

HOME OR MARKET CHILDCARE? SWAPPING CHILDCARE ARRANGEMENTS ACROSS THREE EUROPEAN COUNTRIES

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Abstract: Over the past decades, social protection systems in Western welfare states have designed new ways to facilitate the reconciliation of work and family life. Often, the new measures were added to existing family policies and family-dependent taxation rules. This has led to heterogeneous policy mixes relating to caring for children, ranging from support of the working mother (e.g. subsidies for child care) to measures that are aimed at compensating parents for self-provided care efforts (e.g. home-care benefits). This heterogeneity entails complex incentive structures that are not a priori clear. Also, the different policy options are far from distributionally neutral.

In this paper, we use EUROMOD to model the policy measures of both types (work support and home care support) in place in three European welfare states with very distinct care policy systems: Finland, Belgium and Germany. Using microsimulation techniques we introduce the Finnish policy set in Belgium and Germany. The distributional consequences of the “Finnish” allocation of public expenditures for the Belgian and German families and children are investigated. We also try to provide insight into the difference in incentive structure across these three countries.

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1. INTRODUCTION

Over the past decades, social protection systems in Western welfare states have designed new ways to facilitate the reconciliation of work and family life. Often, the new measures were added to existing family policies and family-dependent taxation rules. This has led to policy mixes that are very heterogeneous, inside countries as well as between different countries.

We compare measures in the field of family policy that aim to help reconcile paid work and parental care responsibilities in three European countries. The specific aim to take only care and reconciliation policy into account in the analyses implies that we disregard various, traditionally strong pillars of family policy. Most importantly, we do not take into account all kinds of measures that have been introduced to alleviate the financial burden related to the upbringing of children, notably child benefits and tax allowances related to the presence of children in the household. Rather we focus on policy measures that are directly linked to the time conflict that parents experience. This conflict is most pressing for children that have not reached the age of compulsory school, because on the one hand younger children require more active supervision and on the other, the countries at hand all have compulsory school systems that take care of children for a considerable part of the working day and, hence, reduce the time conflict to a great extent. Consequently, we limit our analysis to families with at least one child below 6, which is under the starting age of compulsory school in the countries concerned: Germany, Belgium and Finland.

The three countries considered are quite distinct in terms of the care policy set that has been developed. Germany has a rationed child care market, and achieves the care for children to an important extent by supporting home care provided by a parent. In Belgium, a hybrid system is in place, where out-of-home child care is heavily subsidized but its use concentrated among higher income families, while traces of the former joint taxation system continue to support single-earner families. In Finland, finally, childcare facilities explicitly aim to be universal. In addition, with its act on Home Care, Finland provides an allowance to parents who choose to provide the necessary childcare themselves until the child reaches the age of 3.

We distinguish policy measures according to their underlying rationale: A first category of policy measures is designed to support the working parent, by facilitating the combination of paid employment and parental care responsibilities. Policies include the provision of subsidized child care and temporary parental leave schemes. A second category aims at compensating parents for self-provided care efforts. As examples of policies in this category count home care allowances, long parental leaves, but also the implicit benefits from income-splitting tax rules for couples, as it can be seen as a subsidy to married couples with the traditional division of labour within the household, where the secondary earner stays at home (Steiner and Wrohlich 2004). This encompassing yet fine-grained viewpoint is relatively rare, especially when cross-country comparisons are made (see e.g. Misra et al. 2007). We argue that it is necessary: different policy measures within one country are often complementary. Focussing on only one type of policy (e.g. parental leave, or subsidized child care) across countries results in only a partial truth.

In this paper we aim at a comparative analysis of the full set of policies that have grown over time to compensate parents for their child care efforts. Using the microsimulation model EUROMOD, we first disentangle the distributional flows stemming from current policy configurations and compare across income strata and family types within each country. Second, we implement the Finnish policy package in Belgium and Germany. This ‘policy swapping’ exercise serves to highlight characteristics of the policy configuration in the three countries, because it maintains the socio-demographic

characteristics of a particular country. In effect, it answers the question ‘what if we would implement Finnish policy?’.

We have organized the rest of the paper in the following way. In Section 2, we describes the current care policy context in the three countries in detail. The existing policy measures are listed and their size and scope in budgetary terms and in use are compared. Section 3 covers the methodology and microsimulation model used. The results of our dual microsimulation exercise are discussed in Section 4. Section 5 concludes.

TABLE 1: OVERVIEW OF THE CARE CONTEXT IN BELGIUM, FINLAND AND GERMANY (2002-2003)

measure	BELGIUM	budget (as % of GDP)	Use (as % of targeted children)	FINLAND	budget (as % of GDP)	Use (as % of targeted children)	GERMANY	budget (as % of GDP)	Use (as % of targeted children)
Maternity leave (ML), paternity leave (PtL) parental leave (PrL)	ML: 15 weeks at 80%(first month) - 75% (rest) of (capped) earnings PtL: 10 days at 82% of (capped) earnings PrL: 3 (6) months full(part)-time - at a flat rate of €547(FTE)	0.18% (1)	No take-up rate available	ML: 21 weeks PrL: 31 weeks PtL: 3.5 + 2.5 weeks rate: max.70% of earnings, min €11.45/day	0.40% (1)	ML & PrL +/- 100% (5)	ML: 14 weeks at average annual earnings	0.03% (1)	No take-up rate available
home care	Income-splitting tax rules	0.08% (2)	13% (2)	home care allowance	0.23% (1)	30% (5)	(a) Income-splitting tax rules (b) Child raising allowance	(a) 1.2% (6) (b) 0.16 (1)	(a) 61% (6) (b) 49% (6)
fees in subsidized childcare	Income & family size dependent	-	-	income & family size dependent	-	-	income & family size dependent	-	-
subsidized child care	yes	0.79% (1)	37% (4)	yes	0.93% (1)	54% (5)	yes	0.06% (7)	8.6%(3)
private child care	mostly family day care	N.A.	26.4% (4)	private day care allowance	0.10% (1)	4% (5)	yes, privately organized, but is also subsidized		
tax deduction for child care costs	yes (up to 11.20€/day). (small) tax allowance for children for whom no child care expenses are deducted.	0.06% (2)	100% (2)	no	-	-	for expenses over €1,548/year. max. deduction: 1,500€	0.01% (6)	7% (6)
pre-primary education	age 2.5 to 6, free of charge (only incidental costs)	0.60% (3)	100% (7)	age 6&7, free of charge	0.20% (3)	100% (3)	age 3 to 6, fees apply	0.40% (3)	93% (3)

Notes: all figures refer to 2003 for Belgium and Finland, and to 2002 for Germany. The use-column corresponds to the children living in a family that makes use of this measure as a percentage of all children potentially eligible to benefit from this measure (called targeted children). Exception: there is no applicable targeted group of children for the Belgian and German tax-share rules, which means the value in this column refers to the percentage of children younger than 6 who live in a family making use of the income-splitting tax rules with a net benefit of min. €100/year. The corresponding budget (as % of GDP) refers to this group only as well.

Sources: (1) OECD social expenditure data (2002-2005), (2) own calculations on the basis of BE-SILC2004 and MISIM, (3) OECD Report "Starting Strong II" (2006), (4) Van Keer et al. (2004), this source reflects the situation in the region of Flanders only (5) Statistical yearbook of the Finnish Social Insurance Institution (2004), (6) own calculations on the basis of GSOEP and EUROMOD, (7) OECD Family Database.

