# PAYMENT FOR CHILDCARE. WHAT HAPPENS WHEN THE FAMILIES GET ONE, TWO OR THREE CHILDREN? 

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# PAYMENT FOR CHILDCARE. WHAT HAPPENS WHEN THE FAMILIES GET ONE, TWO OR THREE CHILDREN? 

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## Payment for Childcare, what happens when the Families get one, two or three Children?

## Introduction.

This working paper is closely related to working paper 04:2006 'Maternity Leave and Payment for Childcare, Impact on the Economic Situation of a married Couple in Denmark, Sweden, Norway, Finland, Great Britain and Germany'. The two papers share the same methodology and concepts, both are described in working paper 04:2006, which also contains descriptions of the rules for childcare payment in the 6 countries. This paper can be seen as a direct enhancement of working paper 04:2006.

The first paper focused on the impact on the economies of families when a married couple gets their first child. It was shown how the family purse was changed when the couple utilizes the right to publicly financed maternity leave and parental leave. After the leave period it was assumed that both parents returned to the labour market and their child attends some kind of public childcare.

In this working paper, 08:2006, it is examined how it will affect the economy of the family when its size is enlarged to include one and two children more. That is, what happens when the family goes from having one to two to three children? Though, only the childcare situation is included.

The analysis is build up just as in working paper 04:2006 with basic graphs, though the time dimension is not included here. Instead the difference in family purse between the different situations is measured in per cent and listed in tables.

It is assumed that in the two-children case, the children are aged one and two, and in the threechildren case the children are aged one, two and three. This age assumption may seem unrealistic when taking the mothers health into account, but in most countries it doesn't matter whether the oldest child is three, four or five years old with respect to the child benefit rules and childcare rules. For that reason it is recommendable to ignore the 'unrealisticness' for a moment and focus on the results instead.

## Country situations.

## Denmark

In the three-children case the two youngest children are attending day nursery as described in working paper 04:2006. The oldest child is, however, attending kindergarten, which is for children in the age of three to six years. The cost of kindergarten is $1,569 \mathrm{DDK} /$ month, but because of sibling rebates the parents only have to pay full price for the most expensive child, else 50 per cent of the price for the other children.

In graph DK1, the family purse and net payment for childcare are shown in three cases: One-child family, two-children family and three-children family. The net payment is the payment for childcare minus the family benefit.

Graph DK1. Family purse for a married couple working and without children as well as with one, two and three children, respectively.

## Denmark 2003 rules

Married couple with respectively $0,1,2$ and 3 children Both parents work


|  | - |
| :--- | :--- |
| $\square$ | F.P. without children |
| F.P. with 2 children 1 child |  |
| Net payment, 1 child | F.P. with 3 children |
| Net payment, 3 children | Net payment, 2 children |

The yellow curve in the above graph represents the family purse of the married couple without children, just as in working paper 04:2006. The pink curve is the family purse for the family with one child, and the child is attending childcare since both parents work. The dark green curve is the family purse of the two-children family and the brown curve is the family purse of the threechildren family. The light green curve is the net payment for the family with one child, the dark red curve is net payment for the family with two children and the blue curve is the net payment for a family with three children.

At the 1.3 APW level the parents are paying full price in all three cases, and all three net payment curves become horizontal. However, there are some differences in the level of the three net payment curves. In the case of the one child family there is a net payment of 20,004 DDK (annual amount), while in the case of two-children and three-children families this amount equals 23,556 DKK and 21,270 DKK, respectively. This means that the highest net payment is for the two-children family.

As is shown, the family purse is highest for the case with three children as long as the parents are in the low wage area and thereby obtains a reduction in the payment. Even though the income level, which implies full payment for childcare, is the same in all three cases, there is a small difference in the APW level when the three family purse curves become parallel to the yellow no-children family purse curve. The reason for this is the housing benefit rules in Denmark. As mentioned in wp $04: 2006$, the housing costs (the rent) are assumed to equal $20 \%$ of the gross income of the family.

