

## Table 1

## Family allowances for two children as percent of average earnings, 1980.

| | Percent |
|---|---|
| *Eastern Europe* | |
| Hungary | 24.9 |
| Bulgaria | 22.2 |
| Czechoslovakia | 20.0 |
| Poland | 19.6 |
| Romania | 17.0 |
| East Germany | 3.9 |
| *Western Europe* | |
| Austria | 16.9 |
| Belgium | 10.7 |
| Netherlands | 9.0 |
| Sweden | 8.7 |
| UK | 8.2 |
| Switzerland | 6.9 |
| West Germany | 6.6 |
| France | 6.5 |
| Norway | 6.4 |
| Italy | 5.4 |
| Denmark | 3.0 |

Note: The figures for Denmark, West Germany, Norway and Sweden refer to 1981 and that for Poland to 1984.

Source : ILO (1989) Table 8, p.55.

## Table 2

## Rates of Family Allowance, August 1990

| | Family Allowance, August 1990 Forints per month per child |
|---|---|
| *Both Parents Present* | |
| First Child | 1,870 |
| Second Child | 2,470 |
| Third Child | 2,560 |
| Fourth plus Child | 2,300 |
| *Both Parents Present* | |
| One Child (where previously 2+) | 2,170 |
| *Single Parent* | |
| First Child | 2,170 |
| Second Child | 2,430 |
| Third Child | 2,300 |

Note: All allowances are Ft 100 per month higher up to the age of three.

Source: World Bank (1992) p.169.

## Table 3

### Changes in Rules on Entitlement to Family Allowance, 1946-1990

| | |
|---|---|
| 1946 | Allowance given only to state sector employees; members of agricultural co-operatives excluded from receipt. No restriction according to number of children. |
| 1953 (March) | Coverage extended to families of members of agricultural co-operatives with three or more children but at lower benefit rate than for families of state sector employees. Coverage of state sector employees restricted to families with two or more children. |
| 1959 (April) | Coverage extended to all single mothers with one or two children. |
| 1966 (July) | Coverage extended to all agricultural co-operatives with two or more children. |
| 1972 (January) | Coverage extended to all families with one child qualifying for the allowance where there were previously two or more qualifying. |
| 1975 (July) | Benefit rates for agricultural co-operative families raised to the level of that for families of state sector employees. |
| 1983 (July) | Coverage extended to families with only one child aged under six. |
| 1990 (April) | Universal allowance, independent of employment status and coverage extended to families with only one child over six. |

Source
Nepszava lap es konyvkiado, 1986, 1987.

## Table 4

## Distribution of share of family allowance in total net household income among households receiving the allowance, 1987

| | Share (%) |
|---|---|
| 10 percent of households with share less or equal to | 2.5 |
| 20 .. | 3.7 |
| 30 .. | 4.8 |
| 40 .. | 6.1 |
| 50 .. | 7.6 |
| 60 .. | 9.0 |
| 70 . | 10.5 |
| 80 .. | 12.8 |
| 90 .. | 17.6 |
| 100 .. | 81.4 |

Note

We take all households in the Income Survey who received family allowance during 1987 and calculate the share of their total annual net income accounted for by their allowance payments (taking no account of differences in household size). We then rank the households by the value of this share; the results of this exercise are shown above in terms of the deciles of the distribution of the share. There are 25 households in the top decile with shares in excess of 50 percent and the figure of 81.4 percent is for the household with the highest recorded share.

Source: 1988 Income Survey microdata, calculations based on 7,863 households.

