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IMPACT OF ALTERNATIVE BENEFIT LEVELS AND PARENTAL CHOICES ON THE PARENTS' INCOME. Micro-simulation approach on the Finnish parental leave.

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Abstract: One aim of the Finnish parental leave benefit scheme (maternity-, paternity and parental leave benefits) is to support the participation of both mothers and fathers in caring their child since her/his birth. Most fathers take up paternity leave when the mother is on her leave, but very few fathers share parental leave. That accumulates long absences from work to the mothers and the costs of the scheme to the female dominated industries. One reason to fathers' low take up, it has been argued, is fathers' often higher income compared to his spouse and low compensation rate of the benefit for the higher income. This DP presents changes in the level of the benefit scheme since the 1990's and analyses spouses' income differences in different family situations. The main aim, however, is to evaluate a tripartite proposal in the Spring 2006 to reform parental leave benefit scheme. Evaluations are made using micro simulation methods at population level and in type-family calculations.

Key words: Maternity, paternity and parental leave benefit, transfers, compensation rate, women's and men's income (differences), micro simulation.

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Tiivistelmä: Suomalaisen vanhempainpäivärahajärjestelmän (äitiys-, isyys- ja vanhempainraha) yhtenä tavoitteena on tukea molempien vanhempien osallistumista lapsen hoitoon syntymästä lähtien. Useimmat isät pitävät isyysvapaan, mutta harvat jakavat vanhempainvapaata. Tätä on selitetty miesten naisia korkeimmilla palkoilla ja päivärahan korvaustasolla. Nyt äideille kertyy pitkiä poissaolojaksoja työstä ja vapaista aiheutuvat kustannukset kasautuvat naisvaltaisille aloille. Keskustelualoite esittelee päivärahan tasomuutokset 1990-luvun alusta ja analysoi puolisoiden välisiä tuloeroja eri elinvaiheessa. Päätavoitteena on arvioida kolmikantatyöryhmän päivärahojen korotusesitystä keväältä 2006. Esityksen vaikutuksia arvioidaan mikrosimulointimenetelmän avulla sekä väestötasolla että esimerkkilaskelmin eri tulotasoilla ja erilaisten käyttäytymisvaihtoehtojen vallitessa.

Asiasanat: Äitiys-, isyys- ja vanhempainpäiväraha, tulonsiirrot, korvaustaso, naisten ja miesten tulot (tuloerot), mikrosimulointi.

Contents

1. Introduction

Finnish parental leave benefits cover four schemes altogether; maternity, paternity and parental leave and fathers' "bonus" leave. Parental leave benefits form a significant part of economic wellbeing of families with newborn and small children. The benefits provide a possibility both for mothers and fathers to take care of children at home with job security. Thus, gender equality aims are taken into account. However, the benefit schemes have undergone quite radical changes during their time of existence since 1964. As an example, recruiting fathers in participating child care started in 1978 with paternity leave and continued in 1980 with parental leave.

In recent years there has been two main themes discussed concerning parental leave benefits in Finland. The first theme concerns the costs of parental leaves to the employers, and how unevenly these costs are distributed between female and male dominated industries. The main question is: should these costs be either reduced or balanced? The second theme has been the low take up rate of parental leave by fathers. The latter problem has been seen as feeding back to the first problem and creating/affecting another problem: very often women use the whole parental leave and long child care leave following the parental leave period. This is understood to be harmful for women's labour market position and as one reason for the increase in temporary employment among young women and mothers, and further segregate employer costs.

The latest reforms have tried to pay attention to both of these themes. In the Spring 2006 the government was preparing a new bill based on the proposals by a tripartite working group. The present paper concentrates in Finnish parental leave benefits and calculates immediate cost and incentive effects of the proposals available in the public before the final proposal. The paper was prepared for the 8th Nordic Seminar on Microsimulation Models, Oslo, 8-9.6.2006.

The changes in the benefit scheme are described with type-families calculated by using the TUJA-model (Niinivaara & Viitamäki 2005). Cost - distributional effects are calculated by using the SOMA-model (Parpo 2004).

2. Main changes in parental leave policies and outcomes since the 1990s

2.1 Leave periods and fathers' participation

This chapter explains in detail the separate parts of the three parental leave schemes, including the structure and levels of the benefits. We start by introducing the leave schemes and father's participation rates on paternity leave and on parental leave.

Maternity leave of four months is mothers' non-transferable right. It can be started 1.5-2 months before the calculated day of delivery. Maternity leave after the birth of a child is correspondingly 2.5-2 months. Maternity leave is followed by approximately 6 months' parental leave. Parents can negotiate how to share it or whether the other parent uses it solely.

Since 1978 fathers have had a right for two weeks' paternity leave, which is intended to be spend simultaneously with the mother on leave. At the launch of the paternity leave scheme the spent leave cut the length of parental leave correspondingly. Since 1993 fathers have had a non-transferable right for three weeks paternity leave which no longer cut the length of parental leave. In addition, in 2003 new paternity leave scheme, the so called two "bonus weeks" for fathers were introduced. Fathers received a right to two extra leave weeks after the parental leave, when the mother is not on leave. However, fathers first have to take at least two parental leave weeks in order to be entitled to the new bonus weeks. This is different to fathers' quota in parental leave schemes of other countries like Sweden, Norway and Iceland.[1]

When all the parental leave periods are used up, the child is approximately 9-10 months old, depending on when the mother started her maternity leave and on whether the father used his "bonus weeks" or not.[2] After the parental leave period about 75-80 percent of all mothers continue absence from paid work choosing instead child care leave and child home care allowance paid by the municipalities. This option is available until the youngest child turns three years. On the average the child is 1.5 years old when the mother returns to work (Lammi-Taskula 2004).

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[1] E.g. in Sweden, the parental leave was from the beginning (since 1974) shared into two parts, one half to the mother and one half to the father. However, both of the parents could transfer his or her share partially or totally to the other part. Nowadays both of the parents have 2 months' quota, which is non-transferable. In spite of these equality principles Swedish mothers use a major share of parental leave, but fathers take up is higher than in other Nordic countries, nonincluding Iceland (Haataja and Nyberg 2005; Haataja 2004a).

[2] Earnings related leave periods are longer in Sweden and Norway, and about the same as in Island.

Finnish fathers choose quite often the possibility for paternity leave, when the mother is also on leave. On paternity leave fathers do not take independent care responsibility of the child, as they do when sharing parental leave or during the "bonus weeks", but they have the possibility to create early contact to new born child and participate in household duties. The increase in paternity leave take up rates has been remarkable since 1993 when these weeks became fathers' non-transferable right. In 2003 there were about 80 fathers compared with 55 fathers in 1993 per 100 ended leave periods, who used paternity leave (Kela 2005, Tables 61 and 63). In 2004 the statistics show that almost 57 900 children were born and 46 400 fathers used their paternity leave rights.

The number of father's choosing to share the parental leave is lower in Finland compared to other Nordic countries. Until the "bonus weeks" reform in 2003 the amount of fathers sharing parental leave varied between 1 500 – 1 600 individuals, meaning about three fathers per 100 ended leave periods. In 2004 approximately 4 000 fathers used "bonus weeks" including two parental leave weeks and about 1 300 fathers shared only traditional parental leave. Now 9 fathers per 100 ended leave periods use some kind of parental leave compared with 3 fathers per 100 ended leave periods in 2002. The numbers show that the reform did not meet its lowest prognosis of 25 percent (STM 2001). That is why father's low take up rate is still seen as a serious problem.

2.2 Benefit levels

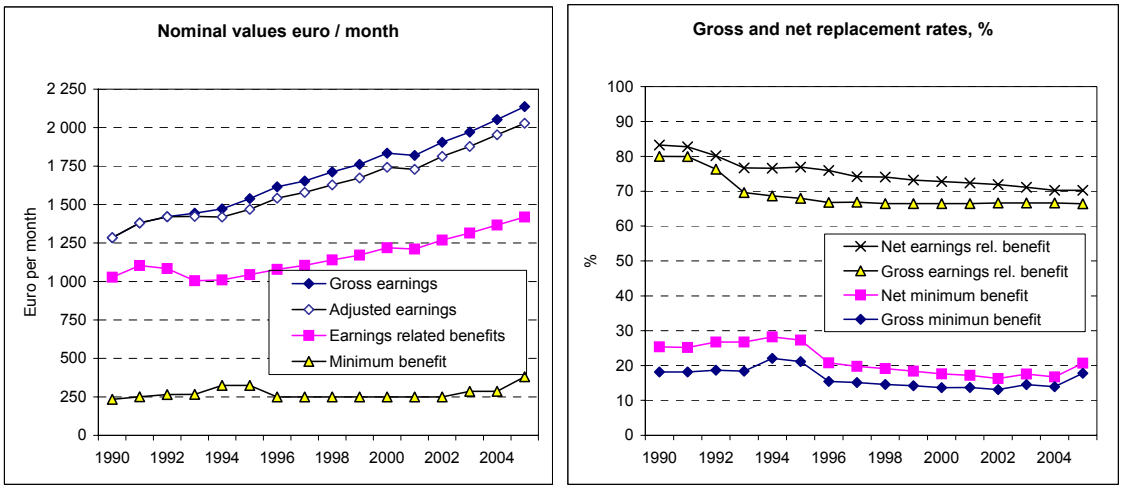
One reason for fathers' small take up rate of parental leave is claimed to be the low compensation rate of earnings related benefits. It is argued that if a father uses parental leave the income of the family will decrease remarkably. This claim is analyzed later in this paper, when we compare the contemporary benefit scheme with the latest proposal for the improvements. First, however, the development and principles of the Finnish parental leave scheme is presented.

