Income Taxation and its Family Components in France and Germany: A Comparison of Distributional Effects

Katharina Wrohlich, Fabien Dell and Alexandre Baclet

A comparison based on German and French micro data shows that the redistributive effects of family support provided in the form of tax relief are stronger in Germany than in France. This is true both for redistribution between households of different sizes and for redistribution between households with different incomes. The average burden on single individuals without children compared to other types of household is larger in Germany than in France. Couples with one, two, or three children bear a comparatively lower burden in Germany than in France. For couples with four or more children, the relative income-tax burden is the same in the two countries. Overall, all German households with children bear a below-average share of the income-tax burden, while in France this applies only to lone parents and to couples with three or more children. In France, therefore, there is a greater degree of redistribution than in Germany from households consisting of couples with one or two children to households that have three or more children.

The study also revealed differences in the redistributive effects related to the amount of household income. In all households with children, the burden is much lower (or the relief obtained is much higher) in the bottom five deciles in Germany than in France. Only couples with children who are in the top two deciles (or in the top three deciles in the case of couples with three children) enjoy greater relief under the French system than their counterparts in Germany.

For a long time, family policy has been more of a peripheral question in the political debate in Germany, but issues relating to family policy have recently been gaining increasing priority. One important reason is the fact that family policy in Germany – despite the substantial amount of public funds spent on it compared to other countries – performs less well with respect to a range of indicators than the family policy of other European countries.

1 This article is based on a report drawn up by DIW Berlin on behalf of the Hans Böckler Foundation: Alexandre Baclet, Fabien Dell, Viktor Steiner, and Katharina Wrohlich: ‘Verteilungseffekte der staatlichen Familienförderung – Ein empirischer Vergleich zwischen Deutschland und Frankreich’. Berlin 2005.
countries. Indicators that deserve particular mention in this respect are the low birthrate and the low share of working mothers. Contributors to the public debate often cite France, whose income-tax system and supply of state-funded child-care facilities are believed to be particularly supportive of families. France is seen as an example of a country with a ‘successful family policy’ because both its fertility rate and the share of working mothers in its labor force are higher than in Germany and, in particular, because childlessness is less common there amongst highly qualified women than in Germany. French family policy differs from German family policy in many respects, ranging from the supply of subsidized child-care facilities and the design of the regulations on parental leave benefits to the family policy components of the income-tax system.

The focal point of this report is a comparison between the redistributive effects engendered in Germany and France by the different tax treatment of families with children. The German instruments concerned are child benefits (Kindergeld) and the tax-free allowance for dependent children (Kinderfreibetrag); the French measures are the ‘family splitting’ procedure in the calculation of income tax and family allowances (Allocations Familiales). If a comparison of the relief provided by these measures is to yield useful information, then it must, on principle, also take account of the empirical income distribution and of the different definitions of taxable income. This is particularly important in the context of a Franco-German comparison because there are some substantial differences in the definitions of taxable income used in the two countries. Having compared the tax treatment of families in France and Germany, the results of the empirical analysis of the effective average tax burden or amount of tax relief will then be presented; the analysis is based on the year 2001 because more recent data are not yet available for France.

Comparison of Family Income Taxation in France and Germany

Income-tax schedules in France and Germany

A comparison of the German and French income-tax schedules shows that the average burden follows a similar trajectory in the two countries, although the rates differ (cf. figure 1). The average tax rate in 2001 for a taxable income of euro 10 000 amounted to around 6% in Germany, compared to 7% in France; for a taxable income of euro 20 000, the figure was 16% in Germany, compared to 17% in France. Overall, however, the average burden rises at a sharper rate in France than in Germany. For an income of euro 55 000, which belongs to the highest tax bracket in both countries, the average burden in Germany is around 31%, compared to 35% in France. This indicates that the French schedule is more progressive than that applied in Germany.

The household is the relevant unit for income tax purposes in both Germany and France. Married couples are jointly and children are taken into account in the calculation of the amount of tax payable. This principle stands in contrast with the system of individual taxation practiced in the Scandinavian countries, and also in Austria and the United Kingdom. The income-splitting system also applies to married couples without children in both France and Germany (cf. box 1).