## Table 5

## Estimates of the distribution of marginal tax rates on first economy earnings in 1988 and 1990.

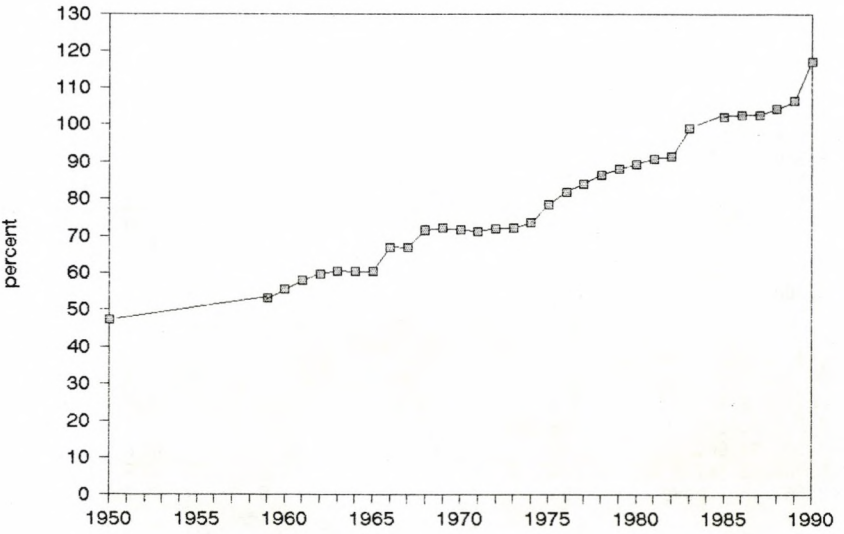
| Tax bracket (Ft./month) | marginal tax rate (%) | % of employees paying at this rate | | |
|---|---|---|---|---|
| | | all | men | women |
| a) *1988* | | | | |
| up to 5,000 | 0 | 15.3 | 7.8 | 24.3 |
| 5,000-6,833 | 20 | 23.2 | 17.5 | 29.6 |
| 6,833-8,500 | 25 | 19.8 | 20.5 | 18.8 |
| 8,500-11,000 | 30 | 19.9 | 24.1 | 14.7 |
| 11,000-13,500 | 35 | 10.0 | 13.1 | 6.8 |
| 13,500-16,000 | 39 | 5.0 | 6.9 | 2.8 |
| 16,000-21,000 | 44 | 4.1 | 5.8 | 2.0 |
| 21,000-31,000 | 48 | 2.0 | 3.0 | 0.7 |
| 31,000-51,000 | 52 | 0.5 | 1.0 | 0.1 |
| 51,000+ | 56-60 | 0.2 | 0.2 | 0.1 |
| b) *1990* | | | | |
| up to 5,583 | 0 | 4.0 | 2.9 | 5.1 |
| 5,583-8,500 | 15 | 22.6 | 15.3 | 30.4 |
| 8,500-26,000 | 30 | 67.1 | 73.1 | 60.8 |
| 26,000-42,667 | 40 | 4.9 | 6.7 | 2.9 |
| 42,667 and above | 50 | 1.4 | 2.0 | 0.7 |

Source : own calculations using grouped data from September earnings censuses in 1988 (*Statistical Yearbook*, 1988, Table 4.9, p.70) and 1990 (information provided by CSO).

Notes : 1) Pareto interpolation within ranges from grouped data using the INEQ package written by F.Cowell, LSE.
2) The 12,000Ft annual tax allowance for all employees is included in the calculations (the brackets in the first column therefore refer to total earnings rather than just taxable earnings). No account has been taken of the third child tax allowance.

## Figure 1

## Number of children for whom family allowance paid as percent of all children aged 0-14, 1950-1990




Sources:

(i) number of children for whom family allowance paid

1950: Ferge (1991a) p.22
1959-83: Nepszava lap es konyvkiado, 1986, 1987.
1986, 1987: *Statistical Yearbook 1987*, Table 20.7, p.334
1985, 1988, 1989 : *Statistical Yearbook 1989*, Table 20.6, p.318
1990 : *Statistical Yearbook 1990*, Table 15.9, p.239

