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## **Vertical policy conflicts in female employment enhancing**

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## 1. The aim of the study

Women are often considered as a labour force reserve for the labour market (Pylkkänen and Smith 2004). This situation seemed to change in Finland towards the end of the 1970s and the 1980s, when maternity and parental leave arrangements and child day care services were developed and women's employment pattern started to resemble men's long working age patterns. These changes lead also to a considerable increase of women working in the social and health care sectors. In the mid-1980s a new "cash for care" -scheme was introduced as an alternative for public support of public child day care provisions. The scheme came fully into force in 1990 and it covers children under 3 years of age. The new provision encouraged especially mothers to stay longer periods at home after parental leave than earlier. The contemporary labour reserve of women seems to arise in a self-accelerating manner: if women are encouraged to leave their jobs for childcare, they demand less day care services, which in turn reduces employment at the social care sector.

In Finland the public sector (the welfare state) consists of central and local authorities. The targets of the welfare state are set by the state (Central Government) and the implementation of the targets is the responsibility of about 350 autonomous municipalities (local governments). The Central Government is a tax author and supports the municipalities by state grants in implementing the welfare programmes. The autonomous municipalities have the right to levy taxes and to collect out-of-pocket user fees from public services. The municipalities are also big employers, they employ a third of employed women and about 20 % of all of those employed. Because the municipalities can choose their ways in implementing the statutory targets, the outcomes and ways of allocating the resources differ locally.

The implementation of public employment policies is connected with the provision of child day care. At the state level, the aim is to increase overall employment of women and men. After the economic recession in the early 1990s, many reforms in tax and benefit systems were made in Finland during the latter part of the decade. The aim was "to make work pay" by cutting the level of most social transfers and by introducing a new earned income tax allowance. The tax allowance rewards wage income, compared with transfer income at the same level.

High employment rate is pursued because the associated increase in public tax revenues helps to finance the needs of the welfare state. However, the high employment rate of mothers of young children implies a high demand for child day care provisions and thus a need to invest in child day care services. From the perspective of the local budgets, investing in services is more expensive than offering the alternative: cash for home or private care. Very little emphasis since the 1980s has been given to promote the sharing of parental care between the mothers and fathers, as policies focus mainly on women and on women's solutions of how to combine family and work. That is why local authorities may prefer women to stay longer periods at home with young children, and thus act against the aims of increasing employment. The short run economic incentives of the state and the local authorities in child day care and employment policies seem to contradict each other.

We are interested in assessing possible contradicting economic incentives of the Central Government and local governments concerning child day care and employment policies in

Finland. In this paper we map direct costs of childcare policies at individual, local (municipal) and state level using the method of static micro simulation. The micro data we use as a source of simulations is the Income Distribution Survey (IDS) from the year 2006 produced by Statistics Finland. We use the Soma-model for population level simulations and the Jutta-model to describe the tax system (Honkanen 2009; Parpo 2005). Our aim is to shed light on macro data by producing information from micro data and to contribute new views and information to the discussions of costs, aims and incentives of Finnish childcare policies.

The paper starts by describing the Finnish child day care provisions, expenditure and sources of financing (chapter 2). In chapter 3 we move to describe shortly the tax system, especially from the point of the problems with state and local taxes as far as child care and employment policies are concerned. Chapter 4 presents mothers' contemporary choices between child care and employment. Then we turn to analyse the costs of child care and employment from the micro level, focusing on the economic effects of the contemporary tax benefit system concerning child care and child care personnel (chapters 5 and 6). The final part of the paper discusses the findings and outlines plans for further study.

## **2. Child day care – the responsibilities of the public sectors**

### *Background of the Finnish child day care policies*

The issues of provision of maternity-parental leave and child day care services have been a matter of political passion in Finland since the 1960s. Finland became as one of the first Nordic countries which introduced public child care provisions (the Act on Child Day Care 1973) and rights for the fathers to participate in child care at home on paternity leave (1977) and to share parental leave (1980). Mothers' labour participation exceeded up to 80 percent in the 1980s even though there was still a huge shortage of supply of day care services at that time.

The support to publicly funded child day care has not been politically unanimous. The Act on Child Day Care was accepted with a resolution in the Parliament that an alternative public support to the families, who do not use publicly funded child care, should be developed. In the mid of the 1980s a compromise between the main parties in the Cabinet, (Social democrats and the Centre, former agrarian, party) was established. All the families with a child less than 3 years of age were guaranteed by subjective right to receive a place in public child day care or to receive child home care allowance. Irrespective of the name of the allowance, it could also be used in buying private day care<sup>1</sup>. The Acts came fully into force in 1990. The subjective rights to a place in public child care were enlarged in 1997 to cover all children below the obligatory school age.

Where do we stand now? The employment rate of Finnish mothers with minor children is one of the lowest in OECD-countries (Society at Glance 2005; Haataja 2005b in Pfau-Effinger et al.). In 1990 the share of children at age of 0-6 in public child care was in Finland 44%, which was about the average in the Nordic countries. In 2007 the share had increased

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<sup>1</sup> If the allowance was used for buying private services that lead to double taxing. Since 1997 there has been a separate public cash transfer for private child day care.

up to 52%, but lagged behind all other Nordic countries. (Nososco 2007)<sup>2</sup>. In a more extended perspective the Finnish situation looks even paradoxical. According to OECD the enrolment of children less than 6 years of age in formal child care and pre-school educational programmes is one of the smallest in Finland among 27 OECD countries. However, public spending on childcare, including pre-primary education, is amongst the highest as percentage of net national income (Society at Glance 2009, 77).

How this, partially contradicting information, can be interpreted? If Finland uses as much as other Nordic countries on public child care from national income, is the care organised expensively reflecting exceptionally high quality? If the quality of child care is high why so few children are enrolled in public child care in Finland? Or do these results reflect something else, like ineffectively organised care for relatively much fewer children than in other countries? Or does the result simply reflect wrong statistics? VASTAUS<sup>3</sup>: In Finland total child day care costs consists of both the services and the cash for care costs, but number of children in day care does not include children taken care at home.

There are no clear evidences from the changes in the gender equality policy at principle level during the past 20 years. On the other hand, the politics in practice have neither made special efforts to support sharing child caring between the parents<sup>3</sup> nor increasing mothers' employment. However, it is not clear how different policy aims finally appear in practice. Some policies which at first glance seem to have nothing to do with gender equality, may boost existing situation or support unintended developments.

Provision of child day care is a matter of politics, economics and labour market. This concerns both the individuals and the society. Who should pay and how much? What share of child care should be a part of public provision, what part financed directly by private households? How much should be invested in affordable and good quality day care services, how much and for how long publicly supported parental care at home should take place? Provision of child day care is also a matter of individual preferences, attitudes and family values. Furthermore, solutions of child care may depend on practical issues, such as supply, level and prices of day care facilities in one hand and on the situation of labour market of the parents (mothers) on the other hand.

### *Contemporary provisions*

The municipalities have the responsibility to organise public childcare so that nationwide goals of subjective child day care are met. At the moment (2009) there are 348 municipalities with autonomous administration and taxation. This is about one hundred municipalities less than ten years ago. Small municipalities are merging with their neighbours and a lot of local public tasks are carried out in co-operation by municipal federations, especially the tasks of health and social care and education.

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<sup>2</sup> In 15 years much development has happened in all Nordic countries e.g. in pre-school system and in most countries also in the parental leave schemes. So, nowadays age group 0-6 is not quite suitable to measure children's access to child care services. This age group, however, is the only group which can be followed since the year 1990.

<sup>3</sup> In 2003 fathers received a new right for 2 weeks after parental leave of their own leave. This right is, however, conditional, because fathers have first to share 2 weeks of traditional parental leave.

Public support on child care starts around the time when the child is born. Maternity and parental leave benefit schemes offer earnings related compensation or at least minimum benefit to all mothers and fathers, who take care of children during this period<sup>4</sup>. Parental leave benefits are financed by sickness insurance. Furthermore, some employers offer paid maternity leave, covering 2-4 months from the total period. Since 2006 the employers and employees have financed the earnings related part of the parental leave benefit and the state the basic level benefit for those with no former earnings. In 2006 total costs of parental leave benefits were 692 million euros. The employers financed a major part of the scheme (62 %), the insured 24 % and the state the rest, about 12 %<sup>5</sup>.