The tax treatment of children

France and Germany have different regulations regarding the ways in which children are taken into consideration for income tax purposes. In Germany, parents are entitled to child benefits (Kindergeld) for each child. This amounted in 2001 to euro 138 each per month for the first and the second child, to euro 154 for the third child, and to euro 179 for the fourth and each subsequent child. The total annual child benefit per child therefore amounted to euro 1656 each for the first and the second child, euro 1848 for the third child, and euro 2148 for the fourth and each subsequent child. Par-

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6 While in Germany the system of joint income taxation (Ehegattensplitting) only applies to married couples, in France unmarried couples who have signed a Civil Solidarity Pact (Pacte Civil de Solidarité – PACS) can also be jointly taxed and use the income-splitting procedure.

7 In the case of individual taxation, each partner’s income is taxed separately and the income of the other partner is given no consideration whatsoever in the calculation of the tax liable. In accordance with this system, most countries with individual taxation regimes provide support for children not in the form of tax concessions but as non-means-tested transfers.
ents in Germany are also entitled to a tax allowance for dependent children (which includes an allowance for child-care expenses); this amounted to €5112 per child in 2001. The child benefit and the tax allowance for children are not granted concomitantly, rather the so-called higher-yield test is applied: if the amount of tax saved by means of the tax allowance is higher than the amount of the child benefit, then the tax allowance is applied. In the case of families with one child, the reduction in the tax burden by means of the tax allowance

Figure 1
Income-Tax Schedules in France and Germany, 2001: Marginal Burden and Average Burden

Sources: Enquête Revenus Fiscaux 2001; German Socio-Economic Panel 2002; calculations by the French National Institute for Statistics and Economic Studies (INSEE) and by DIW Berlin.

Box 1

**Income splitting for married couples**

Income splitting for married couples (Ehegattensplitting) entails summing the incomes of the two spouses and dividing the result by two. The income-tax schedule is applied to this amount and the resulting tax payable is then doubled. The income splitting formula can be expressed as follows:

\[
T = k \cdot t \left( \sum w_i \right)
\]

where \( T \) is the household's tax payable, \( k \) is what is known as the splitting coefficient, \( t \) is the tax rate, and \( w \) are the income components of the individual members of the household. In the case of married couples without children, the splitting coefficient \( k \) is equal to 2 in both Germany and France. The tax rate \( t \) is the same for married couples and single adults in both countries. When a household's income is split unequally between the two partners, under the system of progressive income-tax rates this formula results in a lower tax burden than if the two individuals were taxed separately. This is why public policy debates on this issue often speak of a 'splitting gain.'

The amount of the gain yielded by the income-splitting procedure depends on three factors: the degree of progression of the income-tax schedule, the distribution of income within the household, and the total income of the household. Because Germany and France's income-tax schedules are very similar, the amount and the progression of the splitting gain are also very similar in the two countries. The system is of the greatest benefit in both cases to those married couples in which a single earner takes home a taxable income of over €100 000 per annum. In these households, joint taxation using the income splitting system leads to a 'gain' of about €10 000 per annum compared to a system of separate taxation. As the gap between the incomes of the two spouses decreases, this gain diminishes. The splitting gain is minimal for married couples whose incomes are approximately equal or whose joint income is very large.1

1 An illustration of the progression of the splitting gain in Germany and France can be found in Alexandre Baclet et al., loc. cit. The effects of income splitting on revenue and income distribution in Germany are described in detail in Stefan Bach et al., 'Untersuchung zu den Wirkungen der gegenwärtigen Ehegattenbesteuerung'. Project report for the Federal Ministry of Finance. Berlin 2003.
was larger than the amount of the child benefit for annual taxable incomes of euro 55 000 and upwards. The maximum amount of relief by means of the tax allowance was obtained in that year by families with a taxable income of over euro 110,000, for whom it amounted to almost euro 2500 per child per annum.8

In France, unlike in Germany, the amount of child benefits (Allocations familiales) received is staggered according to the age of the child. There is also a higher increase in the benefit than in Germany as the number of children increases. Child benefits in France are only granted from the second child onwards. In 2001, it amounted to euro 107 per month (euro 1284 per annum) for the second child, and to euro 137 per month (euro 1644 per annum) for the third and each subsequent child. The benefit was increased in 2001 by euro 30 per month for children aged 11 to 15, and by euro 54 per month for children aged 16 and over. In addition, a means-tested supplement to the child benefit (Complément Familial) is paid for the third and each subsequent child. This supplement amounted to euro 140 per month in 2001 and was granted to families with a taxable income of maximum euro 24 545.

