STATE RESPONSES TO POVERTY AND UNEMPLOYMENT IN HUNGARY

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During the 1990s, the incomes of Hungarian households decreased on average in every year except 1994. At the same time, in this period of transition, the output of the economy also decreased mainly due to the restructuring which took place. Employment declined: both the number of unemployed people and the inactivity rate among the population increased. In all years but 1994, when real earnings increased by 7 per cent, earners had to face a situation where the rate of inflation considerably exceeded the increase in nominal earnings. Incomes from employment decreased as a proportion of total household incomes, while social incomes increased particularly among low income households.

What is characteristic of the composition of incomes at the bottom of the Hungarian income distribution is that, while before 1990 low income households were particularly dependent on pensions for the aged, in 1996 low income households were more dependent on unemployment benefits and various forms of family assistance. This happened because families with dependent children but without an active earner came down to the lowest rung of the income ladder, while the incomes of pensioner households decreased, on the average, less those that of families with children.

In the period considered, income inequality increased significantly. According to the data of the income survey carried out in 1996 (with a reference year of 1995) as a supplementary survey of the Microcensus, the total household income share of the poorest population decile amounted to 3.3 per cent only while in 1987 this share was 4.5 per cent of a much higher real income. At the same time, the share of the income attributed to the top decile of the income distribution increased from 20.9 per cent to 25 per cent.[1]

In 1995, the government of Hungary decided to reform the child benefit system as a part of austerity measures designed to reduce a budgetary imbalance. However, it was planned to reduce the variety of benefits and number of households eligible to these benefits in a way that would not affect negatively those most in need. After a lengthy political and legal debate, the new package of measures came into force on 16 April, 1996. A long period had elapsed between the time the decision on reform was taken and the reform was actually introduced, yet an assessment of the distributional impacts of the re-

[1] Jövedelemeloszlás Magyarországon, 1995. Központi Statisztikai Hivatal. Budapest. 1998. 10 p.

form was never carried out. In this paper we use a recently developed microsimulation model to examine the impact of the April 1996 reforms of child-related benefits on budget expenditures and household incomes. In addition, the microsimulation model is also used to examine the budgetary and distributional impact of some possible alternatives to the policies introduced.

Our purpose in carrying out this task is two-fold. First, we wish to demonstrate the usefulness of a microsimulation model in a country such as Hungary which is undergoing social and economic transformation. We believe that the real importance of this microsimulation model is its ability to highlight to decision makers the necessity and possibility of impact assessment. Our second aim is to draw some conclusions about the impact of reforms to the child-related benefits system implemented in April 1996. An assessment of these reforms is vitally important, not only because the child-related benefits system is crucial to the incomes of millions of Hungarian households, but also because of the longer term implications of reform, particularly in the areas of labour market participation and population growth. This also implies that the benefits system should be regularly re-assessed as economic and social conditions change.

Our main conclusion from this research is that while the reform of the child-related benefits system, in particular the introduction of means-testing for Family Allowance, did produce certain savings to the government budget, and had relatively little distributional impact, this would have been offset by the considerably higher administrative costs associated with means-testing. We also found, however, that the cost of restoring Family Allowance to the real levels enjoyed by households with children in the early 1990s would be rather expensive.

The remainder of this paper is divided into four parts. In the first chapter, the microsimulation model and the data are discussed. In the second the reform to child-related benefits of April 1996 are discussed and evaluated. In the third some possible alternatives to the April 1996 reforms are considered. The last one presents our conclusions.

THE MODEL AND MICRODATA

The primary aim of this research was to investigate the impact of various policy options – concerning state benefits and tax alleviations connected with child bearing and child raising – on poverty and the distribution of household incomes, and on the relative income position of various social groups including families with different numbers of dependent children. In order to carry out these investigations, a microsimulation model was built by the Department of Living Standards and Human Resources Statistics, Hungarian Central Statistical Office (HCSO), in collaboration with the Microsimulation Unit, University of Cambridge.[2] Here, we give only a very brief summary of its features.

The Microsimulation Model

Researches on methodological issues of microsimulation techniques began in the HCSO in the mid-1980s. The microsimulation model developed for the present research

[2] The model is described in more detail in *Papp, E. – Jarabek, Z.*: State responses to poverty and unemployment in Hungary: Technical description of the Hungarian Microsimulation Model. Hungarian Central Statistical Office. Budapest. 1997.

project is a static and non-behavioural one, meaning that the internal structure and characteristics of households in the dataset were left unchanged, and no change in individual or household behaviour was assumed as a result of a policy change. The model was designed in the first instance to examine the impact of reforms to the system of child benefits in Hungary on household incomes. To carry out microsimulation procedures, an SAS application was used. This allowed the easy manipulation of both data and policies. The tax/benefit provisions that the model can currently simulate include personal income taxes and social security contributions, Family Allowance, Child Care Allowance and Maternity Allowance. Allowing for limitations in the microdata, the model can be extended to handle other types of benefits, too.

The microdata

The microsimulation model constructed for this project used the Hungarian Household Budget Survey (HBS) from 1995 as its major source of microdata. The HBS is collected annually by the HCSO, and has been widely used to chart the impact of economic transformation on Hungarian households.[3] These data included detailed information on the characteristics and personal incomes of individuals in 10,500 Hungarian households, and are grossed up by using demographic weights to be representative of the Hungarian household population. *Havasi, É.* and *Rédei, M.* in an analysis[4] of representativity of the 1995 HBS have found that in terms of the composition of Hungarian households, the data and the population are similar. However, the representativity of some income components, particularly income from self-employment, is poorer. This problem is not unique to the Hungarian HBS. It is generally experienced in income and expenditure surveys.[5] However, it is important to take into account a differential representativity when microsimulation results based on these data are being interpreted.