The length of the maternity parental leave period after the child's birth has been about 9-10 months since the 1980s, and 6 months of this period can be shared between mothers and fathers. After the parental leave period the responsibility of public support from child care moves to the municipalities. The shorter the parental leave period is the earlier public costs move from the sickness insurance (state-responsibility) to the local authorities – and vice versa. The right to leave from work during parental leave benefit period and the right to return the same or similar kind of work is unambiguous for those in permanent work contract. The leave period accumulates paid yearly vacation and pension as at work.

The municipalities have to answer for the costs of public support to child care between the age groups from about 10 months to obligatory school age of 7 years in Finland. Nowadays there are three alternatives for the parents to choose and the municipalities to organise:

- 1) Public child day care services at day care centres or at the homes of the family carers<sup>6</sup>. This option concerns all age groups after parental leave. Municipalities charge for using the services, but the state has regulated the maximum fees since 1997<sup>7</sup>. The fees are adjusted with family income and size.
- 2) The families, who have at least one child less than 3 years of age, can choose child home care allowance instead a place in child day care. If the siblings less than 7 years of age are taken care at home, too, the family receives allowance from the siblings, too. The statutory child home care allowance consists of basic care allowance, siblings' allowance and means tested allowance for low income families<sup>8</sup>. The municipalities can pay local supplements on the top of the statutory allowance according to their own rules. Child home care allowance is taxable income to the beneficiary. The parents have right to absence of work in the period of child home care allowance. This right is, however, not as strong social right as parental leave. The leave does not accumulate earning related pension, only pension years and a low flat rate level pension<sup>9</sup>.

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<sup>4</sup> Gross compensation rate on average female earnings (€ 2 294 per month, Statistics Finland) was 67% and net replacement rate about 76%. The level of minimum benefit was € 380 per month and net benefit after taxes was € 284.

<sup>5</sup> Social Protection Expenditure and Financing 2006. 7.3.2007. Statistical summary 9/2008. 7.3.2008 <http://www.stakes.fi/tilastot/sosiaalimenot>.

<sup>6</sup> Family carers are persons who take care of children at their home, who are hired by the municipalities and who have right to different kind of activities, education and support in their care work.

<sup>7</sup> Maximum child day care fee from the first child was € 200 (€ 233) per month, from the second € 180 (€210) per month and the rest of the children 20% from the first child's fee in 2006 (2008).

<sup>8</sup> Basic child home care allowance was € 210, means tested supplement maximum € 168, supplement from the siblings, € 84 per each other 3 olds and € 50 dder siblings in 2006.

<sup>9</sup> These rights are rather young and introduced in the pension reform 2005.

- 3) Private child care allowance is aimed to support purchasing private child day care services for the children under the school age. The support compensates private care costs and is paid by the municipalities directly to the provider of care and the providers of care have to be accepted by the local authorities. The level of support is about the same category than home care allowance, except that the support is the same per every child. The municipalities can pay local supplements on the top of the statutory allowance, too<sup>10</sup>.

The pre-school system was introduced at the turn of 2000 in the whole country for the children at 6 years of age. Depending on the municipality the pre-school is organised either by the social or the educational sector. Pre-school is free of charge and organised on part-time basis. The rest of the day the children are entitled to use child day care services.

Municipal supplements on the top of statutory child home care allowance are aimed to decrease the demand of child day care services. There has been some correlation between the prevalence of municipal supplements, the level of statutory allowances as well as mothers' employment rate. In the turn of the 1990 when the child home care allowance came fully into force as well as subjective rights to child care services, the municipalities had difficulties to meet the targets, and municipal supplements became common. The economic recession in the following years practically ended labour demand and unemployment increased dramatically both among women and men. At the same time statutory child home care allowance was increased, and the demand for child day care services dropped dramatically. Municipal supplements were offered only in a couple of big cities. Later in the 1990s, when statutory allowances were cut and subjective child day care rights were enlarged to all children under school age, the prevalence of the supplements has increased again (Sources ).

In 2007 about 62 percent of all municipalities did not offer any kind of supplements on statutory allowance, but only about 20 percent of all children under school age were living in these municipalities. Supplements for only child home care are paid only in 5 municipalities, covering 5 percent of children, but supplements paid on both for child home care and private care were paid in 11 % of municipalities. In these municipalities lived 46 % of all children under school age. Supplements for only private child care are paid in 21 % of the municipalities and in these municipalities lives 29 % of small children (Miettunen 2008).

Child care is highly gender segregated. Men use nowadays very often paternity leave, when mother is at home. Nowadays about 80 fathers per 100 born children takes up paternity leave. Instead, sharing the parental leave is still rather rare. About 10 percents of ended parental leave periods are paid to the fathers, and the period is on average about one month from total maternity-parental leave period. Fathers share is even less of the users of child home care allowance. Only 5 percents of all beneficiaries are men. From mothers 83 percent start child home care allowance period just after the parental leave period (Kela 2008).

### *The expenditure and financing*

Total expenditure on families and children was 11.1% from total social expenditure in 2006. About 80 % of the expenditure on families and children consists of non-taxable child allow-

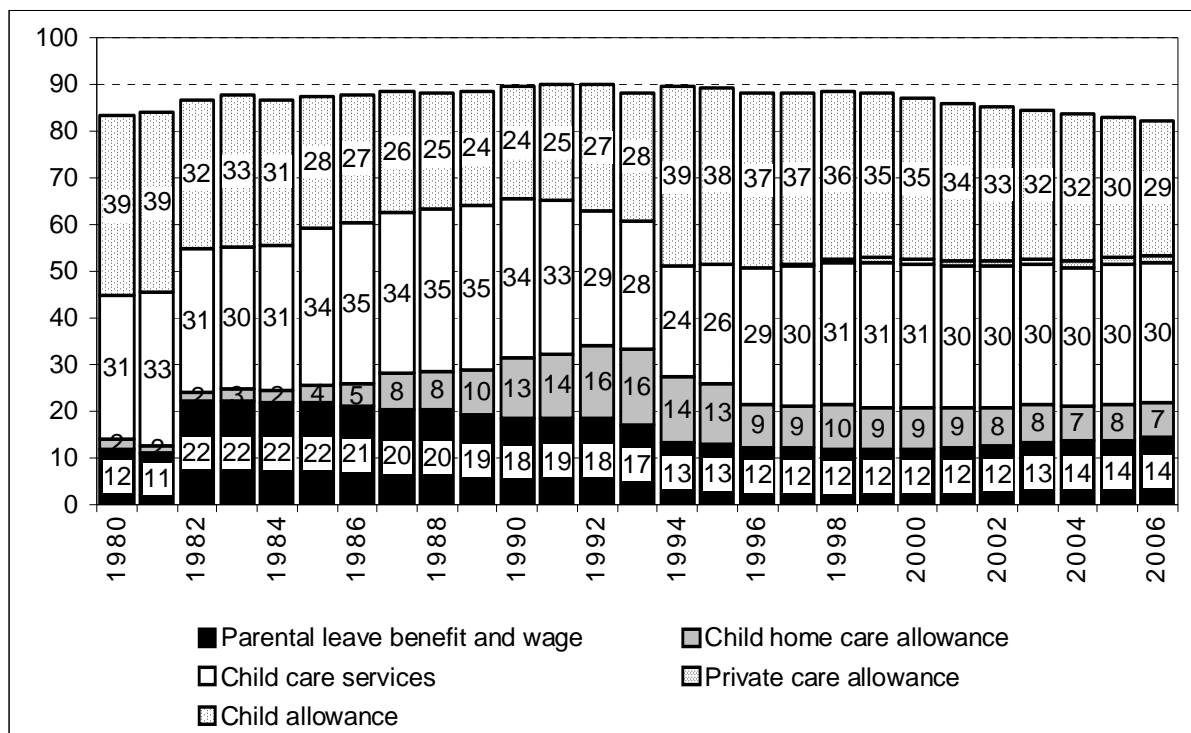
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<sup>10</sup> Average day care fee per child in private care was € 509 per month in 2006 (Kela 2006).

ances (29 %) and child care services and transfers (54 %). The share of expenditure on child care increased from 45 % in 1980 until the turn of the 1990s up to 60 percent. The drop of the share later to 50 percent was due to changes in tax-benefit scheme of child allowances: Tax allowances from children were abolished and partially compensated by increasing the level of universal, non-taxable child allowances in 1994 (Haataja 2005a; Hiilamo 2002). (Diagram 1).