Finnish parental leave benefits have been taxable and earnings related since 1982. Parents without earnings are entitled to minimum level of the benefits. Benefits are adjusted with earnings without ceiling, but compensation percentages decline according to amount earned; the higher is the level of earnings the less is the relative compensation. Since any earnings, however small, used to increase the minimum benefit there was high incentive to employment before starting the parental leaves. This principle was replaced by an income threshold as a result of reforms carried out in the 1990s[3].

[3] In 2006 entitlement to earnings related parental leave benefit starts with earnings above 1091 Euros per year. Gross compensation rate from the wages are 70 percent until the next threshold, which is 28 403 Euros per year. Income above that threshold is compensated by 40 percent until the last threshold, 43 699

The reforms in the early 1990s, justified by the economic crises, cut the earnings related benefits, but simultaneously increased the level of the minimum benefit[4]. However, later in the 1990s also the minimum benefit was cut back. Other reforms carried out in 1990s cut the benefit levels further, but indirectly[5]. Firstly, new wage earner unemployment and pension contributions were presented in the early 1990s. These contributions are reduced from earnings before the amount of parental leave benefits is calculated ("adjusted earnings" in Diagram 1, Figure on the left). Second "cut" was introduced through the taxation. A former deduction for all 'small income'[6] in municipal taxation was replaced in 1996 by a deduction limited only to wage income. This reform made transfers less attractive compared to earnings.

Diagram 1. Women's average gross earnings, adjustable earnings after social contributions, corresponding earnings related parental leave benefits and minimum benefit (euros per month, nominal value); Gross and net compensation rates of earnings related and minimum parental leave benefits, adjusted with women's average wage (%), in 1990-2005.



The nominal level of minimum and earnings related parental leave benefits (the earnings related benefits adjusted with average earnings of women, a single mother) in 1990-2005 are presented in Diagram 1 (Figure on the left). Right hand Figure in Diagram 1 presents net replacement rates of the benefits, and thus also the effects of the tax reforms. The net benefits are adjusted with women's monthly average net wage. If the reference wage had been men's average wage

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Euros per year. Income above the highest threshold is compensated only by 25 percent. Minimum per diem allowance is 15.20 Euros, which accounts about 380 Euros per month.

[4] Until 1993 there were also some tax deductions for children below 18 years of age, and a tax deduction for single parents. In 1994 these deductions were abolished and partially compensated by increased non taxable child allowances (e.g. Haataja 2005).

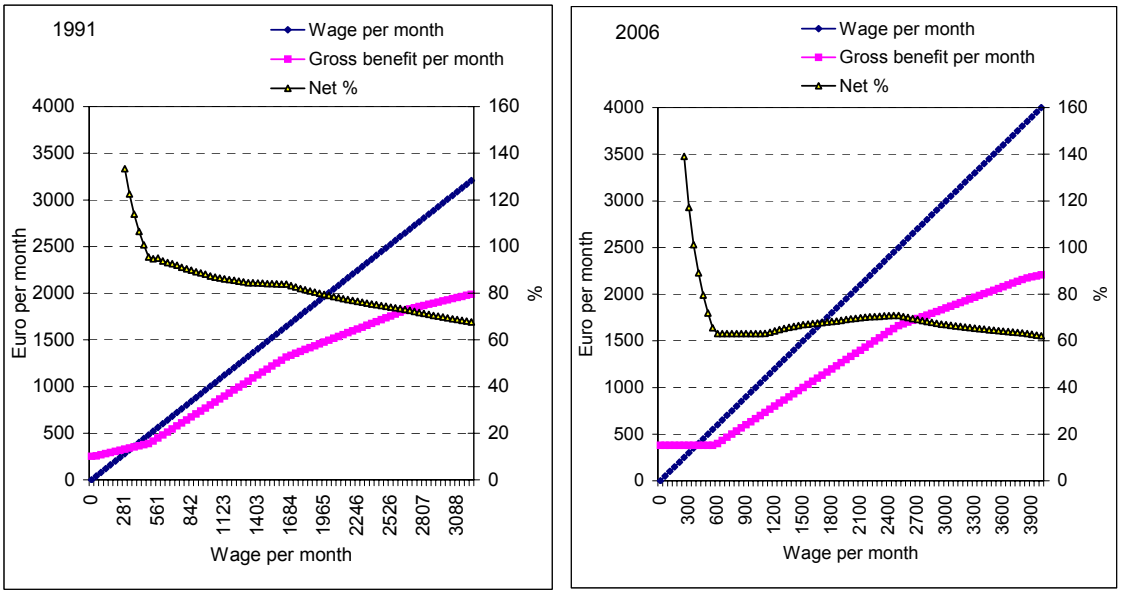
[5] See also Haataja 2005.

[6] Pensions are an exception since they have different tax deduction scheme than other income at the lower level.

the nominal values would have been higher but the net replacement rates a couple of percent lower.

The Figures above show that the gross value of the parental leave benefits has been at the same level, in about 66-67 percent, since the mid 1990s. The net compensation rate has been decreasing, and it has fallen systematically from 80 percent in 1990 to 70 percent in 2005. The minimum amount of parental leave benefits has reached in 2006 the same level it was in 1990, but its net level lags still behind.

Diagram 2. Gross parental leave benefit and net compensation rate at different wage levels in 1991 and in 2006 (wages for 1991 are adjusted from the values of the year 2006).



Reforms on taxation, income threshold and in compensation rates affect differently on different income levels. The Diagram 2 illustrates gross monthly wage and benefits by the rules in 1991, which is a period before the reforms, and in 2006, which is a period after the reforms, on different wage levels. The wage thresholds for the year 1991 are adjusted from the year 2006 by the living cost index, in order to get comparable results. We can see that in 1991 and 2006 gross benefit level increases when wage level increases, but the net compensation rate acts differently before the reforms and after them. In 1991 the net compensation rate was the higher the lower earlier earnings were, but in 2006 the compensation rate is lower for low incomes than for average income.

Both in 1991 and in 2006 men's average monthly wage was in the income interval where the compensation rate for higher incomes started to reduce the compensation rate. Women's average gross wage in 1991 was about 1 125 euros and men's 1713 euros per month in nominal value. In 2005 corresponding wages were 2 140 euros for women and 2 660 euros for men. We can thus conclude that

even when men receive higher wages and higher benefits on average compared to women, men's relative losses are also higher than losses of women on average.

Nordic comparisons have shown that the Finnish parental leave benefits seem to be one of the highest amongst Nordic countries at the highest earnings levels. That is due to lack of any ceiling common in other countries. Furthermore, the compensation level is one of the lowest at the low earnings levels (Hanssen et. al. 2006).

3. The employer costs

Parental leave benefits are a part of social insurance which is funded by employers, employees and the state. The recent debate on the employer costs of parental leave is partially due to cuts in earnings related benefits presented in the former chapter. In Finland a majority of collective agreements offer fully paid maternity leave, the length of which varies from some weeks up to maximum three months of total 4 months' maternity leave period (Metsämäki 2005). These periods, fully paid leaves, are compensated by Kela (Finnish Social Insurance Institution) to the employers by the maternity leave benefit. When the compensation rates have decreased, the gap between wages and benefit level has increased, and the employer costs have increased correspondingly.

Parental leave periods accumulate yearly vacation. If mother (as usually) uses all the leave periods, she has accumulated almost as long fully paid vacation period than by working. Since 1994 the state has compensated costs of these paid vacation periods to the employers, and increased gradually their coverage up to full compensation. The prevalence of temporary work contracts and lack of information may have affected to the result that the employers claim these compensations much less than expected (Metsämäki 2005; Haataja et al. 2006).

However, the costs of parental leaves to the employers consist of other costs, too, e.g. such as hiring other employees to replace the leave takers, but there is still not yet much empirical information of these costs. In this paper we concentrate on the costs of leave periods only. We analyse, among other things, the cost effects of the recent proposals to the employers.

4. Proposed reforms for 2007

Government appointed in Spring 2005 a Rapporteur ad int. with an aim to discuss how to increase compensation of the costs created by parental leave benefits (Metsämäki 2005). The Rapporteur suggested, among other things, that the gross compensation rate of parental leave benefits should be increased to 80 percent. The suggestions have been formed by a working group set by Ministry of Labour (TM 2005) and a tripartite working group in the Ministry of Social Affairs and Health. The results of the latter working group are available only via bulletins on the web sites of the Ministry and other related parties. While the government's final proposal is not yet handed to the Parliament, when this paper is written, our analyses is based on public information and proposals suggested by the tripartite working group[7].

The proposal is divided into mothers' part and fathers' part. From the total maternity leave period of 105 working days 56 days would be paid with 90 percent compensation of former wage. From the shareable parental leave period of 158 (or 170 working days in a case when a father is on parental leave and uses the bonus weeks) maximum of 50 working days would be compensated with 80 percent but for the father only.[8] In short, mothers or their employers (when the mother has fully paid leave during that period) would receive compensation level for the lost / paid wages of 90 percent for the period of two months and one week, and fathers would receive compensation level of 80 percent for the period of two months (maximum period), in case parents share the parental leave.

The proposals have already resulted public debate concentrating on gender equality aspect and atypical families' position[9]. We, however, leave this debate aside and concentrate to assess the immediate impact of the proposals on

a) women's and men's individual income

b) spouses' combined income

c) gross and net costs of parental leave benefits

d) gross compensation amount paid to the employers.

The increase of maternity leave benefit would be favourable for mothers whose employers do not pay wage during maternity leave, and for those employers who

[7] Fact sheets in the websites of the Ministry of Social Affairs and Health 17.3.2006 (www.stm.fi); Akava 17.3.2006 (www.akava.fi); STTK 17.3.2006 (www.sttk.fi)

[8] Parental leave benefits are paid only from working days, i.e. maximum 6 days per week and on average 25 days per month.