In addition to these transfers children in France are also taken into account in the calculation of income tax by means of the family splitting procedure (Quotient familial), whereby the splitting coefficient (cf. box 1) increases as the number of children rises. The coefficient is increased by 0.5 each for the first and the second child, and by 1 each for the third and each subsequent child. This means that the calculation of the tax liability of a married couple with two children, for example, is based on a splitting coefficient of 3, whereas for a married couple with three children, the splitting coefficient is 4. The maximum amount of relief obtained in 2001 on the basis of the family splitting procedure was subject to a ceiling of euro 2017 each per annum for the first and second child, and of euro 4034 each per annum for the third and each subsequent child. Unlike in Germany, child benefits and tax relief by means of the family splitting system only takes effect with higher incomes. Families with two children and with a taxable income of up to euro 35 000 per annum also enjoy more relief in Germany than in France. Only in the case of higher incomes does the French family splitting procedure lead to higher relief than the German system.

The tax relief provided by means of the French family splitting procedure can be very substantial for high-income households. A family with two children in France and with a taxable annual income of euro 60 000 receives support of euro 5318, compared to only euro 3370 in Germany. French families with three children and with a taxable income of euro 15 000 upwards benefit more than equivalent families in Germany. Thanks to the means-tested supplement to child benefits

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9 This figure only shows the effect on the tax burden of two-parent families. The effects for lone parents are described in detail in Alexandre Baclet et al., loc. cit.
granted for the third and subsequent children, the relief enjoyed by families with a taxable income of euro 26 000, for example, is almost euro 1300 higher per annum in France than in Germany.

The higher the family income, the higher the relief obtained through the family splitting system. Because in France the splitting coefficient is twice as large for the third as for the first child, while in Germany the tax allowance is the same for all children, there are substantial differences in the tax relief granted to high-income families with three children. The maximum amount of relief through family splitting for a family with three children in France is around euro 11 000 per annum, and this is obtained by families with a taxable income of euro 70 000 upwards. The tax relief for a family with three children in this income bracket in Germany is euro 5400, in other words only around half the amount of support provided in France.

### Principal regulations governing tax treatment of married couples, lone parents, and children in France and Germany

<table>
<thead>
<tr>
<th></th>
<th>France</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married couples</td>
<td>Joint taxation with income splitting, splitting coefficient = 2.</td>
<td>Household tax allowance for lone parents of euro 2780 per annum.</td>
</tr>
<tr>
<td>Lone parents</td>
<td>Income splitting, splitting coefficient = 1.5.</td>
<td>Tax allowance for dependent children of euro 5112 per annum (including allowance for child-care expenses).</td>
</tr>
<tr>
<td>Children: tax treatment</td>
<td>Family splitting: The family splitting coefficient increases by 0.5 each for the first and second child and by 1 each for the third and each subsequent child. The splitting gain for the first and second child is capped at euro 2017 per annum; the cap for the third and each subsequent child is set at euro 4034 per annum.</td>
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### Comparison of relief effects on the basis of micro data

While a comparison of the French and German tax regulations with respect to the family context yields important insights about the way in which the two systems work, it takes no account of the fact that, in addition to the income-tax schedule, the definition of taxable income also has an important influence on the actual redistributive effects of a tax system. Given that there is a considerable difference between the French and German definitions of taxable income, a comparison of family support mechanisms must be carried out on the basis of a comparable concept of gross income. In addition, the progressive structure of the income-tax schedule in France is weakened by a proportional tax on income.