In Denmark the housing benefit is calculated with respect to, among other things, the number of children in the family. That is, the maximum rent to enter the housing benefit calculation is 62,600 DKK ( 0 children), 65,730 DKK ( 1 child), 68,800 DKK ( 2 children) and 71,990 DDK (3 children). These three levels of rent means that the housing benefit will equal zero at 1.15 APW (combined level) in the one-child case, 1.30 APW in the two-child case and 1.42 APW in the three-child case.

In table DK1, the impact on the family purse from extending the family size with more children is shown.

Table DK1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  | 3 children |  |
|  | Transiton from no children | Transiton from no children | Transition from 1 child | Transiton from no children | Transition from 2 children |
| 1.08 | -6.8 | -1.5 | +5.7 | +5.4 | +7.0 |
| 1.8 | -9.5 | -11.2 | -1.9 | -10.1 | +1.2 |
| 2.7 | -7.4 | -8.7 | -1.4 | -7.9 | +0.9 |
| 3.6 | -6.3 | -7.4 | -1.2 | -6.7 | +0.8 |

In table DK1, we first consider the situation when the family moves from having no children to having one, two and three children, respectively. The biggest impact in all three cases is seen at the middle income level, 1.8 APW in combined income. Across the three cases, it is most expensive for the family to go from no children to two children. At the lowest income level, the biggest negative impact is found when the family is having their first child. Compared to the situation without children the family will face an increase in the family purse of 5.4 per cent if they decide have three children.

Now consider the transitions in steps, going from no children to one child, and from there to two children and finally to three. The impacts will now be less negative or even positive, compared to having the first child. This implies that the most crucial decision a family can make, seen from an economic point of view, is to have their first child. After the first child, the economic situation will not be affected substantially, except at the at the lowest income level, where the gains are relatively high. It should, however, be remembered that the claims on the family purse increase with increasing family size.

The relative difference in the gross payment (that is without deduction of family benefit), is found to be of $50 \%$ when going from one to two children and $19.07 \%$ when going from two to three children. The huge difference in these two percentages is primarily caused by the assumption of the ages of the children in the three different cases. In both the one-child case and the two-children case, the children are so small that they both enter day nursery. In the three-child case, the oldest child is assumed to be aged three and is therefore attending kindergarten, according to the Danish rules, and kindergarten is substantially cheaper than day nursery.

The results will not be changed if the age of the oldest child is changed to four or five. The child will still be attending kindergarten and likewise the child benefit will be the same.

## Sweden

As described in working paper 04:2006, the payment for childcare in Sweden depends on the income of the parents. Child benefits depend on the number of the children in the family. This implies 11,400 SEK (annually) for one child, 11,400*2 SEK for two children and 11,400*3+3,048 SEK for three children in child benefits.

Graph S1 outlines the family purse and net payment for childcare in the cases of one child, two children and three children.

Graph S1. Family purse for a married couple working and without children as well as with one, two and three children, respectively.

Sweden 2003 rules
Married couple with respectively $0,1,2$ and 3 children Both parents work


|  | $\square$ |
| :--- | :--- |
| $\square$ | F.P. without children |
| F.P. with 2 children | F.P. with 1 child 3 children |
| Net payment, 1 child | Net payment, 2 children |
| Net payment, 3 children |  |

In the graph above the family purse and net payment of the three cases are shown. The colours of the curves have the same references as in the Danish case.

It is seen that the so called 'maxtaxa' implies that the parents reach the maximum payment at approximately 1.9 APW in combined income, in all three cases. Because of inexactness in the graph this is not obvious optically in the net payment curves.

Otherwise graph S1 shows that in the cases of the one and two children, the family purses are a lot like in the case without children when max payment has been reached. This is caused by the neutrality effect of the family benefit on the payment for childcare. This means that the net payment ends up being zero or almost zero.

