The Impact of the Tax Relief to Families on Household Income in Hungary
Who benefits the most from the family allowances?

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ABSTRACT

Hungary's family tax system is often criticised for being unequally distributed, favouring high-earners and those with several children. In my analysis, I point out that, according to calculations based on the traditional notion of per capita income, families with four children are the worst off on all incomes, and that families with one child are no worse off than the often envied families with three children, and are, in fact, several income decils above them. However, if we take into account that newer household members require less extra expenditure and apply the OECD statistical methodology, we can see that in the lower income categories, who are at risk of poverty, it is indeed the one-child households who are worse off, while in the middle income categories (median and mean income) it is the two-child households who are worse off. The study also dispels the misconception that the family tax relief is only fully available to wealthy parents. Even the majority of those in the lowest income decile can take full advantage of the benefit for up to 3 children. The critical situation is, in fact, for single-parent families. Indeed, single-parent families are not entitled to the full benefit for 3 or more children in the lowest income decile.

INTRODUCTION

One question is important to clarify in advance: who will receive the family tax allowance? The starting point of the study is that although the parent's tax base is reduced, the family is ultimately the beneficiary. Therefore, the benefit can only be assessed in the context of family or household income, and it is not sufficient to look at how the personal income of the beneficiary has evolved. Krekó and coauthors (2022) investigated the income redistributive effect of the family tax allowance from individual tax returns of the Hungarian National Tax Office. In their study, the authors themselves indicate that they cannot link the two parents from the data. Since in the Hungarian system parents jointly own the child tax credit and can distribute it between them as they wish, looking at only one parent may lead to erroneous conclusions in several cases. For example, they found that almost half of the benefit claimants claim the benefit for one child. The data on which their calculations are based cannot handle the situation where the father and mother share the benefit, with one claiming for one child and the other for the other. This could lead to the conclusion that one parent could not claim the allowance for both children, although it is possible that he or she did not want to. The authors split the taxpayer income data into deciles, and in the remainder of the paper they make findings for these taxpayer deciles, leading to further ambiguous conclusions.

Highlighting some of their findings:

'the system continues to favour those on high incomes, with the top decile receiving a disproportionate share of total family benefits' (p.20)

They cannot take into account the impact of the higher income member of the couple claiming the full benefit and the lower one nothing, because they have chosen to do so for simplicity's sake. But that does not mean that they could not have taken it if they wanted to!

According to their calculations:

'while the lowest income decile receives on average less than 7,000 HUF per month, the top decile receives nearly 40,000 HUF' (p. 21)

Even if we add that we are not talking about the usual income deciles reported by the Hungarian Central Statistical Office (hereafter HCSO), but about taxpayer deciles, it still seems an interesting figure. Let us calculate how much tax relief the people in the lowest income decile can receive: even with an income of HUF 30,000 (around EUR 85 in 2020), they receive the full amount (HUF 10,000) for one child. In 2020, the average monthly gross income per person in the lowest income decile was HUF 80,815 (around EUR 230). If (s)he has at least 2 children, (s)he can claim a benefit of HUF 27 000. How did the authors get the average tax credit of HUF 7000? Presumably, taxpayers who do not claim the tax credit because, for example, another parent claims it are included in the analysis. But this does not mean that lower earners could not have claimed.

The key questions

The aim of my study is to look behind the numbers and examine the following claims of Kreko's study:
- 'the family tax credit favours rich families with many children over families with one or fewer children';
- 'the biggest winners from the family tax credit are therefore taxpayers in the top income decile with three or more children' (p. 24).

In my study, I want to examine the income situation of the family as the unit of consumption. I argue that even among the worst off, i.e. those already in the 1st income

decile according to the HCSO, the allowance fulfils the role of bringing those with children closer to the living standards of those without.

First, I will briefly describe the Hungarian family tax credit system which can be used also for social security contributions and the very special tax exemption available to mothers of four or more children, which I will refer to collectively as the family allowances. I then calculate how much benefit families are entitled to on different incomes and how much of their benefit is unused. Taking into account the child benefit, I determine the disposable income per capita and see which income decile they fall into (according to the HCSO). Finally, I convert family incomes to OECD equivalised incomes to compare the living standards of people with the same gross wage. The main question is who ultimately benefits: the poor or the rich, those with one or more children, and what about the childless; are we unfairly burdening them compared to those with children?

BACKGROUND

Brief summary of the system of family allowances and child benefit in Hungary

Currently, in Hungary, parents can reduce the personal income tax base per beneficiary dependent by the amounts shown in Table 1 (jointly), depending on the number of dependents.