10 Unlike in Germany, pensions and unemployment benefit, for example, are fully taxed in France.

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1 Data from 2001. — 2 The full amount of child benefits in Germany is not a transfer benefit but a fictitious tax allowance for dependent children of families whose income exceeds the basic allowance (Grundfreibetrag); cf. Jörg Althammer 2002, loc. cit. Child benefits are referred to here as a transfer benefit only for the purposes of simplification.
This tax is also taken into account in the empirical analysis, as is the German solidarity surcharge (Solidaritätszuschlag).

Moreover, the differences in the distribution of incomes must also be taken into account. For example, the fact that France has a higher maximum tax rate tells us nothing about the actual redistributive effects of the tax system if fewer households are taxed at this rate than in Germany. This is why an analysis seeking to ascertain which types of household benefit to what extent from family support in the two systems must also take account of the empirical distribution of comparable gross incomes. The empirical analysis of the actual average burden on families with children is based on separate representative micro data sets for Germany and France.

Redistribution between households of different size

A comparison of the average pre-tax and post-tax incomes of different household types in France shows that, on average, lone parents with two or more children and couples with four or more children gain income through family support based on fiscal measures, while all other households suffer income losses. These losses are most substantial for childless singles and are lowest for couples with three children (cf. table 1). In Germany, too, lone parents with two or more children benefit on average in the form of income gains from the system of family support through fiscal instruments. The income of couples with four or more children does not change, on average, as a result of fiscal measures. As in France, all other household types are, on average, ‘net payers’ (cf. table 2).

As a result, it proves more informative to compare each difference on the basis of its deviation from the mean. Then it becomes evident that, compared to the average, childless singles bear a greater burden in Germany than in France. Average post-tax income in Germany amounts to 82% of pre-tax income, compared to 88% in France. The reason is that income tax in France accounts for a smaller share of total tax revenue than in Germany.

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Table 1
Average Pre-Tax and Post-Tax Income in France

<table>
<thead>
<tr>
<th>Household type</th>
<th>Pre-tax income (Euro per annum)</th>
<th>Post-tax income (Euro per annum)</th>
<th>Post-tax income as % of pre-tax income</th>
<th>Deviation from average in percentage points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childless singles</td>
<td>17 694</td>
<td>15 461</td>
<td>87</td>
<td>-1</td>
</tr>
<tr>
<td>Lone parents with one child</td>
<td>19 359</td>
<td>17 188</td>
<td>89</td>
<td>+1</td>
</tr>
<tr>
<td>Lone parents with two or more children</td>
<td>18 288</td>
<td>18 721</td>
<td>102</td>
<td>+14</td>
</tr>
<tr>
<td>Childless couples</td>
<td>33 668</td>
<td>29 035</td>
<td>86</td>
<td>-2</td>
</tr>
<tr>
<td>Couples with one child</td>
<td>40 758</td>
<td>34 664</td>
<td>85</td>
<td>-3</td>
</tr>
<tr>
<td>Couples with two children</td>
<td>41 637</td>
<td>36 874</td>
<td>89</td>
<td>0</td>
</tr>
<tr>
<td>Couples with three children</td>
<td>38 369</td>
<td>37 073</td>
<td>97</td>
<td>+8</td>
</tr>
<tr>
<td>Couples with four or more children</td>
<td>33 188</td>
<td>35 176</td>
<td>106</td>
<td>+18</td>
</tr>
<tr>
<td>Average of percentage change</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>


11 The database for Germany is the Socio-Economic Panel (SOEP), which is a representative annual survey of private households in Germany carried out by DIW Berlin in collaboration with the Infratest Social Research Institute. Detailed information on the SOEP can be found on DIW Berlin’s web site (www.diw.de/sop). The analysis of the French situation is based on the Tax Revenue Survey (Enquête Revenus Fiscaux – ERF). This database consists of individual income-tax data combined with figures from the French Labor Market Survey. These data, which provide information on 75 000 households, are compiled by the French National Institute for Statistics and Economic Studies (INSEE) together with the tax department of the French Ministry of Finance (DGI).