The family gains most in the situation with three children. This is also shown table S1, which displays the impact on the family purse from extending the family size with more children.

Table S1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  |  |  |
|  | Transiton from <br> no children | Transiton from <br> no children | Transition <br> from 1 child | Transiton from <br> no children | Transition from <br> 2 children |
| 1.08 | +2.4 | +8.8 | +6.2 | +14.9 | +5.6 |
| 1.8 | -0.9 | +1.6 | +2.5 | +4.7 | +3.1 |
| 2.7 | -0.7 | +1.0 | +1.7 | +3.2 | +2.2 |
| 2.6 | -0.6 | +0.8 | +1.4 | +2.6 | +1.8 |

In the above table it is seen that the effect on the family purse is mostly positive or else slightly negative, contrary to the Danish case.

The negative effects are all connected to the transition from no children to the first child. After the first child, the effects are positive, even when the no-child situation is compared with the two-child case and three-children case, respectively. In both cases, the positive effect decreases with income. This is seen in the transitions from the no children situation to situations with children and from the one and two children situations to the two and three children situations, respectively.

The highest positive effects are found in the three-children case. This is caused by two factors: First the cost of the third child is only 1 per cent of the gross income combined with a low maximum payment and second there is an additional child benefit of 3,048 SEK (annual basis) for the third child.

If the age of the oldest child had been chosen to be 4 or 5 years, the child would have been entitled to free preschool for 525 hours a year which is a rule in Sweden for children within the age span 4-5 years. This would have caused changes in both the graph and the table. In the graph the family purse for the family with three children would be higher and therefore differ even more from the other situations. The net payment for childcare would decrease and differ even more from the two other net payment curves.

In the table the transition percentages would be overall higher. For instance the transition from no children to three children will lead to an increase of 17 per cent in the family purse, at an income level 1.08 APW, against the increase of 14.9 per cent in the current situation in table S1.

## Norway

As mentioned and described in wp 04:2006, the payment for childcare in Norway is based on the combined personal income of the parents. The payment for the first child for full time childcare varies between minimum $1,000 \mathrm{NOK} /$ month and maximum $3,000 \mathrm{NOK} / \mathrm{month}$. The payment increases by a certain rate, when the income increases from one income interval to the next, until a maximum payment is reached. In the case of siblings, there is a rebate of $1 / 3$ per 'extra' child. This means that when there are three children, the minimum payment becomes $\left(1,000+2 / 3^{*}(2 * 1,000)\right)=$ $2,3331 / 3 \mathrm{NOK} /$ month, and likewise the maximum payment becomes $(3000+2 / 3 *(2 * 3000))=7,000$ NOK/month. It should be remembered that the Norwegian pay scheme for childcare is not an exact model of the 2003 situation.

The rate of increase in the different income intervals is assumed to be 25 NOK for an income increase of 1,000 NOK in case of one child, but this rate also changes when the number of children attending childcare is increasing. In the case of three children the rate of increase becomes ( $25+$ $2 / 3 *(2 * 25))=581 / 3$ NOK per 1,000 NOK the income increases.

In graph N1 the family purse and net payment for child care are shown in the cases of one child, two children and three children.

Graph N1. Family purse for a married couple working and without children as well as with one, two and three children, respectively.

Norway 2003 rules
Married couple with respectively 0,1 , 2 and 3 children
Both parents work


| $\square$ | F.P. without children | F.P. with 1 child |
| :--- | :--- | :--- |
| F.P. with 2 children | F.P. with 3 children |  |
| Net payment, 1 child | Net payment, 2 children |  |
| Net payment, 3 children |  |  |

The colours of the curves in graph N1 refer to the same cases as in the previous curves for Denmark and Sweden.