Table 1: Amounts reducing parents' consolidated tax base per beneficiary dependent (own ed.)

Number of dependents:	Monthly tax credit (in HUF) per beneficiary dependent in a family
1	66,670
2	133,330
3	220,000
4	mother: total tax base exempted + 220,000 allowance OR father: 220,000

Special attention is given to family with 4 children, where the mother is exempt from personal income tax on certain income (such as wages, but not on renting property). At the same time she can also claim the family tax and contribution allowance; for the mother $4 * 220\,000 * 0.15 =$ HUF 132 000 can be used as a social security contribution allowance near to tax exemption, or the father can claim the same amount of personal income tax and/or social security contributions.

Currently, the personal income tax rate is 15% for everyone, so the tax payable is reduced by 15% of the benefits available from Table 1 if the taxpayer has a liability to pay this amount of income tax or social security contributions (currently 18.5%).

EXAMPLE: There are two parents and three children in a family, both parents worked at minimum wage in December 2020, earning 161,000,- HUF each, for a total of 322,000,- HUF. At that time, they had no personal income tax to pay, since the tax credit ($3*220,000 = 660,000$ HUF) is higher than their total tax base. The tax on the unused tax credit ($15\% * (660,000 – 322,000) = 50,700$, HUF) could be used to reduce their social security contributions ($322,000 * 18.5\% = 59,570$, HUF). In total, their net income became 313,130, HUF instead of 214,130, HUF, so the total allowance was 99,000 HUF. However, if a single mother on minimum wage raises the above 3 children, she will only receive an allowance of ($161,000 * (0.15 + 0.185) = $ HUF 53,935) on her wage.

If families have a sufficiently large tax base, they can reduce their disposable income by up to the amounts shown in Table 2.

Table 2: Amount of family allowance that increase parents' disposable income for different numbers of children (if all children are dependent) (own ed.)

Number of children	Tax allowance, which can also be used for contributions if necessary (in HUF)
1	10,001
2	39 999
3	99 000
4	132 000

Finally, I have also considered a general support paid by the state, the child benefit, which amount depends on the number of adults and dependents in the household, summarised in Table 3.

Table 3: Monthly Child Benefit in HUF (own ed.)

Child Benefit per Month (in HUF)		Number of parents in the household	
		1	2
Number of children	1	13,700	12,200
	2	14,800	13,300
	3	17,000	16,000
	4	17,000	16,000

METHODS

Equalised Income

Once the household income has been determined, the per capita income can be used to determine which income decile the family members fall into. However, it is misleading to use this to determine who is considered poor, middle class or even rich. Obviously, it makes a difference whether everyone in a household of 1, 2, ... or 6 has HUF 1 million a year, and it makes a difference whether a household of 1, 2, ... or 6 has a total of HUF 6 million a year. To remedy this problem, the OECD (2022) introduced the concept of equalised income. The methodology is constantly being refined, the present study uses the square root method, in which the equalised income of the household members is obtained by dividing the total disposable income of the household by the square root of the number of household members. This conception makes the income of a household of 1, 2, ... or even 6 persons comparable.

Calculation

I compared different family types at different earnings: minimum wage, guaranteed minimum wage (minimum wage for graduates), median wage and mean wage (their amounts are summarised in Table 4). The first two are defined by law, and the latter two are defined on the basis of the HCSO database. I had to use 2020 data because there are no more recent data available.

Table 4: The wage categories examined in HUF and converted into EUR at the average exchange rate in 2020.

Gross monthly wages	in HUF	in EUR*
Minimum wage	161,000	458
Guaranteed minimum wage	210,600	600
Median wage	320,582	913
Mean wage	403,600	1,149

*1 EUR = 351.2373 HUF

Source: author's calculation based on Exchange Rates (2023), HCSO (2023a), HCSO (2023b)

I studied 10 family types: each family could have 1 or 2 (working) adults, while the number of children could take a value between 0 and 4.

To assess the income situation of families, I used data from the HCSO for the year 2020, as more recent data is not yet available. (see Table 5).

Table 5: The monthly mean income per capita of the income deciles in HUF and converted to EUR in 2020.