[9] E.g. column "Isä- vai tasa-arvoa?" in Helsingin Sanomat 10.5.2006.

offer paid leave. The increase of benefit paid to fathers is supposed to act as incentive for fathers to use more parental leave. However, it is not yet clear whether fathers' increase would cover their 2 weeks' "bonus weeks" or not. The two parent families, where the father does not share the parental leave, would be excluded from the parental leave period with 80 percent compensation rate. It is also unclear, whether single mothers would be entitled to the benefit-increase targeted to fathers. In any case, they are not entitled to fathers' "bonus weeks" contrary to Swedish and Norwegian parental leave schemes, where single mothers are entitled to continue parental leave period with fathers' quota.

Diagram 3. Maternity and parental leave days and their proposed compensation rates. Fathers' bonus weeks are included as a part of parental leave, 3 traditional paternity weeks are excluded. Leave periods with 70 percent compensation (gross) are chosen to present the contemporary benefit level.

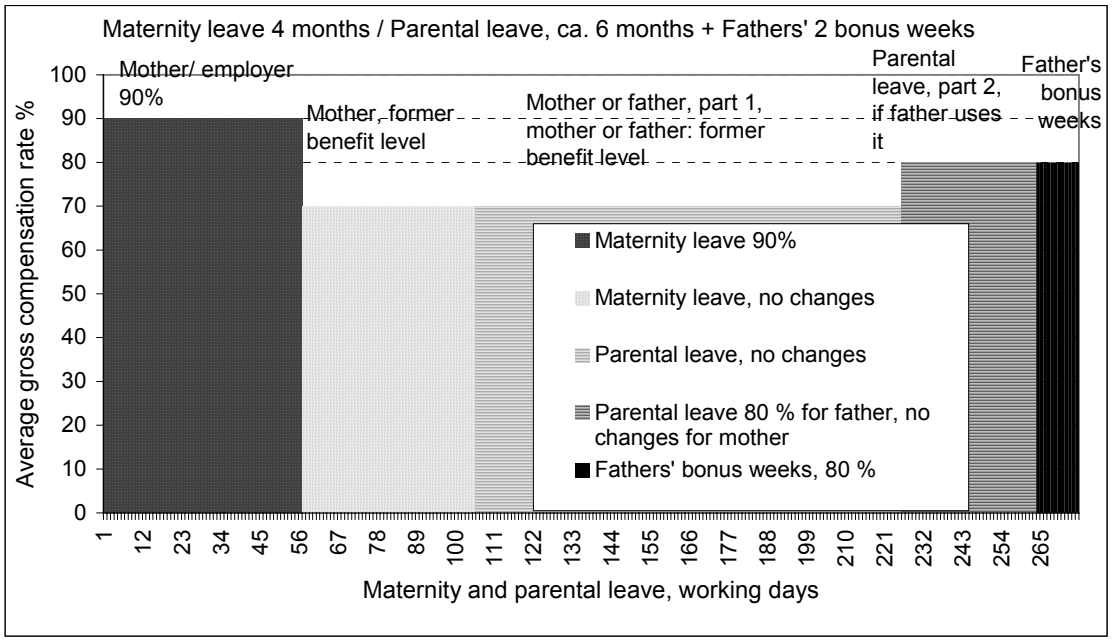
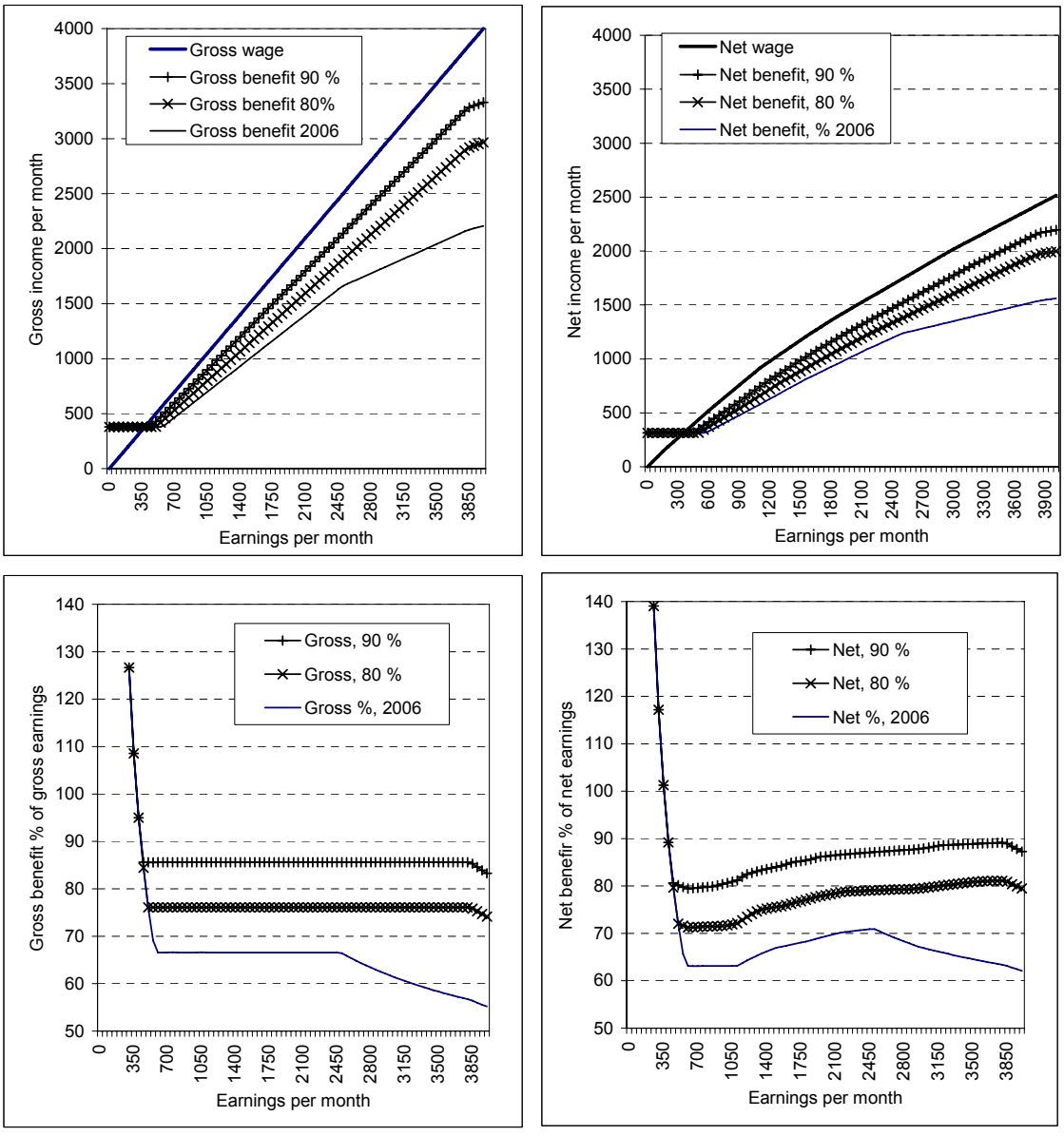


Diagram 3 illustrates the proposed maternity-parental leave period with different compensation rates, including fathers' "bonus weeks" as a part of parental leave. Paternity days of 3 weeks, when the father can be simultaneously at home with the mother, are not presented in this Figure. These days will not be compensated with higher than contemporary benefit level.

The figures in Diagram 4 demonstrate how the new compensation levels appear compared to the current compensation scheme. From simplification reasons the calculations are made for a whole year's period. Upper figures in Diagram 4 illustrates gross and net earnings and corresponding benefit levels of the three schemes with varying monthly earnings. As can be seen, the new compensation

levels would cover a much larger income category with the high compensation level than the current scheme.

Diagram 4. *Gross and net wages and corresponding gross and net benefits, euros per month; Gross and net compensation rates of parental leave benefit at different income levels, %. Situation in 2006 and if compensation rates were 80 or 90 percent. **



* Women' average monthly wage was 2 219 euros and men's 2 749 euros in 2006.

The proposed 80 or 90 percent compensation level would cover yearly incomes below 43 700 euros, whereas the contemporary 70 percent compensation rate covers only incomes below 28 400 euros per year. This amount is a little above the women's average wage level in 2005. Earnings above 28 400 euros are now

compensated to the level of 40 percent up to next threshold of 43 700 euros. In the proposal the earnings above 43 700 euros would be compensated with 32,5 percent, while the current percent is 25.

Lower figures in Diagram 4 illustrate corresponding gross and net compensation rates to upper figures. Due to subtracting unemployment and pension contributions from the wage before calculating parental leave benefits, gross compensation rates are now almost 5 percent lower than original compensation rates of 80 and 90 percent. Contributions count 4.58 percent from the wage in 2006. The Diagram demonstrates rather clearly that suggested reforms would benefit those women and men earning above average wages. In the current system net compensation rate is at the highest when the wage level is 2 400 – 2 500 euros per month, and in the proposal when the wage level is 3 600 – 3 800 euros per month.

The final compensation rates, however, would not be as high as presented above, because highly compensated parental leave periods for the mothers would be of the maximum period of 2 months and 2 weeks and for fathers of the period of 2 months. That means that 61 percentage of combined maternity-parental leave period would have the current compensation rate. In the following chapter we assess the potential costs of these alternatives and calculate final compensation rates with representative micro data.

5. Outcomes of the proposed reforms

5.1 Description of the current situation and the data

Empirical analyses are based on the Income Distribution Data of Statistics Finland from the year 2001. Simulations are made by using the SOMA-model (Parpo 2004). All calculations use tax and benefit rules from the year 2001, excluding parental leave benefit scheme. The model is rewritten according to the proposed reforms and two other alternatives. The rules of the parental leave benefits in 2006 are similar to the rules in 2001 except in the case of minimum benefit, which was increased in 2005. This increase is taken into account in the calculations[10].