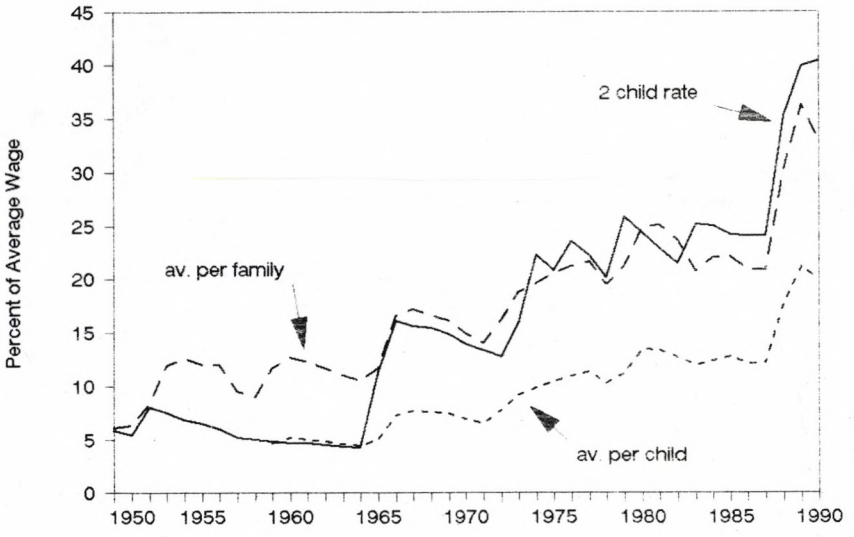
(ii) number of children aged 0-14 (1 Jan)

1949, 1960, 1970, 1980, 1985-89: *Statistical Yearbook 1988*, Table 3.2 p.38
1990: *Statistical Yearbook 1990*, Table 2.2 p.25
All other years: interpolated linearly from data for above years

**Figure 2**

**Level of family allowance payments**

**as percent of average earnings, 1949-1990**




See separate page for Notes and Sources.

Notes and Sources for Figure 2

Note:

Average family allowance per family and per child have been calculated from information on annual total expenditure and on numbers of families and of children in receipt. The 2 child rate is for a family where both parents are present and prior to 1975 is the rate for workers in the state sector; in each year we take for this series the rate applying in August, except in 1984-85 when (due to our lack of information on the August rate) we take the rate applying earlier in the year.

Sources:

i) Annual expenditure on family allowance

1949-52: *Statistical Yearbook 1961*, p.271
1953-64: *Statistical Yearbook 1964*, p.282
1965: *Statistical Yearbook 1965*, p.292
1966-73: *Statistical Yearbook 1973*, p.391
1975-85: World Bank (1992) Table 2.2 p.10
1986-90: *Statistical Yearbook 1990* Table 14.4, p.216

ii) Number of families receiving family allowance

1950-1989: *Statistical Yearbook 1989* Table 1.17, p.22
1990: *Statistical Yearbook 1990*, Table 1.16, p.21

iii) Number of children for whom family allowance paid

see Sources for Figure 1

iv) rate of family allowance for 2 child family

1950-1983: Nepszava lap es konyvkiado, 1986, 1987.
1984-85: *Statistical Yearbook 1987*, (Hungarian edition), Table 20.6, p.253
1987: *Statistical Yearbook 1988*, Table 20.6, p.334
1988-1989: *Statistical Yearbook 1989* Table 20.5, p.318
1990: *Statistical Yearbook 1990* p.239 Table 15.9, p.239