Mean income per capita	Gross income per month	
Income deciles	in HUF	in EUR
1st	80,815	230
2nd	104,226	297
3rd	127,311	362
4th	134,770	384
5th	151,582	432
6th	170,886	487
7th	187,466	534
8th	220,536	628
9th	269,893	768
10th	417,632	1,189

Source: author's calculation based on Exchange Rates (2023) and HCSO (2023c)

RESULTS

Of the findings, (1) is always based on traditional per capita income statistics; (2) judges the family's situation according to equalised income calculations; (3) refers specifically to the extent of benefit take-up.

As the boundaries of the income deciles are not known, but only the average income of the given decile, I was able to compare the per capita household income with this average. In the following tables, the row 'Middle of the income decile' shows the decile whose average income is already exceeded.

Minimum wage

Tables 6.1 and 6.2 present the results for one and two adults, respectively, when adults earned the minimum wage (161,000 HUF a month). Here is how the calculation works for a single parent with 3 children earning 161,000 HUF.

Net family wage: gross wage – (personal income tax + social security contribution) = 161,000 HUF (see the EXAMPLE from previous page).

Household disposable income: Net family wage + child benefit (Table 3) = 161,000 + 3 * 17,000 = 212,000 HUF.

Disposable income per capita: Household disposable income / household size = 212,000 / 4 = 53,000 HUF.

Middle of the income decile: What is the average income decile that is the largest but less than the Disposable income per capita? 0 < 53,000 HUF < 80,815 HUF (the first decile's average from Table 5).

Equalised Income: Household disposable income / √ household size = 212,000 HUF / √4 = 106,000 HUF.

Unused / Maximum Family Allowance: (Maximum Family Allowance – Used Family Allowance) / Maximum Family Allowance = (99,000 – 53,935) / 99,000 = 46 % (see the EXAMPLE and Table 2).

Table 6.1: Household monthly income situation for single parent household where parent earned the minimum wage in 2020 in (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	107	117	147	161	161
Household disposable income	107	131	177	212	229
Disposable income per capita	107	65	59	53	46
Middle of the income decile	5th	0th	0th	0th	0th
Equalised Income	107	92.5	102	106	102
Unused / Maximum Family Allowance	----	0%	0%	46%	59%

Table 6.2: Household monthly income situation for two-parent households where both parents earned the minimum wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	214	224	254	313	322
Child Benefit	0	12	27	48	64
Household disposable income	214	236	281	361	386
Disposable income per capita	107	79	70	72	64
Middle of the gross income decile	5th	2nd	0th	0th	0th
Equalised Income	151	136	140	162	158
Unused / Maximum Family Allowance	----	0%	0%	0%	18%

Key Findings:

(1) Disposable income per capita in households decreases as the number of children increases and the number of working adults decreases. This is not surprising, of course, but note that those without children are not worse off, they are above the fifth income decile average, while those with children remain primarily below the 1st decile average. Even if we consider the disposable income per capita in both single-parent and two-parent households, those with four children were the worst off.

(2) For equalised incomes, it appears that in a one-parent households, the one-child (with 92.5) was the worst off and the childless (with 107) the best off; in a two-parent household, the one-child (with 136) was also the worst off, but here the three-child (with 162) was the best off, not the childless couple (with 151).

(3) The maximum benefit is already fully available (unused allowance is 0%) here below the first income decile'average, for one and two children households, and for two-parent households even with three children. Single-parent families with 3-4 children cannot claim the full amount, but their standard of living is higher than that of a single parent with 1 or 2 children and close to that of a single person with no children. Even two-parent families with four children cannot claim the full benefit, but their standard of living still exceeds that of two-adult households with 0, 1 or 2 children.
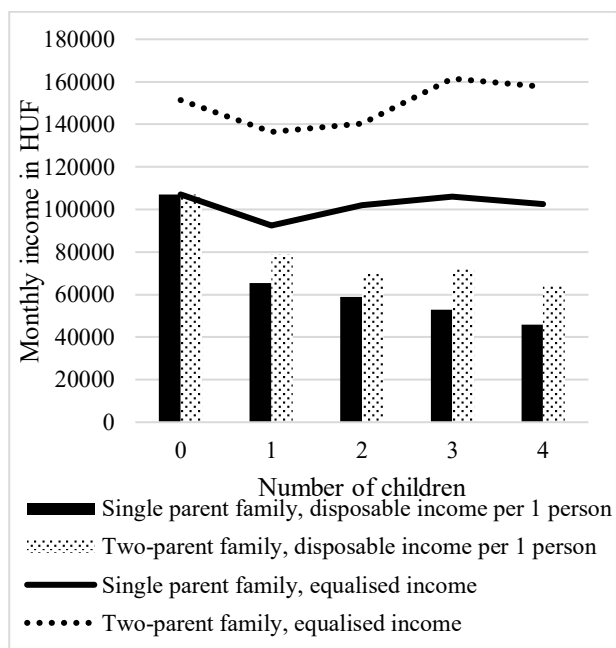

Figure 1: Per capita and equalised disposable incomes as a function of number of children, with adults earning minimum wage

Guaranteed minimum wage

Tables 7.1 and 7.2 present the results for one and two adults, respectively, when adults earn the guaranteed minimum wage (210,600 HUF).