Parental leave reform in 1982 made the benefits taxable and earnings related without ceiling, which doubled the expenditure from 11 to 22 percentages. Later, in the 1990s the share has fallen, partially due the cuts in the earnings related benefit and partially due to the changes of beneficiaries' socioeconomic structure. The share of female recipients of earnings related benefit dropped and the share of recipients only of basic parental leave benefit increased from about 5 percents up to 30 percents in the 1990s. Child home care allowance was put to the test already in the 1980s in different parts of Finland. The share of child home care allowance was at the grates (16 %) of total family and children expenses just after the scheme came fully into force in 1990 and some years after. Entitlement rules of the allowance and the level of the statutory allowance was cut later in the 1990s and the share of allowance from the total family expenditure has dropped. (Haataja 2005a). The expenditure on child day care services has been about 30 percent since the late 1990s.

Diagram 1. The expenses on different provisions of child care and child allowances as percentage of total expenses for family and children in Finland 1980-2006. (Source: Social expenditure in Finland according to EU classification, Stakes / THL).



The total expenditure of child day care consists of the operating costs in child care centres and in family care homes as well as of allowances for child home care and private care (table 1)<sup>11</sup>. In 2006 total child day care costs for the municipalities were 2 170 million euros. Child day care services counted 57 % and municipal family care 21 %, together 78 % of total mu-

<sup>11</sup> Kuntien tunnusluvut 2006-2007. Altika. Statistic Finland.

municipal child care costs. The rest of the child day care expenditure was based on the child home care allowance (358 million euros) and private care allowance (63 million euros). (Table 1.)

Majority of the operating costs is coming from wage expenses of professionals and other staff in child day care centres and in family care. The returns from operating costs, which are mainly child day care fees, counted 286 million euros. Client fees counted 11.6% of total gross expenditure. This makes the net costs of public child day care services 1 420 million euros. The state financed the net costs by grants with on average by 31 %, the rest being left on the responsibilities of the municipalities in 2006.

Main part (85 %) of the expenditure of the cash for care schemes is based on child home care allowance. The private care allowance has minor role. The share of local supplements is higher (57 %) for the costs of private care allowances than for child home care allowance (13 %) in 2006. The sum of the local supplements for child home care allowances, however, is bigger (45 million euros) than for private care allowance (34 million euros). Due to municipal supplements the state grants finance less child home care and private allowances than child day care.

Table 1. Financing cash for care transfers (parental leave benefits and child home care and private care allowance) and child day care services (net) in 2006.

Social expenditure in 2006	Total net expenditure, millions	Total expenditure, %	State	Municipalities	Employers	Insured	Transfer from/to funds
Parental leave benefits	692	100,0	11,8	0,0	62,4	23,6	97,8
Salaries in benefit period	51	100,0	0,0	0,0	100,0	0,0	100,0
Child home care allowance	358	100,0	27,4	72,6	0,0	0,0	100,0
Benefits in kind	1525	100,0	30,6	69,3	0,0	0,0	99,9
Public child day care	1462	100,0	31,4	68,6	0,0	0,0	99,9
Private care allowance	63	100,0	12,7	85,7	0,0	0,0	100,0

Source: Social Protection Expenditure and Financing 2006. 7.3.2007. Statistical summary 9/2008. 7.3.2008 <http://www.stakes.fi/tilastot/sosiaalimenot>. Client fees are included a part of total costs of public child day care, and deducted from net expenditure.

Official statistics publish child day care costs per child. The costs are calculated by dividing the net costs of child day care by the number of children enrolled in child day care in the end of the year. In the end of 2006 there were 189 000 children in public child day care and costs per child varied from 7 000 to 7 700 euros depending on the form of care. Net costs per care days varied correspondingly from 41 to 44 euros per day (table 2)<sup>12</sup>. There were totally 34 million child day care days in 2006. About 20% of the days were part-time days, but costs per part-time days and full-time days are not calculated separately.

Public debate repeats that public child day care is much more expensive than child home care allowance. However, official statistics do not publish any estimates of the child care costs in the cash for care schemes. The argument is understandable; if we compare the average cost of € 7 497 per child in child day care with the child care allowance. The gross allowance was

<sup>12</sup> In fact there are big variations of the costs between the municipalities in organising child day care services (Kangasharju and Altonen 2006).

3 530 (or 5 550 with means tested supplement) euros per year from the first child in 2006. The siblings increase the costs only by 1 000 or 600 euros per child per year, depending on the age of the siblings. If we divide total costs for child home care allowance per 127 500 children in the end of the year 2006 (as is done with child day care costs) we get average gross costs of 2 452 euro per child per year. Net costs are lower, because child home care allowance is taxable income

Table 2. Child care expenditures in public child care services and municipal home care, million euros per year and euros per cared child and day in 2006.

Public child day care	Expenditure millions	Income (Incl. Care fees) millions	Net costs	Net costs per child Euro/year	Net costs per care day Euros
Child care service centres	1 240,4	196,5	1043,9	7 695	44
Child care in family care homes	460,1	84,5	375,6	6 998	41
Total / On average	1 700,5	281,0	1419,5	7 497	43

Source: Altika, Kuntien tunnusluvut 2006-2007.

As a summary, official macro statistics overestimate the net costs of child day care services, because tax returns of the employed parents' and child day care personnel are not taken into account. Also the costs of child home care presented above do not take account tax returns from the taxable allowances. On the other hand, the costs of the child home care allowance are underestimated, because the losses of wage income are not taken into account from the care periods. Some of these aspects will be re-assessed by using micro data and microsimulation models in the chapter 5. Only one earlier study questions the official simple way to express child day care expenditures and assesses the impact of lost wages of child home carers and tax returns (Kajanoja 1999). This study, however, did not use representative micro data and micro simulation models, but applies case families in the calculations.

### 3. Incentives of the tax system, state grants and tax base equalisation

#### *Tax systems*

The municipalities collect about one fifth (21%) from total tax revenues and the share has varied only little since 1990<sup>13</sup>. Local taxes are proportional. In 2006 the tax-rate varied between 16.5 and 21 percentages between the municipalities and was on average 18.6%. The average tax rate has increased since 1990 by 1.92 percentage points. Low incomes are tax free due to the basic tax allowance from income in municipal taxation. The level of the allowance has been € 1 480 per year since 2002. The municipalities can decide the local tax rate, but the state introduces the tax allowance schemes, also to municipal taxes.

State collected taxes from income and wealth 18-19 percent to total tax revenue. State taxation is progressive and starts from higher income level (€ 12 200) than municipal taxation. Social security contributions for statutory sickness insurance, unemployment scheme and pension are taxed on proportional bases, too, and the percentages may vary yearly. The share of the contributions paid by the insured (i.e. all citizens) from income in total tax revenue has increased from 4.8 in 1990 to 7.5 in 2006. For total tax revenue social security contributions

<sup>13</sup> Tax revenues in Finland 1990-1997, Statistics Finland, 10.7.2008:  
[http://www.stat.fi/til/vermak/2007/vermak\\_2007\\_2008-07-10\\_tau\\_002.xls](http://www.stat.fi/til/vermak/2007/vermak_2007_2008-07-10_tau_002.xls)