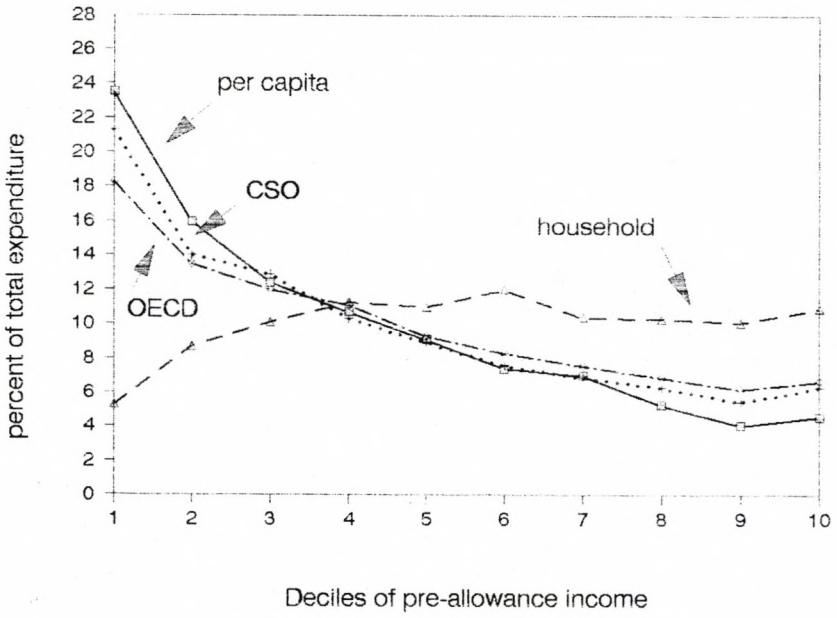
v) Average monthly wage

1950-87: *Statistical Yearbook 1989*, Table 1.14, p.19
1988-90: 1987 figure adjusted by net earnings index given in *Statistical Yearbook 1989* p.vi (implied figure for 1990) and Table 19.2 p.300 (explicit figures for 1988-89)

**Figure 3**

**Share of total family allowance expenditure**

**going to each decile of the pre-allowance income distribution, 1987**




See separate page for Notes and Sources

Notes and Sources for Figure 3

Note:

The distribution in each case is the individual distribution of equivalised household income, pre-family allowance. The OECD equivalence scale is described in the text. The CSO equivalence scale is as follows:

| | |
|---|---|
| child under 3 | 0.45 |
| child aged 3-5 | 0.5 |
| child aged 6-10 | 0.6 |
| child aged 11-14 | 0.7 |
| child aged 15-18 | 0.95 |
| economically active person | 1.0 |
| inactive man aged 19-59 | 0.9 |
| inactive women aged 19-54 | 0.9 |
| inactive man aged 60+ | 0.8 |
| inactive woman aged 55+ | 0.8 |
| addition for head of household | 0.2 |

Source:

1988 Income Survey microdata - see Appendix;
CSO equivalence scale from Atkinson and Micklewright, 1992, Table HI3.

## Appendix

### Share of total family allowance expenditure going to each decile of the pre-allowance net income distribution, 1987

a) the individual distribution of pre-family allowance income.

| | | Equivalence Scale | | |
|---|---|---|---|---|
| decile | per capita | CSO | OECD | household |
| 1 | 23.5 | 21.3 | 18.3 | 5.3 |
| 2 | 16.0 | 14.0 | 13.5 | 8.7 |
| 3 | 12.4 | 12.9 | 12.0 | 10.1 |
| 4 | 10.7 | 10.3 | 11.1 | 11.3 |
| 5 | 9.1 | 8.9 | 9.3 | 11.0 |
| 6 | 7.4 | 7.6 | 8.3 | 12.0 |
| 7 | 7.0 | 6.9 | 7.6 | 10.4 |
| 8 | 5.3 | 6.3 | 6.9 | 10.3 |
| 9 | 4.1 | 5.5 | 6.2 | 10.1 |
| 10 | 4.6 | 6.3 | 6.7 | 10.9 |

a) the household distribution of pre-family allowance income.