Table 7.1: Household income situation for a single-parent household where parent earned the guaranteed minimum wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	140	150	180	211	211
Child Benefit	0	14	30	51	68
Household income	140	164	210	262	279
Disposable income per capita	140	82	70	65	56
Middle of the income decile	7th	2nd	0th	0th	0th
Equalised Income	140	116	121	131	125
Unused / Maximum Family Allowance	----	0%	0%	29%	47%

Table 7.2: Household income situation for two-parent households where both parents earned the guaranteed minimum wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	280	290	320	379	421
Child Benefit	0	12	27	48	64
Household income	280	302	347	427	485
Disposable income per capita	140	101	87	85	81
Middle of the income decile	7th	4th	2nd	1st	0th
Equalised Income	198	175	173	191	198
Unused / Maximum Family Allowance	----	0%	0%	0%	-7%

Key Findings:

(1) Disposable household income per capita is also falling in this case as the number of children increases and the number of working adults decreases. Here, those without children are above the seventh income decile average, while those with children are well below. In single-parent and two-parent households, those with four children are the worst off.

(2) In terms of equalised income, it appears that in single parent households, those with one child were again the worst off (with 116 kHUF), while those without children were still the best off (with 140 kHUF). In two-parent households, those with two children were the worst off (with 173 kHUF) and those with four children and without children (both with 198 kHUF) were the best off. Overall, single-parent families were by far the worst off.

(3) Single-parent families below the 1st income decile average have not been able to take full advantage of the 3 and 4 child benefit, but their standard of living is still higher than that of 1 and 2 child families. Two-parent households with more than the average income decile 1 could claim the benefit in full for 3 children. For 4 children, -7% means that (due to the mother's income tax exemption) the family received a benefit of more than HUF 132,000, even though their gross per capita income is below the average of the first income decile! In other words, (1) they are very poor according to traditional income per

capita statistics, (2) they can nevertheless make ample use of the benefit, (3) according to the OECD methodology, they are the most favourable after family allowances.
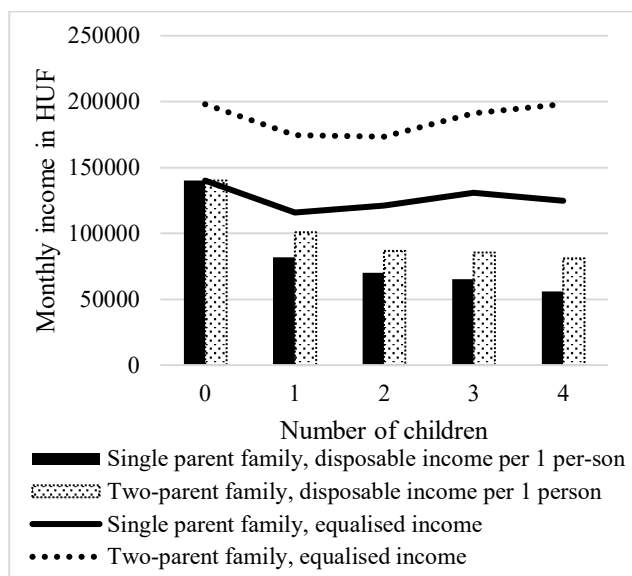

Figure 2: Per capita and equivalent disposable income as a function of the number of children, with adults earning guaranteed minimum wage

Median wage

Tables 8.1 and 8.2 present the results for one and two adults, respectively, when adults earn the median wage (320,582, HUF).