In the lowest income range, the family purse is highest in the case of three children, and lowest in the case without children. However, this picture changes fast as the income increases. From the combined income level of 1.08 APW and further up, the family purse of the no-children family is the highest. The distinct stair case like shape of the family purses in the three cases with children are caused by the payment for childcare. It should be mentioned that the payment mechanism is more or less assumed, based on a great variation in the rules in Norway in 2003. The results are not as 'firm' as for the other countries

Likewise the stair case like shape is seen in the net payment curves. The net payment in the case of one and two children, respectively, is somehow alike or at least close to being so. This is primarily caused by the child benefits, which are equal to 11,664 NOK (annual basis) for children in the age span $0-17$, plus 4,599 NOK for children aged 1-2. This means that when there is a third child, there is a higher payment as well as in the case of a second child, but the child benefit will not increase in the same way because of the assumption about the age of the third child (which actually is the first child since it will be the oldest).

In table N1 the impact on the family purse from extending the family size to include more children is shown.

Table N1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  | 3 children |  |
|  | Transiton from <br> no children | Transiton from <br> no children | Transition <br> from 1 child | Transiton from <br> no children | Transition from <br> 2 children |
| 1.08 | -2.3 | -2.6 | -0.4 | -6.2 | -3.7 |
|  | -3.4 | -4.9 | -1.6 | -8.5 | -3.8 |
| 2.7 | -2.5 | -3.6 | -1.1 | -6.3 | -2.7 |
| 2.6 | -2.1 | -3.0 | -0.9 | -5.1 | -2.2 |

Table N1 shows the losses in family purse terms the families are facing when the size of the families are expanded with one, two and three children, respectively. All effects are negative, contrary to both Sweden and Denmark. The loss in family purse experienced in transition from a situation with no children to a situation with one child, who is attending childcare, varies between 2.1 and 3.4 per cent, depending on the income level. The parents reach the maximum pay level at a combined income level of 1.37 APW , implying that the maximum pay level for childcare has been reached at the 1.8 APW income level. This causes the shift in pattern throughout the table. All percentages increase from the income level of 1.08 APW to 1.8 APW , but when this level has been passed they all decrease when the income is increased.

The loss in the family purse experienced in transition from having one to having two children is approx $1.5 \%$ as a maximum. If the family moves from having two to three children (with the age assumptions made in this paper), the loss increases at all income levels. This is caused by the age of the third child and therefore the lack of the extra child benefit, which only small children are eligible for.

If the age of the oldest child had been chosen to be four or five years, the results in both the graph and the table would still be the same.

## Finland

The Finnish childcare system is described in detail in wp 04:2006, why the description here will be very brief. The payment depends on two factors: The income of the family and the family size. Through information on theses components the payment is calculated and regulated in order to match the rules. The overall principle is rebate when there are siblings in the family. This rebate is seen in both the child benefit scheme and the childcare payment scheme.

The cases are the same as for the other countries, and the impact on the family purse is likewise shown in a graph:

Graph FIN1. Family purse for a married couple working and without children as well as with one, two and three children, respectively.

Finland 2003 rules
Married couple with respectively $0,1,2$ and 3 children Both parents work


| F.P. without children | F.P. with 1 child |
| :---: | :---: |
| F.P. with 2 children | F.P. with 3 children |
| Net payment, 1 child Net payment, 3 children | Net payment, 2 children |

As usual, the colours of the curves represent the same cases as in the graphs of the other countries.
The net payment is negative at the very low income levels in all three cases, but it increases when income increases. The max payment level is reached at 1.62 APW -income for the case of one and two children and at 1.656 APW-income in the case of three children. The net payment in the case of two children is the highest. The APW level is a little bit higher in the case of three children when maximum payment it reached because of an extra reduction in the income used to calculate the payment when the number of children exceeds two.

At low income levels the family purse in the case of three children is significantly higher than in the other cases. After the maximum payment level is reached, the family purse in the case without children is the highest. This means that there is a negative impact on the family purse when the family has children, no matter if they have one, two or three.

The age of the children is not crucial for the results presented in the graph. Both the benefit and payment are only dependent on the number of children, not their age. However, in order to be entitled to childcare the children must be under 7 years old, and the child benefit is only allocated if the children are less than 16 years old.