In order to carry out an analysis of the reforms to child related benefits implemented in April 1996, income data in the 1995 HBS were updated to 1996 levels. The updating strategy employed in the HCSO's microsimulation model is discussed in greater detail by *Éltető, Ö.*[6] While it is often the practice with microsimulation modelling to update income data and also perhaps certain characteristics of the sample so that they reflect what might be the current (or even a future) situation, this has not been felt to be an appropriate strategy in the case of Hungary. Both in 1996 and 1997–1998 social and economic characteristics of the population were still felt to be changing rapidly, but there were few forecasts of the size and nature of these changes. However, by 1997, rather reliable information on the nature of changes up to 1996 were becoming available, and these were used as means of updating the 1995 HBS micro data.

More specifically, three types of information were available about incomes in 1996 and accordingly different procedures were applied in updating incomes to 1996.

[3] *Kattuman, P. – Remond, G.*: Inequality in Hungary 1987 to 1993 DEA Working Paper No. 9726. University of Cambridge. Cambridge. 1997.

[4] *Havasi, É. – Rédei, M.*: Representativity of the Household Budget Survey sample and validity of HBS income data, 1995. Hungarian Central Statistical Office. Budapest. 1997.

[5] *Redmond, G. – Wilson, M.*: Validating POLIMOD. Microsimulation Research Note MUIRN/14. University of Cambridge. Cambridge. 1995.

[6] *Éltető, Ö.*: Algorithm used for updating income data of the 1995 HBS to 1996. Hungarian Central Statistical Office. Budapest. 1997.

First, reliable and fairly differentiated macrostatistical data on the gross earnings of employed earners were available in early 1997. Thus, earnings indices for updating earnings data in the HBS from 1995 to 1996, differentiated by 14 economic branches and within each branch by sex and manual/non-manual grouping, could be calculated.

The second type of information related to those social incomes that were determined for 1996 by law or by governmental measures. For example, in 1996 all state pensions, rents and the Orphan's Allowance were raised by 13.5 per cent, and reported amounts in the 1995 HBS were adjusted accordingly.

Thirdly, early information from the 1996 HBS was used to update other income. For updating income items other than earnings and the above-mentioned benefits, no other information was available except that contained in the 1995 and 1996 HBS data. Therefore indices to uprate these income items were calculated using 1995 and 1996 HBS data. In total, Individual income from all sources was aggregated into 23 groups. Four of these groups were further categorised according to the sex of the respondent and their educational attainment. Therefore, in total, 43 separate indices were used to update these other categories of income. Household income items were aggregated into 13 groups and updated according to 13 separate indices.

The policies modelled

In this project, variations on the following policy provisions were modelled: Family Allowance, Child Care Fee, Child Care Allowance, income taxes and compulsory social insurance contributions. These benefits and taxes are described in more detail in the following chapter.

Here, we briefly describe some of the problems encountered in modelling them using HBS data.

Family Allowance. Since this was a universal benefit until 1996, and then means-tested on the basis of household incomes which could be captured quite well by the HBS, the modelling of entitlement to Family Allowance among HBS respondents was relatively straightforward. However, while information on incomes in the household are collected over a year in the HBS, information on characteristics, such as the number and ages of children, are collected only once, when the household is first interviewed. Therefore, there is a small mismatch in the data between recorded and simulated receipt of Family Allowance.

Child Care Fee and Child Care Allowance. Eligibility to these benefits was modelled on the basis of actual eligibility in 1996. From April 1996, Child Care Fee and Child Care Allowance were amalgamated into one benefit, but the new rules only affected women who gave birth after April 1996, while existing mothers retained their entitlements under the pre-April 1996 rules. Therefore, the proportions of mothers who would be entitled to Child Care Allowance and Child Care Fee under the pre-April 1996 rules, and the proportion subject to the post-April 1996 rules, were estimated, since the HBS database does not contain information on the months of birth, only on the year. Macrostatistical data on the numbers of births in 1995 and 1996 were used for this task. These data showed that, although, the number of mothers in receipt of Child Care Fee decreased considerably between 1995 and 1996, the average amount of Child Care Fee that

they received increased as a result of increases in nominal earnings in the preceding years (Child Care Fee was an earnings-related benefit). Therefore, both the proportion of mothers who remained subject to the pre-April 1996 rules, and the amount of Child Care Fee to which they were entitled, was modelled in this exercise.

Income taxes and social insurance contributions. For political and analytical purposes, the impact of various simulation options on disposable incomes net of direct taxes and social security contributions is of primary importance. This means that net disposable incomes had to be calculated from the gross incomes of individuals and households in the 1995 HBS (updated to 1996) using the provisions of the Personal Income Tax (PIT) laws valid for 1996. This was not a straightforward task, because the 1996 PIT law was the most complicated it had ever been since its introduction in 1988. Therefore, because of the lack of necessary information in the HBS, it was not possible to take into account all of the subtleties of the tax law as they applied to individuals. However, the essential elements of taxing gross incomes were applied.