2. THE CURRENT CARE CONTEXT IN BELGIUM, FINLAND AND GERMANY

Table 1 gives an overview of the care policy sets over the three different countries for the policy years on which the simulations are based. The budgetary size of each type of measure is expressed as a percentage of the countries' GDP. The usage per policy measure is expressed as the share of hypothetically eligible children that are actually covered, enrolled or making use of this policy option. As this eligible group differs from policy to policy, and children can make use of more than one type of care arrangement, these percentages are not cumulative. Our focus lies on the children younger than 6 years. Therefore, we do not take into account out-of-school care for older children.

2.1 Belgium

The care policy set in Belgium follows two distinct tracks. On the one hand, parents are stimulated to remain active on the labour market, with comparatively short maternity, paternity and parental leave, in combination with a relatively extensive market for child care provisions, with both private and subsidized institutions. Both can take the form of day care centres or family day care. An important part of the 0 to 3 year-olds makes use of this form of child care, which is organized at the level of the communities in Belgium. Slightly different systems apply in the Flemish, French and German language communities. Still, a scarcity of available places prevents a guaranteed place for each child when parents are out of parental leave period, and in most cases a number of months have to be bridged with informal care until the child has a place. Also, parental leave can be supplemented with 'time credit'. This is a career break measure that is available to all employees, and is not necessarily linked to taking up care for children¹. Fees in the subsidized child care centres are dependent on the parents' income and the number of children in day care. In 2003, they ranged from €1.26/€1.88 per care day to €22.4/€26.5 in the Flemish/French language community. In private day care, fees can be set freely, but on average correspond more or less to the maximum fees in the subsidized day care centres.

From the age of two and a half onwards, Belgian toddlers can attend pre-primary education (*Kleuterschool*). The Belgian educational system extends to small children, with –internationally speaking – high enrolment rates among the youngest children. At the age of three almost all children attend pre-primary school for on average 25 hours per week.

On the other hand, income-splitting tax rules are in place for single earner families, unconditional upon the presence of young children in the household, giving a life-long labour market adverse incentive for women who chose to stay home for raising their children. These measures trace back to the policy switch in the late 1980s when joint taxation of families was replaced by an individual taxation system. The most important income-splitting tax measure in the Belgian taxation system, called the "marital quotient", entails that part of the income of the earning spouse is transferred to the non-earning spouse. Both parts are then taxed as individual incomes, implying a significantly lower average tax rate, from which the net benefit can add up to almost €5000 euros/year. Additionally, for couples in which one partner has a rather

¹ We therefore do not include it in the overview, as it is not available how many workers make use of this measure for the reason of caring for their children.

small job and income (typically small part-time jobs), tax-allowances can be transferred between the partners if the personal income of one partner is insufficient to make full use of the allowance.²

2.2 Germany

In Germany, the care policy set in 2002 is more home care oriented, especially for children under 3.

Many parents make use of the child raising allowance (*Erziehungsgeld*), consisting of a federal allowance (*Bundeserziehungsgeld*) with supplements in a number of states (*Landeserziehungsgeld*). This is an allowance for a parent with children under the age of 2 who work less than 19 hours/week. It is means-tested: during the first six months, a yearly income limit of €51,129 for couples and €38,347 for single parents applies.³ The allowance amounts to €307 per month. From the seventh month onward, the allowance is incrementally reduced for couples and single parent families with one child whose income exceeds €16,464 and €13,498 respectively. These limits are increased for additional children (according to the year they were born).⁴

Next, the joint taxation of married couples supports a division of labour within the household where the secondary earner stays at home. Different from Belgium, no upper limit is installed on the income split. For families with young children, we regard this net advantage⁵ from income splitting in the analysis as a policy measure that supports home care provided by a parent.

Child care for children younger than 3 is organized in *Kinderkrippen*, child care centres, provided by either municipalities or by private, mostly confessional institutions. Both are subsidized. Availability is rather restricted: per 100 children, there are on average 37 slots in East Germany, and 3 slots in West Germany (Statistisches Bundesamt, 2004, as quoted in Wrohlich, 2006). For children aged 3, 4 or 5, care takes place in *Kindergarten*. With on average 93 available slots per 100 children, *Kindergarten* is nearly universal. Places are nearly all full-time in East Germany, while 82% is part-time in West Germany. Fees for *Kinderkrippen* and *Kindergarten* are largely to the discretion of the providers within the regulation stipulating that fees should be charged as a function of parental income and family size (Wrohlich 2004). In general, fees for *Kinderkrippen* are higher than fees for *Kindergarten*. In 2002, all costs incurred for formal child care from a yearly threshold of €1,548 onward are tax deductible. The maximum deductible

² From our calculations it appears that 37% of children under 12 live in a family that gains min. €100/year from these income-splitting tax rules. At the same time, this group represents only a small fraction of the total group where the measures are applicable: in 77% of the Belgian families making use of income-splitting, there are no children younger than 12 years old present in the household. With the growing employment rate of Belgian mothers, the system has to a large extent transformed into a subsidy to older cohorts for their past childcare efforts rather than a compensation for childcare efforts of the current generation of parents.

³ The limits are not based on the usual definition of net or gross income, but on a special definition of income in the Federal Child-Raising Allowance Act (Federal Ministry of Labour and Social Affairs (2001): Social Security at the Glance. Nr. 998)

⁴ The Child Raising Allowance was replaced by a system which follows more the lines of a parental leave scheme (*Elterngeld*) for children born after 1 January 2007. However, we simulate and describe the care policy context as it was in 2002, the latest year that Germany is modelled in EUROMOD, the microsimulation model we employ.

⁵ The net benefit from this income-splitting at household level is calculated by comparing household net income in a joint taxation system with household net income under a scenario where taxes are calculated at the individual level.

amount is €1,500. Few families reach the yearly threshold cost, which explains the small fraction of families benefiting from the tax deductibility.

2.3 Finland

In Finland, maternity allowance is paid for 105 weekdays (21 weeks) to the mother. For the next 158 days (+/- 31 weeks), the parental allowance can be paid alternatively to the mother or the father, or can be shared between them in a way that both receive partial parental allowance concurrently. Fathers are eligible for a “paternity allowance” for up to 18 weekdays at any point during the maternity or parental allowance period. Fathers who take the last 12 weekdays of the parental allowance entitlement are eligible for an additional 12 weekdays of paternity allowance after the parental allowance period has ended. The replacement rate for these allowances is 70% of average earnings up to €26,124/year. Above this amount, the replacement rate decreases, but there is no maximum limit.

Child care is seen as a children’s right, anchored in the Act on Children’s Day Care as of 1973. The explicit aim is to guarantee a place for each child between the end of the parental leave period and the beginning of primary school. This responsibility lies with the municipalities, organising day care in centres or family day care. When needed, parents should also be able to make use of provisions for child care outside the regular hours. Fees for child care are calculated according to the family income and size, and range from no fee for low income families to max. €200 per month for the first child (€180 for the second child). Apart from this universal provision, parents can also choose to receive a private childcare allowance, which is paid to the private caregiver of their choice. If the parent wishes to care for the child at home or arrange care with friends or relatives, s/he is entitled to the Child Home Care Allowance until the youngest child in the family is three or enters municipal or private day care. As long as there is a younger child in the household, four and five year olds in the household give rise to supplements: the home care allowance consists of a base amount of €252 for one child under three, plus a supplement for the number of children that are cared for in this way (€84 for each additional child younger than 3, and €50 for each additional child under school age). A means-tested supplement up to €168 depends on the family income and size. Municipalities can also remit supplements to the home care allowance. Availability, eligibility and amount vary by municipality. The Child Home Care Allowance is subject to tax. During the home care period (parental leave + home care allowance), the parent has full employment security. Some 80% of the families continue the parental leave period by taking home care allowances at least some time. Of all children under three, more than two thirds are cared for at home. For children from 3 to 6, out-of-the-home care is the dominant option, and home care allowance is allocated to less than 15% of the children in this age group. Pre-primary education starts at the age of 6, and 95% of children are enrolled. (Ministry of Social Affairs and Health 2005)

2.4 Budgets in comparison

When looking at the shares of GDP that the different policies represent, it is clear that the bulk of the budget in Germany is used to support home care. Belgium spends the greatest budget share on day care policies, when subsidized day care (for minus three-year olds) and subsidies for pre-primary education (three to six year olds) are taken together. Parental leave is most extensive in Finland. Finland also significantly supports both home care and day care for pre-school children, resulting in the largest share of spending on child care provisions overall, almost two percent of its GDP.