In table FIN1 below the impact on the family purse from extending the family size with more children is shown.

Table FIN1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  | 3 children |  |
|  | Transiton from no children | Transiton from no children | Transition from 1 child | Transiton from no children | Transition from 2 children |
| 1.08 | -0.6 | +0.1 | +0.8 | +9.4 | +9.2 |
| 1.8 | -5.0 | -8.2 | -3.4 | -4.1 | +4.5 |
| 2.7 | -3.8 | -6.2 | -2.5 | -3.1 | +3.4 |
| 3.6 | -3.1 | -5.1 | -2.0 | -2.5 | +2.7 |

Table FIN1 shows that the transition from no children to one child implies negative effects on the family purse for all income levels. The transition from no children to two and three children, respectively, also implies negative effects, at least for the three highest income levels. However, the negativity decreases as the number of children increases; the effects are least negative in the transition from no children to three children. The same tendency is seen with the positive effects at the low income level, 1.08 APW. The transition from no children to one child implies a negative effect on the family purse, while this same effect is positive when going from no child to two and three children, respectively. That is; there seems to be improvements in the transition percentages as the number of children increases at the low income level. It is also worthwhile noticing that all transition ratios are positive when looking at the transition from two to three children. As mentioned in relation to graph FIN1, there is an extra reduction in the income used to calculate the payment
when there are three children. This combined with the decreasing maximum rates in payment for childcare as the number of children increases, implies the positive effects in the fifth column of table FIN1.

## Great Britain

As mentioned in wp 04:2006, the childcare scheme has been constructed by assuming that the payment is equal to $100 \mathrm{GBP} /$ week per child. This assumption is based on an official document. In our case this means that the cost of having two children equals $200 \mathrm{GBP} /$ week and the payment for three children will be $300 \mathrm{GBP} /$ week. The payment is compensated with $70 \%$ up to a limit of 135 GBP/week for one child and $200 \mathrm{GBP} /$ week for two and more children through the childcare element in the Working Tax Credit (WTC). The compensation is tapered against family gross income.

Graph GB1 shows the family purse and net payment in the cases of one child, two children and three children, attending childcare.

Graph GB1. Family purse for a married couple, working and without children as well as with one, two and three children, respectively.

Great Britain 2003 rules
Married couple with respectively $0,1,2$ and 3 children Both parents work


| - F.P. without children | F.P. with 1 child |
| :--- | :--- |
| F.P. with 2 children | F.P. with 3 children |
| Net payment, 1 child | Net payment, 2 children |
| Net payment, 3 children |  |

Again, the colours of the curves represent the same cases as in the graphs of the other countries. The net payment is here defined as the payment minus family benefits and the childcare element of the Working Tax Credit.

The first striking feature of graph GB1 is the huge difference there is between each of the four family purse curves, compared to those for the other countries. The differences are not only between the family purse of the family without children and the family purses with children (as was the case in Denmark), but there are also big differences between the cases with children. The worst case - in an economic sense - is seen for the family with three children. Only at very low income levels, the family purses of the situations with one and two children, respectively, are above the family purse of the situation without children. At a combined gross income level of 0.92 APW the family purse for the family without children catches up with the family purses of the families with one and two children, respectively. That is, from an income level of around 1 APW and further up the family purse of the family without children totally dominates the other family purses.

Another notable feature of the family purse curves is that there exists income levels at which the net payment is actually larger than the family purse. This is the case for the three-children family at the income span from 2.1 to 2.4 APW, approximately. The family purse would more than double if the family had no children.