The model data includes 103 000 mothers and 45 000 fathers (30 percent), totalling 149 000 parents, who have received parental leave benefits during the year. Beneficiaries are slightly overrepresented in the data since according to register information there were 140 000 beneficiaries in 2001 (Kela 2002). Fathers in the data used almost solely paternity leave but not parental leave. In 2001 fathers' bonus quota was not yet introduced.

Based on the data, the average per diem benefit is 37 euros. Fathers' average benefit is 50 euros and mothers' 31 euros, when the minimum benefit is included. According to corresponding register data per diem allowance is 33 euros on average, 52 euros for fathers and 32 euros for mothers (Kela 2002). Mothers' earnings related benefit level was 39 euros on average. Mothers who were entitled to paid wage had on average highest per diem benefits (48.5 euros) (see Table 1). There were about 28 000 mothers who received only minimum per diem allowance. That accounts of 26 percent of all mothers.

Of all the mothers around 21 percent had received wage during their maternity leave (paid by the employer). However, the actual share of mothers receiving wage during the maternity leave is higher. The difficulty is that these mothers cannot be identified from the cross section statistics if they have finished the maternity leave period already in the year 2000. Employers received totally 63 million euros from Kela as compensation from paid maternity leaves (the sum matches with the register data). That counts 12 percent of the total cost of parental leave benefits. The benefits paid to parents sum up to 445 million euros. Simulated total benefit costs in 2001 are 510 million euros when benefit rules from year 2006 are applied. The sum is higher than the realized costs in 2001, due to increased minimum per diem benefit.

[10] In practice that means that the minimum benefit of 10.09 euros in 2001 is replaced with a higher benefit level (12.86 euros), which corresponds 15.20 euros in 2006.

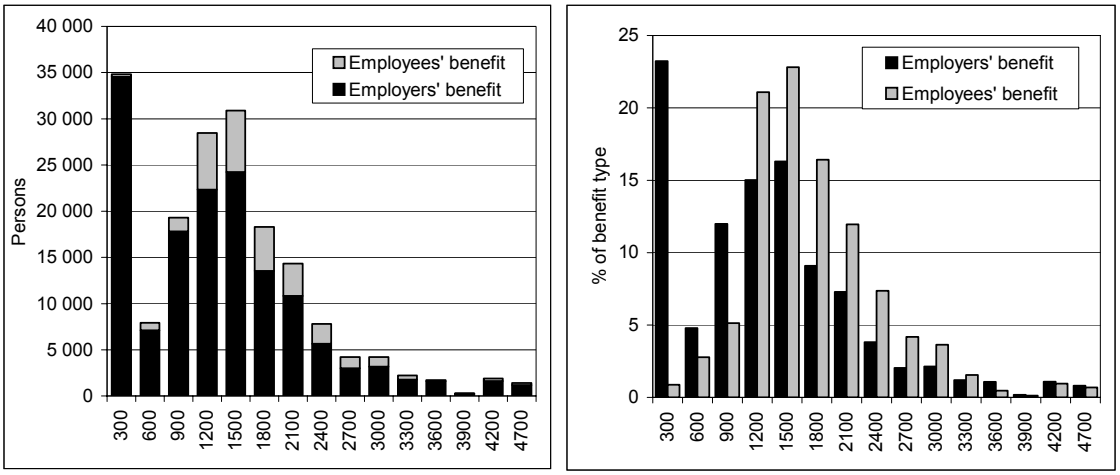
Table 1. Descriptive statistics of parental leave benefits and beneficiaries of the current model.

	Million euros	% of benefits to the parents	Benefit recipients	%	Per diem benefit
Benefits to the parents	444.7	100.0	148 700	100.0	36.88
Fathers	36.2	8.1	45 300	30.5	50.43
Mothers	408.6	91.9	103 400	69.5	30.93
Earnings related benefit	391.7	88.1	117 500	79.0	43.55
Fathers	35.9	8.1	43 900	29.5	51.65
Mothers	355.8	80.0	73 600	49.5	38.72
Minimum benefit	53.1	11.9	31 200	21.0	12.86
Parental leave benefits, total	507.9	100.0	155 300	100.0	
To the employers	63.1	12.4	29 100	18.7	48.51

Source: Calculations from the Income Distribution Data.

The income which is the basis of parental leave benefits is normally taken from the latest taxation. Diagram 5 illustrates how the recipients of parental leave benefits are distributed by their former yearly wage income, which has been the calculation basis on their benefits in 2001. In 2000 female average wage was 1 820 euros and male average wage was 2 257 euros. About 71 percent of all the beneficiaries received per diem allowance which was based on yearly wage income below women's average wage. About 12 percent of all the beneficiaries received earnings above men's average wage in 2000.

Diagram 5. The recipients of parental leave benefits, and the shares of beneficiaries according to benefits paid to the employees and employers (%) by their wage income that was basis for the benefit level in 2001.



Source: Calculations from the Income Distribution Data.

5.2 Gross and net costs

In this section we simulate immediate cost effects of the proposed reforms. Parental leave benefit scheme in 2006 is transferred to correspond the Euro level of year 2001. Thus, our reference model describes the situation in the year 2001 population.

The proposal suggests increase to the compensation of mothers to 90 percent during their maternity leave and of fathers to 80 percent during parental leave, if parents share parental leave, but for a limited time for both of them. In spite of comparing the proposal with the current situation, we simulate two other alternatives; the first alternative would offer 90 percent compensation and the second alternative 80 percent compensation for all the leave periods both to the mothers and fathers. The exact income limits and compensation percentages used in the simulations are as follow:

a) "If 90 percent": benefit level is increased up to 90 percent to the level of 36 962 euros per yearly income, and to the income above this limit 32.5 percent to the all beneficiaries

b) "If 80 percent": benefit level is increased up to 80 percent to the level of 36 962 euros per yearly income, and to the income above this limit 32.5 percent to the all beneficiaries

c) "If as proposed": benefit level would be increased up to 90 percent for maternity leave period, max 56 working days and for the fathers up to the 80 percent max 50 days, if father uses parental leave, i.e. more than 18 working days, with decreased compensation (32.5 percent) above 36 962 euros income.

Due to lack of exact information on how maternity and parental leaves are used during the year, the first calculations include following simplifying assumptions: Mothers who have paid periods during maternity leave will not have any increase for their individual per diem benefit, but the increased benefits (90 percent) are paid to their employers. The mothers, who have no paid maternity leave periods, will receive a maximum of 56 days per diem benefit of 90 percent. This group may also include mothers, who have used their possible paid periods earlier in the year 2000. While these mothers are not excluded from increased benefit periods, the results will overestimate real costs.

The proposed compromise increases the costs approximately to 67 million euros. That is about 7 million euros more than the assessed costs of the tripartite proposal (information based on Akava's Fact sheet 17.3.2006, see footnote 6). One reason why our calculations produce higher costs even though they are made at 2001 prices is that we computed maternity leave days with 90 percent to all

mothers, even if some of them might have used their paid leave period during the previous year. From the 67 million euros the parents would have received about 47 million euros and the employers about 19 million euros, 29 percent of the total costs.

Table 2. The reference situation and simulated gross costs for simulated parental leave benefit alternatives, families on parental leaves.

	Gross costs 1 000 euro	Increase 1 000 euro	Increase %
Parental leave benefits to the parents			
Reference benefits	444 745		
If 90 %	566 162	121 417	27.3
If 80 %	508 751	64 007	14.4
If as proposed	492 344	47 599	10.7
Parental leave benefits to the employers			
Reference benefits	63 143		
If 90 %	83 900	20 757	32.9
If 80 %	74 657	11 515	18.2
If as proposed	82 597	19 455	30.8
Total parental leave benefit costs			
Reference costs	507 887		
If 90 %	650 062	142 175	28.0
If 80 %	583 409	75 522	14.9
If as proposed	574 941	67 054	13.2

If the reference benefit level had completely been replaced by the benefit level of 90 percent, the total sum of maternity, paternity and parental leave benefits would have increased by 142 million euros and by 28 percent. Correspondingly the benefit level of 80 percent would increase the costs by 76 million euros and by 15 percent compared with the reference situation. By paying 80 percent to all parents for all the days, the costs had been about 10 million euros (13 percent) more expensive than the proposed alternative, but the employers would loose in this alternative compared to the two other alternatives (see Table 2).

Increased benefit income would also increase taxes paid by parents and return a part of the costs back to the public sector. While the state pays the benefits, state taxes alleviate state burden, whereas the municipalities, the church and social security funds would get “extra” tax revenues from the increased benefit income. Local taxation is relative and tax rate varies between the municipalities. Compared with the reference situation the proposed model would increase local tax revenue more than 9 million euros and 2,5 percent. The higher are the benefit levels the higher tax returns are received by the state due to progressive taxation. The parental leave benefits paid to mothers are rather low in average, and the tax rate is low for these benefits in state taxation. The proposal as a whole would increase state revenue only by about 3 million euros (1,8 percent) (see Table 3).

Table 3. Reference taxes and taxes from simulated parental leave benefit alternatives, families on parental leaves.

	Total taxes 1 000 euro	Increase 1 000 euro	Increase %
Total taxes			
Reference taxes	633 753		
If 90 %	678 780	45 026	7.1
If 80 %	657 570	23 817	3.8
If as proposed	647 648	13 895	2.2
State taxes			
Reference taxes	177 671		
If 90 %	195 764	18 094	10.2
If 80 %	187 377	9 706	5.5
If as proposed	180 809	3 139	1.8
Municipal taxes			
Reference taxes	375 873		
If 90 %	399 226	23 353	6.2
If 80 %	388 116	12 243	3.3
If as proposed	385 216	9 343	2.5

The employers who receive maternity leave benefits from mothers' paid leave periods pay no taxes from these benefits because the benefits are compensation from the employers' costs. However, the mothers who receive wage during maternity leave pay higher taxes from their higher (wage) income during the same period.

Table 4. Reference net income and net income from simulated benefit alternatives, families on parental leaves.