Family Allowance award amounts and means-test thresholds, 1995 and 1996
(HUF per month)

Maximum amounts of benefit 1995 and 1996	
single parent with 1 child, per child	3250
single parent with 2 children, per child	3750
single parent with 3 or more children, per child	3950
couple with 1 child, per child	2750
couple with 2 children, per child	3250
couple with 3 or more children, per child	3750
amount per handicapped child	5100
Means-test from April 1996	
Single parent, per capita family income below 19600	
entitlement, for family with 1 child	3250
entitlement for family with 2 children, per child	3750
Single parent, per capita family income between 19600 and 22500	
entitlement, for family with 1 child	2300
entitlement for family with 2 children, per child	2700
Single parent, per capita family income between 22500 and 23400	
entitlement, for family with 1 child	1300
entitlement for family with 2 children, per child	1500
Single parent, per capita family income above 23400	no entitlement
Couple, per capita family income below 18000	
entitlement, for family with 1 child	2750
entitlement for family with 2 children, per child	3250
Couple, per capita family income between 18000 and 18750	
entitlement, for family with 1 child	2000
entitlement for family with 2 children, per child	2300
Couple, per capita family income between 18750 and 19500	
entitlement, for family with 1 child	1100
entitlement for family with 2 children, per child	1300
Couple, per capita family income above 19500	no entitlement
Minimum pension for one person	9600
Average net earnings*	31086

* Data of enterprises with more than 20 employees, relating to full-time employees.

DESCRIPTION AND IMPACT OF THE APRIL 1996 REFORMS

*Child-Related Benefits before April 1996.*The main components of the Child-Related Benefits System before 16 April, 1996 were as follows.

Universal (civil right entitlement) Family Allowance, the amount of which depended on the number of children and whether the family was headed by a couple or a single parent. The coloumned setting summarises the amounts of Family Allowance payable to different family types before and after the April 1996 reforms. The significance of Family Allowance could be characterised by the fact that in 1995 the rate for a couple with one child equalled 28 per cent of the minimum pension, and 9 per cent of average earnings, rising to 36 per cent of average earnings where the couple had three children. Family Allowance accounted for 3.8 per cent of total incomes for households with one child, 7.8 per cent of incomes for households with two children, and 16.1 per cent of incomes for households with three or more children.

Pregnancy Allowance was payable on a universal basis to expectant mothers who were more than three months pregnant, and was paid at the same rate as Family Allowance.

Child Care Fee was payable to insured mothers of children aged less than 2; the amount paid was 75 or 65 per cent of average earnings of the previous period depending on the contribution record of the recipient.

Child Care Allowance for insured parents of children aged less than 3, or children aged less than 10 if the child was permanently ill. The amount was a flat-rate sum, regardless of social situation and previous earnings.

Child Care Support, a benefit for families with at least three dependent children under the age of 18 and where the youngest was aged between 3 and 8, was introduced in 1993, and was the sole income-tested component of the system. However, the eligibility threshold (that per capita income should not exceed three times the minimum pension) was set so high that very few families with three children were ineligible.

Maternity Allowance was payable to insured mothers for 24 weeks at a rate of 100 per cent of their former wage.

The amount of Orphan's Allowance awarded was dependent on the earnings of the deceased parents and on the number of children in the orphaned family (in 1995 the average payment to 108, 000 recipients was 9 000 HUF per month) about a third of average earnings, and close to the minimum of old age pension.

A large amount of state support for families with children came in the form of cash and in-kind welfare provisions, such as regular and once-off education support, and partial or total subsidistation of the cost of school lunch and accommodation in student hostels. Further support was provided in the form of allowances to foster parents and welfare scholarships in secondary and higher education.

Child-Related Benefits after April 1996. The reforms of 16 April 1996 affected universal and personal entitlement provisions (Family Allowance, Pregnancy Allowance and Child Care Allowance) as well as provisions connected to employment (Child Care Fee and Maternity Allowance). The system was reformed as follows.

Levels of Family Allowance did not change between 1995 and 1996. However, from April 1996, Family Allowance was subject to a means-test, which was based on the

household's per capita disposable income net of alimony paid, child-care allowance and imputed income from the consumption of home production in the previous financial year (that is, in 1995 in the case of assessment of eligibility in 1996). No means-test was applied in the case of families with three or more dependent children, here the eligibility was automatic. In the case of families with one or two children, a step-wise means-test was applied. Families with per capita incomes below the low income threshold received full entitlement to Family Allowance; families with per capita incomes between the low and the high income thresholds received a reduced amount of Family Allowance, and families with per capita incomes above the high income threshold were not eligible for any Family Allowance. The low and high thresholds varied according to the number of children in the family (one or two), and depended on whether the family was headed by a single parent or a couple. Family Allowance amounts and details of the means-test introduced are summarised in coloumned setting.

This shows that for couples in particular, the range of per capita income across which eligibility to Family Allowance was reduced from full entitlement to none was quite narrow. A couple with per capital income of less than 18 000 HUF (58 per cent of average earnings) were entitled to the maximum amount. But if their per capita income was 19 500 HUF (63 per cent of average earnings), they were anot eligible for any Family Allowance.

Pregnancy Allowance was abolished and replaced with a newly established lump-sum maternity payment of 14 400 HUF. This was equal to about 5 months' Pregnancy Allowance in the former system.

Child Care Fee was abolished in respect of children born after April 16, 1996.

Entitlement to Child Care Allowance became means-tested. Only families eligible for Family Allowance were also eligible for Child Care Allowance, although it was no longer necessary to have a social insurance contribution record to receive it. In addition, the rate of Child Care Allowance was increased from April 1996 from 7 500 HUF to 9 600 HUF (of which a 6 per cent health insuranece contribution was directly deducted). Mothers could claim Child Care Allowance in respect of children who were less than three years old.

Conditions of eligibility and benefit rates for Child Care Support were not changed.

The maximum amount of the Maternity Allowance payable was reduced to 65–75 per cent of previous average earnings of the mother.