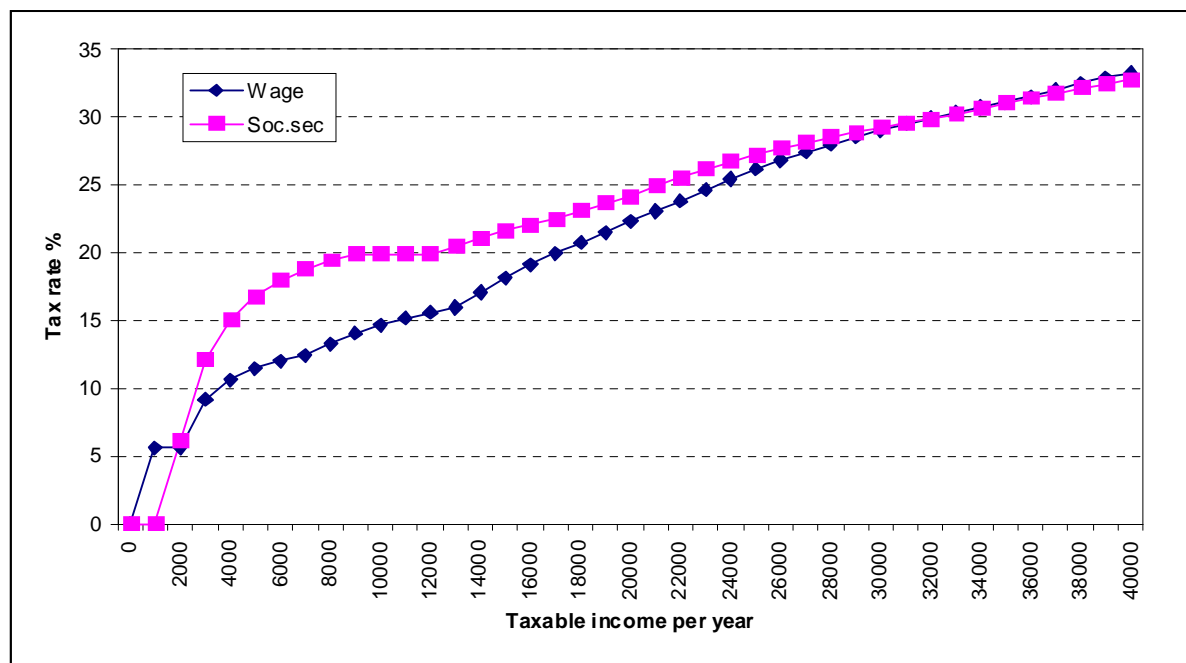
produced 8 percent in 2006. Other state taxes than taxes from income and wealth and social security contributions counted totally 32 % to total tax revenue.

The employers pay 20% from the total revenue. However, the level of social security contributions varies by sector and according to other characteristics of the employers. Here it is important to recognise that the municipalities pay on average the highest employer contributions, on average 31 % from wages (1996). The respective average contribution level for the state as employer was 25 % and private employer 21 % in 2006. As a summary, this makes hiring staff more expensive for the municipalities than to the other employers.

### *Earned income tax allowance*

Municipal taxation is not totally proportional due to tax allowances. The concern for low-income population groups the central government introduced a basic tax deduction to the income tax in the beginning of 1990's. Right after that, the central government started systematically to develop work incentives to the income tax schemes by earned income tax allowance since 1996. The idea was to make also low paid jobs to 'pay'. The allowance is aimed especially for low income earners but covers a wide range of income levels. In practice the allowance means that net income from the same income level is higher from wage income than from transfer income. (Diagram 2.) The total value of earned income tax allowance was 7 336 million euros in 2006. Since 2006 a small part of the allowance can have been done in state taxation.

Diagram 2. The tax rates of the wage earners and peoples on transfer income in 2006, %. (Source: Jutta-model).



The philosophy making 'work pay' rewarding wage income instead of transfer income is largely widespread in the western countries. The persons who are in focus of activation to employment are normally considered as unemployed. The parents of infant children are, however, motivated by transfers out from labour market to take care of their children at home. However, the parents are 'punished' in the same way as the unemployed, while their tax rate increases during child care periods compared with tax rate in employment. From the

parents' perspective this can be seen as double punishment, while the levels of transfer are always lower than wage. In the long run, also the levels of parental leave benefits and child home care allowance have been cut in the 1990s, which make parenting even less economically rewarding (Haataja 2005a).

The earned income tax allowance creates disincentives to local authorities to employ or keep permanent full-time employment for low-income vacancies. The municipalities would not lose very much in tax revenues if their employees are temporary unemployed, or on longer compensated leaves, because tax returns do not reduce with the same amount than wage income. In the same way, if the mothers with low potential wage in the private sector stay at home and receive cash for care benefits instead of demanding child day care services, the municipalities would not lose as much as could be expected in tax returns.

Our assumptions are, however, hypothetical until examined. One of the aims of the next chapters is to assess the immediate impacts of tax systems on public costs and family income.

Earlier studies have pointed out some problems in contemporary tax system. Then the focus has mostly been on low income persons, who live with social transfers and who cannot manage without living support (Honkanen 2006; Peltola and Melender 2008). Sometimes taxation alone decreases the income level so that the persons have to apply living support, which paradoxically is financed by the municipalities. "Kati Peltola's fair tax-model" would abolish separate state and local tax systems and she suggests one tax scheme with progressive taxation and simple allowance system. Basic tax allowance should relieve all income below a certain limit from taxes, after which progression would tax all the persons according to their ability to pay taxes. Honkanen has calculated different alternatives to reduce income traps for low income groups. One of the alternatives was to increase the level of municipal basic allowance, i.e. to increase the limit of tax-free income. Viitamäki and Mustonen (2004) calculated public costs and profits of employing the unemployed. They found out that about 50-60 percent of total public gains accumulate to the central government's funds and local governments benefit only 8-12 percent.

### *State grants and revenue sharing*

The local public sector in Finland accounts for almost 20 percent of the GDP. This volume of financing can only be achieved by having local governments as part of the national tax system. Since the tax base bears large variation between local governments, a state grant system and revenue sharing are necessary to equalize the tax revenues. State grants were reformed in 1993. Since then so called "capacity classification" was replaced by formula based sector grants. The grants are assigned by different criteria applied to education, health care and social welfare services. The calculatory costs for child day care base on local age structure (number of children less than obligatory school age) and to some extent to local employment situation. (Moisio 2002).

The state grant is to guarantee a horizontal equity in service provision across municipalities. The tax equalization is done between the municipalities, but equalization includes adjustments by the state. The tax revenues are adjusted on the basis of a municipality's calculated tax revenue. The idea is that a municipality cannot influence the adjustment level that is granted by its own decision on the tax rate. The adjustment share a single municipality enti-

tled to (could be negative as well) is given by multiplying the municipality's tax base by the national average tax rate. The adjustment level is 91,86 percent of the national average of the calculated municipal tax revenues per inhabitant. If the calculated tax revenue is below the adjustment limit, the municipality receives a sum of adjustment which amounts to the difference between the adjustment limit and the municipality's calculated tax revenue per inhabitant. If the calculated tax revenue exceeds this limit, the municipality's state share is reduced with an adjustment allowance corresponding to 37 percent of the difference between the calculated tax revenue and the adjustment limit.

#### **4. Child care provision and mother's socioeconomic status**

##### *Care arrangements*

Public support on child care depends on the age of the child and especially on the age of the youngest child when child home care allowance is concerned. When the mother or father is on parental leave and all children are simultaneously at home, the family is entitled only to parental leave benefits. However, if the level of parental leave benefit is lower than child home care allowance with supplements for the siblings cared at home would be, the difference between these benefits is paid on the top of parental leave benefit. That can happen when parental leave benefit is very low, practically at minimum level, and there are at least 2-3 siblings at home. It is also possible that elderly siblings use child day care services during parental leave or child home care allowance period. Anyhow, it is rather common in Finland that if the youngest child is less than 3 years of age, the older siblings are also taken care at home.

In 2006 there were about 307 000 mothers with the youngest child maximum 7 years of age, i.e. with children who have been entitled to some form of public child care support during the year (table 3). The mothers had near 640 000 children and on average about two children per mother. Two third of the children were less than 7 years of age and entitled to child day care services. About 90 000 children entitled their mothers or fathers to parental leave benefits at least some period during the year, and about the same number of children less than three years of age entitled their parents and their siblings to child home care allowance. As a summary there were about 185 600 mothers who could have taken care of totalling about 294 000 children less than 7 years of age at home and receive cash transfers for child care.

Most of families benefited several forms of public support to child care during the year. This is partially because when the child reaches certain age limit the forms of the public support changes (from parental leave to child home care allowance or child day care, from child day care to primary school or statutory education, etc.). One family can also organise child care differently for different children at the same time, some of children are at home, some in child day care outside home. It is very common to present the share of children enrolled in public child day care by age of the children (Society at Glance 2009; Nososco 2008). This way gives a simplified picture of every day life in the families. The different combinations in practices can be seen in diagram 1 and 2 in annex 1.