These numbers, largely from administrative sources, have to be nuanced in one important way. The administrative accounts contain gross numbers. In this respect, administrative accounts usually do not take into account the interaction with the taxation system: in some countries, benefits are taxed or certain expenses are tax deductible, while in other countries they are not. Especially for cross-country comparison of social expenditures, this can give rise to considerable distortions (Adema and Ladaique 2009). In our assessment, this is the case with the Belgian and German fees, which are tax deductible (to some extent), and the Finnish home care allowance and private care allowance, that constitutes taxable income of respectively the parents and the private caregiver. Finally, also subsidies to child care centres are reported in gross terms. Yet, parents' fees make up a substantial fraction of the cost of child care, typically around 15% (this ratio is more or less the same for the three countries). For these reasons, and to adequately assess distributive effects, we use the method of microsimulation modelling as the tool to perform the cross-country analysis of the countries' care policy sets outlined above.

2.5 A Finnish perspective

In following sections, we will discuss two series of micro-simulation exercises. First, we will elaborate on the distributional outcome of current policy configurations and compare across income strata and family types within each country. Second, we will implement the Finnish policy package in Belgium and Germany. This 'policy swapping' exercise serves to highlight characteristics of the policy configurations in the three countries, because it maintains the socio-demographic characteristics of a particular country. If effect, it answers the question 'what if we would implement Finnish policy?', even though we engage in a first order analysis only and do not dwell on behavioural changes that may follow after the introduction of a new policy mix.

In theory, policy swapping to highlight the effective meaning of a policy package could be done from any of the three perspectives in our set of countries. Nevertheless, the Finnish perspective is the most promising, because Finland provides a perspective of more parental choice to both Germany and Belgium. In comparison with Belgium the system of home care allowance provides a more financially rewarding compensation for home care, while from the German perspective the large state involvement in childcare presents a significant change.

With the choice of Finland as relative reference, we implicitly endorse parental freedom of choice as the leading policy principle in care policy. We argued in an earlier paper (Ghysels, Verbist and Vanhille 2010) in favour of a policy set that offers true options to choose to parents. We regard the Finnish policy set as one of the few existing policy frameworks with relatively balanced home and out-of-home care options for a large portion of the parent population. We refer the interested reader to Lewis and Guillari (2005) for an extensive discussion of the checks and balances of effective choice in the field of work and care.

3. METHODOLOGY

Microsimulation techniques are particularly well suited to investigate consequences of policy measures and proposed changes that interact with the existing tax-benefit structure. Relevant examples in this context are benefits that qualify as taxable income, such as the Finnish home care allowance, for which microsimulation modelling allows presenting the net benefit (after taxation) in a comparable context. Also the interaction with eligibility for means-tested benefits is taken into account. A final component in this analysis is the tax deductibility of child care costs. The net gain of this measure differs from tax unit to tax unit. Finally, these detailed calculations allow us to assign an individual ‘net’ subsidy at micro-level, which takes into account the intensity of the use of child care, the type of child care that the child attends and the treatment of child care costs in the taxation system.

We make use of the microsimulation model EUROMOD. EUROMOD is a European-wide, static tax-benefit model, covering the countries’ personal income taxes, social security contributions and (part of) social benefits. As output they can provide both budgetary consequences of policy measures as well as the current distributive and poverty indicators. The common model language for all European countries supports performing policy swaps between countries in a comprehensive way.

Of course, simulation models also have inherent limitations. Our method uses empirical data that are obtained by means of surveys. As such, the accuracy of the results depends on the quality of the data (e.g. adequate information about all income components, socio-economic characteristics, use intensity of child care, and a sufficiently large sample). For Germany, the underlying dataset is the German SOEP 2002. For Finland, the model uses the 2003 Income Distribution Survey. For Belgium, Belgian SILC 2004 is used (containing incomes from 2003). We use the EUROMOD policy year 2003 for all three countries. This means data and policy year correspond, with the exception of Germany, where incomes from the underlying GSOEP are updated with one year to match this most recent policy year available in EUROMOD.

While the use of public child care provisions is taken from the data in the three countries, child care fees are modelled in Finland and Belgium, and taken from the data in Germany. Gross subsidies to day care places are imputed according to administrative figures, which allows modelling the “net” subsidies, after parental fees are subtracted. Tax deductibility of child care expenses is applicable in Belgium and Germany and is modelled. Also we model eligibility, gross and net amounts of the home care benefits. We do not incorporate parental leave policies into the simulation exercise. The reason for this is twofold. First, due to its temporary nature, often only a part is captured in the income reference period. Second, there is no information available with regard to the length, intensity (full-time or part-time) or take-up of the parental leave. This makes it almost impossible to derive the necessary comparable base for an assessment of the real income effects of this measure in a cross-country framework.

For the policy swap, where the Finnish policy set is introduced in Belgium and Germany, we only consider first-order effects in this article, so no account is taken of possible labour supply effects or other behavioural reactions. This means that eligible Belgian and German home care families receive the Finnish home care allowance, and the families of German and Belgian children attending day care (or pre-primary school) pay fees along the Finnish system. The amounts and means-tests are the same as in the Finnish system, only adjusted for purchasing power differences: in that way the monthly home care allowance in Germany and Belgium gives rise to the same purchasing power as the monthly allowance in Finland.

4. RESULTS

The microsimulation analysis comprises two parts. In the first subsection, the income flows and use patterns are disentangled in a cross-country comparative perspective. The results are presented in the form of average expenditures over the income distribution (by income quintiles) and over six different family types. The second subsection contains the effects of a policy swap where the entire Belgian and German care policy mix are replaced by the full Finnish policy set.

All results are presented for families with children younger than six, broken down according to income quintile and family type. The income quintiles are constructed on the basis of standardized disposable household income, applying the modified OECD equivalence scale (1 + 0.5 for every other person 14 years or older + 0.3 for children younger than 14 in the household). The family types are constructed according to the number of adults in the household and their employment status. All households in the family type comparison have at least one child younger than 6. Adults are classified as ‘in work’ if they have earned income from (self-) employment during the income reference period of at least €100/month on average.

Table 2 presents the distribution of children under six over these categories. In the three countries, children are fairly evenly distributed over the income quintiles, with a slight drop in their concentration in the upper quintile (strongest in Finland) and in the lowest quintile in Germany. With respect to the family types, children under six live four times more frequently with a single parent in work in Germany in comparison to Finland and Belgium. Most children live in a dual earner family in Finland and Belgium, while in Germany this is in the single earner family. 11% of Belgian pre-school children live in a family where no adult is working, in Germany 12% (the vast majority of them in single parent families). In Finland, this figure is considerably lower (6.4%).

TABLE 2: DISTRIBUTION OF CHILDREN YOUNGER THAN 6 BY INCOME QUINTILE AND FAMILY TYPE.