With the exception of the reform of Family Allowance, these changes applied to those children only who were born after the reforms were introduced. Therefore, the impact of the reforms as they were experienced by Hungarian families, was felt only gradually.

The means-testing of Family Allowance was relatively well received by the people in Hungary. However, the application form was rather complicated and this potentially excluded low income families lacking necessary literacy. At the same time it is questionable whether the money saved by excluding a small part of households justified the extra costs of checking, processing and recording income statements. Also, the use of income thresholds (3 in 1996 and 2 in 1997) to determine eligibility may have resulted in families with incomes near these thresholds adopting strategies that were strongly influenced by the threat of losing eligibility.

However, there were two positive features of the reform: one was that the nominal value of the family allowance would grow from 1997 as promised by the government; the other was that in November, 1997 a new (but means-tested) benefit, Child Welfare Support, was introduced. This benefit was targeted on very low income households with a per capita income of less than the minimum pension level.

Evaluation of the reform of family benefits

The impact of the reforms to family benefits on the income situation of households with children as well as on state budget can best be evaluated by comparing the result of microsimulation of Versions 0 and 1. Version 0 reflects the actual situation in 1996, that means the 1995 incomes updated to 1996 and the changes in the Child-Related Benefits System as a result of the reforms introduced in April 1996. In Version 1 incomes are also updated to 1996, but the Child-Related Benefits System is maintained according to pre-reform rules. Consequently, differences between the results of Versions 0 (1996) and Version 1 (1995) can be attributed to the immediate impact of the reforms introduced in April 1996.

Table 1

Number of child-related benefit recipients and state budget amounts

Version	Number of recipients			Total Annual Expenditure			Income of households	
	Households	Persons		billion HUF				
	Family Allowance	Child Care Fee	Child Care Allowance	Family Allowance	Child Care Fee	Child Care Allowance	Gross incomes	Net incomes available
0	1 339 900	156 500	119 300	96.6	23.6	13.3	2846.5	2321.2
1	1 423 700	188 700	91 500	100.6	29.3	11.2	2862.1	2336.3

Some of the macroeconomic and fiscal impacts of the reforms, as calculated by the microsimulation model using HBS data, are shown on Table 1. Two of the changes, namely means-testing of Family Allowance and the elimination of the Child Care Fee, will potentially have significant long term impacts both on the central budget and on certain groups of society, but in 1996, their aggregate impact was relatively mild. The means-testing of Family Allowance resulted in a 4 per cent reduction in total annual expenditure on this provision (from 100,6 billion HUF to 96.6 billion HUF), while expenditure on Child Care Fee, which was abolished in respect of babies born after April 1996, dropped from 29.3 billion HUF before the reform to 23.6 billion HUF, a reduction of almost one fifth. Expenditure on Child Care Allowance increased from 11.2 billion HUF before the reform, to 13.3 billion HUF after it. This increase occurred partly because it replaced the Child Care Fee for new mothers after April 1996, and partly because of the increased rate for this benefit from the same date.

Analysis of the simulated aggregate costs of Family Allowance, Child Care Fee and Child Care Allowance shows that these three benefits amounted to 5 per cent of the gross incomes and 6 per cent of net incomes of the Hungarian population. Almost three quarters of this amount (72 per cent) consisted of Family Allowance payments, 18 per cent

consisted of Child Care Fee, and 10 per cent consisted of Child Care Allowance. Had the eligibility criteria for these benefits remained unchanged (Version 1), their share in total household incomes would have been approximately 0.3 per cent higher. In other words, it would have cost the central budget an additional 8 billion HUF as compared to the 144 billion HUF spent on these benefits in 1996. Savings were made up of 4 billion HUF from the means-testing of Family Allowance and 4 billion HUF from the abolition of Child Care Fee and the uprating, extension and means-testing of Child Care Allowance. (The latter is a compound of 6 billion HUF savings in Child Care Fee and an additional 2 billion HUF of Child Care Allowance).

The rest of the modifications to child-related benefits discussed above together produced less than 3 billion HUF in savings to the central budget, and did not significantly affect average living standards of families during 1996. They did however, still contribute to a general reduction in welfare.

Table 2

Decile shares of various child-related benefits in Versions 0 and 1
(per cent)

Version	Deciles										Total
	1	2	3	4	5	6	7	8	9	10	
	Decile shares of all child benefits										
0	18.2	14.9	14.8	11.0	9.9	8.8	7.1	7.8	5.0	2.5	100.0
1	17.1	14.0	14.1	10.7	9.7	7.7	6.8	8.3	6.5	5.4	100.0
	Decile shares of Child Care Fee										
0	10.3	10.6	17.4	8.6	11.9	9.9	5.4	12.5	8.1	5.4	100.0
1	11.1	11.1	17.3	8.2	11.4	8.3	6.4	13.4	8.2	4.7	100.0
	Decile shares of Child Care Allowance										
0	22.4	15.4	18.0	11.9	10.0	6.9	5.8	4.3	3.9	1.3	100.0
1	20.7	15.7	17.4	12.2	8.1	7.7	4.0	5.5	5.7	3.0	100.0
	Decile shares of Child Care Support										
0	43.7	19.5	20.9	8.3	0.8	1.4	3.8	-	-	1.6	100.0
1	43.3	20.5	17.2	8.6	2.6	3.3	3.0	-	-	1.5	100.0
	Decile shares of Family Allowance										
0	19.9	16.1	13.9	11.5	9.6	8.8	7.5	7.0	3.9	1.7	100.0
1	18.4	14.6	13.0	11.0	9.4	7.7	7.2	7.2	5.9	5.4	100.0

As can be seen from Table 2, the reforms of April 1996 affected households differently according to their position on the income distribution. In summary, the share of the lowest decile in the three types of child benefits considered grew by about 1 percentage point in 1996 compared with 1995, while the shares of the upper three deciles decreased. Some details are worth highlighting.