When we look at child care provisions from the perspective of the mothers we can see that 43 percent of mothers with children less than 7 years of age use only child day care services (diagram 2 in Annex 1). About total 35 percent of mothers are on parental or child home care

leave and one fifth (21 %) use both leave provisions and services for their children during a year. Only 13 percent of mothers do not use any provision for child care. The use of public pre-school provisions for the 6-years is not visible in these statistics. Participation of children in pre-school is near 100 percent in Finland.

Table 3. The number of mothers and their children by age by groups in 2006 (the youngest child maximum 7 years of age).

Age of the youngest	Mothers	0-10 months	11-24 months	3-6 years	Total less than 7	Older	Children total
Total	307 400	91 200	87 500	217 600	396 300	241 200	637 400
0	61 200	56 600	23 000	23 700	103 300	20 300	123 600
1	51 100	34 600	20 000	26 700	81 300	21 700	102 900
2	43 700	0	44 500	21 800	66 300	25 700	92 000
3	29 600	0	0	42 800	42 800	19 600	62 500
0-3	185 600	91 200	87 500	115 000	293 700	87 300	381 000
4-7	121 700	0	0	102 600	102 600	153 900	256 500

Long parental leave and other leave arrangements for child care decrease the demand of child day care services, especially if the benefits are at high level and reward from the number of children taken care at home. The share of children in child day care, public or private, increases steadily when the child has reached the age of one year. At the age of 4-6 the share of children in child day care is at the highest 80%. Then the shares decrease due to pre-school and obligatory school (diagram 1 in annex 1). But when we look at total public provisions for child care according to the age of the youngest child in the family, we can see that 90% of all children are covered by some support when the youngest child is maximum 3 years of age in the end of the year (diagram 2 in annex 1).

#### *From long term caring to employment and long-term unemployment*

Mother's socioeconomic position is employed and economically active, if she is on paid maternity and parental leave<sup>14</sup>. She is classified outside labour force, if she is on child home care leave or receives the allowance without being on leave.

Mothers' situation corresponds the use of child care provisions (table 5). Mothers with children maximum 1 year of age in the end of the year are engaged to child care at home on parental leave or they have started child home care allowance period. Almost 30 of mothers with the youngest child at the ages of 2-3 years are also engaged to child home care. After that already 81 percent is in employment, but long term unemployment increases up to 10 percent.

Lower long-term unemployment rates when the child is younger may reflect the situation that child home care benefit is chosen instead of unemployment benefit. In fact, about a half of the mothers who receive child home care allowance, have no work contract, and they are not on leave (Haataja 2008). Anyhow, only very few mothers in Finland stay at home when the cash for care periods end, and they return the labour market.

<sup>14</sup> In the IDS socioeconomic status is based on all activities during the year. The activities and income which form majority give the final status. Mothers who start their maternity leave in the last part of the year are also mostly classified as economically active

Table 5. Mothers with children 7 years or younger: Socioeconomic status in 2006 (Source: IDS).

Socio-economic status	Total	The age of the youngest child		
		0 - 1	2 - 3	4 - 7
Mothers	307 400	112 300	73 300	121 700
Total %		100	100	100
Economically active	178 000	32	59	81
On paid parental leave, other	45 100	37	2	2
Taking care of household	48 900	22	29	2
Long term unemployed	23 900	6	7	10
Student	11 400	3	3	5

## 5. New perspectives to the costs of child care: from micro to macro

### *Working mothers financing child day care services*

In this chapter we enlarge the concept of net cost of child care, presented in the chapter 2 (table 2) and to take into account the taxes the parents pay when enrolling children in child day care. First, it is possible to estimate child day care fees paid by the families per care day and per child from the income distribution survey (IDS)<sup>15</sup>. The IDS produces total 39 million care days from total 234 300 children enrolled in child care centres or family care homes in 2006. The average time per year in public child day care was 8 months per child. If we use on average 21 care days per month we get totally about 39.5 millions care days. That is 17 percents more than care days in the official statistics in 2006. We do not separate full-time and part-time care days because that is not done in published statistics either.

By multiplying child day care days from the IDS by average 'official' net cost per day (€ 43) and adding on top the child day care fees paid by the parents from the IDS, we get practically same size of the net (1 424 million euros) and gross costs (1 699 million) than official statistics offer (table 6, compare table 2).

While the choices between employment and child home care are practically women's choices, we calculate the tax returns of mothers' income and child day care fees paid by the mothers, whose children use child day care (table 6). In these families majority of mothers' income is wage income (78 %) and about 10 percent transfers from parental leave benefits, child home care allowance or from unemployment benefits<sup>16</sup>. Mothers pay direct income taxes 23 % and return to the public sector total 30 % from their income when child care fees are included.

The tax returns in municipal taxation and day care fees of the mothers covered almost a half (47%) of total child day care costs in 2006. To total tax revenue mothers' taxes and fees contributed about 2/3 of the gross costs of child day care. The state grants to social service sector was 459 million euros and 31 % on average in 2006<sup>17</sup>. State grants together with municipal

<sup>15</sup> The care periods are interviewed two times per year as months. Months are changed to care days by multiplying the number of months by 21, which is average number of work days per month.

<sup>16</sup> About 60 000 mothers had received also child home care allowance at least some period during the year.

<sup>17</sup> Social Protection Expenditure and Financing 2006. 7.3.2007. Statistical summary 9/2008. 7.3.2008 <http://www.stakes.fi/tilastot/sosiaalimenot>

taxes and child day care fees paid by the mothers, amount about 80 percent of total child day care costs.

Table 6. Mothers' with children enrolled in child day care according to age of the youngest child: Income, taxes and child day care fees and the coverage of taxes and fees of the child day care costs in 2006 (€ 1 000). (Source: calculations from IDS).

	Age of the youngest child		
	Total	0 - 3	4 - 7
Mothers with children in day care	175 500	80 600	94 800
Total taxable income ( € 1 000)	4 070 900	1 871 900	2 199 000
Wages and salaries %	78,4	67,8	87,4
Unemployment benefits %	2,2	4,7	0,1
Parental leave benefit %	3,6	7,9	0,0
Child home care allowance, %	3,7	3,5	3,9
Total taxes (€ 1 000)	945 100	429 400	515 700
Municipal taxes (€ 1 000)	527 900	230 800	297 100
Taxe rate, %	23,2	22,9	23,4
Child day care fees (€ 1 000)	274 700	134 600	140 100
Tax rate plus care fees, %	30,0	30,1	29,8
Municipal child day care costs before the fees 1)	1 698 700	825 200	873 500
Mothers' share of financing (locally)	47,2	44,3	50,0
Mothers' share of financing (totally)	71,8	68,3	75,1

1) Calculated from the care days and children in child day care in the IDS and multiplied with the average 'official' cost per care day.

As a summary, according to these calculations working mothers and the state finance 80% and the municipalities finance only 20 % from total child day care costs. In practice, the compensations and effects of employment and tax returns are not so straightforward. The situations vary between municipalities as well between the families and mothers' economic position. For the municipalities, increased tax returns from mothers' employment may be cut in the final fiscal equalisation process between the municipalities (see chapter 3). However, one of the following steps in this project will be to employ hypothetically all the mothers after the parental leave period and enrol their children in child day care, and assess the outcomes at macro and micro level.

### *Child home care is really cheap?*

Even though there are no official estimates about the child care costs of cash transfers per child, it can be calculated from the IDS in the corresponding way than child day care costs.

Child home care allowance is taxable income. As transfers these incomes are lower than wage income and as lower income taxed also lighter than wage income. However, transfer incomes are not entitled to municipal earned income tax allowance and are taxed heavier than wage income at the same level. Because municipal taxation starts from lower income level than state taxation, taxes from transfer income return considerable more to the municipalities than to the state.

Parental leave benefits are not calculated as such as 'child day care' because these benefits are not considered as an alternative to child day care services like child home care allowance is. Anyhow, it is good to remember that tax returns from these benefits benefit mostly munici-

palities. If the parental leave benefits, totalling 611 million euros paid to the 94 000 mothers, were not taxed, had total tax revenue decreased with 172 million euros. The net costs of parental leave benefits were 438 million euros and mothers paid back to the public sector immediately via taxation 28 % in 2006. The municipalities received 74% of the taxes from parental leave benefits.