13 A detailed description of the data and the procedure used to construct comparable pre-tax and post-tax incomes can be found in Alexandre Baclet et al., loc. cit.
gless to households with children. The burden on lone parents is reduced to a greater extent, comparatively, in Germany than in France. It is also worth noting that in Germany all couples with children bear a below-average burden, whereas this only applies in France to couples with three or more children. In France, therefore, there is a greater degree of redistribution from couples with one or two children to couples with three or more children than in Germany.

Redistribution within one household type

Figure 3 shows the effects of family support through tax relief for selected types of households in Germany and France. Up to the seventh decile, lone parents with one child are granted more relief in Germany than in France, that is, 70% of all families living in this type of household are given greater support under the German system of family burden-sharing or benefit-sharing than in France. The differences in the amount of relief granted in Germany and France are less significant for couples with two or three children. Nonetheless, it is evident in both cases that the curve of the relief effects has a much steeper trajectory in Germany than in France: Low-income households enjoy more relief than in France, while wealthier households bear a greater burden.

All in all, there is a greater degree of redistribution in Germany than in France as a result of the income-tax system and its family policy components. Measured in terms of the Gini coefficient,\(^\text{16}\) the inequality of pre-tax income distribution is similar in Germany and France. The differences in the distribution of post-tax income are smaller in Germany for all household types than in France. In contrast to the expected result based on a comparison of the two countries’ tax schedules, the empirical analysis shows that there is more redistribution in Germany than in France, both between households of different sizes and between households with different incomes. If Germany were to adopt the French system of income taxation and its tax treatment of children, the beneficiaries of a reform of this kind would be couples with children in the top two deciles of the pre-tax income distribution. This would not only be a result of the different tax treatment of children, however, but also of the different definition of taxable income and of the ‘dilution’ of the progressive income-tax schedule in France by means of the proportional CSG.

Assessment and conclusions for policy

An evaluation of the two systems of tax treatment of families with children depends on the goals of family policy. Traditionally, the most important aim of German family policy has been to create ‘income equality’ between families with children and individuals without children by means of financial support.\(^\text{17}\) The joint tax assessment of married couples by means of income splitting and the tax allowance for dependent children are instruments geared towards this objective. Moreover, child benefits serves to provide a portion of the subsistence minimum for each child, regardless of the

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\(^{16}\) The Gini coefficient is used to measure the inequality of income distribution. It is calculated as the ratio of the area enclosed between the ‘equality diagonal’ (45°) and the Lorenz curve to the total area under the diagonal. In the event of entirely equal distribution, the Gini coefficient is 0; it rises to a maximum value of 1 as inequality increases.

Family's income. Child benefits have been taken into account in the family burden-sharing system of taxation since 1996, however, in the sense that is offset against the relief effect of the tax allowance for dependent children. The empirical analysis presented here shows that the German system of 'dual family burden-sharing' combined with the system of income taxation results in more equality in income distribution between households of different types, but also between households of the same type and different incomes (vertical redistribution) than does the French system.

French policy makers have traditionally given greater priority to population goals and to the reconciliation of family and working life. The pursuit of these aims explains why the relief provided through the family policy components of income taxation rises more sharply than in Germany as the number of children increases. Nonetheless, it is not yet possible to infer a causal relationship from the correlation between the higher fertility rate and the stronger progression in the French system of family support as the number of children increases. In addition to the tax treatment of children, numerous other factors also correlate with the higher fertility rates, for instance the availability of child-care facilities.

There are a number of signs that family policy goals have changed in recent years in Germany and will perhaps change even further. The concept of 'sustainable family policy' identifies the birthrate, the reconciliation of family and working life, and the prevention of family poverty as important indicators that should guide family policy. Child benefits may increase household income, but it cannot compensate for the loss of earned income. The tax allowance for dependent children favors high-income families, because the amount of relief increases as taxable income rises. Improved support in the area of child care as well as easier means to deduct the costs of child care in income-tax returns are measures that promise more success with respect to the goals defined above, especially the reconciliation of work and family and consequently also the prevention of family poverty.19

Note: The points in the diagram represent the median pre-tax income and the median effective average burden for each decile. Sources: Enquête Revenus Fiscaux 2001; German Socio-Economic Panel 2002; calculations by the French National Institute for Statistics and Economic Studies (INSEE) and by DIW Berlin.