	Belgium	Finland	Germany
Income quintiles	100.0	100.0	100.0
1	19.1	20.1	16.2
2	18.7	22.8	17.4
3	21.1	22.3	25.9
4	23.5	19.6	21.7
5	17.6	15.2	18.7
Family types	100.0	100.0	100.0
no earner couple	4.4	3.3	2.0
single parent no work	6.6	3.1	10.0
single earner couple	23.4	26.5	39.5
single parent in work	4.4	4.4	14.9
dual earner couple	56.3	58.9	30.9
other	5.0	3.8	2.8

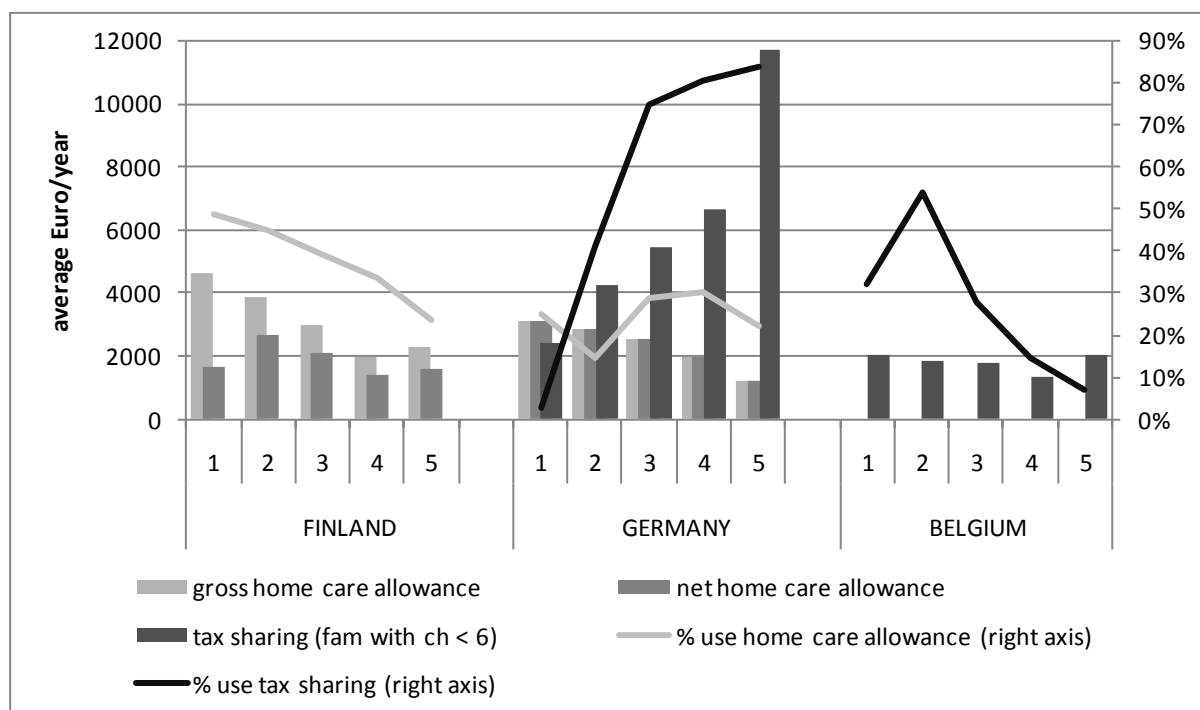
Source: BE-SILC, Finnish IDS and GSOEP.

4.1. Cross-country comparison of income flows per policy measure

In what follows, the home-care cluster and the day-care-cluster of policies are each assessed for the three countries by income quintile and by family type. The amounts (bars, left axis) are averaged over those families actually making use of the policy measure, per presented category, and expressed in Euros/year. . Positive values indicate a transfer from government to the households, negative values indicate costs to be paid by the household (in this case the child care fees). The lines (right axis) indicate per country the percentage of families, by category, making use of the policy measure.

For the home care benefits, we present a gross home care allowance and a net home care allowance (Figure 1). The net home care allowance is constructed as the net difference in disposable income between the baseline scenario where the home care allowance is simulated, and an alternative scenario where it is abolished. The difference is relevant for Finland, as this is the only country where the allowance is part of taxable income. In the higher quintiles, the difference between gross and net corresponds to the taxes paid on this higher income. In the lower quintiles, this difference is also made up of a second factor: a changing eligibility for other means-tested benefits. The relatively low net benefit from home care in Finland in the bottom quintile, despite the highest gross value, means that families who are now receiving the Finnish home care allowance, would qualify for e.g. higher housing allowances in case the home care allowance was abolished. These alternative benefits would, to a large extent, replace for the income that these families now receive from the home care allowance.

Figure 1: Distribution of income flows for home care and use by income quintile.



Source: own calculations based on EUROMOD and national survey data.

In Germany, the child raising allowance is not included in taxable income, and the gross allowance equals the net benefit. The income splitting system in Belgium and Germany (darkest bars) is by definition ‘net’ of taxes. We only present the average net benefit and use intensity for families with at least one child younger than 6 in the family.⁶

The (gross) home care allowances in Finland and Germany follow a more or less similar pattern: averaged over all families making use of the home care allowance, both countries show a decline over the income quintiles, caused by the means-test in place. As mentioned before, it is remarkable how the net home care allowance in the first Finnish quintile does not fit into this pattern, for the reason that it is part of taxable income. The usage pattern is less resembling: the first two quintiles are relative frequent users in Finland, in Germany the most frequent users are situated in the upper-middle quintile 3 and 4.

Also the pattern of usage of tax-splitting among families with children is remarkably different in Germany in comparison with Belgium. The ‘cap’ on the amount that can be transferred between spouses in Belgium implies that the average gains are relatively evenly distributed, while upper quintiles, where one-and-a-half earner families and dual earner families are more frequent, make significantly less use of the measure than lower-middle income families, where single earnership is more prevalent. In Germany, where no such cap is in place, the net gains from tax splitting increase with taxable income, given the increasing marginal tax-rates. Taxes are on average considerably lower for families in the first quintile, which implies that their potential benefit from the income-splitting rules is inherently limited. In the upper quintile on the other hand, the highest percentage of families gaining from the tax-splitting measure is combined with the highest average amounts of the net benefit from joint taxation.

Figure 2 shows the distributional pattern of the income flows underlying child care. In all three countries, child care is most intensively used in the top quintiles, and comparatively little in the lower quintiles. For Belgium and Germany, we distinguish between child care (0 to 3) and pre-primary school (3 to 6). While the dominant pattern is very pronounced in Germany for pre-primary (*Kindergarten*), and much less for *Kinderkrippe* (mainly because of very low overall usage levels), in Belgium the opposite counts: because enrolment rates in Belgian pre-primary education (*kleuterschool*) are very high, the pattern here merely follows the incidence of toddlers in Belgian families over the income distribution. Child care for 0 to 3 year olds on the other hand, is much more significant in size in comparison to Germany, and also follows a pattern where use of childcare facilities is concentrated among the higher income families.

When we conclude that usage of child care is highly skewed in all three countries, the question remains to what extent the progressive structure of the fee calculation (based on family size and income) corrects for this in the distribution of income flows underlying the provision of child care. For all three countries, the progressive fee structure is visible from the graph, with families in the higher quintiles paying substantially higher fees than in the lower end of the income distribution, also when corrected for the intensity of the use. Fees appear to be lowest in Germany and highest in Belgium. However, especially in Belgium their tax deductibility moderates the real cost to a comparable level as in Finland. At the same time, the fact that the childcare expenses are tax deductible also weakens their progressivity. Higher income families, paying taxes at the highest marginal rate, gain the highest net benefit from this measure. Overall, net subsidies in Belgium are most to the benefit of the top quintiles, because their use of the

⁶ The enormous spill-over, caused by the fact that the income-splitting tax rules are not conditioned on having children, is therefore left out of scope.