In 2006 there were totally 121 000 mothers who received child home care allowance at least some time during the year. The total sum of allowances was 336 million euros, from which the mothers paid taxes 80 million euros (24 %). Thus the public net costs of child home care allowance were 256 million euros. About 80 % of all taxes paid from child home care allowance returned to the municipalities.

Table 7. The gross and net costs of child home care allowance of the mothers who received child home care allowance for the municipalities in 2006\*. (Source: IDS and soma-model).

	Gross	Net
Child home care allowance, € 1 000	327 400	250 521
Mothers receiving allowance	107 000	
Children taken care by allowance	186 600	
Municipal costs per estimated number of children, €	1 755	1 343
Municipal cost per estimated care day, €	12,4	9,5

\* These numbers do not match quite total numbers in the IDS, which is due to that the child home care model does not identify exactly the number of the all children in home care.

With the help of the IDS and Soma-model it was possible to calculate the net costs of child home care allowance per cared child. The IDS survey does not as such gives exact information about children in home care, but can be estimated by the model (table 7).

Using the ISD data and Soma-model we get estimation which is far less costly per child than cross cost calculations presented in the chapter 2. In these estimates average length per child on child home care allowance was 7 months, but care time for the siblings is, so far, rather rough estimate.

To conclude, immediate child home care costs for the municipalities are much cheaper than child day care costs. These calculations do not take account the losses of tax revenues nor the losses of wage income of mothers and families. These indirect costs are important, not only in the short but also in the long run to the mothers themselves as well for the welfare state. In order to get the idea of the scope of the economic impact of the two alternatives of child day care provisions, child day care services and child home care, there are two more aims for the simulations in the future: a) to assess the costs of lost earnings of the mothers who have now chosen the child home care alternative and b) to assess the economic and distributive immediate impacts of the situation, if all the mothers entitled to child home care allowance would choose it instead of employment.

## 6. Punishing and rewarding by municipal earned income tax allowance

### *Transfer income productive to the municipalities?*

One could ask, why the philosophy of ‘making work pay’ is applied to the parental leave and child home care allowance periods? Earnings related parental leave benefits are accumulated from the earnings and there are no policies to encourage the parents to leave children less than 9-10 years of age for employment. The parents are encouraged to take care of their infant babies.

The question is not so unambiguous when considering child home care allowance and leave. The parents are offered to choose between the two alternatives: cash for care or child day care services. However, there is no real policy to encourage women to choose child day care services and return the employment earlier. There is neither any policy to encourage the fathers to share child home care periods, such as there are, for example, in the parental leave scheme. Parental leave benefits and child home care allowance are justified by the children’s need for parental care and the parents’ needs and wishes to stay with their children.

Table 8. The impact of municipal earned income tax allowance (million euros) on taxes if extended to parental leave benefit and child home care allowance, all beneficiaries in 2006.

Benefit type € 1 000 000	Parental leave benefit		Child home care allowance		Total	
	Actual taxation	Potential loss/gain	Actuald taxation	Potential loss/gain	Actual taxation	Potential loss/gain
Mothers	141 610		128 160		210 730	
Taxable income	3 315		2 144		4 404	
Parental leave benefit	666		369		666	
Child home care all.	157		350		350	
Total taxes	808	- 48	449	- 50	4 404	- 61
Municipal taxes	455	- 31	267	- 33	1 034	- 40
Tax allowance	236	144	169	157	599	186
Net income	2 508		1 695		3 370	

If the parents would be rewarded from child care at home as paid work by tax allowance, it would be rather costly to the municipalities. Furthermore, the parents would benefit from the allowance and receive an indirect promotion to their net benefit level. By computing new taxes regarding both parental leave benefit and child home care allowance equal to wage income, we will see that total tax revenues would decrease by 61 million euros and municipal taxes alone 40 million euros (table 8). The value of tax allowance in total taxation is almost equal with total public expenditure spent in private child day care allowance in 2006 (see table 1).

### *Care work is not wage work*

At the individual level the impact of municipal earned income tax allowance varies. For one share of the parents the allowance has minor importance, while they use these transfers rather short period during the year. For instance, fathers use parental leave benefit commonly for

paternity leave on average only 14 days on average. The average effect of the allowance on the net income of the parents is 288 euros per year.

The situation changes when we assess the impact of the allowance only on those parents whose yearly income mainly consists of transfers. In table 9 there are only the mothers, whose taxable income consists of at least 50 % either from parental leave benefits or from child home care allowance. In 2006 there were about 38 000 mothers, whose income depended mostly on parental leave benefits, and 34 000 mothers, whose income depended mostly on child home care allowance.

Table 9. Average taxable income per mothers, of whose income at least 50% is either parental leave benefits or child home care allowance in 2006.

Euros per year per person	Parental leave benefit > 50%			Child,home care allow. > 50%		
	Actual taxation	Taxes with allowance	Potential loss/gain	Actual taxation	Taxes with allowance	Potential loss/gain
Mothers	38 110			33 700		
Taxable income	13 430			6 505		
Parental leave benefit	9 180			610		
Child home care all.	1 350			4 954		
Total taxes	2 620	1 820	- 800	1 004	480	- 524
Municipal taxes	2 100	1 580	- 520	849	490	- 359
Value of allowance	440	2 880	2 440	35	1 728	1 693
Net income	10 810	11 610	800	5 501	6 025	524
Tax rate	19,5	13,6	- 5,9	15,4	7,4	- 8,1

The average monthly gross income per parental leave mother was about 1 100 and per child home care allowance mother 540 euros. Thus both of the groups had on average low income. The absence of municipal tax allowance kept tax rate rather high, 6 percent higher for mothers with parental leave benefit and 8 percent for the mothers with child home care allowance. If the mothers were rewarded by the municipal earned income tax allowance, mothers with parental leave benefit would win 800 euros per year and mothers with child home care allowance 520 euros. For them this would mean one months' extra allowance compared with actual situation.

#### *The costs of full-employment in the child day care sector*

In 2006 personal-years in municipal child day care sector were 46 700. This formed a fair 20 percentage of total municipal personal-years (SVT 2007). About one third of the personnel were working as family carers (persons who are hired by the municipality to take care of children in the carers' homes). One fourth of personnel were teachers, with as a rule university degrees. There are certain norms in the Act and decrees on child day care how many and what kind of personnel should be at present in child day care centre of family care homes, but the municipalities have sometimes problems to keep the norms, especially that concerns the periods when substitutes are needed.

Majority of the staff are childminders with medium or lower education. Their salaries varied between 1 600 – 1 900 euros per month, and the salaries of child day care teachers were on average just above 2 000 in 2006 (Kuntasektorin palkat 2006). The average female wage was € 2 292 per month in 2006, which means that child care personnel is less paid on average than women on average in Finland.

According to the Labour Force Survey (LFS) female the labour force in the whole social and health sector about 90 percent were employed and the rest were unemployed or under-employed. Under employment in this sector often occurs via temporary work contracts. About 25 percent of the personnel in the sector have temporary work contract.

For the IDS a special variable was constructed in the Statistics Finland to describe the total personnel in child day care sector during a year. This variable summarises different occupations and gives an estimate about 60 000 persons working in the area in 2006. In this group about 10 000 persons had been at least some time unemployed and received earnings related unemployment benefit. Furthermore, there were also persons, who had received basic unemployment benefits. Temporary work contracts explain that there are more persons receiving unemployment benefit during a year than average unemployment rate lets us to expect.

Above we have argued that it might not be very 'profitable' for the municipalities to keep low paid employees in permanent work contracts due to tax system and high employer costs of the municipal employers. Next this argument is tested empirically. All the employees in the child day care sector will be "employed", if they have received earnings-related unemployment benefit in 2006<sup>18</sup>. First the unemployment benefit is replaced by the earnings before unemployment and then the immediate gross and net costs for the public sector are calculated. The results are presented in table 10.