The gain in shares of Child Care Fee is concentrated around the middle of the income distribution. Child Care Fee was abolished in respect of children born after 16 April, 1996, but previously, it had been available to insured mothers of children aged less than

2 as long as they remained on maternity leave. Women in insured employment were likely to belong to households in the middle or higher deciles. But as *Lakatos, J*. shows, women in the best-paid jobs tended to remain on maternity leave for shorter periods than women in less well-paid jobs.[7] Therefore, after the 1996 reform, Child Care Fee was concentrated more towards the middle of the income distribution, with decreases in shares at the bottom, and at the 7th and 8th deciles. On the whole, in 1995 the three lowest deciles received 39.5 per cent of Child Care Fee transfers, while in 1996 their share was reduced to 38.3 per cent.

Both in 1995 and 1996, over half of all Child Care Allowance was received by households in the three lowest deciles. This is not surprising, since this benefit was less generous than Child Care Fee and was available to mothers of children aged less than 3, who did not have a sufficient social insurance contributions record to claim Child Care Fee, or whose child was aged between 2 and 3, and their entitlement to Child Care Fee had been exhausted. Child Care Allowance was therefore considerably less attractive to mothers with a well-paid job than to return to work (this is clear from the distribution of this benefit across the income deciles). After the 1996 reforms, Child Care Allowance was even more concentrated among households in the bottom three deciles.

Child Care Support was available as a means-tested benefit to households with three or more children. Both in 1995 and 1996 over 80 per cent of all Child Care Support payments were made to households in the lowest three deciles. This is not surprising, considering its means-tested nature, and the fact that households with several children tend to be concentrated in the lower income deciles.

After it was means-tested in 1996, the distribution of Family Allowance became more concentrated in the bottom deciles. In 1995, households in the bottom decile received 18.4 per cent of all Family Allowance. In 1996, this share increased to 19.9 per cent. By contrast, the share of Family Allowance accruing to households in the top income decile decreased from 5.4 per cent in 1995 to 1.7 per cent in 1996. Only households in the top three deciles lost out, on average, in 1996 compared with 1995. Households in the bottom seven deciles gained in terms of shares as a result of the reforms.

The 1996 reform of the Child-Related Benefits System, saving 8 billion HUF in the types of benefits under study, therefore led to a greater concentration of payments towards the middle and the bottom of the per capita income distribution.

Breaking down households in two groups, those with and those without active earners, allows for a more detailed analysis of these trends. Fifty-seven per cent of the households (containing nearly three-quarters of the Hungarian population) had active earners in 1996. Nearly two thirds of these households had children. At the same time, only one tenth of the nearly 1.6 million inactive households had children. To put it in a different way, there were active earners in almost nine tenths of the 1.5 million households with children, but 11 per cent of households with children did not have an active earner. In 1995, 85 per cent of child benefits were transferred to households with active earners, while in 1996 this figure was reduced to 83 per cent. The reform package which saved 8 billion HUF was designed to affect only households with active earners. Households

[7] *Lakatos, J*.: Return to the labour market after the Child-Care Leave. Hungarian Central Statistical Office. Budapest. 1997.

without active earners continued to receive about 24–25 billion HUF in Child-Related Benefits, most of which was in the form of Family Allowance payments.

Table 3

Decile shares of child-related benefits among active households in Versions 0 and 1
(per cent)

Version	Deciles										Total
	1	2	3	4	5	6	7	8	9	10	
	Decile shares of total child-related benefits										
0	15.0	14.2	14.1	11.9	12.3	9.4	9.5	7.4	4.2	2.0	100.0
1	13.7	13.5	13.1	11.3	10.9	9.3	9.4	7.6	6.6	4.4	100.0
	Decile shares of Family Allowance										
0	16.5	15.1	13.7	12.5	12.1	10.0	9.0	6.6	3.5	1.1	100.0
1	15.1	14.1	12.4	11.7	11.0	9.3	8.7	6.8	6.3	4.6	100.0
	Decile shares of Child Care Fee										
0	6.6	12.0	14.2	8.2	14.9	9.0	12.7	9.9	7.9	4.5	100.0
1	7.3	12.4	14.8	7.5	12.4	11.1	13.6	8.2	8.7	4.0	100.0
	Decile Shares of Child Care Allowance										
0	20.2	13.9	17.7	13.5	11.8	8.0	5.8	4.6	2.9	1.5	100.0
1	18.7	15.2	15.9	14.2	9.0	9.2	5.5	5.4	3.5	3.5	100.0
	Decile Shares of Child Care Support										
0	35.1	25.3	23.6	5.0	1.2	4.6	2.9	-	-	2.3	100.0
1	35.1	23.4	23.9	6.7	1.1	4.6	2.9	-	-	2.3	100.0

Table 3 shows the impact of the 1996 reforms on those households with active earners. Compared with the overall results presented in Table 1, the distributional impact of the reforms is quite large. In 1996, child-related benefit payments to households below the median were 2 billion HUF or 5 per cent higher than in 1995. At the same time child benefit payments for households in the upper four deciles decreased by 10 billion HUF. These changes were primarily due to a decline in the amount of Family Allowance and Child Care Fee paid to households in upper deciles, as well as to the increases in Child Care Allowance and Child Care Support paid to households in the lower deciles. Families with children who lost their Family Allowance and/or Child Care Fee entitlement moved to lower, normally middle income deciles, while households receiving Child Care Allowance or Child Care Support instead of Child Care Fee moved to the lowest income deciles in 1996. Income inequality, however, changed little: both in 1995 and 1996, incomes in the uppermost decile were on average 5.6 times higher than in the lowest decile according to the HBS.