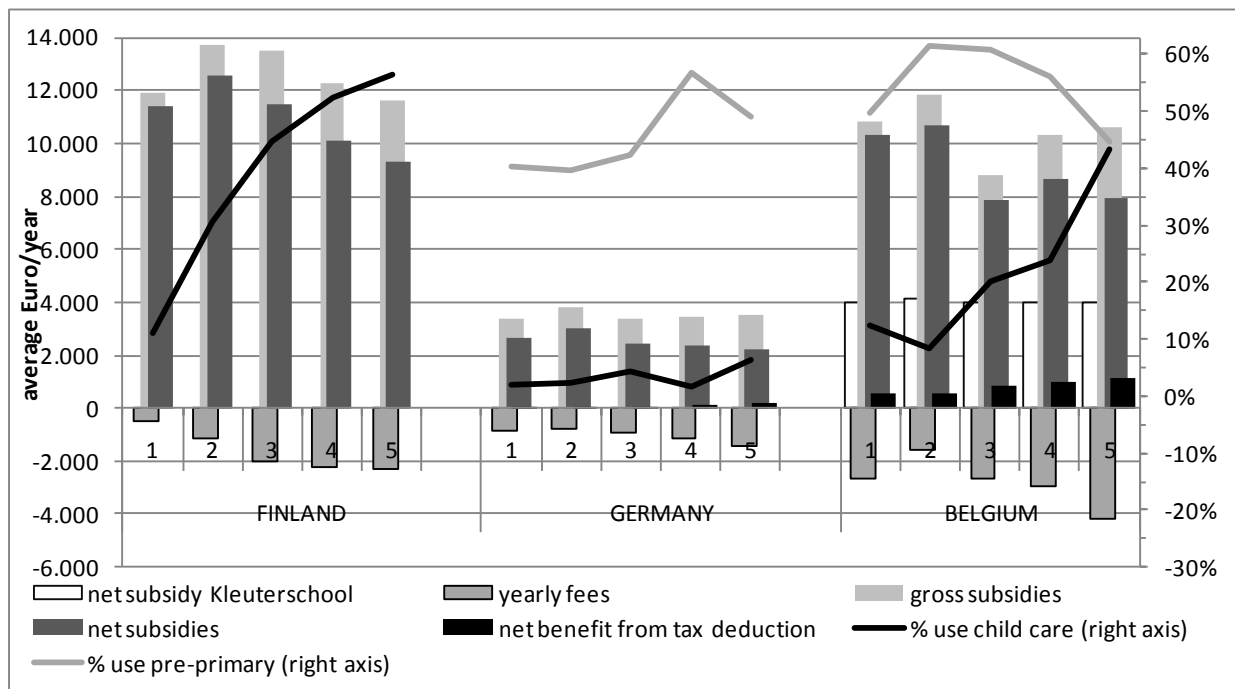
service is most intensive. In Finland, a slightly higher degree of progressivity is obtained, as the child care fees calculated are equal to the real cost and are not tax deductible.

For Germany, the low average subsidies per place are remarkable at first glance, given that the level of families' usage of Kindergarten is comparable to the other countries. (Part of) the explanation lies in the fact that the by far dominant form of child care in *Kindergarten* is organized for 3 to 5 year olds, while proportionally only very little subsidized day care is provided for very small children, who require much more attention, and are therefore significantly more expensive per subsidized place. Furthermore, *Kindergarten* is often provided for only a part of the day. In conclusion, this analysis at micro-level confirms what was derived from the administrative budget shares in Table 1 – that Germany on average spends relatively little budget on child day care policy. This is largely due to the low availability of slots for the 0 to 3 year-old.

On this basis one can conclude that both clusters of measures – home care and child care – are to a considerable extent skewed according to one's income position. In Finland and Belgium, home care measures are more concentrated among low-middle income families, while middle-high income families make more use of child day care policy. In Germany, both types of measures are skewed towards high-income families.

The comparison over countries suggests a relationship between the extent to which families with young children opt for home or out-of-the-home care, and the size of the benefits associated with this option. In Germany, home care is the dominant choice, especially for children younger than 3, but also the benefits for parents making use of it are very large. In Belgium and Finland, day care is much more frequently

Figure 2: Distribution of income flows for child care and use by income quintile.



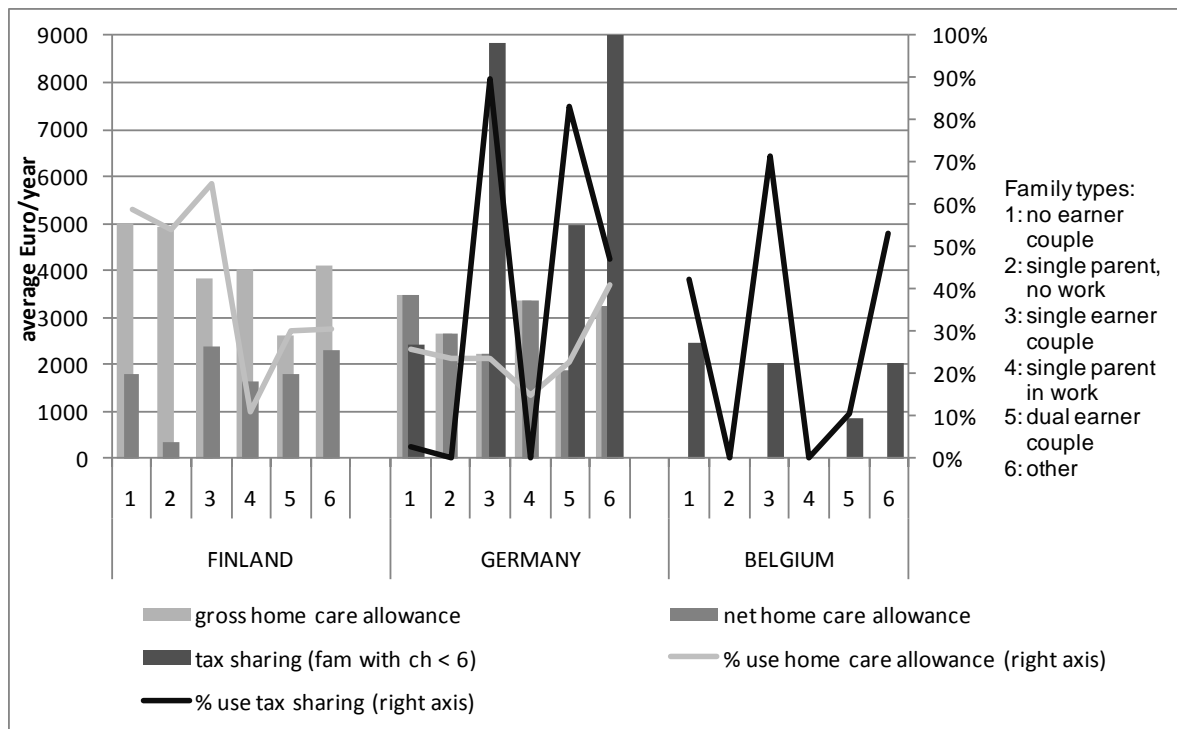
Source: own calculations based on EUROMOD and national survey data.

used, also for young children, and here this option is associated with higher government subsidies. Of course, this observation does not allow to determine the causal direction of the relationship. It is both possible that policy making influences peoples decisions, as well as that policy measures are installed to support dominant patterns of child care in society. Also, this first appraisal does not take into account the second round gains from possible behavioural effects of available good-quality childcare provisions, namely higher usage, and consequently higher employment rates among women and according social contributions and taxes on their earnings.