	Net income 1 000 euro	Increase 1 000 euro	Increase %
Net effect			
Reference	2 015 709		
If 90 %	2 092 100	76 391	3.8
If 80 %	2 055 900	40 190	2.0
If as proposed	2 049 414	33 704	1.7

Final net costs to the public sector of the three presented alternatives are assessed by comparing the increases in the net income of families. In low income families the increase would also decrease possible need for means tested housing allowance and living support. That kind of calculations would assess better the immediate public net costs. These calculations are not, however, done here. Tax returns to the public sector would increase net costs of the proposed benefit scheme about 34 million euros, 1.7 percent. This increase presents also potential net costs of the proposed benefit scheme. The alternative with 80 percent compensation for all the parents and from all periods would increase the costs 6 million euros more, about 40 million euros and 2 percent (see Table 4).

5.3 New compensation rates

The reference model results 68.7 percent average gross compensation rate for the parental leave benefits. This rate includes parents who are entitled to minimum benefit. In this group there are incomes which are below the threshold income entitling to earnings related benefit. When the compensation rate is calculated only for those, who receive earnings related benefits, the average compensation rate decreases to 64.9 percent. The proposed model would increase the average compensation rate of parental leave benefits by 2.7 percent points up to 67.5 percent compared to the reference model. If there had been more fathers sharing parental leave, the average compensation rate would have increased, due to father's compensation rate of 80 percent for the first 2 months (see Table 5).

The benefit level paid to the employers would increase the compensation rate from the average of 65 percent up to 79 percent, 14 percentage points for the paid period. The lower compensation rate which is illustrated earlier e.g. in Diagram 5 is due to the fact that fully paid periods can be longer than the periods which are compensated by 90 percent. The increase in benefits for the employers would not benefit directly the mothers who receive the wage, and their compensation level would stay at the original level. However, we have not counted the fully paid period (100 percent period) into the compensation rate in these calculations, but we analyse these effects by type family calculations in the following section.

Table 5. Average gross compensation rate of parental leave benefits paid to the parents and to the employers.

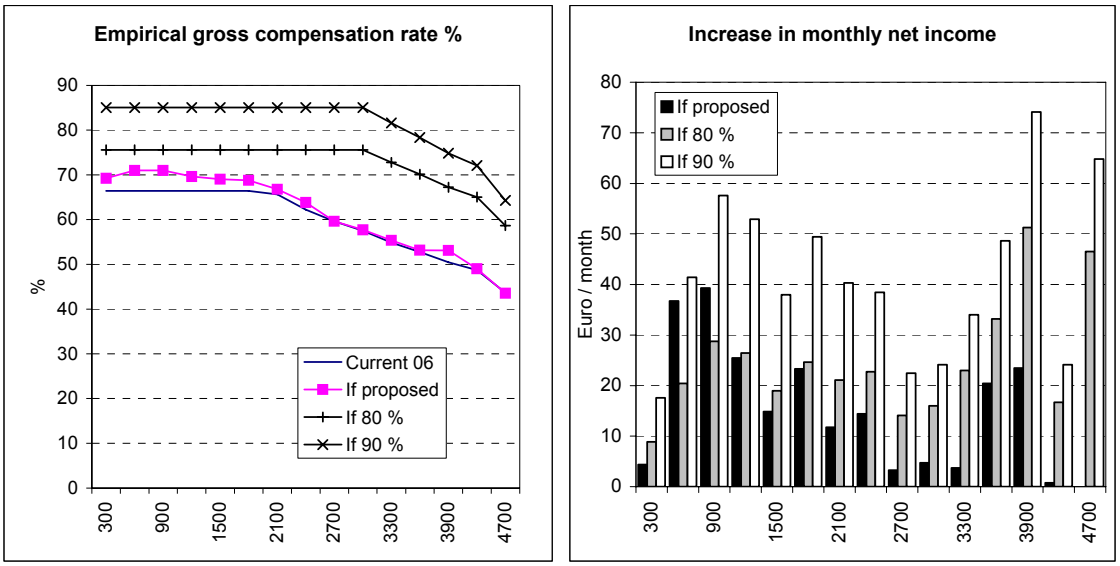
	Gross compensation %			Change %-points		
	Average compensation rate	Entitled to earnings-related	Entitled to paid leave	Average compensation rate	Entitled to earnings-related	Entitled to paid leave
Reference	68.7	64.9	64.9			
If as proposed	70.9	67.5	79.0	2.2	2.7	14.1
If 80 %	77.0	75.2	75.3	8.3	10.3	10.5
If 90 %	84.6	84.5	84.7	15.9	19.6	19.9

If all benefits would be paid at 80 percent compensation rate the total benefit costs would increase from original proposal of 67 million euros to about 76 million euros (see Table 2), with less than 10 million euros. The average compensation rate would increase from average 65 percent about 10 percentage points up to 75 percent.

Diagram 6, Figure on the left, shows that evenly increased compensation rates up to 80 and 90 percent are similar to those presented in Diagram 4 (lower figures). When the various periods of parental leave are compensated differently for mothers and fathers, and differently among mothers, the empirical compensation rates will not be as smooth.

The increase of yearly income per parent depends on the length of the period she or he is on leave, whether the parent is entitled to earnings related parental leave benefit, and whether the mother has fully paid leave periods or not. The changes in the compensation rates show that average increase in monthly incomes per parent cannot be significant.

Diagram 6. Simulation results: Empirical gross compensation rate and increase in monthly net income by former wage income, mothers without paid wage.



The compensation rates are calculated only from the benefits received in the reference year compared with the earnings received before the leave. Another way to assess the compensation rates would be to compare the income parents have during the year they are in parental leave with the income they would receive by being employed all the year. That information would also tell the immediate costs of parental leave to parents. Especially, if the leave periods affect on the future wage development, these kinds of calculations should take into account the long run effects as well.

In this paper we, however, have to leave above mentioned calculations for further research. Instead we show the income level of mothers and fathers, and their combined income divided according to whether they have been on leave or not during the year (Appendix 1). The Diagrams in the Appendix 1 show that the combined income of the couples (divided for 2 persons) are more often concentrated below the median income than the income level of the couples not on parental leave. The result is the same when we look at the distribution for mothers. Fathers who use parental leaves (here mainly paternity, not parental leave) seem to be economically rather well off compared to other fathers. The same outcomes have been verified by other researches as well (Lammi-Taskula 2004; Takala 2005).

6. Outcomes of type-family calculations

We use the microsimulation model TUJA and type family calculations to assess how fathers' use of parental leave affect on family income compared with common alternative when the mother uses the whole parental leave period. We analyze various outcomes and include different levels of family income.

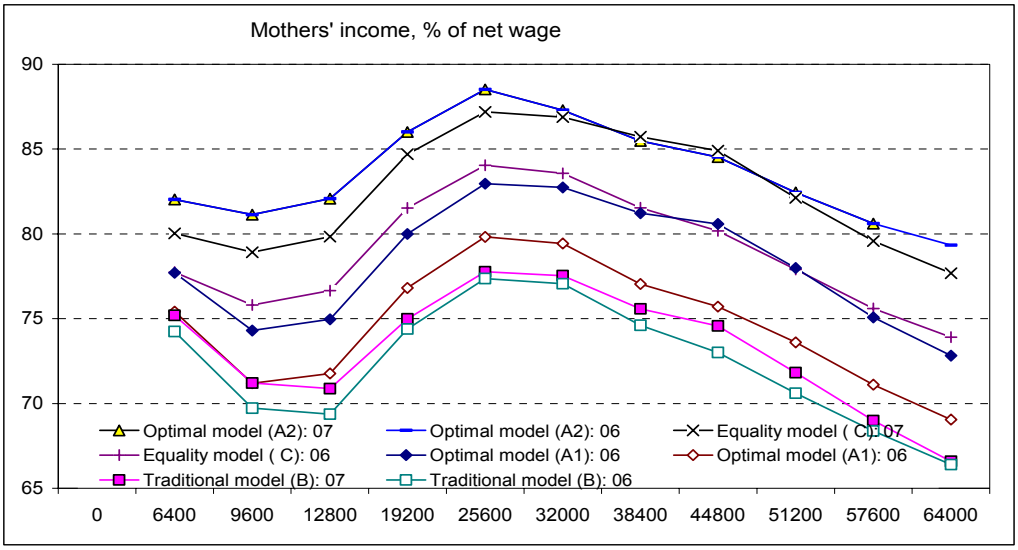
We took men's average wage in 2005 as the starting income and selected 5 higher income levels, each of them 20 percent higher than the former, and 7 lower income levels with the same principle. We assume that the parents have to choose only between paid work and parental leaves. We also assume that child home care leave is not used after the parent leave, even though it is commonly used by mothers in Finland (Lammi-Taskula 2004; Haataja and Nyberg 2005).