Table 10. Original and simulated income and taxes from the employees of public child day care personnel, if unemployment periods and benefits were replaced with employment and wages. (Source: Soma-model calculations from IDS 2006).<sup>19</sup>

Income and taxes, € 1 000 per year	Employed (sim)	Unemp- loyed (orig.)	Change	%
Persons	10 400	10 400		
Total taxable income, € 1 000	192 735	179 400	13 336	6,9
Sum of wages, € 1 000	170 617	125 589	45 027	26,4
Municipal employer costs, 31 %	52 891	38 933	13 959	26,4
Total wage costs, € 1 000	223 508	164 522	58 986	26,4
Sum of taxable transfers	16 307	47 998	-31 692	-194,3
Taxes and contributions, total, € 1 000	38 090	34 050	4 041	10,6
Municipal taxes, € 1 000	22 935	22 162	773	3,4
Tax allowance (municipal), € 1 000	36 664	29 561	7 103	19,4
State taxes from earnings, € 1 000	2 225	1 529	696	31,3
Net income, € 1 000	154 645	145 350	9 295	6,0
Net income per employee, € per year	14 830	13 938	892	6,0
Tax rate, %	19,8	19,0	0,8	
Net costs of the municipalities, € 1 000	200 573	142 360	58 213	29,0
The share, % of total municipal costs	18,2	13,1	5,1	28,1

Employing the unemployed child day-carers in 2006 would have decreased unemployment benefit costs about € 31 millions and increased direct wage costs of the municipalities by € 45 millions. Increase in indirect wage costs (employers' social security contributions) would

<sup>18</sup> We leave out those unemployed because there is no information about former salaries of these people unlike from those who receive earnings related benefits. Furthermore, if the person receive basic unemployment benefit or means tested labour market support, she/he may be young with no or small work history, and perhaps not yet reached her/his full profession.

<sup>19</sup> NB: These calculations are first step calculations with not much checking and adjusting yet!

have been € 14 millions, thus total increase in wage costs had been € 59 millions. Increased wage income would increase total tax revenue by € 4 millions, from which only 0.7 millions would have benefited the municipalities. This is due to impact of municipal earned income tax allowance. The value of allowance deductible from income increased about € 7 millions. Increased income increased the tax rate only by 0.8 %-points.

To conclude, there are no real economic incentives to the municipalities to keep the child day care personnel in permanent work during the whole year: tax returns from increased wages would only be 0.7 million euros while direct gross wage costs would increase by near 60 million euros.

However, indirectly municipalities would benefit more. That would start from the increased satisfaction in the work communities and among the unemployed themselves by increasing the predictability and economic security. Child day care services have failed permanent personnel and that have also worried the parents of children in child care. More permanent employment would increase the satisfaction of the customers of child care services as well.

The unemployed in child day care sector were mostly low-paid employees, while after employing their yearly gross income would have been only 19 000 euros on average, meaning only about 1 550 monthly gross income (may be under-estimated). Increase in net income had been 900 euros. The increased income from full-time employment had not dramatically increased their purchasing power per month, but could have effected on their possible needs for housing allowance or other benefits. At individual and household level that could mean even less increase in disposable income, but from the welfare states' perspective the costs might have reduced. Assessing these impacts will, however, be left later in the research project.

## 7. Summary discussion

The Finnish welfare state consists of the state government and about 350 autonomous local governments, the municipalities. Both of them are tax authorities and employers. The state introduces national targets and norms, while the municipalities have the responsibility to carry through the statutory targets, applying local needs and emphasis. The state subsidises municipalities for implementing the targets by state grants. Formula based state grants take into account, among other things, the local age structure and the employment situation. Finally, there is a separate tax base equalisation process (revenue sharing) between the worse-off and better-off municipalities. Revenue sharing may affect local governments' economic incentives to stimulate economic development. The basic division of duties and the financing of the welfare state is thus a rather complicated system and can create vertical policy conflicts between central government and local governments. These conflicts can be identified when tax policies, employment policies and child care policies are considered.

In this paper we have focused upon analysing some of the areas where conflicts appear. Even though we use micro data, we are mapping here even preliminary macro level expenses and average effects on individual level. Distributional effects will be taken into account later.

The municipal 'earned income tax allowance' is one of the areas which may create vertical conflicts. The allowance accumulates less local tax revenues from wage income than from

transfer income of the same level. Correspondingly, tax rates are higher and net income smaller for the persons receiving their income from the transfers, when compared with wage income. For the municipalities the allowance system creates a situation where there are practically only weak economic incentives to promote employment for persons who get their living from low wages instead of transfer income, because local tax revenues might be the same. Further, the system does not seem to be fair from the perspective of the parents, who are encouraged to leave the labour market for caring their children at home. They become "double losers": firstly, by changing wage income for transfer income and secondly, by falling into a higher tax rate system.

The conflicts accumulate most when it concerns the municipalities' role as employers. Employing permanent staff, even with low wages, is more costly for the municipalities than for the state or the private sector. Firstly, municipal employer costs, i.e. contributions to social security funds, are higher than the costs of other sectors. Secondly, increased wage income benefits not as much local tax revenues as it does the state tax revenues because of earned income tax allowance in municipal taxation. Formally the state compensates for these losses, but because of a complicated state grant and revenue sharing system, it is difficult to separate direct compensation in the vertical redistribution between the state and the municipalities, and consequently the effects of "good" or "bad" local employment policies disappear without being rewarded or punished.

If local preferences are to reduce child day care costs instead of increasing mothers' employment, the municipalities probably prefer to invest more on child home care allowance than on child day care services. We tested this assumption from the perspective of child day care personnel, many of whom are at least under some period unemployed during the year. Earnings related unemployment benefits had been paid to about 10 000 out of nearly 60 000 persons in the child day care sector in 2006. We 'employed' all persons replacing the unemployment benefit with corresponding wages. That decreased unemployment benefit costs by € 32 million from the original € 48 million. Total municipal wage costs, employer contributions included, increased by € 59 millions. The sum of total taxes increased by 4 million euros but municipal tax revenues only by 0.8 million euros. From this perspective it is less costly to the municipalities to offer temporary work instead of permanent work contracts. That may also help to explain why temporary work contracts are more common in the municipal sector than in other sectors.

There seem to be very little economic incentives to the municipalities to encourage the mothers receiving child home care allowance to enter the labour market and demand a child day care place for their children. About a half of the mothers receiving the allowance has no job to return to and their employability may be weak except in the low paid jobs. If these mothers would enter employment, the increase in local tax returns from low paid jobs would be relatively small, compared with the taxes they pay from the child care allowance. We have not yet 'employed' caring mothers to test the validity of this argument, but we have calculated the impact of the earned income tax allowance in their cases. First, because earned income tax allowance cannot be deducted from parental leave benefits or child home care allowance, the local tax revenues 'win' 61 million euros. Treating the child home carers as wage earners in local taxation would thus be very costly to the municipalities. Secondly, for the beneficiaries of parental leave benefits the contemporary system means an average increase in their tax rate about of 6 and for the beneficiaries of child day care allowance about 8 percentage points, compared with wage income at same level.

According to official statistics the state grants covered about 31% and the municipalities paid the remaining 69% of the child day care net costs in 2006. Customer fees covered about 11 percent of the gross costs. Net cost does not take into account, however, tax returns from working mothers who use child day care services. In this paper we wanted to make visible the tax volume of these mothers. When we compared the value of municipal tax returns and customer fees of the mothers with total child day care costs, it could be seen that payments paid from mothers' pockets reached the level of about a half (47%) of the child day care costs.

So far we have shed some light on the mechanism of the tax and benefit system which does not support the state and local governments to work towards parallel employment and child day care policies. In order to get a deeper insight into this mechanism, more sophisticated simulations have to be done. One way to do this is to simulate economic and distributional impacts of some extreme behavioural models, such as a) employing all mothers from child home care leave and letting their children to be cared for in child day care services, b) letting all mothers with at least one child less than 3 years of age to stay at home and take care of all their children under school age, and c) last but not the least, simulating a longer parental leave period with fathers' quota for some months, and letting the fathers to take care of the children when the mothers return to employment. Former studies have shown with type families that it is economically not so bad, as is often believed, that the parents share more parental leave (Haataja and Mattila-Wirolahti 2006). Our aim is to study alternatives with representative micro data. Furthermore, increasing the length of parental leave would move child day care costs from the municipalities to the Central Government and thus, perhaps, alleviate existing vertical conflicts.