The impact of the Child Benefit Reform on active households with various numbers of children

Table 4 shows that there were 2.2 million active households in Hungary in 1996. Of these, 40 per cent had no children, 28.2 per cent had one child, 26.2 per cent had two

children, and 5.6 per cent had three or more children. If people rather than households are used as the unit of analysis, then people living in households with no children comprised 29.4 per cent of the Hungarian people living in households headed by an active person, and people living in households containing 3 or more children comprised 9.3 per cent of the population of people living in active households.

Table 4

Poverty and inequality within active households by the number of dependent children

Denomination	Number of children in household				All active households
	0	1	2	3 or more	
Number of households	883 160	613 449	574 453	122 363	2 193 439
Percentage of all households	40.0	28.2	26.2	5.6	100.0
Number of persons	2 091 039	2 014 986	2 346 736	663 354	7 116 115
Percentage of all persons	29.4	28.3	33.0	9.3	100.0
			Version 0		
Average net annual equivalised income (HUF)	475 204	368 112	319 977	263 387	374 860
Poverty line (HUF)	160 045	160 045	160 045	160 045	160 045
Number of poor persons	86 915	97 263	155 151	82 558	421 887
Percentage of all poor	20.6	23.4	36.8	19.6	100.0
Average poverty gap (HUF)	19 015	32 754	37 675	27 039	36 016
Relative poverty gap	11.9	20.5	23.5	16.9	19.1
Gini co-efficient	0.247	0.232	0.227	0.220	0.260
			Version 1		
Average net annual equivalised income (HUF)	475 704	373 461	323 612	266 007	377 974
Poverty line (HUF)	160 552	160 552	160 552	160 552	160 552
Number of poor persons	86 915	98 622	153 656	85 438	424 631
Percentage of all poor	20.5	23.2	36.2	20.1	100.0
Average poverty gap (HUF)	18 812	31 733	37 063	26 571	29 978
Relative poverty gap	11.7	19.8	23.1	16.5	18.7
Gini co-efficient	0.247	0.234	0.229	0.220	0.260

Before the reforms of April 1996, the annual equivalised income of households with no children was 475 204 HUF. Households with one child had 373 461 HUF per annum, or 79 per cent of the incomes of households without children; households with two children had, on average 323 612 HUF (68 per cent of the average amount of households without children); and households with three or more children had annual equivalised incomes of 266 007 HUF (56 per cent that of households with no children). After the reforms, which had no impact on households without children, the average equivalised household incomes of active households with children as a proportion of the incomes of active households without children fell to 77 per cent in the case of households with one child, 67 per cent for households with two children and 55 per cent for households with three or more children. Therefore, the relative income position of households with children worsened somewhat as compared to that of households without dependent children.

Table 4 also shows that if households who had less income than 50 per cent of the median net equivalised income are defined as poor, it can be shown that both before and after the April 1996 reforms, the number of people living in households defined as poor was slightly over 420 000, of whom 87 000 lived in households with no children, 150 000 lived in households with two children, over 80 000 lived in households with three children. These numbers suggest that households with no children or one child were under-represented among those below the poverty line, but households with two children, and particularly households with three or more children, were over-represented. As a result of the April 1996 reforms, slightly more households with two children fell into poverty, while slightly fewer households with three or more children did so. However, at about 20 per cent both before and after the reforms, the representation of households with three or more children among those in poverty was more than twice of what their population strength would suggest.

The Gini inequality index, though rather low, shows that income inequality was the largest among active households without children. This was particularly the case within single member households. The Gini inequality index decreased according to the number of children in the household, and was largely unaffected by the reforms to child benefits.

OUTLINE OF ALTERNATIVE POLICY OPTIONS

Besides assessing the impacts of the 1996 reform of the Child-Related Benefits System, the research project also investigated some alternative policies concerning child benefits using microsimulation methods. The purpose in doing this was primarily to see whether some of these alternatives could yield a more favourable distributional and perhaps psychological impact without greatly increasing the burden on the state budget.

The alternative policies investigated can be classified into three groups.

1. Vary eligibility criteria for Family Allowance. In Versions 2, 3 and 6, eligibility criteria for Family Allowance, which would have an impact on the incomes of most households with children, were changed, but the amount payable per child was held constant according to the 1996 rules. In these versions entitlement to Family Allowance was made universal not just for families with three or more children (as was the case under the 1996 régime), but also for families with one child under the age of six (Version 2), for families with one child under the age of 3 (Version 3), and for single parent families (Version 6).

2. Vary rates of Family Allowance. In Versions 4/3 and 9, eligibility criteria for Family Allowance were held constant according to the 1996 rules, but the rates at which Family Allowance was paid were increased. Between 1992 and 1996, nominal rates of Family Allowance were not increased to compensate for increases in the cost of living. With the introduction of means-testing in 1996, its nominal value even decreased for many families. In Version 4/3, the means-testing thresholds for Family Allowance introduced in April 1996 were held constant, but rates at which the benefit was paid were doubled. In Version 9, the amounts of the Family Allowance were set at the level actually implemented in 1997 (when Family Allowance was increased), but income thresholds for means-testing purposes were kept at the same level as in 1996.