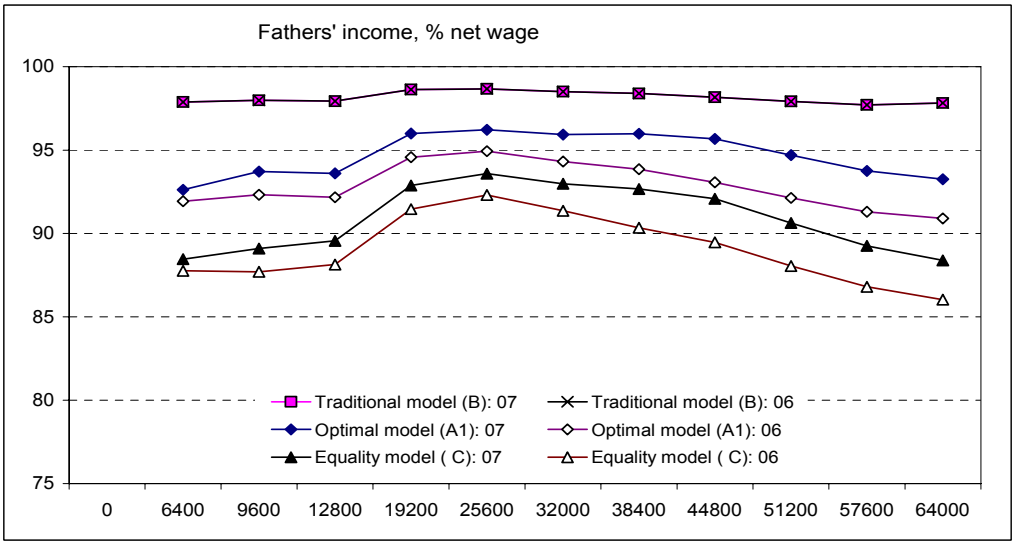
In our calculations we assessed the outcomes for following four behavioural models in current situation (2006) and in the proposed situation (2007):

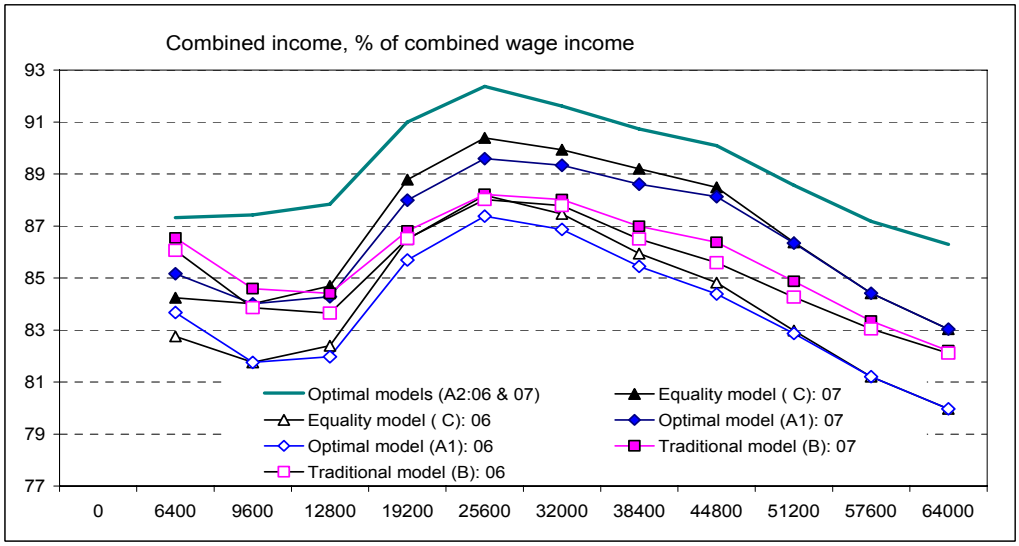
A1. Optimal model 1, where father uses his 3 weeks' paternity leave and two months of parental leave. That period responds in the proposed system the 50 working days when he would be entitled to 80 percent benefit level. The mother has no paid maternity leave, she is entitled to 90 percent benefit level for a fair two months (56 working days).
A2. Optimal model 2. The same as above but the mother has 3 months' fully paid leave.
B. Traditional model, where the father uses only paternity weeks and the mother uses solely the parental leave. In this case the parental leave is 2 weeks shorter compared with the situation the father uses parental leave, and the mother "returns" earlier to paid work. The mother has no paid leave.
C. Equality model, where the father uses a half of the 6 months' parental leave. The mother has no paid leave.

The outcomes are presented in the following Diagram to each of the spouses separately and to couples, when their combined incomes are halved equally between them. The outcomes describe the parents' net income per year (when they use one of the above mentioned options of parental leave) as percentage of the net income if they were working full time for the whole year.

Diagram 7. Mothers' and fathers' and spouses combined net income during alternative parental leave take ups, percent of corresponding yearly net wage income, spouses with equal wage, in current (06) and in proposed scheme (07).



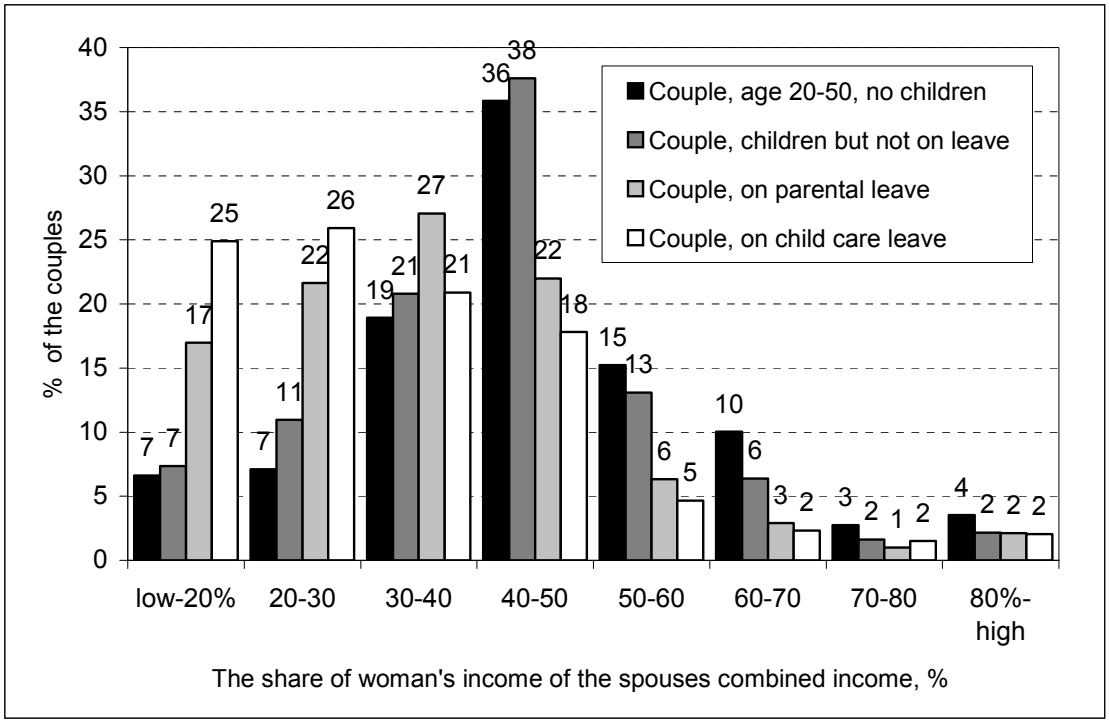




In the Diagram 7 the spouses have equal wages. The different outcomes illustrate outcomes from differences in behaviour of the parents and in income levels. The most important conclusion of this exercise is that when spouses' incomes are the same and we have spouses' combined net income as the base of the calculations, halving parental leave brings out the best outcome in the sense of family's total income. In the lowest income levels it seems to be most profitable that the mother takes the whole maternity-parental leave period and the father keep on working. The reason for this is, as Diagram 5 earlier demonstrated, that the net compensation rate of parental leave benefit is lower for low incomes than for average wage income. Low benefit income is taxed harder than corresponding wages.

Halving the 6 months' parental leave does not, however, mean that the parents are on leave equally long periods, because of non-transferable maternity leave. In addition, the proposed reform offers different compensation rates for different periods for mothers and for fathers. However, the proposal would benefit both mothers and fathers compared with the current situation.

Diagram 8. The distribution of couples according to the share of woman's income of the spouses combined income, percent, in 2001.



Source: Calculations from income distribution data.

The most common situation is that the mother has lower wage than the father. This is also the most frequently presented explanation for fathers' low take-up rate of parental leave. Woman's income is often between 40 and 50 percent of the combined net income of the couple, especially when the couple has no chil-

dren or neither of the parents is on parental or child care leave (Diagram 8). In the case the couple has no children almost a third of women have higher income than their partners and in the case the couple has children but none of them is on any kind of leave about a fifth of women have higher income than their partners.

Next we demonstrate cases where mother's income is more or less lower than father's income. These cases are:

1) Mother has women's and father men's average wage (25 600 and 32 000 euros per year)
2) Mother and father both have low wages (12 800 and 19 200 euros per year)
3) Mother has low wage and father men's average wage (12 800 and 32 000 euros per year)
4) Mother has low wage and father has high wage (12 800 and 44 800 euros per year)
5) Mother has women's average wage and father has high wage (25 600 and 44 800 euros per year)

These "type" families and outcomes are presented in the Tables in Appendix 2. The outcomes are measured with personal and combined net incomes (replacement rate and euros per year) when they are on parental leave during the year and when they are working the whole year. Also current scheme in 2006 and the proposed scheme for 2007 are compared. The summary of the outcomes, changes in net income as percentages from halved net wages of the couples is presented in Table 6.

Table 6. The impact of different behavioural models (A1-C) on the yearly net income of the couples in different income levels, percent: current scheme (06) and the proposed scheme (07).

Cases by the parents' income level: **The current scheme 06**	Net wage per year per couple	Optimal A1	Optimal A2	Traditional B	Equal C
1) Mother has about women's and father about men's average wage	40582	-12.3	-8.3	-11.1	-12.0
2) Mother and father both have low wages	*25512*	*-15.0*	*-10.6*	*-13.6*	*-14.7*
3) Mother has low wage and father about men's average wage	32719	-13.0	-9.7	-11.0	-13.4
4) Mother has low wage and father has high wage	39254	-12.7	-9.9	-9.7	-14.0
5) Mother has about women's average wage and father has high wage	**47117**	**-12.1**	**-8.7**	**-10.0**	**-12.7**
The proposed scheme 07	Net wage	A1	A2	B	C
1) Mother has about women's and father about men's average wage	40582	-10.0	-7.5	-11.0	-9.7
2) Mother and father both have low wages	*25512*	*-12.8*	*-9.8*	*-13.0*	*-12.6*
3) Mother has low wage and father about men's average wage	32719	-10.9	-8.6	-10.5	-11.3
4) Mother has low wage and father has high wage	39254	-10.0	-8.0	-9.2	-11.2
5) Mother has about women's average wage and father has high wage	**47117**	**-9.3**	**-7.1**	**-9.9**	**-9.8**

Source: Appendix 2.