| | | Equivalence Scale | | |
|---|---|---|---|---|
| decile | per capita | CSO | OECD | household |
| 1 | 25.8 | 21.7 | 16.0 | 2.0 |
| 2 | 15.8 | 13.9 | 12.3 | 5.1 |
| 3 | 12.5 | 12.8 | 12.1 | 7.4 |
| 4 | 10.7 | 10.2 | 11.4 | 9.1 |
| 5 | 8.4 | 9.2 | 10.1 | 11.9 |
| 6 | 7.2 | 7.5 | 9.1 | 11.9 |
| 7 | 6.6 | 6.8 | 8.3 | 13.6 |
| 8 | 4.8 | 6.0 | 7.4 | 12.7 |
| 9 | 4.0 | 5.6 | 6.4 | 12.9 |
| 10 | 4.2 | 6.1 | 6.9 | 13.4 |

Note: in the individual distribution, each household is weighted by its number of members. In the household distribution, each household receives a weight equal to one. The figures for the individual distribution are illustrated in Figure 3.

Source: Income Survey microdata.

## References


Adamik, M, 1991, "Women and Welfare State in Hungary : the last forty years and a short look ahead into the future." mimeo.

Atkinson, A B, and Micklewright, J, 1992, Economic Transformation in Eastern Europe and the Distribution of Income, Cambridge University Press.

Buhmann, B, Rainwater, L, Schmaus, G, and Smeeding, T M,, 1988, "Equivalence Scales, Well-Being, Inequality and Poverty", Review of Income and Wealth, vol 34: 115-142.

Coulter, F, Cowell, F, and Jenkins S, 1992, "Differences in Needs and Assessment of Income Distributions", Bulletin of Economic Research, vol 44: 77-124.

Danziger, S, and Taussig, M, 1979, "The Income Unit and Anatomy of Income Distribution", Review of Income and Wealth, vol 25: 365-375.

Deaton, A, and Muellbauer, J, 1980, Economics and Consumer Behaviour, Cambridge University Press.

Ferge, Z, 1991, "Social Security Systems in the New Democracies of Central and Eastern Europe: Past Legacies and Possible Futures" in Cornia, G A and Sipos, S ed. (1991), Children and the Transition to a Market Economy, Avebury.

Ferge, Z, 1991a, "The Social Safety Net in Hungary: A Brief Survey" in "Social Safety Nets in East/Central Europe", by Williams S, Beschel, R, and McNamara K, The Ford Foundation.

Gordon, M, 1988, Social Security in Industrial Countries, Cambridge University Press.

Hethy, L, 1991, "Structural Adjustment and Changes in Income Distribution in the 1980s in Hungary", World Employment Programme Research Working Paper 32, ILO.

ILO, 1989, From Pyramid to Pillar. Population Change and Social Security in Europe, Geneva.

Johnson, P, Stark, G, and Webb, S, 1989, Alternative Tax and Benefit Policies for Families with Children, IFS Commentary 18, Institute for Fiscal Studies, London.

Kopits, G, Holzmann, R, Schieber, G, and Sidgwick E, 1990, Social Security Reform in Hungary, Fiscal Affairs Department, IMF, Washington DC.

Kupa, M and Fajth, G, 1990, "Incidence Study '90: The Hungarian Social Policy Systems and the Distributions of Incomes of Households", Central Statistical Office and Ministry of Finance, Budapest.

Nepszava lap es konyvkiado, 1986, A Tarsadalombiztositas negy evtizede, Budapest.

Nepszava lap es konyvkiado, 1987, A Tarsadalombiztositas fejlodese szamokban 1950-1985, Budapest.

Ministry of Finance, 1987, Act on the Personal Income Tax, Public Finance in Hungary Paper 39/B.

Parker, H, and Sutherland, H, 1991, Child Tax Allowances? A Comparison of Child Benefit, Child Tax Reliefs, and Basic Incomes as Instruments of Family Policy, STICERD Occasional Paper 16, London School of Economics.

World Bank, 1992, Hungary : Reform of the Social Policy and Expenditures, Washington DC.

Zam, M, 1991, "Economic Reforms and Safety Nets in Hungary: Limits to Protection" in Cornia, G and Sipos, S ed. (1991), Children and the Transition to a Market Economy, Avebury.

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