To gain additional insight in the distribution of care policy benefits, we perform a similar exercise in the following figures, now distinguishing between various family types. This allows us to explain to what extent the distributional patterns can be explained by the “needs” of a family, in the sense that a family with working parents is more likely to be situated in the higher part of the income distribution, but will also use more childcare in order to obtain this higher income from employment.

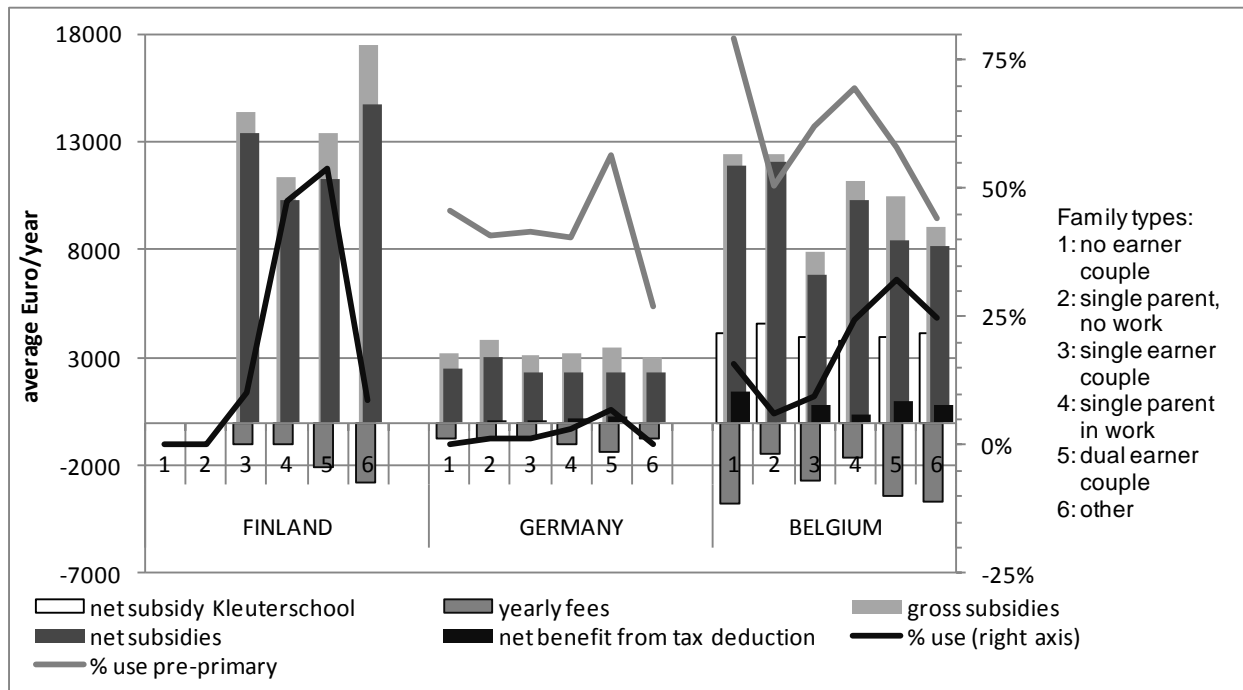
When we look at the distribution of the net gains of the home care benefits over the different family types (Figure 3), we observe that single earner families make up the bulk of the beneficiaries of the income splitting tax measures in Belgium, and to a lesser extent also dual earner families in Germany (this category contains couples from the moment that both have, even a very small, job). Meanwhile the consequence of the income-splitting tax rules for couples is very clear: single parents cannot make use of the measure by definition, as it entails a transfer of taxable income between two partners. This means there exist no compensation for the care time that single parents invest in their children in Belgium. In Germany, this is partly alleviated by the child raising allowance, which is also available to single parents.

Figure 3: Distribution of income flows for home care and use by family type.



Source: own calculations based on EUROMOD and national survey data.

Figure 4: distribution of income flows for child care and use by family type.



Source: own calculations based on EUROMOD and national survey data.

Alternately, dual earners are the main beneficiaries of the state’s investment in child care in all three countries. They pay the highest fees on average, but also gain the most from the possibility of tax deduction for child care costs in Belgium and Germany. They are closely followed by the category of single parents in work. Although the intensity of their use is slightly lower than for dual earner families, they pay considerably lower fees than dual earners, which implies the average net subsidy for day care is comparable or higher for single parents making use of it.

Taken together, Figures 3 and 4 illustrate the different nature and target of the home care and out-of-the-home care policy measures. While the former mainly benefit families with at least one parent not gainfully employed, the latter’s prime recipients are families that are fully engaged in paid employment, being single parents with a job and dual earner couples.

4.2. Introduction of Finnish policy in Belgium and Germany

We now simulate the distributive impact of introducing the Finnish child care policy set in both Belgium and Germany. As discussed at the end of Section 2, Finland scores best in terms of universal accessibility and freedom of choice for the parents. Overall, the Finnish system is the most expensive one, so implementing it in the two countries would in a first instance require additional budget (see Table 3). This is mainly due to high spending in Finland on day care per child: when expressed in PPP, Belgium spends around 80%, and Germany around one fourth, of the Finnish budgetary effort on day care. The Finnish system is particularly expensive for 4 to 5 year old children (due to extensive opening hours, high required staff qualifications, etc.). Implementing Finnish policy in Belgium would, without behavioural

reactions, lead to a 50% increase of the Belgian average budget per child. In Germany, the costs would go up with a factor of 1.7.

Expressed as an average per child, home care efforts are most costly in Germany, more than 7 times the Finnish average, mainly because of the very generous income tax splitting system. Belgium, on the other hand, spends only 60% of the Finnish average on home care. When the existing home care supporting measures in Belgium and Germany would be replaced by the Finnish home care allowance, the average budget per child would decrease with 80% in Germany and increase with nearly 80% in Belgium. These budgetary amount reveal however little about who will gain or lose from these policy swaps: are beneficiaries situated mainly at the top or the bottom of the income distribution? Are specific family types more prone to win or lose? This distributive impact is scrutinized in the remainder of this section.

As already indicated, the simulation exercise is static, so at this stage we do not incorporate possible changes in the number of childcare (e.g. to align to the number of subsidized childcare users in Finland), nor do we estimate possible reactions in parental labour supply following changes in both home and day care rules. Given the large shift for Germany from home care to day care efforts, these effects may not be negligible: we would expect that for Germany this shift may lead to increased labour supply. For Belgium, expectations are less clearcut.

TABLE 3: AVERAGE BUDGETS PER CHILD YOUNGER THAN 6, PER TYPE OF CARE IT SUPPORTS, PER COUNTRY.

	Finland	Germany	Belgium	Germany (in % of Finland)	Belgium (in % of Finland)
day care					
(nominal €/year)	4535	943	3113	-	-
(2003PPP, Finland = 100)	4535	1124	3700	25%	82%
Finnish policy (nominal €/year)	4535	2526	4873	-	-
Finnish policy (2003PPP, Finland = 100)	4535	3012	5792	66%	128%
% change Finnish policy vs original policy	-	+168%	+57%	-	-
home care					
(nominal €/year)	676	4131	340	-	-
(2003PPP, Finland = 100)	676	4926	404	729%	60%
Finnish policy (nominal €/year)	676	871	602	-	-
Finnish policy (2003PPP, Finland = 100)	676	1039	716	154%	106%
% change Finnish policy vs original policy	-	-79%	+77%	-	-

Source: own calculations based on EUROMOD and national survey data.