As could be anticipated, the decreases in net income in all behavioural alternatives are bigger in current scheme than in the proposed scheme. If the mother has 3 months fully paid maternity leave period (A2), and the father uses paternity leave and two months' parental leave, the drop in income is smallest, below 10 percent in all chosen income levels in actual model and in proposed model, except for families at the lowest income level in actual scheme. In all the alternatives the relative drop in income level is highest for low income families (case no 2). Smallest decrease happens when the father has high and the mother average income for all behavioural choices (case no 5). One of the most interesting outcomes is that the proposed benefit scheme would increase the number of the spouses, who would benefit from more equal sharing than using parental leave traditionally, i.e. the mother uses the whole period.

The outcomes above base on type family calculations, and cannot thus be generalized. The results of former research (Haataja 2003) simulated at population level, however, are in line with these outcomes: fathers' use of parental leave does not usually harm family economy if the mother returns paid work. These simulations were done in order to assess one months' fathers' quota at the level of the whole population. All fathers were assumed to use the quota, if their spouse could return to work instead of using child care leave. The result was that the majority (86 percent) of the families gain: The earnings received by the mothers more than compensated the losses of fathers' when they received parental leave benefit for one month instead of working.

However, in practice it would be interesting to calculate, how many families are economically potential losers or winners, if the parents chose more equal sharing versus traditional sharing at the population level. Also taking into account the alternative that mother or father, instead of returning to work, go on child care on home care leave would deserve evaluations. Furthermore, it is possible to assess, how much single mothers loose compared with the couples in the proposal, while they have to choose earlier than the couples either return to work or go on leave with low level child home care allowance instead of earnings related parental leave benefit.

7. Summary and discussion

In this paper we have analysed a proposal to alleviate the costs of parental leave schemes and to make parental leave more attractive to fathers. The proposal would increase mothers' maternity leave benefit level up to 90 percent and fathers' parental leave benefit up to 80 percent for maximum about two months' periods per parent. The current benefit level is on average below 70 percent of former earnings for the whole leave period. The reforms would treat on the one hand mothers and fathers differently and on the other hand female-male couples versus other family types, including single parents, differently. That is why the proposals have awaked critics in public discussion.

We have considered maternity-paternity-parental leave as one entity, in which mothers and fathers have different social rights - as they always have had - and as they will have, if the reform is implemented as proposed. Our focus was to assess and compare the current and proposed parental leave benefit schemes and their outcomes. All the calculations are based on the information that has been available from the Ministry's and the Social partners' websites. The final proposal is being prepared at the time of writing the present paper and is not available for analyses.

Both population level and type-family calculations are presented. For the population level calculations we use representative micro-data from the year 2001 and SOMA micro-simulation model from the Ministry of Social Affairs, updated according to the proposed reforms. Type-family calculations by the TUJA model in VATT are used to assess the nature of the current benefit scheme compared with the scheme where reforms are already included. The choices of models is based on the availability and expertise of different models in VATT at this period.

The type-family calculations answer the question; how parents' individual and combined incomes change, when they choose between various combinations of sharing the parental leave, at different income levels in current and in proposed schemes. The type-family calculations suggested, even though they cannot be generalized for the whole population, that the traditional way of sharing the parental leave is not always as profitable economically for the family income as argued, and equal sharing is not as expensive as expected. That is true already in the current system, but the proposal increase the potential amount of couples who would benefit from more equal sharing. These outcomes base on the assumptions that mothers participate in paid work when the fathers are on parental leave. In practice that is not a common case, because most mothers use the whole parental leave and go on then on child home care leave.

In practice, it is not always money earned, that determines the choices of parents. Also many other factors have an effect, such as cultural, traditional, and of course

practical obstacles, such as does mother have a job to return to if father takes the leave. Furthermore, inflexibility of parental leave, combined with the fact that the child is less than 10 months old when the parental leave period is over, may also create obstacles in fathers' use of parental leave. These obstacles may be more important for parents than the benefit level itself.

With representative data we calculated immediate gross and net cost effects, and new empirical compensation rates of the proposal as well as of two other alternatives. The results show that the proposal would increase the costs of the benefits paid to the parents, by 11 percent but their effects on parents' compensation rate and on average increase in net income per year are rather small. Average compensation rate of earnings related benefit would increase by 2.7 percent points. The reason for this result is that part of the mothers, those who are entitled to fully paid leaves, will not directly benefit from the reform, since their employers receive the increased benefits. Secondly, the rest of the mothers use such a long maternity-parental leave period, that the impact of 90 percent compensation period becomes weaker, while most of the leave period is compensated only with current benefit rules. For the fathers the proposed increase of 80 percent would be much more attractive due to shorter leave periods.

The costs of the benefits paid to the employers would increase about 30 percent covering more than a quarter of the total increase of the costs. Our estimates for the total costs turned out to be higher than estimates presented by the tripartite group. There are many reasons for that: different calculation methods, relatively old data, different assumptions made etc. One of the most obvious reasons is that some mothers received highly compensated leave periods even though they in practice may have finished the maternity leave before the year when empirical calculations were made. Our method overestimates benefit increase of mothers' and underestimates benefits received by fathers' compared calculations done with more recent data.

We also calculated, for comparison purposes, a case where benefit level is increased up to 80 percent and 90 percent for the whole period. The results show that the 80 percent compensation rate is not much more costly than the tripartite proposal. This compensation rate, however, would not benefit the employers, who pay full wage during the maternity leave, as much as the original proposal.

In addition to the calculations we have done it would have been interesting to look at some Nordic comparisons. Norway, Sweden and Iceland have 1-3 months' fathers' quotas in their parental leave schemes, Finland only 2 weeks' conditional bonus weeks. The longer the quota is, the more fathers seem to use them, and in Finland take up rates are lowest in the Nordic countries. Thus we should compare Nordic parental leave schemes, their distributional and cost-benefit outcomes with empirical data.

The present paper is one example of the use of a micro-simulation method to analyze current and future social policies, their effects on incomes of different families and even costs of policy changes to employers. Despite it's undeniable advantages micro-simulation is underrated as a method in policy design, in evaluation and even in comparative research. However, the truth is that we cannot ignore the valuable information provided by micro-simulation method if we intend to design and implement successful policies in the future. This means besides increase in demand from the policy steering side also more possibilities to benefit model expertise, and models, between different government research institutes.

References

Haataja, Anita. 2005. Outcomes of the Two 1990s Family Policy Reforms at the Turn of the 2000s in Finland. Yearbook 2005 of Population Research in Finland 41:5–28.

Haataja Anita. 2004a: Pohjoismaiset perhevapaat kahden lasta hoitavan vanhemman tukena. Janus 12 (1), 25-48. (English abstract: Nordic Parental Leaves as Supporters of Two Caring Parents).

Haataja, Anita. 2004b. Yhden tai kahden ansaitsijan malli: vaikutukset ansiotyön, hoivan ja tulojen jakoon. Julkaisussa: Räisänen H. – Hjerppe R., toim. Hyvinvointi ja työmarkkinoiden eriytyminen. Helsinki: VATT-julkaisuja 40: 162–186.

Haataja, Anita. 2003. Lapset – vanhempien ja hyvinvointivaltion yhteinen projekti? Talous & Yhteiskunta 2003; 31 (1), 37–41.

Haataja, Anita – Nyberg, Anita. 2005. Did the Dual-Earner Model Become Stronger or Weaker in Finland and Sweden in the 1990s? Luxembourg Income Study. Working Paper no. 415. <www.lisproject.org >

Haataja, Anita – Järviö, Maija-Liisa – Mustonen, Esko (2006). Talousarvion sukupuolivaikutusten arviointi. Pilottihanke sosiaali- ja terveysministeriön hallinnonalalla. Selvityksiä 2006:1. Helsinki: Sosiaali- ja terveysministeriö. (English abstract: Gender Impact Assessment of the Budget (A pilot project in the sector of the Ministry of Social Affairs and Health) PDF-form <www.stm.fi>.

Hanssen, Hans et.all . 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. An unfinnished paper to be published as a part of the Danish project "Care Architecture". See SFI Internet pages (www.sfi.dk) the project "Care Architecture" and look at comparative micro simulation papers there.

Lammi-Taskula, Johanna. 2004. Äidit työmarkkinoilla - kahden kerroksen väkeä? Yhteiskunta-politiikka 69 (2), 202-206.

Kela 2002. Statistical Yearbook of the Social Insurance Institution, Finland. 2001. Helsinki: Kela.

Kela 2005. Statistical Yearbook of the Social Insurance Institution, Finland. 2004. Helsinki: Kela.

Metsämäki, Janne. 2005. Perhevapaista aiheutuvien kustannusten korvauksen kehittäminen. Sosiaali- ja terveysministeriön työryhmämuistioita 2005:16. Helsinki: Sosiaali- ja terveysministeriö. (English abstract: Increased compensation for the costs caused by family leaves. Report by Rapporteur ad int.).

Niinivaara, Reino – Viitamäki, Heikki (eds.). 2005. Tuja-käsikirja. Verotuksen ja etuuksien mikrosimulointimalli. VATT-muistioita 72. Helsinki: VATT.