The net payment curves are likewise at very different levels depending on the number of children. As is shown the two net payment curves for the situations with one and two children, respectively, follow each other until an income level corresponding to 1.42 APW in combined gross income. At the 1.42 APW level both the child element and the childcare element of the WTC scheme has been tapered completely to zero. This happens at a lower level for the case of one child compared to the case of two and three children respectively, because of differences in the amounts that are tapered. Likewise does the curve of net payment for three children continue to increase until the level of 2.28 APW in combined gross income. At that level the curve somehow becomes horizontal until a small increase in the interval of 2.47 to 2.86 APW, which is caused by the tapering of the family element of the Child Tax Credit (CTC). Because the family element is the same in all three cases, this tapering happens at the same income level and in exactly the same interval.

All this indicates that the English childcare system does not include a very high level of compensation on childcare payment, especially not compared to the Nordic countries. For that reason the families are facing substantially changes (downwards) in the economic situation when they have children and the children attends childcare.

In table GB1 the impact on the family purse from extending the family size with more children is shown, just as in the corresponding tables for the other countries.

Table GB1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  | 3 children |  |
|  | Transiton from <br> no children | Transiton from <br> no children | Transition <br> from 1 child | Transiton from <br> no children | Transition from <br> 2 children |
| 1.08 | -9.6 | -6.3 | +3.6 | -29.5 | -24.7 |
|  | -18.5 | -30.4 | -14.6 | -45.8 | -22.2 |
| 2.7 | -14.1 | -30.0 | -18.5 | -45.8 | -22.7 |
| 2.6 | -11.5 | -23.7 | -13.8 | -36.0 | -16.0 |

The big differences between the curves in graph GB1 are clearly seen in table GB1. The trend is that the impact of going from having no children to the situation of having children is the biggest. This means that going from one to two and from two to three children does not imply the same big effects as in the cases going from no children to whatever number of children.

There is only one positive impact, and this happens in the transition from one to two children at the very low income level. This effect is also seen in the graph where the family purse in the case of two children is above the graph of the family purse in the case of one child. Otherwise all effects are negative. Especially expensive is the transition from no children to three children. In that case the families are facing a reduction in their family purse of up to almost $50 \%$, depending on which income level we are looking at. Even when we just look at the transition from two children to three children, the negative impact is still very big, around $20 \%$.

Net payment for two children attending childcare is relatively low at the lowest income level. In all other situations net payment for childcare is high.

## Germany

As was mentioned in wp 04:2006, pay schemes vary considerably across Germany and the scheme for Nordrein-Westfalen was selected for this analysis. This pay scheme implies that the families only have to pay for one child, even when they have more than one in day care. On top of that the families get an extra deduction in the income to enter the pay scheme when they have their third child. The deduction is 5,808 Euro and will lower the actual payment.

Graph DE1 shows the family purse and net payment in the cases of one child, two children and three children attending childcare.

Graph DE1. Family purse for a married couple, working and without children as well as with one, two and three children, respectively.

## Germany 2003 rules

Married couple with respectively $0,1,2$ and 3 children Both parents work


| $—$ F.P. without children | $-\quad$ F.P. with 1 child |
| :--- | :--- |
| F.P. with 2 children | F.P. with 3 children |
| Net payment, 1 child | Net payment, 2 children |
| Net payment, 3 children |  |

Again, the colours of the curves represent the same cases as in the graphs of the other countries.
In Graph DE1 it is seen that the family purse curve for the three-children family is above the other family purse curves. This is caused by three factors: First, there is no payment for the third (or second) child. Second, the family is still receiving child benefits for all three children and third, there is a special deduction in the income used to calculate the payment when there are three or more children in the family. This also explains why the net payment in the three-children always is negative. By the way, it should be mentioned that the net payment in the German case is calculated as:

Net payment = payment - child benefits (either the tax credit or the tax value of the tax allowance) - the tax value of the child care allowance

The inclusion of the child tax allowances explains the arched form of the net payment curves. When the tax allowance alternative is chosen (it is when it is best for the family), the tax value of the child allowance will increase with income and taxation, which is progressive.