3. Introduce tax relief for workers with dependent children. Under Version 7/1, entitlement to Family Allowance was held constant according to the rules implemented in April 1996, and extra help for families was provided in the form of child-related tax reliefs. In this version, parents could deduct some of the extra costs associated with raising children from their personal income taxes: parents could deduct between them a total of 1 000 HUF per month in case of one child, 1 500 HUF per month/child in case of two children and 2 000 HUF per month/child in case of three or more children. However, if parents did not earn enough taxable income to pay income tax, they could not avail of this benefit. It must be noted here that in 1996 there was no income threshold below which income tax was not payable: the lowest income tax rate was 20 per cent. Social incomes were either not taxable (as it was in the case with Family Allowance) or the tax on them was deductable from total tax (as it was the case with pensions).

Table 5

Number of child benefit recipients and state budget amounts in the various versions

Version	Number of recipients			Cost of reform as percentage of Total Annual Expenditure on child-related benefits		Income of households (billion HUF)	
	Households	Persons					
	Family Allowance	Child Care Fee	Child Care Allowance	in Version 1 (1995)	in Version 0 (after April 1996)	Gross income	Net income available
1	1 423 700	188 700	91 500	100.0	105.7	2862.1	2336.3
0	1 339 900	156 500	119 300	94.6	100.0	2846.5	2321.2
2	1 409 800	156 500	119 300	96.0	101.4	2849.3	2324.0
3	1 369 900	156 500	119 300	95.2	100.6	2849.1	2323.8
4/3	1 339 900	156 500	119 300	162.9	172.1	2944.7	2419.3
6	1 339 900	156 500	119 300	95.0	100.4	2850.0	2324.6
7/1	1 339 900	156 500	119 300	94.6	100.0	2846.5	2387.5
9	1 339 900	156 500	119 300	115.2	121.7	2877.3	2352.0

The consequences of these alternatives on macroeconomic expenditures are summarised on Table 5, and can be elaborated as follows.

1. Vary eligibility criteria for Family Allowance. The extra cost to the central budget of paying Family Allowance as an entitlement for all children aged under six (Version 2), or under the age of three (Version 3), or for all single parent families (Version 6) was relatively small. Under all three versions, budget expenditures as simulated by the model increased by as little as 1 or 2 billion HUF compared with Version 0, or less than one per cent of total expenditure on child-related benefits after April 1996. This can be explained by the relatively low fertility rates experienced by Hungarian women during the 1990s.

2. Vary rates of Family Allowance. In versions where eligibility criteria for Family Allowance were the same as in 1996 (Version 0), but where benefit amounts were increased, the model shows that budget expenditures would grow considerably. These versions were based on the consideration that Family Allowance could play a more central role in preventing poverty than was the case in 1996. In Version 4/3, Family Allowance rates current in 1996 were doubled, but the means-test was kept in place. This had the effect of restoring Family Allowance to its early 1990s value in real terms for families with

incomes below the means-test threshold, but would have cost the central budget an extra 100 billion HUF, equal to a 72 per cent increase in expenditure on child-related benefits. The share of child-related benefits in total household incomes would have increased by 3 percentage points. It is obvious, however, that the central budget would not be able to cover these expenditures. In Version 9, Family Allowance was increased as required by regulations in May 1997, but with income limits the same as in 1996. This reform increased simulated expenditure on child-related benefits by about 22 per cent, and average net household incomes by about 1.3 per cent.

3. Introduce tax relief for workers with dependent children. In version 7/1, the post-April 1996 Family Allowance regime was left unaltered, but extra income tax rebates for workers with dependent children were simulated. According to HBS data, this would result in a 60 billion HUF reduction in income tax revenues. If this measure were introduced, however, it is possible that the actual loss would be smaller, as families, in seeking to claim these rebates, might not conceal their incomes to the same extent as they may do under the current system.

Table 6

The share of deciles in Family Allowance in various versions
(per cent)

Version	Deciles										Total
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
1	18,5	14,7	13,0	11,0	9,4	7,7	7,2	7,2	5,9	5,4	100,0
0	19,9	16,0	13,9	11,7	9,6	8,8	7,5	7,0	3,9	1,7	100,0
2.	19.8	16.1	13.9	11.5	10.0	8.4	6.9	6.2	4.2	3.0	100.0
3.	20.0	16.4	14.4	11.9	10.5	8.6	6.8	5.6	3.5	2.3	100.0
4/3.	16.4	15.0	14.1	12.4	10.2	9.6	8.3	6.8	4.6	2.6	100.0
6.	20.2	16.4	14.4	12.0	10.5	8.6	6.7	5.6	3.4	2.2	100.0
9.	19.4	16.4	14.6	12.2	10.2	8.9	7.0	5.5	3.8	2.0	100.0

Table 6 shows some of the distributional impacts of the simulated reforms discussed above. In all versions except Version 4/3 (including the one adopted from April 1996, Version 0), the concentration of Family Allowance on the bottom decile was greater than was the case under the 1995 system (Version 1). However, none of the alternative versions improve markedly the targeting of Family Allowance on households in the bottom decile over that which Version 0 delivers. At the other end of the per capita income distribution, however, the 1996 Family Allowance régime is by far the least generous to households in the top decile. Households in this decile receive only 1.7 per cent of all Family allowance under the 1996 regime, compared with 5.4 per cent under the 1995 régime.

Overall, however, only in Versions 2 and 3, where the Family Allowance is a personal entitlement or increased differentially according to the number of children in the household, does the distribution of shares of Family Allowance vary significantly from that pertaining under the simulated 1996 regime. In other versions, the distribution of Family Allowance across active households with children is roughly the same as in 1996.