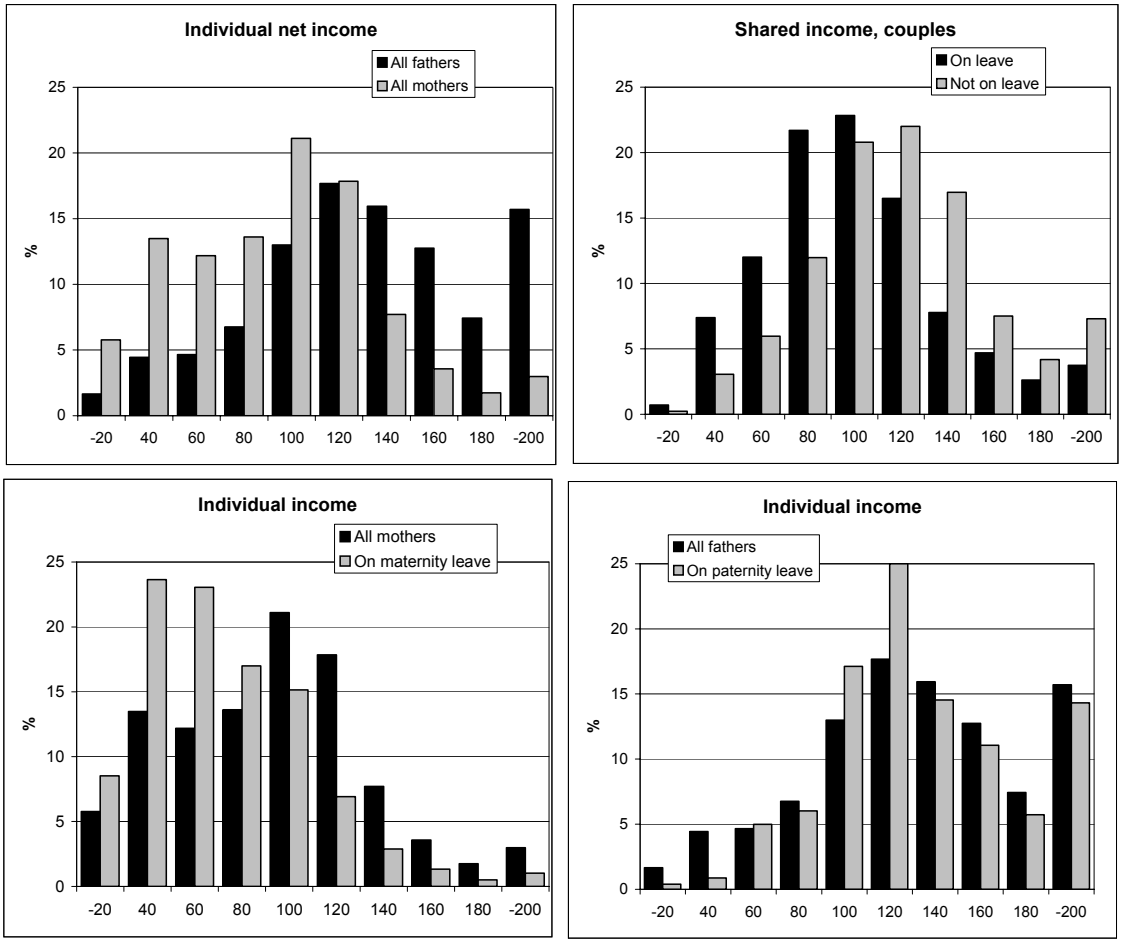
Parpo, Antti (ed.). 2005. SOMA. Sosiaaliturvan ja verotuksen mikrosimulointimalli 2001. Helsinki: Stakes. Aiheita 2004: 1.

STM [Sosiaali- ja terveysministeriö] 2001:28. Työ- ja perhe-elämän yhteensovittamista selvittäneen työryhmän (PEVA II) muistio. Työryhmämuistioita 28. Helsinki: Sosiaali- ja terveysministeriö.

Takala, Pentti. 2005. Uuden isyysvapaan ja isän muiden perhevapaiden käyttö. Sosiaali- ja terveysturvan selosteita 43. Helsinki: Kelan tutkimusosasto.

TM [Työministeriö] 2005. Perhevapaasäännösten toimivuus. Perhevapaasäännösten toimivuutta arvioivan työryhmän raportti. Työhallinnon julkaisu 358. Helsinki: Työministeriö.

Appendix 1. The distribution of mothers and fathers by their individual net income and combined and shared incomes by income brackets adjusted below and above the median net income of the parents according to their situation to be on parental leave or not, in 2001.



Source: Calculations from the Income Distribution Data.

Appendix 2. Type families' net income in different choice situations of parental leave and work, actual model and proposed model, (A1 and A2)

	Net wages per year	Optional use of parental leave (A1) 2006	Proposed 07	Difference	Optional use of parental leave (A2) 2006	Proposed 07	Difference
Mother on women's average wage (25 600)	18524	79.8	83.0	3.1	88.5	88.5	0.0
Father on men's average wage (32 000)	22058	94.3	95.9	1.6	94.3	95.9	1.6
Combined net income	40582	87.7	90.0	2.3	91.7	92.5	0.9
Losses / gains, euros and %							
Combined net income, change euro / year	40582	-4992	-4054	938	-3381	-3024	357
Combined net income, change % / year		-12.3	-10.0	2.3	-8.3	-7.5	0.9
Compensation rate %							
Mother low wage (12 800)	10661	71.8	75.0	3.2	82.1	82.1	0.0
Father low wage (19 200)	14851	94.6	96.0	1.4	94.6	96.0	1.4
Combined net income	25512	85.0	87.2	2.2	89.4	90.2	0.8
Losses / gains, euros and %							
Combined net income, change euro / year	25512	-3816	-3265	550	-2717	-2506	210
Combined net income, change % / year		-15.0	-12.8	2.2	-10.6	-9.8	0.8
Compensation rate %							
Mother low wage (12 800)	10661	71.8	75.0	3.2	82.1	82.1	0.0
Father average wage (32 000)	22058	94.3	95.9	1.6	94.3	95.9	1.6
Combined net income	32719	87.0	89.1	2.1	90.3	91.4	1.1
Losses / gains, euros and %							
Combined net income, change euro / year	32719	-4264	-3567	697	-3165	-2808	357
Combined net income, change % / year		-13.0	-10.9	2.1	-9.7	-8.6	1.1
Compensation rate %							
Mother low wage (12 800)	10661	71.8	75.0	3.2	82.1	82.1	0.0
Father high wage (44 800)	28593	93.1	95.7	2.6	93.1	95.7	2.6
Combined net income	39254	87.3	90.0	2.8	90.1	92.0	1.9
Losses / gains, euros and %							
Combined net income, change euro / year	39254	-4992	-3907	1085	-3893	-3148	746
Combined net income, change % / year		-12.7	-10.0	2.8	-9.9	-8.0	1.9

Compensation rate %							
Mother average wage (25 600)	18524	79.8	83.0	3.1	88.5	88.5	0.0
Father high wage (44 800)	28593	93.1	95.7	2.6	93.1	95.7	2.6
Combined net income	47117	87.9	90.7	2.8	91.3	92.9	1.6
Losses / gains, euros and %							
Combined net income, change euro / year	47117	-5721	-4394	1327	-4110	-3364	746
Combined net income, change % / year		-12.1	-9.3	2.8	-8.7	-7.1	1.6

Appendix 3. Type families' net income in different choice situations of parental leave and work, actual model and proposed model, (C and B)

	Net wages per year	Fully shared parental leave (C) 2006	Proposed 07	Difference	Traditionally shared leave (B) 2006	Proposed 07	Difference
Compensation rate %							
Mother on women's average wage (25 600)	18524	84.1	87.2	3.1	77.4	77.8	0.4
Father on men's average wage (32 000)	22058	91.4	93.0	1.6	98.5	98.5	0.0
Combined net income	40582	88.0	90.3	2.3	88.9	89.0	0.2
Losses / gains, euros and %							
Combined net income, change euro / year	40582	-4859	-3922	937	-4522	-4449	73
Combined net income, change % / year		-12.0	-9.7	2.3	-11.1	-11.0	0.2
Compensation rate %							
Mother low wage (12 800)	10661	76.7	79.8	3.2	69.4	70.9	1.5
Father low wage (19 200)	14851	91.5	92.9	1.4	98.6	98.6	0.0
Combined net income	25512	85.3	87.4	2.2	86.4	87.0	0.6
Losses / gains, euros and %							
Combined net income, change euro / year	25512	-3758	-3208	549	-3469	-3308	161
Combined net income, change % / year		-14.7	-12.6	2.2	-13.6	-13.0	0.6
Compensation rate %							
Mother low wage (12 800)	10661	76.7	79.8	3.2	69.4	70.9	1.5
Father average wage (32 000)	22058	91.4	93.0	1.6	98.5	98.5	0.0
Combined net income	32719	86.6	88.7	2.1	89.0	89.5	0.5
Losses / gains, euros and %							
Combined net income, change euro / year	32719	-4394	-3700	695	-3596	-3435	161
Combined net income, change % / year		-13.4	-11.3	2.1	-11.0	-10.5	0.5
Compensation rate %							
Mother low wage (12 800)	10661	76.7	79.8	3.2	69.4	70.9	1.5
Father high wage (44 800)	28593	89.5	92.1	2.6	98.2	98.2	0.0
Combined net income	39254	86.0	88.8	2.8	90.3	90.8	0.4
Losses / gains, euros and %							
Combined net income, change euro / year	39254	-5500	-4415	1085	-3788	-3627	161
Combined net income, change % / year		-14.0	-11.2	2.8	-9.7	-9.2	0.4

Compensation rate %							
Mother average wage (25 600)	18524	84.1	87.2	3.1	77.4	77.8	0.4
Father high wage (44 800)	28593	89.5	92.1	2.6	98.2	98.2	0.0
Combined net income	47117	87.3	90.2	2.8	90.0	90.1	0.2
Losses / gains, euros and %							
Combined net income, change euro / year	47117	-5964	-4638	1327	-4714	-4641	73
Combined net income, change % / year		-12.7	-9.8	2.8	-10.0	-9.9	0.2

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