Table 8.1: Household Income Situation for Single Parent Household where Parent Earned the Median Wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	213	223	253	312	321
Child Benefit	0	14	30	51	68
Household income	213	237	283	363	389
Disposable income per capita	213	118	94	91	78
Middle of the income decile	9th	5th	2nd	0th	0th
Equalised Income	213	168	163	182	174
Unused / Maximum Family Allowance	--------	0%	0%	0%	19%

Table 8.2: Household Income Situation for Two-Parent Families where both parents earned the median wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	426	436	466	525	606
Child Benefit	0	12	27	48	64
Household income	426	449	493	573	670
Disposable income per capita	213	150	123	115	112

Middle of the income decile	9th	7th	5th	3rd	2nd
Equalised Income	301	259	246	256	274
Unused / Maximum Family Allowance	-----	0%	0%	0%	-36%

Key Findings:
(1) Disposable income per capita in households continues to fall as the number of children increases and the number of working adults decreases. Those without children are already above the average of the ninth income decile, while there are families with children who are even below the first decile. Here it is much more striking how having children "im-poverishes" people.
(2) In terms of equalised income, it can be seen that in both one- and two-adult households, families with two children are the worst off, while those without children are the best off.
(3) Only single-parent households with four children below the first income decile average were not entitled to the maximum benefit, but their standard of living still exceeds that of single-parent households with one or two children. For two-parent families of four children with a gross income above the average of the second income decile, -36% unused allowance means that the family can receive 1.36 times the maximum HUF 132 000 benefit. Their standard of living (274 kHUF) is only outperformed by childless households with two adults (301 kHUF).
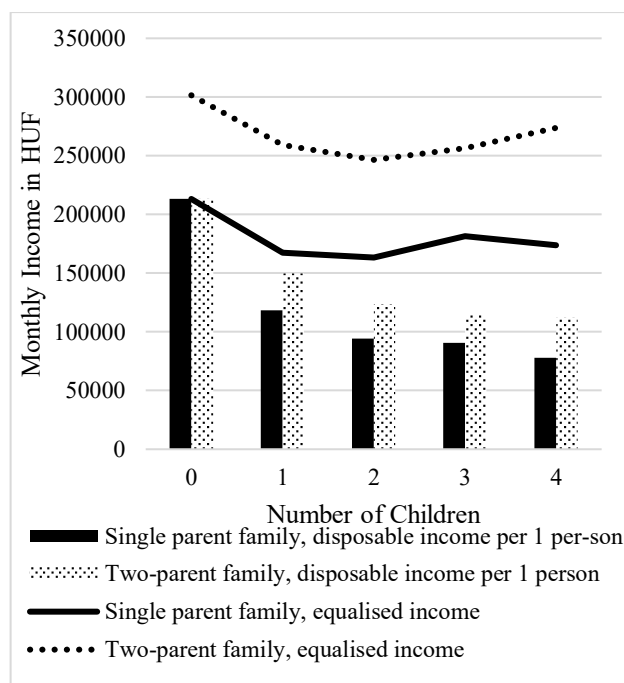

Figure 3: Per capita and equalised incomes for different numbers of children when the adult household member(s) earn(s) a median wage.

Mean wage

Tables 9.1 and 9.2 present the results for one and two adults, respectively, when adults earn the mean wage (403,600 HUF).

In single-parent households, we now have to distinguish between the mother and the father living with the children, as the mother can now claim more benefits than the father on a mean income. In Table 9.1 below, households with 4 children are denoted by 4F for father households and 4M for mother households.

Table 9.1: Household income situation for single parent household where the parent earned the mean wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4F	4M
Net family wage	268	278	308	367	400	404
Child Benefit	0	14	30	51	68	68
Household income	268	292	338	418	468	472
Disposable income per capita	268	146	113	105	94	94
Middle of the income decile	9th	7th	3rd	1st	0th	0th
Equalised Income	268	207	195	209	209	211
Unused / Maximum Family Allowance	----	0%	0%	0%	0%	-2%

Table 9.2: Household income situation for two-parent households where both parents earned the mean wage in 2020 (data in 1000 HUF)

Number of children	0	1	2	3	4
Net family wage	537	547	577	636	729
Child Benefit	0	12	27	48	64
Household income	537	559	603	684	793
Disposable income per capita	268	186	151	137	132
Middle of the income decile	9th	8th	7th	5th	3rd
Equalised Income	380	323	302	306	324
Family allowance claimed	----	0%	0%	0%	46%