The outcome of the German analysis is that the situation looks quite favourable for the families when they have more than one child. However, one should have in mind the low childcare coverage for small children, as mentioned in wp 04:2006. The nice financial picture for the families may not
look that nice in reality if there is no where to place the children. Then the parents will have to take care of the children them selves or find other private alternatives.

In table DE1 the impact on the family purse from extending the family size with more children is shown, just as in the tables for the other countries.

Table DE1. Impact on family purse from childcare payments in one, two and three children families measured in percent.

| APW level | Family type |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 child | 2 children |  |  | 3 children |  |
|  | Transiton from <br> no children | Transiton from <br> no children | Transition <br> from 1 child | Transiton from <br> no children | Transition from <br> 2 children |  |
| 1,08 | +1.7 | +12.5 | +10.7 | +23.1 | +9.3 |  |
| 1,8 | -5.6 | +2.4 | +8.5 | +10.4 | +7.8 |  |
| 2,7 | -4.0 | +3.8 | +8.1 | +11.1 | +7.1 |  |
| 2,6 | -2.2 | +5.7 | +8.0 | +13.2 | +7.2 |  |

In table DE1, it is again seen how the economic impact is all over positive, except for the three highest income levels in the one-child case. The effect on the family purse gets more positive, as the number of children increases. This is seen in the fourth column, where the transition effect from going from having no children to have three children is showed. It peaks at the very low income level, and this is caused by the fact that there is no payment at all at this level.

In the case with only one child, there are negative effects on the family purse for the three highest income levels. However, the effects get less and less negative as the income increases. This happens because of the payment limit, which is reached at about 1.8 APW in combined gross income level.

## Comparisons

We will now turn to comparisons of the countries. In the two tables beneath the different transition effects are presented. Table COMP1 contains the transitions from the situation of no children to the situations with children. These effects are called average 'costs' in family purse terms, (they can also be gains). In table COMP2 the transitions from no children to one child, from one to two children and finally from two to three children are shown. These effects are called marginal 'costs' in family purse terms.

First we consider table COMP1.

Table COMP1. Average 'costs' (\%) in family purse terms, when the family size increases from none to three children.

|  | Transition effects |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Level | 1.08 |  |  | 1.8 |  |  | 2.7 |  |  | 3.6 |  |  |
|  | 0-1 | 0-2 | 0-3 | 0-1 | 0-2 | 0-3 | 0-1 | 0-2 | 0-3 | 0-1 | 0-2 | 0-3 |
| Denmark | -6.8 | -1.5 | +5.4 | -9.5 | -11.2 | -10.1 | -7.4 | -8.7 | -7.9 | -6.3 | -7.4 | -6.7 |
| Sweden | +2.4 | +8.8 | +14.9 | -0.9 | -1.6 | +4.7 | -0.7 | +1.0 | +3.2 | -0.6 | +0.8 | +2.6 |
| Norway | -2.3 | -2.6 | -6.2 | -3.4 | -4.9 | -8.5 | -2.5 | -3.6 | -6.3 | -2.1 | -3.0 | -5.1 |
| Finland | -0.6 | +0.1 | +9.4 | -5.0 | -8.2 | -4.1 | -3.8 | -6.2 | -3.1 | -3.1 | -5.1 | -2.5 |
| Great Britain | -9.6 | -6.3 | -29.5 | -18.5 | -30.4 | -45.8 | -14.1 | -30.0 | -45.8 | -11.5 | -23.7 | -36.0 |
| Germany | +1.7 | +12.5 | +23.1 | -5.6 | +2.4 | +10.4 | -4.0 | +3.8 | +11.1 | -2.2 | +5.7 | +13.2 |

In the ' $0-1$ ' case Sweden has the smallest negative impact (largest gain) of all the countries. Then follows Norway, Finland and Germany. Germany is better than the two Nordic countries at the lowest income level and also 'better' than Finland at the highest income level. Denmark has larger negative impacts than the 4 countries already mentioned and Great Britain has the highest negative impacts from payment for childcare of all 6 countries.