Table 7

Shares of active households with different number of children in Family Allowance

Version	Active households	Inactive households	Households with 1 child	Households with 2 children	Households with 3 or more children
			as per cent of all active households*		
1	84.5	15.5	25.2	52.2	20.3
0	84.2	15.8	22.2	53.4	23.0
2	85.2	14.8	30.8	44.6	22.1
3	84.9	15.1	28.4	46.9	22.2
4/3	84.6	15.4	27.2	47.8	22.5
6	84.6	15.4	27.9	47.4	22.1
9	84.5	15.5	26.3	47.3	23.9

* The proportions of families with one or more children in receipt of Family Allowance do not add up to the proportions of all active households in receipt of Family Allowance, because some households where there are no children present in the household at the time of interview for the HBS may still report receiving Family Allowance if a child was temporarily absent, or had recently left the household.

Restricting now our investigations to active households, who received the bulk (about 85 per cent) of Family Allowance in all versions differentiating them by the number of dependent children, we can conclude – on the basis of Table 7 – the following.

– Households with one child, which comprised 47 per cent of all active households with children, received in all versions except Version 2, less than 30 per cent of total Family Allowance payments. Version 3 was the next most generous simulated reform as far as they were concerned. There are two reasons for this: first, where there was only one child in the family, they tended to be quite young, and therefore the family benefited from the simulated universalisation of Family Allowance for children aged under 6 (Version 2) or under 3 (Version 3); second, most other reforms simulated were likely to the disadvantage of families with only one child.

– Households with two children, which comprise 44 per cent of all active households with children, received in the various versions between 45 and 53 per cent of all Family Allowance payments.

– Households with three or more children, 9 per cent of all active households with children, received 20–24 per cent of Family Allowance payments in all of the versions simulated in this paper. The fact that the variation in relative outcomes for this group is so small may be attributed to the state of affairs that none of the simulated reforms sought to be to the disadvantage of this group. It is worth mentioning, however, that more than one third of households with three or more children belong to the group of inactive households. Within active households, their share was the largest in versions where amounts of Family Allowance per child were increased.

The impact of Version 7/1 on the income distribution and especially on poverty deserves special attention. As it can be seen from Table 8 and comparing it with Table 4, it considerably reduces both overall poverty within active households and that of households with 2 or more children.

Table 8

Poverty within active households by the number of dependent children according to version 7/1

Poverty indicators	Number of children in household				All active households
	0	1	2	3 or more	
Average net equivalised income (HUF)	48 378	379 610	338 460	285 417	388 003
Poverty line (HUF)	166 176	166 176	166 176	166 176	166 176
Number of poor persons	90 332	95 220	114 284	50 996	350 832
Percentage of all poor persons	25.8	27.1	32.6	14.5	100
Average poverty gap	20 414	33 087	41 729	25 609	31 552
Relative poverty gap	12.3	19.9	25.1	15.4	19.0

CONCLUSIONS

Two types of conclusions can be drawn from this paper. First, the inferences that can be drawn from the results of the simulations themselves, should be presented summarising the main findings of the impacts of the April 1996 reform as well as the alternative policy options considered.

The other type of conclusions concerns the evaluation of the whole project, particularly in relation to the continued utilisation of the microsimulation model. The 1996 reform to the Child-Related Benefits System resulted in 8 billion HUF saving for the central budget. Half of this saving resulted from the introduction of means-testing for Family Allowance. Although means-testing of social benefits seems generally justifiable, it is questionable, considering the additional administrative cost of collecting, checking and processing the application forms, whether it was worth the trouble to introduce it for Family Allowance. Moreover, from statistics referring to 1996 and 1997, it seems that means-testing of Family Allowance and Child Care Allowance – along with other measures of the 1996 reform – may have a negative impact on an already very low birth rate.

The reform had no perceptible impact on the overall income inequality. However, it caused some restructuring between income deciles: the majority of families with several children and single parent households have moved to the lowest income deciles, and families who are now excluded from certain benefits have shifted downwards in the income hierarchy.

From among the alternative policy options considered, only those in which the level of Family Allowance was increased had a large impact on the income situation of families with children: in these versions the inequality indices show smaller income differences. However, the fiscal implications of increasing Family Allowance payments are severe: they would result in a significant extra burden for the central budget.

As to the second type of conclusions, it should be pointed out, first of all, that this research may serve as a good example of how the impacts of planned central measures influencing the welfare of households and affecting the state and/or social security budgets could be investigated by microsimulation techniques in advance of their introduction. It is no wonder, therefore, that there was active interest on behalf of the decision makers, especially the Ministry of Welfare at the November Workshop, where the methodological issues and the results of the research project were presented. The HCSO itself put on

its workplan further investigations of this type. In order to increase the level of interest in, and knowledge of, microsimulation techniques in Hungary, the HCSO has also published both the methodological issues and the results of this ACE Project in three parts in the *Statistical Review*, the periodical of the HCSO.[8]

However, because researches of this type are generally considered as basic researches and not those for direct application, it is difficult to raise the necessary funds for their financing. We think that it would be useful if financing further microsimulation researches could be secured.

[8] *Csicsman, J. – Papp, P.*: A családtámogatási rendszerek hatásvizsgálata mikroszimulációval. *Statisztikai Szemle*. 1998. No. 3. 238–249. p.; *Éltető, Ö. – Havasi, É.*: Mikroszimulációs kísérlet a családtámogatások hatásvizsgálatára. *Statisztikai Szemle*. 1998. No. 4–5. 324–340. p.; *Keszthelyiné dr. Rédei, M. – Dr. Lakatos, J.*: A családtámogatási rendszer változtatásának hatásai. *Statisztikai Szemle.* 1998. No. 6. 473–480. p.