## References (preliminary)

Haataja, Anita. 2005a. 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. 2005b. Family leave and employment in the EU: transition of working mothers in and out of employment. In Pfau-Effinger, Birgit and Geissler, Birgit (eds.) *Care and Social Integration in European Societies*. Bristol: Policy Press, 255-278.

Haataja, Anita, Mattila-Wirolahti, Päivi (2006). Impact of alternative benefit levels and parental choices on the parent's income. *Microsimulation approach on the Finnish parental leave*. Discussion Papers 399. Helsinki: Government Institute for Economic Research. (VATT). (Available PDF [www.vatt.fi/publications](http://www.vatt.fi/publications)).

Honkanen, Pertti (ed.). 2009. *JUTTA-käsikirja. Tulonsiirtojen ja verotuksen mikrosimulointijärjestelmä*. Helsinki: Kela.  
<http://www.kela.fi/in/internet/suomi.nsf/net/240209100642HJ?OpenDocument>

Honkanen, Pertti. 2006. Työttömien perusturvan ongelmia. *Sosiaali- ja terveysturvan selosteita* 54. Helsinki: Kelan tutkimusosasto.

- Kangasharju, Aki, Aaltonen, Juho. 2006. Kunnallisen päivähoidon yksikkökustannukset: Miksi kunnat ovat niin erilaisia? [Unit costs of public day care: Why municipalities are so different?]. VATT-Research Reports 119. Helsinki: VATT.
- Kajanoja, Jouko. 1999. Lasten päivähoito investointina [Child day care as an investment], VATT-Research Reports 50. Helsinki: VATT.
- Kela 2008. Statistical Yearbook of the Social Insurance Institution. Social protection 2008. Helsinki: Kela.
- Kuntasektorin palkat 2006. SVT. Palkat ja työvoimakustannukset 2007. Helsinki: Statistic Finland.
- Miettunen, Laura. 2008. Lasten kotihoidontuen kuntalisät osana suomalaista päivähoitojärjestelmää [The role of the Municipal Home Care Allowance in the Finnish child day-care system]. Studies in social security and health 101. Helsinki: Kela.
- Moisio, Antti. 2002. Essays on Finnish Municipal Finance and Intergovernmental Grants. VATT Research Reports no 93. Helsinki: VATT.
- OECD 2009. Society at Glance 2009. OECD Social Indicators.
- OECD 2005. Society at Glance 2005. OECD Social Indicators.
- Parpo, Antti (ed.). 2004. SOMA. Sosiaaliturvan ja verotuksen mikrosimulointi 2001. Aiheita 1. Helsinki: Stakes.
- Peltola, Kati and Melender, Pirkko. 2008. Reilu verokirja. Barrikadi-sarja no 3. Helsinki, WSOY.
- Pylkkänen, Elina, Smith, Nina. 2004. The Impact of Family-Friendly Policies in Denmark and Sweden on Mothers' Career Interruptions Due to Childbirth. IZA DP No. 1050.
- Social Protection Expenditure and Financing 2006. SVT. Statistical Summary 9/2008. Stakes: <http://www.stakes.fi/tilastot/sosiaalimenot>.
- SVT 2007: Sosiaali- ja terveydenhuollon tilastollinen vuosikirja 2007. Sosiaaliturva 2007. Helsinki: Stakes.
- Viitamäki, Heikki, Mustonen, Esko. 2004. Työmarkkinatuelta ansiotyöhön: Vaikutukset valtion ja kuntien tuloihin ja menoihin. VATT-muistio 65. Helsinki: VATT.

**ANNEX**

Diagram 1. The share of children (%) enrolled in public or private child day care (pre-school excluded) by the age of the children in 2006.

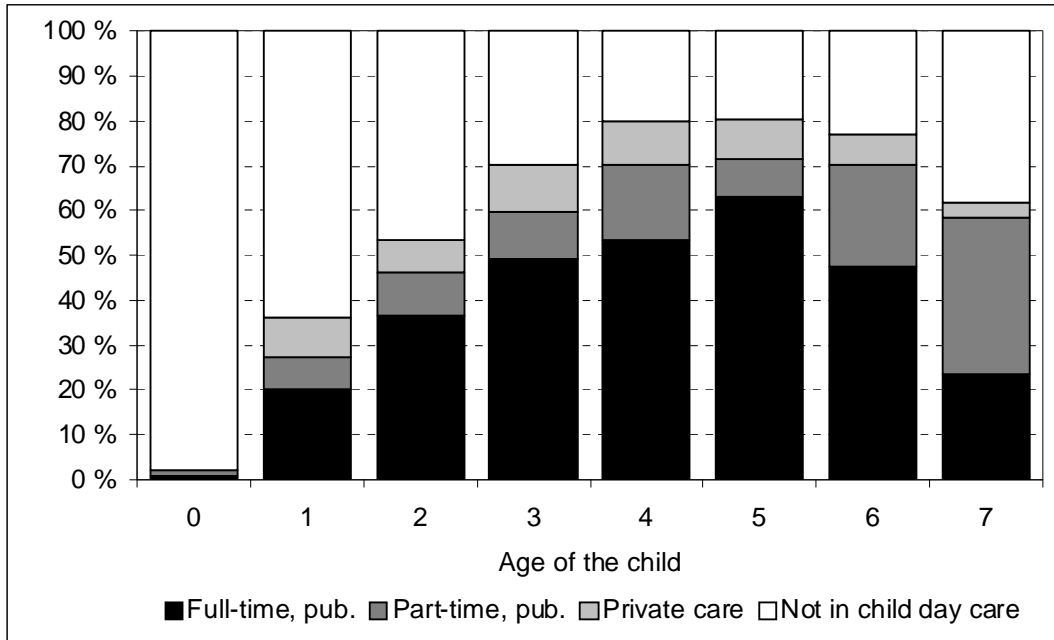
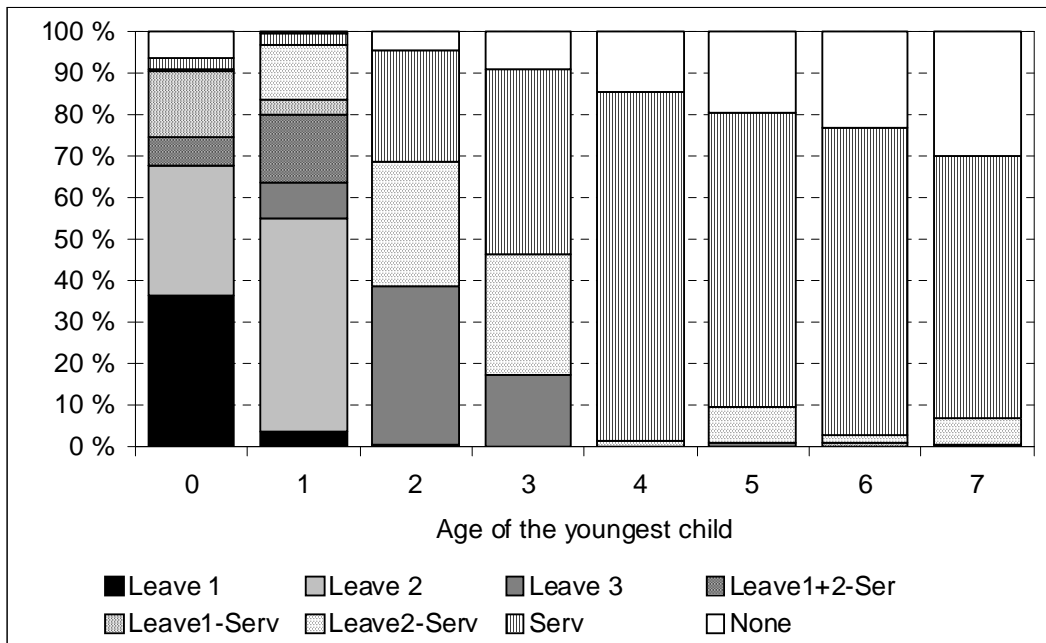


Diagram 2. Public provisions of child care used by the families (mothers) according to the age of the youngest child in the family in 2006 \*



\* Leave 1: Only parental leave, Leave 2: Parental leave and home care, Leave 3: Only Child home care, Leave1+2-Serv: Parental leave and child home care and day care services, Serv: only child day care services, None: none of these alternatives. The share of children in the pre-school at age of 6 is not shown in diagram.