Table 4 clearly shows that, in case the Finnish policy is introduced in Belgium, the winners are far more numerous than the losers, and this in each quintile. Winners are relatively evenly distributed over the quintiles, more or less analogous to the distribution of families with young children over the income distribution, with a modest peak in the fourth quintile. Losers are virtually absent in the first quintile, and their share proportionally increases until 4% in the fifth quintile. The income concept employed to compare in relative terms, consists of cash income (which includes the home care benefit) plus subsidies associated with a place in subsidized day care, minus fees paid for this day care. When looking into the average gain per winner, expressed as a percentage of this household income concept, the income flows

are substantial, up to 37% in the first quintile. For those who lose, the income involved is smaller (expressed as a % of disposable income), but still substantial up to 17% in the first quintile. We decompose the income flows underlying this result into three differences (positive if the households gain, negative if the household loses): (1) changes in fees parents pay for day care, (2) changes in the subsidies that support the day care place, and (3) changes in the extent to which home care is supported, by differentiating the amounts that each of the policy components represent in the national system in place, and the amounts that would be transferred when a Finnish policy scenario would be installed.

From Table 4 we observe that winners in Belgium gain on average on all three components: they pay lower fees, the day care places are more heavily subsidized, and they gain on average from the replacement of the tax-splitting rules by the home care allowance. Income flows underlying losses, on the other hand, present a more diverse picture. These families tend to lose benefits from subsidies for childcare places, tend to lose – to a lesser extent, but more so in the lower quintiles than in the higher quintiles – from the benefits from tax splitting, but, remarkably, gain from lower fees for day care - except in the first and the fifth quintile.

TABLE 4 : GAINS AND LOSSES OVER QUINTILES, BELGIUM.

	Quintiles				
	1	2	3	4	5
% winners	90.5%	88.7%	82.0%	84.7%	66.5%
% losers	7.6%	9.2%	16.6%	15.3%	32.9%
% no change	1.9%	2.2%	1.3%	0.0%	0.6%
average gain/winner (% of disposable income)	37.2%	17.9%	13.9%	10.1%	9.4%
decomposed (average €/year)					
Δ fees	-72	886	1329	1430	928
Δ subsidies out-of-home care	4647	5235	5812	5234	5502
Δ home care allowance	1095	418	303	380	377
average loss/loser (% of disposable income)	19.0%	15.1%	9.1%	9.1%	7.0%
decomposed (average €/year)					
Δ fees	-155	352	995	702	-384
Δ subsidies out-of-home care	-9484	-4376	-2389	-4243	-5296
Δ home care allowance	1032	-1023	-577	-136	-122

Notes: Numbers in italic are based on cell frequencies of less than 40 families, and are therefore presented as indicative. Numbers that are based on cell frequencies of less than 5 cases are not presented. Percentages representing less than 5 cases are put between brackets.

Source: own calculations based on EUROMOD and national survey data.

Table 5 presents the same data for Germany. Here, losers are more frequent than winners, except in the first two quintiles. On the other hand, the change of policy mix is accompanied by relatively smaller changes in disposable income, except for the winners in the first quintile, who gain no less than 30% on average. The decomposition over the three different policy components reveals that the nature of the change runs in an entirely different direction compared to Belgium. Families that lose, do so primarily

because of the abolition of the joint taxation system, which is only partly replaced by the Finnish home care allowance. At the same time, these families win from lower fees and higher subsidies for day care places. Families that gain, exhibit the same pattern, but for them the gains, especially from the higher subsidies, outweigh the losses from the replacement of the joint taxation system by the home care allowance. A notable exception here are again the first two quintiles, who did not benefit as much from joint taxation due to their generally lower taxable income, and also gain from the introduction of a home care allowance along Finnish lines.

TABLE 5 : GAINS AND LOSSES OVER QUINTILES, GERMANY.

	Quintiles				
	1	2	3	4	5
% winners	75.2%	54.9%	30.6%	31.7%	25.1%
% losers	8.8%	33.4%	64.7%	67.7%	72.5%
% no change	16.0%	11.7%	4.7%	0.5%	2.4%
average gain/winner (% of disposable income)	31.0%	8.7%	5.5%	3.7%	1.7%
decomposed (average €/year)					
Δ fees	-145	465	846	772	519
Δ subsidies out-of-home care	2744	2913	3578	3999	3127
Δ home care allowance	1141	382	-282	-114	-770
average loss/loser (% of disposable income)	10.2%	6.0%	6.9%	7.3%	6.9%
decomposed (average €/year)					
Δ fees	0	313	345	478	400
Δ subsidies out-of-home care	0	988	1688	2053	2387
Δ home care allowance	-1738	-3500	-5489	-7767	-12188

Notes: Numbers in italic are based on cell frequencies of less than 40 families, and are therefore presented as indicative. Numbers that are based on cell frequencies of less than 5 cases are not presented. Percentages representing less than 5 cases are put between brackets.

Source: own calculations based on EUROMOD and national survey data.

Table 6 presents these figures over family types with at least one child under the age of 6 for Belgium. Not surprisingly, the vast majority of the families is significantly affected by the policy swap. Again, winners dominate losers in numbers, overall but also within the category of each family type separately. No earner couples, single parent families and other family types that win, do so primarily from the higher subsidies for day care places and the home care allowance, even though they pay slightly higher fees in the Finnish system than in the Belgian system. Single earner couples, single parents in work and dual earner couples that gain, do so on all three components. Lower subsidies for day care are responsible for a small 20% of single parents and dual earner couples that lose in total, even though they pay lower fees and some dual earner families even gain from the Finnish home care system. Single earner couples, expectedly, lose in the first place from the abolition of the income-splitting, when the Finnish home care allowance cannot make up for the loss (e.g. because the youngest child already reached the age of three).

TABLE 6: GAINS AND LOSSES OVER FAMILY TYPES, BELGIUM.

Families with children < 6						
	no earner couple	single parent no work	single earner couple	single parent in work	dual earner couple	other
% winners	90.8%	94.7%	81.0%	83.0%	80.9%	83.4%
% losers	(6.2%)	(3.6%)	16.8%	17.0%	19.2%	(8.4%)
% no change	3.0%	1.7%	2.2%	0.0%	0.0%	8.2%
average gain/winner (% of disposable income)	46.0%	50.4%	17.4%	6.1%	11.7%	23.3%
decomposed (average €/year)						
Δ fees	-252	-222	842	787	1325	-157
Δ subsidies out-of-home care	4550	4608	5133	5316	5527	4829
Δ home care allowance	852	1919	163	398	436	542
average loss/loser (% of disposable income)	n.a.	n.a.	6.5%	12.2%	9.4%	n.a.
decomposed (average €/year)						
Δ fees	n.a.	n.a.	740	679	107	n.a.
Δ subsidies out-of-home care	n.a.	n.a.	-552	-4388	-5349	n.a.
Δ home care allowance	n.a.	n.a.	-1473	0	137	n.a.

Notes: Numbers in *italic* are based on cell frequencies of less than 40 families, and are therefore presented as indicative. Numbers that are based on cell frequencies of less than 5 cases are not presented. Percentages representing less than 5 cases are put between brackets.

Source: own calculations based on EUROMOD and national survey data.