Key Findings:
(1) Disposable income per capita in households is still falling as the number of children increases and the number of working adults decreases. Those with no children are above the ninth income decile average, while among single-parent households with children, there are still some households where the average is below the first decile. According to traditional per capita income statistics, they are very poor, but we will soon see how much benefit they can claim despite this.
(2) In terms of equalised incomes, it appears that in both one- and two-adult households, those with two children are again the worst off, while those without children are the best off.
(3) For those earning the average wage, even with 4 children, they can take maximum advantage of the tax credit. A mother raising her children alone can claim 1.02 times the maximum of HUF 132,000, or 1.46 times if she lives with father. However, the standard of living in this case (324 kHUF) does not exceed that of childless households (380 kHUF), but it does exceed that of households with 1, 2 and 3 children.
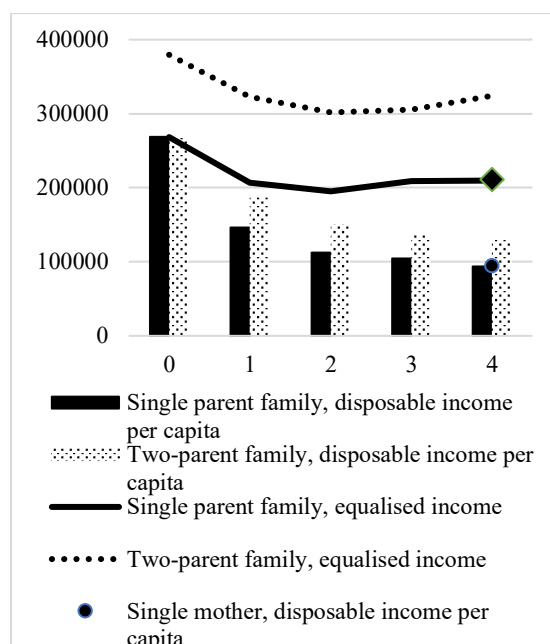

Figure 4: Per capita and equalised incomes for different numbers of children when the adult member of the household earns mean wage.

Brief summary of the results

The median equalised income income was 193 752 HUF (552 EUR) in 2020 in Hungary (Eurostat, 2023). Those are at risk of poverty and social exclusion whose equalised income is less than the 60 % of the median equalised income (this is the standard the poverty threshold). Table 10 shows the types of families included in the study in increasing order of equivalised income. The last column shows how much the equalised income of a given household is as a percentage of the median equalised income. Only single-adult households are at risk of poverty. Among them, families with one child are also the most vulnerable.

Table 10: Summary of model families' income data and their allowances.

Household members		Gross Income Decile	Unused / Maximum Family Allowance	Percent of median equalised income
Adults	Children			
1	1	0th	0%	48%
1	2	0th	0%	53%
1	**4**	**0th**	**59%**	**53%**
1	**3**	**0th**	**46%**	**55%**
1	0	5th	-----	55%
1	1	2nd	0%	60%
1	2	0th	0%	62%
1	**4**	**0th**	**47%**	**64%**
1	**3**	**0th**	**29%**	**68%**
2	1	2nd	0%	70%
1	0	7th	-----	72%
2	2	0th	0%	72%
2	0	5th	-----	78%
2	**4**	**0th**	**18%**	**81%**
2	3	0th	0%	83%
1	2	2nd	0%	84%
1	1	5th	0%	86%
2	2	2nd	0%	89%
1	**4**	**0th**	**19%**	**90%**
2	1	4th	0%	90%
1	3	0th	0%	94%
2	3	1st	0%	99%
1	2	3rd	0%	101%
2	0	7th	-----	102%
2	4	0th	-7%	102%
1	1	7th	0%	107%
1	3	1st	0%	108%
1	4	0th	0%	108%
1	4	0th	-2%	109%
1	0	9th	-----	110%
2	2	5th	0%	127%
2	3	3rd	0%	132%
2	1	7th	0%	134%
1	0	9th	-----	139%
2	4	2nd	-36%	141%
2	0	9th	-----	156%
2	2	7th	0%	156%
2	3	5th	0%	158%
2	1	8th	0%	167%
2	4	3rd	-46%	167%
2	0	9th	-----	196%

CONCLUSION

Those who appear to be poor according to traditional income decile statistics can claim the family allowance at a very good rate. In the OECD equivalent income approach, the family allowance does indeed improve the situation of families with children,.

If we stick to the per capita concept, we can refute on several points the claim that the poor and with one child are badly off and the rich and three children are well off. However, if we the equalised income, it is indeed the one-child group that is worst off in the lower income categories (below 80% of median) and the two-child group in the middle income categories (above 80% of median). Families with three children are best off in income categories below the median, while families with four children are best off above the median.

The biggest winners of the family tax credit are the poorest two-parent families with three or more children, as they have a higher standard of living than childless couples earning the same amount.

But, whether looking at traditional per capita income or OECD equalised income, single-parent households are the worst off. They deserve higher tax relief than they currently receive.

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