In the ' $0-2$ ' and ' $0-3$ ' cases Germany has the best position. This is because of the payment for one child only in the Nordrein-Westfalen model used for this study. Then follows Sweden and thereafter the three other Nordic countries. Norway and Finland change positions after the first income level in the ' $0-2$ 'case while Finland is always 'better' than Norway in the ' $0-3$ ' case. Denmark follows after Finland and Norway except at the lowest income level where it is 'better' than Norway but not Finland. Great Britain has the highest negative impacts, just as in the ' $0-1$ ' case.

It should be remembered that that the childcare capacity for small children (0-2 years) in Germany is restricted.

The largest gain in family purse is for Germany at the 1.08 APW income level, it is approx. $23 \%$. The largest loss among the Nordic countries is for the Danish family with two children at the 1.8 APW income level, it is a little above $11 \%$. The loss for the British families with three children reaches a level of more than $45 \%$. This loss is substantially higher than for all the Nordic countries. This very large difference is explained in the section on Great Britain, above.

It should be remembered that the family grows from two persons to five persons in the family with three children. The 'private' costs of having children are not included in the results of table COMP1.

Now we consider table COMP2.

Table COMP2. Marginal 'costs' (\%) in family purse terms when the family size increases in 'steps' of one child.

|  | Transition effects |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Level | 1.08 |  |  | 1.8 |  |  | 2.7 |  |  | 3.6 |  |  |
|  | 0-1 | 1-2 | 2-3 | 0-1 | 1-2 | 2-3 | 0-1 | 1-2 | 2-3 | 0-1 | 0-2 | 0-3 |
| Denmark | -6.8 | +5.7 | +7.0 | -9.5 | -1.9 | +1.2 | -7.4 | -1.4 | +0.9 | -6.3 | -1.2 | +0.8 |
| Sweden | +2.4 | +6.2 | +5.6 | -0.9 | +2.5 | +3.1 | -0.7 | +1.7 | +2.2 | -0.6 | +1.4 | +1.8 |
| Norway | -2.3 | -0.4 | $-3.7$ | -3.4 | -1.6 | $-3.8$ | $-2.5$ | -1.1 | $-2.7$ | -2.1 | -0.9 | -2.2 |
| Finland | -0.6 | +0.8 | +9.2 | -5.0 | -3.4 | +4.5 | -3.8 | -2.5 | +3.4 | -3.1 | -2.0 | +2.7 |
| Great Britain | -9.6 | +3.6 | -24.7 | -18.5 | -14.6 | -22.2 | -14.1 | -18.5 | -22.7 | -11.5 | -13.8 | -16.0 |
| Germany | +1.7 | +10.7 | +9.3 | -5.6 | +8.5 | +7.8 | -4.0 | +8.1 | +7.1 | -2.2 | +8.0 | +7.2 |

The results from table COMP1 can be interpreted as the average 'costs' of having children (one, two and three children). The results of table COMP2 can be interpreted as the marginal 'costs', when the number of children is increased by one. When moving from no to one child the average and marginal 'costs' are the same. In table COMP1 the base of calculations was constant, that is the family purse for the family with no children. In table COMP2 the base changes for each transition.

The picture is more mixed in table COMP2 than in table COMP1. Sweden and Germany have a marginal gain in moving from one to two children and from two to three children at all income levels as the only two countries, the German gains are the largest. However, Denmark and Finland sometimes have larger marginal 'gains' than Sweden. All countries, except Norway and Great Britain, have positive marginal 'gains' when the families move from two to three children.

The picture from table COMP1 is also found in table COMP2: Great Britain has larger marginal losses than the other countries. Again the British families are facing the biggest loss when they have their third child. This is the case when looking at the average 'costs' and is again the case when looking at the marginal 'costs'. All countries except Great Britain have siblings rebates and there is no addition to the child care element after the second child. It should however be noted that the child care element of the WTC is a considerable improvement compared to earlier for relatively low income levels.