Table 7 presents the results for Germany over family types. Here, the picture is more clear-cut. Because of the large advantages from income splitting, couples, both single earners and dual earners, are mainly on the losing side. In the decomposition, this is very clearly visible, with losses up to 8600 €/year on average for single earner families from the change in home care support. Increased subsidies to day care facilities are the main cause for the gains for families with young children in Germany. At the same time, single parents and non-earner couple also significantly improve their financial situation with the Finnish system of home care allowances: In relative size, working and non-working single parents gain respectively 17 and 37% of their original disposable income.

TABLE 7: GAINS AND LOSSES OVER FAMILY TYPES, GERMANY.

Families with children < 6						
	no earner couple	single parent no work	single earner couple	single parent in work	dual earner couple	other
% winners	75.7%	70.2%	16.8%	77.6%	47.2%	40.1%
% losers	(6.9%)	9.3%	78.5%	9.9%	50.3%	46.7%
% no change	17.4%	20.5%	4.7%	12.5%	2.5%	13.2%
average gain/winner (% of disposable income)	8.2%	37.2%	9.5%	17.8%	4.5%	5.5%
decomposed (average €/year)						
Δ fees	-23	-428	885	406	781	119
Δ subsidies out-of-home care	2749	2571	4454	2654	3757	1692
Δ home care allowance	1314	1076	-788	789	-415	973
average loss/loser (% of disposable income)	n.a.	13.7%	8.3%	6.5%	5.1%	3.5%
decomposed (average €/year)						
Δ fees	n.a.	0	403	0	390	278
Δ subsidies out-of-home care	n.a.	0	1865	0	1997	1356
Δ home care allowance	n.a.	-2431	-8617	-1561	-6230	-6376

Notes: Numbers in italic are based on cell frequencies of less than 40 families, and are therefore presented as indicative. Numbers that are based on cell frequencies of less than 5 cases are not presented. Percentages representing less than 5 cases are put between brackets.

Source: own calculations based on EUROMOD and national survey data.

5. DISCUSSION AND CONCLUSION

This paper looks into the distribution of government funds allocated to reconciliation. In general, we distinguish between two classes of measures, those allowing parents to engage in other activities (direct and indirect subsidies to care services) and those compensating parents for their own care time (e.g. home care allowances).

When we compare Germany with Belgium and Finland, several general tendencies can be observed. First, families with young children tend to make considerably more use of funds for day care than those for home care in Finland and Belgium, while in Germany the benefits from joint taxation are increasing with income. In Finland and Belgium by contrast, home care related outlays tend to favour the lower income groups and those families with at least one parent out of work.

For day care subsidies the pattern is rather similar in the three countries: day care subsidies tend to favour the higher income groups in each country. The use (and hence benefit) of subsidized child care is linked to gainful employment which situates benefiting families more than proportionally in the upper income groups. Our analysis according to family type corroborates the fact that in Finland and Belgium, when one parent is not gainfully employed, families are not likely to use childcare services and, given the unequal balance of the two classes of reconciliation policy, tend to benefit considerably less from government support of the types that are considered in this study. In Germany, both home care and day care are skewed towards couples where at least one person is gainfully employed.

The introduction of the Finnish policy mix in Germany and Belgium, would result in a considerable redistribution of funds in the German case. German single parents would generally win from this reform and often increase their purchasing power by more than 20%. Conversely, about half of the German dual earner couples would stand to lose from such a reform, though on average no more than 5% of disposable income. Overall, the German budget for care interventions would decrease, although it behavioural reactions are not taken into account in our first order analysis. The reduction of male breadwinner advantages and the concurrent increase of government funding of childcare facilities, is likely to stimulate German mothers to engage more strongly in the labour market. Over time, it seems therefore likely that the introduction of the Finnish policy mix will expand demand for childcare and, hence, call for a further expansion of the budget for care.

In Belgium the mere introduction of the Finnish policy principles, would immediately lead to a substantial expansion of the public budget. Parents providing home care would get more financial compensations from the state and, concurrently, the state would provide more funds for childcare and pre-school. Not surprisingly, most Belgian families with young children can be expected to gain from this policy reform. Nevertheless, the Finnish example would also in Belgium result in redistribution within the parent population. Especially families without employment income will gain from the reform and obtain often proportionally important income increase (rises of up to 50% of disposable income). In the upper income quintiles gains are proportionally smaller and the proportions of families not winning income are larger. Conjectures on the behavioural impact of the reform in Belgium are more adventurous. The overall increase in budget and especially the expansion of compensations for home care may stimulate parents to refrain from labour market participation. Concurrently, however, the budget for childcare services will increase which is likely to facilitate the combination of work and care. In future work, we will therefore model the likely behavioural responses explicitly. For now, we conclude that the introduction of the Finnish policy mix may alter the income situation of German and Belgian families with children

considerably and foster vertical income redistribution within the group of parents. Additionally, the policy reform would create a policy configuration that offers parents more effective choice in the field of childcare than is currently the case.

6. REFERENCES

- Adema, Willem and Maxime Ladaique (2009), "How Expensive is the Welfare State? Gross and Net Indicators in the OECD Social Expenditure Database (SOCX)", *OECD Social, Employment and Migration Working Papers*, No 92, OECD Publishing.
- Apps, Patricia and Ray Rees (2001), "Household production, full consumption and the costs of children". *Labour Economics* 8(6):621-648.
- Ghysels, Joris and Wim Van Lancker (2009), "Het Matteüseffect onder de loep: over het ongelijke gebruik van kinderopvang in Vlaanderen." (UA/Berichten), Antwerpen: Herman Deleeck Centre for Social Policy.
- Ghysels, Joris, Gerlinde Verbist and Josefine Vanhille (2010), "Taxing care: enhancing the value of childcare time in the dual earner era" CSB Working Paper 10/01, Antwerpen: CSB.
- Grabka, Markus M. (2001), "EUROMOD country Report – Germany", Colchester: University of Essex.
- Lewis, Jane, and Susanna Giullari (2005), "The adult worker model family, gender equality and care: the search for new policy principles and the possibilities and problems of a capabilities approach", *Economy and Society* 34(1):76-104.
- Ministry of Social Affairs and Health (2005), "Trends in Social Protection in Finland 2004-2007", Helsinki: Ministry of Social Affairs and Health.
- Misra, Joya, Stephanie Moller and Michelle J. Budig (2007), "Work-family policies and poverty for partnered and single women in Europe and North America", *Gender & Society* 27:804-827.
- OECD Social Expenditure Data (2002-2005)
- OECD (2006), "Starting Strong II: Early Childhood Education and Care", Paris: OECD Publishing.
- Schoenmaekers, David, Jef Breda, Joris Ghysels, Bea Cantillon, Maja Debacker and Joke Wiercx (2006), "De overheidsuitgaven voor Vlaamse kinderen becijferd", Antwerpen: Herman Deleeck Centre for Social Policy.
- Steiner, Viktor and Katharina Wrohlich (2004) "Household Taxation, Income Splitting and Labor Supply Incentives – A Microsimulation Study for Germany" *DIW Discussion Paper* 421, Berlin: DIW.
- The Social Insurance Institution (2003) "Statistical Yearbook of the Social Insurance Institution", Helsinki: The Social Insurance Institution.
- Van Keer, Stijn, Cynthia Bettens and Bea Buysse (2004), "Enquête naar het gebruik van opvang voor kinderen jonger dan 3 jaar", Brussel: Kind en Gezin.
- Viitamäki, Heikki (2004), "EUROMOD Country Report – Finland", Colchester: University of Essex.
- Wrohlich, Katharina (2004), "Child care costs and mother's labour supply: an empirical analysis for Germany." *DIW Discussion paper* 412, Berlin: DIW.